



# Baby Food facts.



## Nutrition and marketing of baby and toddler food and drinks



UCONN  
**RUDD CENTER**  
FOR FOOD POLICY & OBESITY

## **Baby Food FACTS**

### **Nutrition and marketing of baby and toddler food and drinks**

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Birth to age 2 is a critical period for establishing lifelong and healthy dietary preferences and eating habits and preventing childhood obesity. The information that parents receive about feeding their young children, including from marketing, should consistently correspond with advice from health professionals about practices that help children grow up at a healthy weight. However, baby and toddler food and drink products and the marketing messages used to promote them do not always support experts' recommendations for feeding babies and toddlers.

The World Health Organization (WHO), American Academy of Pediatrics (AAP), and other experts agree that breastmilk is the best choice for infants under 6 months old, and optimally breastfeeding should continue until 12 months and beyond.<sup>1,2</sup> By around 6 months (between 4 and 6 months if the baby is developmentally ready), infants should be introduced to solid food, progressing from pureed or mashed foods to chopped foods and harder finger foods by 12 months.<sup>3</sup> Toddlers' diets (1-2 years old) should support development of gross and fine motor skills and learn to enjoy the family diet, including varied and positive exposures to the taste, flavors and textures of fruits, vegetables, and other table food.<sup>4,5</sup> Children under age 2 should not consume added sugar,<sup>6</sup> and saturated fat and sodium should also be limited.<sup>7</sup>

However, previous research has documented marketing practices that do not conform with these recommendations. Infant formula manufacturers have pledged to promote exclusive breastfeeding for infants under 6 months and to refrain from marketing that implies that infant formula is a better choice than breastmilk,<sup>8,9</sup> but research has identified numerous marketing practices that could mislead parents to believe that formula products have additional benefits over breastmilk.<sup>10-13</sup> Research on the diets of babies and toddlers has also shown that most young children do not consume enough fruits and vegetables, and many regularly consume foods high in added sugar, sodium, and salt.<sup>14,15</sup> Furthermore, research has documented high levels of added sugar and sodium in some baby food products,<sup>16,17</sup> as well as marketing messages that imply these products may benefit children's nutrition and health.<sup>18</sup> These findings present additional concerns about potential effects of marketing on the development of healthy dietary preferences and eating habits among the youngest children.

Notably, the United States is one of a small number of countries that has not enacted any provisions of the WHO's International Code of Marketing for Breast-Milk Substitutes (ICMBS) to address aggressive marketing of infant formula and complementary foods (established in 1981).<sup>19</sup> In response to concerns about recent developments in marketing of these

products, as well as marketing of toddler food products and toddler milk (also known as toddler or follow-up formula), the WHO ratified additional guidance in 2016.<sup>20</sup>

In this report, we examine the nutritional quality and other characteristics of food and drink products marketed to parents for their babies and toddlers (up to age 3), as well as the messages used to promote these products, and evaluate how well they correspond to expert advice about feeding young children.

## Scope and methods

We used a variety of data sources and methods to provide a comprehensive analysis of food and drink products marketed for babies and toddlers in the United States. Through publicly available data, we document and evaluate the nutrient content of baby and toddler food, infant formula, toddler milk, and nutritional supplements for children under age 3 and the marketing practices used to promote these products. We focus on data for marketing in 2015 and nutrition content and product packaging in April to June 2016. Whenever possible, we also document changes in advertising over the past five years. We analyze brands offered by companies spending \$100,000 or more in total advertising for the categories examined.

We report the following:

- Nutritional quality and nutrient content of baby and toddler food, infant formula, toddler milk, and nutritional supplements;
- Nutrition-related, child development, and other marketing messages on product packaging;
- Special issues in product packaging, including type of packaging (pouches vs. other), the match between product names and their main ingredients, and differentiating infant formula and toddler milk offered by the same brands;
- Advertising spending in all measured media, using Nielsen syndicated data;
- Exposure to TV advertising by women (the primary target market for these products), using syndicated data from Nielsen;
- Content of the messages used in TV, online video, and magazine advertisements;
- Adult visitors to company websites and advertising viewed on third-party websites, using syndicated data from comScore;
- Extent and common techniques used to encourage viral marketing through social media platforms and mom blogs; and
- Advertising targeted to Hispanic and black parents on TV and the internet, including advertising spending and exposure on Spanish-language and black-targeted TV,

using syndicated data from Nielsen and comScore, and content of Spanish-language TV and magazine advertisements.

We did not have access to food industry proprietary documents, including privately commissioned market research, media, and marketing plans or other strategic documents. Therefore, we do not attempt to interpret baby food companies' goals or objectives for their marketing practices. Rather, we provide transparent documentation of the range of marketing practices that encourage parents to feed these products to their young children.

## Results

In the context of the entire food industry, the market for baby and toddler food and drink products is relatively small: \$6.5 billion in sales annually.<sup>21</sup> By comparison, the market for food and beverages aimed at children 2 to 14 years old has been estimated at \$23 billion, approximately 4% of the total U.S. food and beverage market.<sup>22</sup> Nonetheless, the marketing of products intended for babies and toddlers has the potential to impact the diets of very young children with lasting consequences.

## Companies and brands

In 2015, advertising spending for baby and toddler food, infant formula, toddler milk, and one nutritional supplement brand aimed at young children totaled \$77 million in all media, primarily TV and magazines. Just eight brands from three companies were responsible for 99% of advertising spending and all TV advertising exposure for their respective categories in 2015.

- Nestle brands, Gerber and Gerber Graduates, dominated the baby and toddler food categories, with more than 95% of total advertising spending in these categories.
- Gerber Good Start, another Nestle brand, was responsible for almost 60% of infant formula advertising spending. Enfamil from Mead Johnson Nutrition and Similac from Abbott also advertised their infant formula brands, primarily in magazines, digital media, and coupons.
- Enfagrow from Mead Johnson was the only toddler milk advertised in English, while Nido from Nestle only advertised in Spanish-language media.
- Pediasure from Abbott was the only nutritional supplement for young children with advertising in 2015.

Four additional baby and toddler food brands spent \$100,000 or more in advertising in 2015 and are included in our analysis: Plum Organics (Campbell Soup Company), Beech-Nut (Hero A.G.), and Happy Baby and Happy Tot (Nurture Inc.).

## Baby and toddler food nutrition

To assess nutritional quality, we used the Nutrient Profile Index (NPI) score, which measures the overall nutritional composition of the food based on total calories and proportion of nutrients to encourage and limit. A score of 64 or higher identifies a nutritious food (the cut-off for foods that can be advertised to children in the United Kingdom).<sup>23</sup>

- An impressive 100% of all fruit, vegetable, and meal products offered by all brands in our analysis qualified as nutritious, and most had very high NPI scores of 76 or more.
- On the other hand, just four of the 80 baby and toddler snacks analyzed, such as cookies, cereal bars, puffs, and fruit snacks, had a nutritious NPI score of 68 or higher. Furthermore, one-half of baby snacks and 83% of toddler snacks contained added sweeteners.
- With a median NPI score of 56, baby and toddler snacks were similar in nutritional quality to snacks marketed for older children and adults, such as Kashi cereal bars, Cheetos reduced fat puffs, and animal crackers. In contrast, regular Cheerios, a traditional finger food for babies, has an NPI score of 70 and would be a more nutritious choice.

However, there was wide variation in the nutritional quality of products offered by different brands in our analysis.

- Notably, Beech-Nut and Gerber did not offer baby food snacks, and all their baby food products had nutritious NPI scores.
- In contrast, almost one-third of Happy Baby products and 15% of Plum Organics baby products were snack foods that did not meet minimum nutrition scores to qualify as nutritious choices for babies.
- In the toddler food category, Happy Tot had the most nutritious products overall; almost 90% had NPI scores of 68 or higher.

## Baby and toddler drink nutrition

There was less variation in nutrition content between brands in the drink categories. Most infant formula brands offered multiple varieties designed for specialized infant feeding needs, including for newborns, supplementing breastmilk, reducing fussiness, gas, or spit-up, as well as soy-based formula. All infant formula products had similar nutrition content.

Compared with infant formula, toddler milk products had higher saturated fat and sodium content, as well as more protein, but these products also contained added sweeteners, including sugar, glucose syrup solids, and honey. Notably, the American Academy of Family Physicians and the AAP do not recommend serving "toddler formula," stating that there is no evidence of advantages over whole milk for children ages 1 to 2.<sup>24</sup> Furthermore, the added sugar in these products is not recommended for children under age 2.<sup>25</sup>

- Nido 1+ and Similac Go & Grow had the highest total sugar content at 13 and 15 grams-per-serving, respectively.
- Enfagrow Toddler Transitions, a “transition formula” for children 9 to 18 months old, had the lowest NPI score (58) of any of the drinks analyzed. Although this product was marketed as appropriate for toddlers, its nutrition content was closer to infant formula.

Two nutritional supplement products from Pediasure (Pediasure Grow & Gain and Pediasure Sidekicks) had nutritious NPI scores due to relatively high protein and fiber content, but they also had a median of 18 grams of sugar per serving (comparable to an 8-ounce sports drink). In addition, Pediasure Grow & Gain contains 240 calories per serving. These products would be beneficial for sick or malnourished children but not for those at a healthy weight.

### Messages and other features of product packaging

Baby and toddler food and drink packages featured numerous nutrition-related messages, as well as messages promoting developmental and other benefits to children. Research on nutrition-related messages on children’s cereals has shown that these types of messages mislead parents to believe that products also provide health-related benefits for their children.<sup>26</sup>

- All baby and toddler drink products and 96% of food products averaged approximately six nutrition-related messages per package. Messages about the absence of unwanted ingredients (e.g., no artificial ingredients, BPA-free packaging) were more common on food packages.
- Snack food packages tended to feature more nutrition-related messages than packages for nutritious baby and toddler food products (i.e., fruits, vegetables, and meals), with up to 9.5 messages per package for Plum Organics snacks.
- Infant formula packages averaged 5.9 nutrition-related and 3.1 child development messages each. Toddler milk and nutritional supplement packages averaged 4.0 and 5.8 nutrition-related messages, respectively, and 2.6 and 2.5 child-development messages.

Additional features of product packaging raise further concerns.

- Fruits, vegetables, and meals for toddlers often came in pouch packages, including 82% of Happy Tot and 56% of Plum Organics toddler food products. Although these products qualified as nutritious, pouches do not promote young children’s eating development skills or expose children to the colors, varying taste, and textures of real fruits and vegetables. They also may promote overeating.<sup>27</sup>
- Product names did not match the ingredient lists for more than one-half of Plum Organics toddler food products and more than 10% of Happy Baby and Plum Organics baby food and Gerber Graduates and Happy Tot toddler food

products. These product names may mislead parents about what they are feeding their children and/or product healthfulness.<sup>28</sup>

- Multiple formulations of infant formula and toddler milk aimed at different ages and stages of young children were packaged in similar containers and colors with similar branding. Research indicates that this practice confuses parents and may lead them to believe that less-expensive toddler milk is appropriate for feeding infants younger than 12 months.<sup>29</sup>

### Traditional advertising

The majority of advertising spending for baby and toddler food and drinks was allocated to TV (73%) and magazines (24%).

- One nutritional supplement – Pediasure – spent \$20.7 million almost exclusively on TV, more than any other entire category in our analysis. Toddler milk brands (Enfagrow and Nido) together spent \$16.8 million.
- Gerber, Plum Organics, and Beech-Nut baby food spent a combined \$16.5 million. Toddler food brands (primarily Gerber Graduates) spent \$13.2 million.
- Infant formula brands (Gerber Good Start, Similac, and Enfamil) had the least advertising, spending \$9.7 million primarily in magazines.
- Just six brands advertised on TV in 2015: Pediasure, Gerber, Gerber Graduates, Enfagrow, Gerber Good Start, and Nido (Spanish-language only).
- From 2011 to 2015, toddler milk and toddler food brands increased their advertising spending more than other categories (+74% and +48%, respectively). Infant formula was the only category to spend less in 2015 than in 2011 (-68%).

The messages used in TV and magazine advertising for baby and toddler food and drinks highlighted product nutrition and often promoted developmental benefits for infants and young children.

### Baby and toddler food

- These ads frequently promoted the products as nutritious with “real,” natural, or organic ingredients.
- Gerber, Plum Organics, and Gerber Graduates also highlighted developmental benefits from consuming their products. Gerber emphasized that its Lil’ Bits help babies learn to chew.

### Infant formula

- Gerber Good Start focused the majority of its 2015 advertising on its Soothe and Gentle varieties, while Similac primarily advertised its Sensitive variety. Notably, the American Academy of Family Physicians has stated that most babies do not need specialty formulas such as these, and they are not worth the additional cost.<sup>30</sup>



- Nearly 100% of infant formula ads emphasized specific nutrients and ingredients in their products (e.g., DHA, lutein, probiotics). Gerber Good Start also focused on supporting babies' digestive health, promoting "comfort for baby" and reduced crying.
- Similac and Enfamil emphasized their products' advantages for babies' mental development (brain growth and enhanced vocabulary for Enfamil; brain and eye development for Similac).
- Gerber Good Start and Enfamil promoted their scientific formulas, and Enfamil stated that it is the "#1 brand" recommended by pediatricians.

### Toddler milk and nutritional supplements

- Enfagrow toddler milk and Pediasure emphasized similar messages in their advertisements. Both brands described benefits to children's mental performance, and presented their products as a solution to picky eating. For example, one Enfagrow ad stated, "85% of brain growth happens in the first three years, which is why it's important that children get DHA. Enfagrow Toddler has DHA, which toddlers may not be getting in their diets."
- Pediasure and Enfagrow also claimed to be the "#1 brand" recommended by pediatricians.

### Digital marketing

The brands in our analysis tended to place less emphasis on internet advertising, spending \$1.2 million in 2015. However, these numbers do not include advertising spending or visitors to websites on mobile devices, which was not available through comScore.

- Just three websites offered by the companies in our analysis had enough internet visitors in 2015 to measure: Enfamil.com (promoting Enfamil infant formula and Enfagrow toddler milk brands), Similac.com (promoting its infant formula and toddler milk), and Gerber.com (for Gerber baby food, Gerber Graduates toddler food, and Gerber Good Start infant formula brands).
- Similac, Gerber, and Enfamil/Enfagrow (combined) also placed the most banner ads on third-party websites, averaging approximately 16 to 17 million ad views per month each in 2015. Similac alone spent \$1 million on internet advertising in 2015.
- Additional baby food brands – Happy Family, Plum Organics, Earth's Best Organic, Beech-Nut, and Ella's Kitchen – advertised on third-party websites in 2015, but purchased little or no advertising in other media.

All brands in our analysis also utilized social media marketing in 2015, including company-sponsored accounts on various social media platforms (Facebook, Twitter, Instagram, Pinterest, and YouTube) and posts on mom blogs.

- In social media, brands frequently featured experts offering advice for parents on healthy eating, sleeping, and breastfeeding.
- Companies commonly provided incentives to mom bloggers to post about their brands and invited posts from "regular" moms to submit pictures or share their stories on other social media platforms, spreading their messages virally.
- One extensive campaign sponsored by Similac – #EndMommyWars – featured entertaining but controversial videos that garnered more than 20 million views on Facebook and YouTube, supported by sponsored posts on mom blogs and Facebook posts inviting mothers to join the "Sisterhood of Motherhood."
- Other common messages on social media platforms and mom blogs included contests, coupons, and invitations to join loyalty programs to reduce the cost of baby food and infant formula.
- Notably, marketing for infant formula on the internet and social media did not include the disclaimers that appeared on TV and magazine advertisements and product packages, including that breastfeeding is best for baby and that parents should consult a pediatrician before use.

### Marketing to Hispanic and black parents

Just three brands in our analysis invested in Spanish-language TV advertising in 2015, but they allocated a substantial proportion of their advertising budgets to this medium.

- In total, Enfagrow and Nido toddler milk and Pediasure nutritional supplement spent approximately \$16 million.
- Spanish-language TV advertising represented 25% of Pediasure TV advertising spending, 54% of Enfagrow TV advertising, and 100% of Nido advertising. By comparison, a previous analysis showed that the most highly advertised food and beverage brands allocated on average just 8% of their TV advertising budgets to Spanish-language TV.<sup>31</sup>
- These three brands also increased their Spanish advertising from 2011 to 2015. Enfagrow spent the most in 2015 – almost \$7 million in Spanish-language advertising, more than one-half of its total TV advertising spending. Notably Enfagrow did not advertise at all prior to 2013. Pediasure Spanish-language advertising also increased by 74%, and Nido advertising increased by 21%.
- Enfagrow, Nido, and Pediasure used similar messages in their Spanish-language advertising, emphasizing that their products help fill the gaps in young children's nutrition and promote children's growth and brain development.

Although marketing that recognizes the importance of Hispanic consumers is laudable, advertising for sugar-sweetened drinks targeted to Hispanic parents raises public health concerns due to higher rates of overweight and obesity

among Hispanic children and may contribute to health disparities affecting Hispanic communities.<sup>32</sup>

However, there was little evidence of marketing targeted to black parents in 2015.

- The brands in our analysis spent just over \$1 million in black-targeted TV advertising in 2015, but only Pediasure, Gerber baby food, and Gerber Good Start infant formula allocated a noticeable amount of their total TV advertising budgets to black-targeted TV (ranging from 2-5%).
- Advertising on black-targeted TV also declined from 2011 to 2015. In 2011, the brands in our analysis spent \$3.5 million (3.5 times the amount spent in 2015) to advertise on black-targeted TV, including Enfagrow toddler milk and Enfamil infant formula, as well as Pediasure and Pediasure Sidekicks.

## Conclusions

The nutritional quality of all baby and toddler foods in this analysis, with the exception of snacks, was very high. Beech-Nut and Gerber baby food also marketed their products in a way that supported most expert recommendations on best practices for feeding infants. In addition, traditional advertising for infant formula declined substantially from 2011 to 2015.

However, we also found many examples of marketing messages that imply that commercially prepared baby and toddler food, infant formula, toddler milk, and nutritional supplements are nutritionally superior and/or provide developmental advantages compared with breastmilk or whole milk and table food for toddlers. Common marketing themes also presented commercial products as a “solution” to normal stages of children’s development, such as crying and not sleeping through the night for babies or picky eating for toddlers. Furthermore, this marketing often promoted products that experts do not recommend serving to young children – including nutritionally poor snacks, toddler milk, and energy-dense nutritional supplements – and implied that these products are beneficial for most young children. Many do not support the development of adequate dietary behaviors, acceptance of the family’s diet, and healthy food preferences, particularly fruits and vegetables.

## Recommendations

Additional research is required to understand how often parents serve the marketed products to their young children, why parents serve these products, and whether the marketing affects parents’ understanding and attitudes about feeding practices that will lead to their children’s good health and nutrition. In particular, research is needed to determine whether claims on product packages and in advertising misleads parents to believe that products benefit their children in ways that are not supported by the scientific evidence. Additional research into healthy nutrition and development of healthy food and dietary messages is especially timely to help inform the expansion of the Dietary Guidelines for Americans

to include infants and toddlers up to age 2 beginning with the 2020-2025 edition.<sup>33</sup>

Policy makers, health professionals, and the public health community also have the opportunity to take action to address information conveyed through marketing for baby and toddler food and drink products that may not support expert recommendations for feeding young children.

## Policymakers

- The United States could follow the lead of 135 other countries and the U.S. Congress could pass laws consistent with WHO guidance to address aggressive promotion of breastmilk substitutes.<sup>34</sup> Provisions in the original WHO Code<sup>35</sup> and the recent WHO Guidance<sup>36</sup> would curtail all marketing for infant formula, toddler milk, and baby food for children under 6 months.
- Regulators should ensure that all messages on product packaging and in advertising are truthful and not misleading. In addition to its proposed guidance on structure/function claims on infant formula packaging,<sup>37</sup> the U.S. Food and Drug Administration (FDA) could also regulate structure/function claims on toddler milk products, as well as direct comparisons between infant formula and breastmilk and other claims that serve to discourage breastfeeding. The U.S. Federal Trade Commission (FTC) should similarly regulate claims made in advertising. State attorneys general can also take action to stop manufacturers from making misleading claims on product packaging and in their marketing messages.
- The United States Department of Agriculture (USDA) could use WIC’s considerable purchasing power and leverage<sup>38</sup> to require WIC suppliers to create infant formula labels free from unnecessary marketing messages and refrain from other questionable marketing practices.
- Current government-sponsored child nutrition education programs through WIC, SNAP, CACFP, and Head Start could begin to address the messages that parents receive through marketing for baby and infant food and drinks and help correct parents’ misunderstanding of these messages.

## Health professionals

- Pediatricians and other health providers can ask caregivers about their provision of marketed products to babies and toddlers, in addition to discussions about breastfeeding and infant formula. In many cases, they will be able to counsel parents that these products may be unnecessary for their child and not worth the added expense.<sup>39</sup>
- Healthcare providers serving Hispanic communities in particular should be aware of the extensive marketing for toddler milk and nutritional supplement brands aimed at Hispanic mothers.
- Healthcare professionals can also file complaints through the Better Business Bureau’s National Advertising Division system about misleading information in advertising,

including the lack of reliable scientific evidence to support many of the claims about benefits for their children.<sup>40</sup>

### Advocates

- Advocates for children's health can help raise awareness about common marketing practices used to encourage purchases of baby and toddler food and drinks, including challenging the nutrition advice provided by companies' paid experts, utilizing social media and mom blogs to help counteract these messages, and calling for consumer protection actions to address misleading information conveyed through marketing.
- Advocates could also encourage the food industry to expand the Children's Food and Beverage Advertising Initiative (CFBAI) self-regulatory program for improving

food advertising to children<sup>41</sup> to incorporate marketing of all products intended for children's consumption, including baby and toddler food and drinks.

Manufacturers of food and drinks intended for babies and toddlers should support parents' efforts to raise healthy children. They should discontinue marketing that promotes products that health professionals have determined are not necessary for most young children, messages that imply that infant formula and nutritionally poor products are beneficial for children's development, and other marketing that does not support expert recommendations for encouraging lifelong healthy dietary preferences and eating habits. This marketing undermines public health efforts to create a culture of health for our youngest and most vulnerable children.

Early childhood is a critical time for the development of healthy food preferences and eating habits that carry into adulthood. In this report, we examine the marketing of baby and toddler food and drinks to parents and whether this marketing supports health professionals and the public health community in their efforts to encourage parents to feed their children a healthful diet.

Birth to 2 years, is a critical period for establishing lifelong and healthy dietary preferences and preventing childhood obesity.<sup>1</sup> The World Health Organization (WHO) recommends that newborns be fed breastmilk exclusively for the first six months.<sup>2</sup> The American Academy of Pediatrics (AAP) recommends exclusive breastfeeding until around 6 months, but also advises that babies may be ready for some solid food (e.g., iron-fortified infant cereal) by 4 to 6 months.<sup>3</sup> Once introduced to solid foods, young children's diets should include varied and positive exposures to the tastes and textures of fruits and vegetables.<sup>4,5</sup> In addition, consumption of high amounts of added sugar, salt, and fat is discouraged in infants and young children.<sup>6,7</sup> Following these recommendations encourages healthy dietary preferences later in life, supports healthy growth, and helps to prevent obesity and other diet-related diseases in children.<sup>8,9</sup>

However, research on the diets of babies and toddlers (up to age 3) found that three out of five infants and one in five toddlers do not consume any vegetables in a given day.<sup>10,11</sup> Furthermore, young children regularly consume foods high in added sugar, salt, and fat, including fried foods, sweet and salty snacks, and sugary drinks. In addition, the prevalence of children 2 to 5 years old with obesity in the United States has risen from 5% in 1970 to 9.4% in 2013-2014.<sup>12</sup> While obesity rates are beginning to decline in this age group, an estimated 8% of U.S. children under the age of 2 are predisposed to have obesity.<sup>13</sup> These trends disproportionately affect children of color. Hispanic 2- to 5-year-olds have rates of obesity five times higher than their non-Hispanic white peers, and black children have rates three times higher than white children.<sup>14</sup> Poor nutritional quality during the first years of life has also been linked to the development of hypertension, Type 2 diabetes, and other diet-related diseases later in life.<sup>15</sup> In addition, young children with obesity are significantly more likely to have obesity as adults.<sup>16</sup>

Therefore, it is critical that the information parents receive about feeding their children, including the marketing of food and drink products intended for babies and young children, should reflect advice from health professionals about helping children grow up healthy. In this report, we analyze the nutritional quality and other characteristics of food and drink products marketed to parents for their babies and toddlers (up to age 3). In addition, we examine the messages used to promote these products, and evaluate how well they correspond to expert advice about feeding young children.

## Baby and toddler food and drink marketing in the United States

Sales of baby and toddler food and drinks in the United States reached an estimated \$6.5 billion in 2013.<sup>17</sup> Seventy-one percent of these sales went to formula products, which include infant formula and toddler milk (manufacturers refer to both product categories as "formula"). Another 26% of sales were for baby food and snacks (including products marketed for toddlers 1 to 3 years old). The remaining 3% of baby food sales were for juice and electrolyte products for children under age 3. Three companies dominate the baby food market. In 2014, Nestle S.A.'s Gerber brand captured 34% of the market, followed by Abbott (maker of Similac and PediaSure) at 28%, and Mead Johnson Nutrition (maker of Enfamil and Enfagrow) at 25%. Private label brands and brands from other food and beverage companies comprised just 13% of total sales.

However, these companies face challenges to continuing to grow their business. First, there is a limited number of children under age 3 to consume their products. Second, the percentage of mothers in the United States choosing to breastfeed their newborn babies is increasing, from 71% in 2000 to 79% in 2011.<sup>18</sup> In response, one market research company recommends marketing strategies such as developing formula that more closely mimics breastmilk, persuading parents to serve commercial baby food instead of "adult" food by highlighting the concentration of nutrients in their products, and providing on-the-go products that make feeding babies more convenient.<sup>19</sup> Other recommended strategies include offering money-saving coupons (noting parents' concerns about the high cost of infant formula especially) and expanding higher priced organic products. Through these types of marketing strategies, sales of formula are projected to grow by 35% from 2013 to 2019, while sales of baby food and snacks are projected to grow by 347%. These rates far surpass the 6.7% projected annual growth in the number of U.S. children under age 3.<sup>20</sup>

## Concerns about the role of marketing

This report is not the first to examine the potential influence of marketing on what and how parents feed their young children. Previous research has examined a number of issues, including the nutritional profile of baby and toddler food and drinks, as well as marketing messages that may misinform parents about optimal practices when feeding babies and young children.

For example, various studies have documented the poor nutritional quality of some baby and toddler foods. An extensive analysis of 1,047 products sold in the United States (using a 2012 nutrient database) found that 72% of toddler dinners were high in sodium, and that the concentration of sodium in infant and toddler snacks was comparable to that of potato chips.<sup>21</sup> This study also found that more than one-half of infant ready-to-serve mixed grain and fruit products contained at least one added sugar, with more than 35% of their calories



derived from total sugar. Another nutritional analysis of 240 baby and toddler foods sold in the United States found that 58% had high levels of sodium and/or a high proportion of calories from sugar. Almost one-half of the products examined derived 20% or more of their calories from sugar.<sup>22</sup> As in the first study, toddler meals contained the highest sodium content.

### Marketing messages that may misinform parents

Researchers and advocates have also examined issues regarding marketing messages for baby and toddler food and drinks that may misinform parents about best feeding practices. Potentially misleading messages include those that serve to discourage breastfeeding, promote toddler milk (also known as follow-up or toddler formula), and lead parents to infer that commercial infant formula and baby food products have benefits over breastmilk and foods that parents prepare themselves.

**Discouraging breastfeeding.** Two studies found that mothers exposed to infant formula marketing, such as free formula samples upon hospital discharge after birth, were less likely to initiate breastfeeding or more likely to breastfeed for a shorter period of time than mothers not exposed.<sup>23,24</sup> Another study assessed the use of the words “breastmilk,” “human milk,” and “breastfeeding” in 42 ads for infant formula. Researchers found that 89% presented breastmilk and infant formula in the same sentence. The authors concluded that this practice would confuse parents about the similarities and differences between formula and breastmilk.<sup>25</sup> A recent analysis of social media posts from infant formula brands found that posts frequently focused on the nutrients in formula, positioned formula as a solution for combating colic, and explicitly compared infant formula with breastmilk.<sup>26</sup> In addition, print media generally tends to portray breastfeeding as less convenient, while formula feeding is not problematic.<sup>27</sup> Furthermore, marketing that promotes some baby food products may discourage parents from following recommendations to wait until 6 months to introduce solid foods. For example, a recent content analysis of 400 ads for infant and toddler foods found that 43% of the products were intended for babies at 4 months old.<sup>28</sup>

**Confusion about toddler milk.** There is evidence that marketing of toddler milk products intended for children older than 12 months may mislead and confuse parents about the differences between toddler milk and infant formula. One study found that companies market infant formula (i.e., for babies younger than 12 months) and toddler milk as part of the same line of products, with similar labels, colors, and logos.<sup>29</sup> Companies also present toddler milk line extensions (i.e., use of an already existing brand name for a new product in the same product category) in larger text than the text that identifies the correct product category (i.e., infant formula, toddler milk). This marketing practice may encourage consumers to transfer what they already know about an

existing product (i.e., infant formula) to the new product line extension (i.e., toddler milk). Another study demonstrated that mothers had difficulty differentiating between infant formula, supplementary formula (i.e., formula designed for ages 6 months and up to complement weaning), and toddler milk, which are collectively referred to as “formula” in advertisements.<sup>30</sup> Similarly, in focus groups with mothers, 12 of the 15 participants used the terms “formula,” “infant formula,” or “baby formula” to describe toddler milk products.<sup>31</sup> Notably, the AAP does not recommend serving “toddler formula” to young children, citing the additional cost and no proven advantages over whole milk for 1- to 2-year-olds.<sup>32</sup>

**Inferences about product benefits.** Research has shown that baby and toddler food and drink advertisements may lead parents to infer that these products will benefit their young children compared with breastfeeding or non-commercial foods. In an analysis of advertisements for formula and complementary food products, almost 99% used rational appeals (e.g., claims about nutrition and child health benefits), while 20 to 50% also used emotional appeals (e.g., images of smiling infants and parental love).<sup>33</sup> In the analysis of formula ads cited earlier, more than one-half included at least one health statement, averaging 1.6 such statements per ad.<sup>34</sup> Common statements included the products’ ability to aid in brain, eye or vision, and immune system development, which was supported by the addition of nutrients found in breastmilk, such as DHA, as well as probiotics and/or prebiotics. Only seven of the 42 ads examined referenced a supporting clinical study. In focus groups, usage of scientific and technical language increased formula brands’ legitimacy and was especially persuasive for mothers in choosing a particular brand of formula.<sup>35</sup>

In a comprehensive review of the research on ingredients in infant formula, the Institute of Medicine concluded that the addition of nutrients found in breastmilk (e.g., DHA, ARA) to infant formula are not essential and may even be detrimental if the proportion versus other nutrients is inadequate.<sup>36</sup> Furthermore, researchers cite a lack of evidence to support benefits to babies from minor changes in protein content, lactose reduction, soy or hydrolyzed proteins, probiotics, or prebiotics of infant formula, such as reduced fussiness or crying.<sup>37</sup> A recent commentary in the *Journal of Pediatrics* discussed parents’ misperceptions that formulas are extensively tested before being marketed to consumers, leading consumers to believe that their advertised health benefits have been proven.<sup>38</sup> However, the scientific evidence does not support the advertised properties of some specialty formulas, including newborn formulas, breastfeeding supplements, low-lactose and prebiotic/probiotic formulations, and “gentle” or “sensitive” varieties that imply benefits for babies with colic.

Some misleading statements used in advertising for foods intended for young children have also led to consumer protection actions. In 2013, the New York State Office of the Attorney General reached a settlement with Abbott,

the makers of Pediasure Sidekicks nutritional supplement, about a misleading claim in its advertising.<sup>39</sup> Abbott agreed to discontinue its “You are what you eat” advertising, which conveyed the impression that consuming the product makes children more energetic and active. In 2015, the Center for Science in the Public Interest announced agreements with Plum Organics and Gerber to discontinue their misleading practice of using product names that do not accurately reflect the products’ ingredients, such as Kale, Apple, & Greek Yogurt in which kale is the fourth ingredient (after apple puree, water, and pasteurized yogurt).<sup>40</sup>

### Guidance on marketing of baby food and drinks

In 1981, the WHO established the International Code of Marketing for Breast-Milk Substitutes (ICMBS) to help address a worldwide decline in breastfeeding and “aggressive and inappropriate” marketing of breastmilk substitutes, including food products that compete with breastfeeding.<sup>41</sup> The Code recommends that national governments prohibit marketing practices that serve to discourage breastfeeding (see **Table 1**). To date, 39 countries have passed legislation incorporating

most of the key provisions, and an estimated 135 countries have adopted some key provisions.<sup>42</sup> However, the United States has not enacted any of these recommendations. In May 2016, the WHO ratified additional guidance that specifically addresses new forms of marketing for infant formula, as well as marketing of toddler milk and food products for infants and toddlers.<sup>43</sup>

In the United States, the government does not regulate the marketing of baby food and drink products and, as noted, has not adopted any of the WHO ICMBS provisions. In recognition that infant formula requires more regulation than other foods, the U.S. Food & Drug Administration (FDA) does require that ingredients in infant formula be recognized as safe for infant consumption.<sup>46</sup> The FDA also requires formula to contain minimum amounts of certain nutrients per 100 calories, with maximum levels when appropriate.<sup>47</sup> However, the FDA does not review the scientific evidence to support manufacturer reformulations of the ingredients in their infant formula, although as noted earlier parents assume that these claims have been tested and proven.<sup>48</sup> As with all food products, the FDA also regulates infant formula labeling, including claims.<sup>49</sup> In response to concerns about structure/function claims (i.e., claims that a product ingredient benefits the normal

**Table 1.** Key provisions of WHO guidance on marketing infant formula and baby food

<b>WHO International Code of Marketing for Breast-Milk Substitutes (ICMBS) (1981)<sup>44</sup></b>
<ul style="list-style-type: none"> <li>■ Informational and educational materials aimed at educating mothers on infant feeding should state the superiority of breastfeeding, the difficulty of reversing the decision not to breastfeed, and recommendations on the proper use of infant formula.</li> </ul>
<ul style="list-style-type: none"> <li>■ Labels of formula products should provide only the necessary information and should not discourage breastfeeding.</li> </ul>
<ul style="list-style-type: none"> <li>■ Neither the container nor the label should contain pictures of infants or phrases that idealize the usage of infant formula.</li> </ul>
<ul style="list-style-type: none"> <li>■ The messages on product labels should be easily readable and understandable to the person acquiring it.</li> </ul>
<ul style="list-style-type: none"> <li>■ There should be no advertisement or promotion to the general public of products within the scope of the code.</li> </ul>
<ul style="list-style-type: none"> <li>■ Manufacturers and distributors should not provide directly or indirectly sample products to pregnant women or members of their families.</li> </ul>
<b>WHO Guidance on Ending the Inappropriate Promotion of Foods for Infants and Young Children (2016)<sup>45</sup></b>
<ul style="list-style-type: none"> <li>■ Products that function as breast-milk substitutes should not be promoted. A breast-milk substitute should be understood to include any milks (or products that could be used to replace milk, such as fortified soy milk), that are specifically marketed for feeding infants and young children up to the age of 3 years (including follow-up formula and growing-up milk).</li> </ul>
<ul style="list-style-type: none"> <li>■ Messages should always include a statement on the importance of continued breastfeeding for up to two years or beyond and the importance of not introducing complementary feeding before 6 months of age.</li> </ul>
<ul style="list-style-type: none"> <li>■ Messages should not include any image, text or other representation that might suggest use for infants under the age of 6 months (including references to milestones and stages).</li> </ul>
<ul style="list-style-type: none"> <li>■ The packaging design, labelling, and materials used for the promotion of complementary foods must be different from those used for breast-milk substitutes so that they cannot be used in a way that also promotes breast-milk substitutes (for example, different color schemes, designs, names, slogans, and mascots other than the company name and logo should not be used).</li> </ul>
<ul style="list-style-type: none"> <li>■ Companies that market breast-milk substitutes should refrain from engaging in the direct or indirect promotion of their other food products for infants and young children by establishing relationships with parents and other caregivers (for example through baby clubs, social media groups, childcare classes and contests).</li> </ul>

structure or function of the human body, such as crying, mental performance, or eye health) on infant formula labels, in September 2016 the FDA published a draft recommendation that would require manufacturers to substantiate these claims with scientific evidence.<sup>50</sup> Notably, the FDA does not have this requirement for food products intended for older children or adults.

Manufacturers of infant formula and toddler milk (all are considered to be breastmilk substitutes by WHO) have made different levels of commitment to the WHO ICMBBS and its recent guidance on ending the inappropriate promotion of foods for infants and young children. Nestle pledges to adhere to the WHO Code wherever it has been implemented by national governments.<sup>51,52</sup> Additionally, Nestle has its own policy that applies to countries with less strict or no regulations. Under this policy, Nestle infant product labels must state that breastmilk is best for babies, and the company says it will not promote complementary foods for infants younger than six months. Abbott and Mead Johnson Nutrition belong to the International Association of Infant Food Manufacturers (IFM), a non-profit, non-governmental organization representing global manufacturers of products for infants and children.<sup>53</sup> IFM members pledge to adhere to the WHO recommendation to promote exclusive breastfeeding during the first six months of life. Specifically, IFM members pledge that they will not, a) make claims or suggest in marketing, informational, and educational materials or elsewhere that covered products are equivalent or superior to breastmilk; b) present covered products in a way that discourages caregivers from feeding breastmilk to their infants; or c) market complementary foods as breastmilk substitutes, and, unless applicable law prescribes otherwise, market complementary foods for infants up to six months of age. Notably, the IFM does not support the new WHO Guidance on inappropriate promotion of foods for infants or young children.<sup>54</sup>

Infant formula manufacturers also participate in industry self-regulation of national advertising through the Better Business Bureau's National Advertising Division (NAD). Since 2000, infant formula manufacturers have filed 17 complaints against competitors' "inaccurate and deceptive" advertising.<sup>55</sup> Many of these disputes involved comparing infant formula to breastmilk, and analysis of NAD decisions reveals that standards for supporting these claims has weakened considerably over time.

## This report

The purpose of this report is to highlight best practices and identify opportunities for companies to improve their products and marketing practices in ways that help parents raise healthy

children. We quantify the nutrition content and marketing of baby and toddler food and drink products (referred to collectively as baby food). We utilize the definition of baby food from the World Health Organization, which refers to both foods and beverages "that are marketed as being suitable for infants and young children up to 3 years."<sup>56</sup> We examine two categories of food products (baby food and toddler food, including snacks), and three categories of drink products (infant formula, toddler milk, and nutritional supplement). We define toddler food and drinks as products marketed for consumption of children between 12 months and 3 years.

This report documents differences by baby and toddler food and drink category, company, and brand, including changes in the past five years when available. These analyses include:

- Nutrition content and nutritional quality of baby and toddler food and drink products;
- Marketing messages on product packages and other packaging issues;
- Advertising spending in all media, TV advertising exposure (primarily viewed by women), and messages and other content of magazine and TV advertisements;
- Marketing in digital media, including visits to company websites, display advertising on third-party websites, and marketing in social media on social media platforms, YouTube, and "mom blogs;" and
- Targeted marketing of baby and toddler food and drinks to Hispanic and black parents.

The nutrition and packaging analyses examine baby and toddler food and drink products offered by 13 brands from six companies with \$100,000 or more in advertising spending in 2015. All marketing analyses examine these same brands, as well as additional brands with notable advertising prior to 2015. Product nutrition information was obtained in June 2016 through company websites or by contacting company representatives. Syndicated market research data was obtained from Nielsen for 2011 through 2015 and from comScore for 2015. Researchers collected additional data on brand marketing practices from company websites, social media sites, packaging of products in the supermarket, and through content analyses of advertisements.

The findings in this report evaluate how companies' marketing of baby and toddler food and drinks reinforces or contradicts expert advice on optimal feeding practices to promote young children's long-term health. We highlight positive findings and document products and messages that may not communicate best practices to parents.

## Baby food market

### Baby and toddler food and drinks

#### Definitions

Baby and toddler food and drinks	Food and drinks that companies indicate are specifically intended for babies or children under age 3.
Category	Type of baby or toddler food or drink (e.g., infant formula, toddler food).
Sub-category	Subset of a food category that describes the texture, type of ingredients, and/or time of consumption (e.g., pureed single food group, textured mixed food, grain-based snack).
Company	The company that owns the brand, as listed on the product package or the official brand website.
Brand	The main marketing unit for each product.
Stage	Designation of a variety that indicates the age group the product is intended for, as defined by the company, and typically included in the product name (e.g., Beech-Nut Stage 1 for babies at about 4 months, Gerber 1st Foods for babies that are “supported sitters”).
Variety	A subset of products within a brand, defined by the stage, sub-category, differences in packaging type (e.g., pouch vs. jar), and/or other features (e.g., organic vs. natural fruit puree).
Product	Each specific flavor or modification of a variety.

In this section we describe the baby and toddler food and drink products offered by U.S. companies advertising these categories. Our analysis includes all brands from companies with \$100,000 or more in total advertising spending on baby and toddler food and drinks in 2015. In some sections, we also include brands from companies with little or no advertising in 2015, but with notable marketing in previous years.

In total, we examined 371 baby and 148 toddler *food* products offered by four companies and six brands. Due to

the variability of products within brands, we assigned all baby and toddler food to one of six sub-categories that describe the texture and/or type of ingredients in the food. We also analyzed 42 baby and toddler *drink* products offered by five companies and seven brands. These drinks belonged to one of three categories: infant formula, toddler milk, and nutritional supplement. This analysis does not include baby juice, refrigerated yogurt, or cereal products.

## Baby and toddler food

### Categories and sub-categories

#### Definitions

Baby food	Food products that companies indicate are specifically intended for infants 0 to 12 months old.
Toddler food	Food products that companies indicate are specifically intended for children 1 to 3 years old.
Pureed single food group	Fruits and vegetables ground, pressed, blended, or sieved to the consistency of a soft creamy paste or thick liquid. For this analysis, fruits and vegetables are considered to be one food group.
Pureed mixed food	Fruits, vegetables, and other ingredients ground, pressed, blended, or sieved to the consistency of a soft creamy paste or thick liquid. These products consist mainly of fruits and vegetables plus grain or dairy ingredients.
Textured mixed food	Food ground, pressed, or blended to the consistency of a thick puree with lumps or small pieces that require very little chewing. These products consist mainly of fruits and vegetables plus grain or dairy ingredients.
Bitesize food and meals	Products consisting of pieces of food small enough to be eaten in one mouthful and require chewing, typically eaten using fingers (e.g., fruit or vegetable cubes, small pasta pieces).
Grain-based snacks	Food with grains as main ingredients that are customarily consumed on their own outside of main meals and are easily portable.
Fruit-based snacks	Food with fruits as main ingredients that are customarily consumed on their own outside of main meals and are easily portable.



**Table 2.** Baby and toddler food varieties and products by company and brand

Company	Brand	Baby food		Toddler food	
		# of varieties	# of products	# of varieties	# of products
Nestle S.A.	Gerber	11	132	8	30
Campbell Soup Company	Plum Organics	9	48	8	25
Nurture Inc.	Happy Baby	14	62	n/a	
Hero AG	Beech-Nut	13	129	n/a	
Nestle S.A.	Gerber Graduates	n/a		13	63
Nurture Inc.	Happy Tot	n/a		9	30

Source: 2016 Rudd Center product analysis

The baby food category had the most products: 371 products and 47 varieties offered by four of the six food brands in our analysis (see **Table 2**). The toddler food category included 148 products and 38 varieties from four brands. Gerber Graduates did not offer baby food, and Beech-Nut did not offer toddler food.

All six of the analyzed baby and toddler food brands offered products in multiple sub-categories (see **Table 3**). Most of Beech-Nut's products were pureed single food group and mixed food, and it was the only brand that did not sell snacks. Gerber offered mostly products in the pureed single food group and mixed food sub-categories of baby food, as

**Table 3.** Baby and toddler food brand varieties by sub-category

Company	Brand	Varieties by sub-category					
		Pureed single food group	Pureed mixed food	Textured mixed food	Bitesize food and meals	Grain-based snacks	Fruit-based snacks
<b>Baby food</b>							
Hero AG	Beech-Nut	Stage 1, Classics Stage 1, Naturals Stage 1, Organic Stage 2, Classics Stage 2, Naturals Stage 2, Organic Stage 2, Fruities on-the-go Stage 2, Veggies on-the-go	Stage 2, Classics Stage 2, Naturals Stage 2, Organic	Stage 3, Classics Stage 3, Naturals Stage 3, Organic			
Nestle S.A.	Gerber	1st Foods, Organic 1st Foods 2nd Foods, Organic 2nd Foods 3rd Foods, Organic	2nd Foods, Organic 2nd Foods 3rd Foods, Organic	3rd Foods Lil' Bits			
Nurture Inc.	Happy Baby	Stage 1, Clearly Crafted Stage 2, Clearly Crafted Stage 1, Simple Combos Stage 2, Simple Combos Stage 1, Starting Solids	Stage 2, Clearly Crafted Stage 2, Homestyle Meals Stage 2, Simple Combos	Stage 3, Hearty Meals		Gentle Teethers Rice Cakes Superfood Munchies Superfood Puffs	Coconut Creamies Yummy Yogis
Campbell Soup Company	Plum Organics	Stage 1, Just Fruit Stage 1, Just Veggies Stage 2, Second Blends	Stage 1, Hello Morning Stage 2, Grow Well Stage 2, Second Blends Stage 3, Hello Meals	Stage 3, Hello Dinner		Little Yums Super Puffs	

**Table 3 continued.** Baby and toddler food brand varieties by sub-category

Company	Brand	Varieties by sub-category					
		Pureed single food group	Pureed mixed food	Textured mixed food	Bitesize food and meals	Grain-based snacks	Fruit-based snacks
<b>Toddler food</b>							
Nestle S.A.	Gerber		Grabbers Yogurt Blends		Fruit Pick-ups Lil' Entrees Pasta Pick-ups Veggie Pick-ups	Lil' Beanies Puffs	Yogurt Melts
Nestle S.A.	Gerber Graduates	Grabbers	Grabbers Pudding Grabbers		Lil' Meals Lil' Pastas	Animal Crackers Bitty Bites Cereal Bars Cookies Lil' Biscuits Lil' Crunchies Lil' Twists Lil' Whoos Puffs Waffle Wheels Wagon Wheels	Fruit Melts Veggie Melts Yogurt Melts
Nurture Inc.	Happy Tot	Love My Veggies	Stage 4, Fiber & Protein Stage 4, Super Food Greek Yogurt Plus Super Morning			Fiber & Protein Bars	Happy Munchies Love My Veggies Freeze-Dried
Campbell Soup Company	Plum Organics	Fruit & Grain Mish Mash Mighty 4 Mighty Veggie Super Smoothie			Mighty Mealtime	Mighty 4 Bar Mighty Sticks	Teensy Fruits

Source: 2016 Rudd Center product analysis

well as toddler snacks and bitesize food and meals. Gerber Graduates offered only toddler food, including the most grain-based snack products of any brand. Happy Family (Happy Baby and Happy Tot) and Plum Organics both offered varieties in nearly all baby and toddler food sub-categories. Notably, Happy Baby and Plum Organics were the only brands to offer snacks for babies.

All baby food brands designated different varieties for specific developmental stages, typically according to babies' age in

months. Gerber differentiated its stages by developmental markers (i.e., supported sitter, sitter, crawler). Beech-Nut also offered three different varieties – Classics, Naturals and Organic – within each stage. In some cases, these different varieties contained the same main ingredients (e.g., Beech-Nut Classics apples, Beech-Nut Naturals just honeycrisp apples, and Beech-Nut Organic just apples). Gerber also included Organic varieties of its 1st Foods and 2nd Foods stages. Happy Tot labeled some toddler food as Stage 4.

## Baby and toddler drinks

Categories and sub-categories	Definitions
Infant formula	The Federal Food, Drug, and Cosmetic Act (FFDCA) defines infant formula as “a food which purports to be or is represented for special dietary use solely as a food for infants by reason of its simulation of human milk or its suitability as a complete or partial substitute for human milk.” <sup>1</sup>
Toddler milk	Powdered milk drink supplemented with nutrients and that the company indicates is specifically for toddlers older than 12 months and younger than 3 years. These products are also known as toddler or follow-up formula.
Transition formula	A sub-category of toddler milk that the company indicates is appropriate for both babies younger than 12 months and for older children (e.g., Enfagrow Toddler Transitions for children 9-18 months). These products utilize the infant formula nutrition facts panel.
Nutritional supplement	Products consumed alone as a food or meal, that contain a “dietary ingredient” intended to add further nutritional value to enhance the diet, and that the company indicates is suitable for children younger than 3 years.

We identified nine baby and toddler drink brands offered by five companies in our analysis (see **Table 4**). In this analysis, we excluded specialty formulas intended for infants or toddlers with specific dietary needs (e.g., pre-term infants or protein allergies) and products designed to be added to other food or drinks (e.g., “mix-ins”). Infant formula represented the largest drink category with 18 products. The toddler milk and nutritional supplement categories each had 12 products. Most infant formula brands had multiple varieties designed for different infant feeding needs, including formula for newborns, supplementing breastmilk, and reducing fussiness, gas, or spit-up, as well as soy-based products. Some brands promoted varieties that they claimed were closest to breastmilk (e.g., Enfamil Enspire, Gerber Good Start Gentle). Enfagrow offered one transition toddler milk variety (Toddler Transitions).

**Appendix A** provides a complete list of the baby and toddler

drink brands and varieties included in this analysis and their nutrition content.

Abbott offered the most baby and toddler drink products, including Similac infant formula and toddler milk, and was the only company in this analysis offering nutritional supplement products for children younger than age three, including PediaSure Grow & Gain and PediaSure Sidekicks. Mead Johnson offered 12 products in two categories: Enfamil infant formula and Enfagrow toddler milk (including the only transition formulas in this analysis). Nestle offered eight Gerber Good Start products, also in the infant formula and toddler milk categories. The remaining companies offered just one product in one drink category: Campbell Soup’s Plum Organics infant formula and Nurture Inc.’s Grow & Shine toddler milk.

**Table 4.** Baby and toddler drink brands and varieties by company

Company	Brand (# of products)		
	Infant formula	Toddler milk	Nutritional supplement
Abbott	Similac (4)	Similac (4)	PediaSure Grow and Gain (8) PediaSure Sidekicks (4)
Mead Johnson Nutrition	Enfamil (8)	Enfagrow (4)*	
Nestle S.A.	Gerber Good Start (5)	Gerber Good Start (1) Nido (2)	
Nurture Inc.		Grow & Shine (1)	
Campbell Soup Company	Plum Organics (1)		

\*Includes three transition formula products for older infants and toddlers (9-18 months)

Source: 2016 Rudd Center product analysis

## Nutrition

Nutrition	Definitions
Nutrition information	Serving size (g), calories (kcal), saturated fat (g), total sugar (g), sodium (mg), fiber (g), and protein (g) per serving as provided on the product nutrition facts panel. Medians and ranges are reported for baby and toddler food brands and varieties with multiple products.
Main ingredient	Ingredient listed as one of the first five components of a product, as indicated on the ingredient list of the nutrition facts panel.
NPI score	Measure of the overall nutritional composition of the food based on total calories and proportion of nutrients to encourage and limit. We used a score of 64 or higher to identify a nutritious food, the cut off used to identify nutritious products that can be advertised to children on TV in the United Kingdom.
Added sweeteners	A product is indicated to have added sweeteners when its nutrition facts panel listed any type of sugar, including syrups (agave, corn, cane, brown rice, glucose, and high fructose corn), sugar, dextrose, sucrose, lactose, fructose, and honey.

In this section, we evaluate the nutritional quality of baby and toddler food brands according to the NPI score, a nutrition standard used by regulators in the United Kingdom to identify nutritious products that can be advertised to children. We also compare differences in food brands by sub-category to understand how ingredient complexity relates to nutritional quality, and examine the nutrition content of different drink brands. Finally, we compare the NPI score of baby and toddler food and drink products to equivalent whole foods or foods marketed for older children and adults.

### Baby and toddler food

The five sub-categories ranged from products with simple ingredients and textures (i.e., pureed single food group) to more complex and textured food and snacks. Generally, products increased in complexity and texture with the developmental stage of the child (see **Table 5**). For example, brands offered

textured mixed food for babies and bitesize food and meals for toddlers. Although brands offered products in the remaining sub-categories for both babies and toddlers, the majority of pureed single food group and pureed mixed food products were for babies (93% and 63%, respectively), whereas approximately two-thirds of grain-based and fruit-based snacks were offered for toddlers. The pureed single food group sub-categories included the most products ( $n = 228$ ), followed by the pureed mixed food sub-categories ( $n = 128$ ). The snack sub-categories had the fewest products ( $n = 80$ , combined).

The majority of baby and toddler food products had NPI scores of 64 or higher and qualified as nutritious, including 100% of pureed and textured baby and toddler food products, textured mixed baby food, and bitesize food and meals for toddlers. Median NPI scores for products in these sub-categories were high at 70 for toddler bitesize food and meals, and 76 to 80 for the other sub-categories.

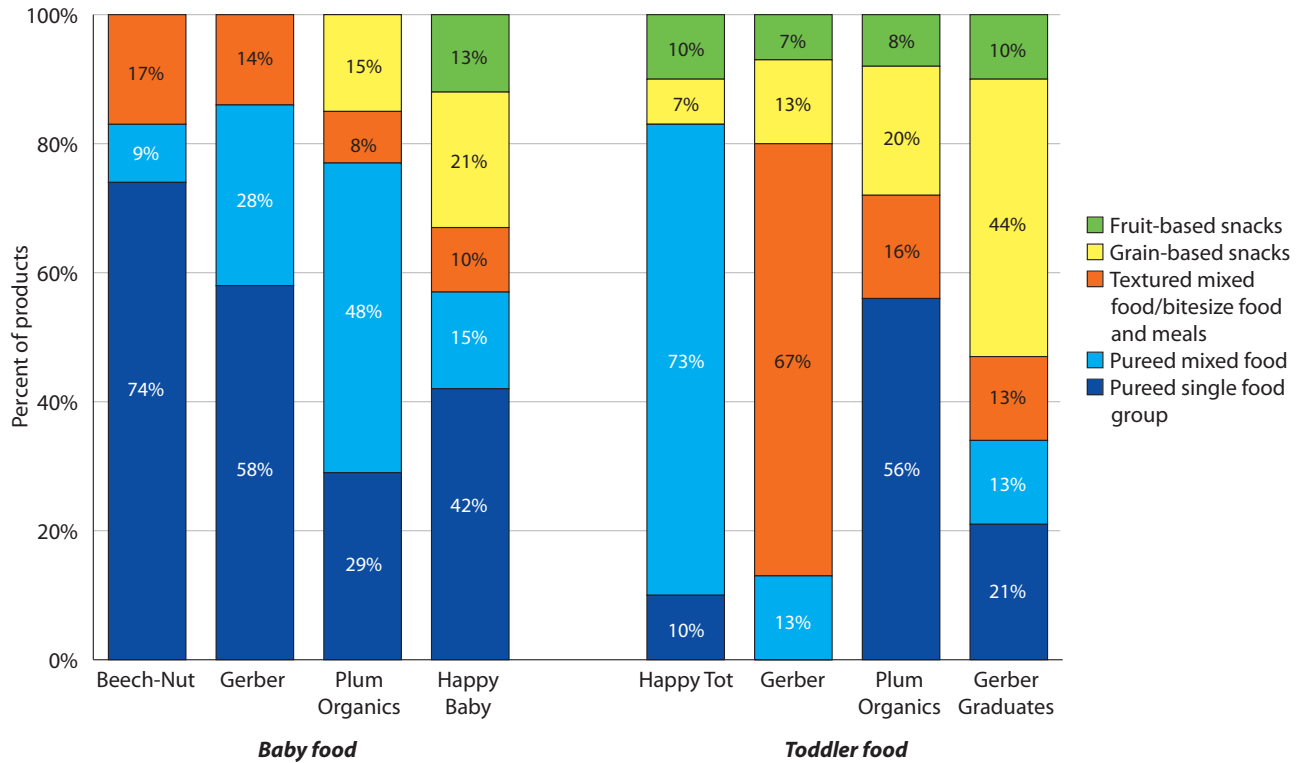
**Table 5.** Nutrition content and NPI score for baby and toddler food by category and sub-category

Category and sub-category	# of products	% nutritious NPI	NPI score	Serving size (g)	Calories (kcal)	Sat fat (g)	Sodium (mg)	Total sugar (g)	Added sweeteners
			Median	Median	Median	Median	Median	Median	% products
<b>Baby food</b>									
Pureed single food group	212	100%	78	99	60	0	5	9	0%
Pureed mixed food	80	100%	76	99	80	0	10	7.5	0%
Textured mixed food	51	100%	78	120	90	0	15	6	0%
Grain-based snacks	20	10%	56	7	25	0	0	1	45%
Fruit-based snacks	8	0%	36	7	30	0	15	4	63%
<b>Toddler food</b>									
Pureed single food group	16	100%	76	120	70	0	5	13.5	0%
Pureed mixed food	48	100%	80	113	80	0	15	11	19%
Bitesize food and meals	32	100%	70	150	120	1	235	3	53%
Grain-based snacks	39	3%	56	7	35	0	25	1	95%
Fruit-based snacks	13	8%	56	7	30	0	20	4	46%

Source: 2016 Rudd Center product analysis

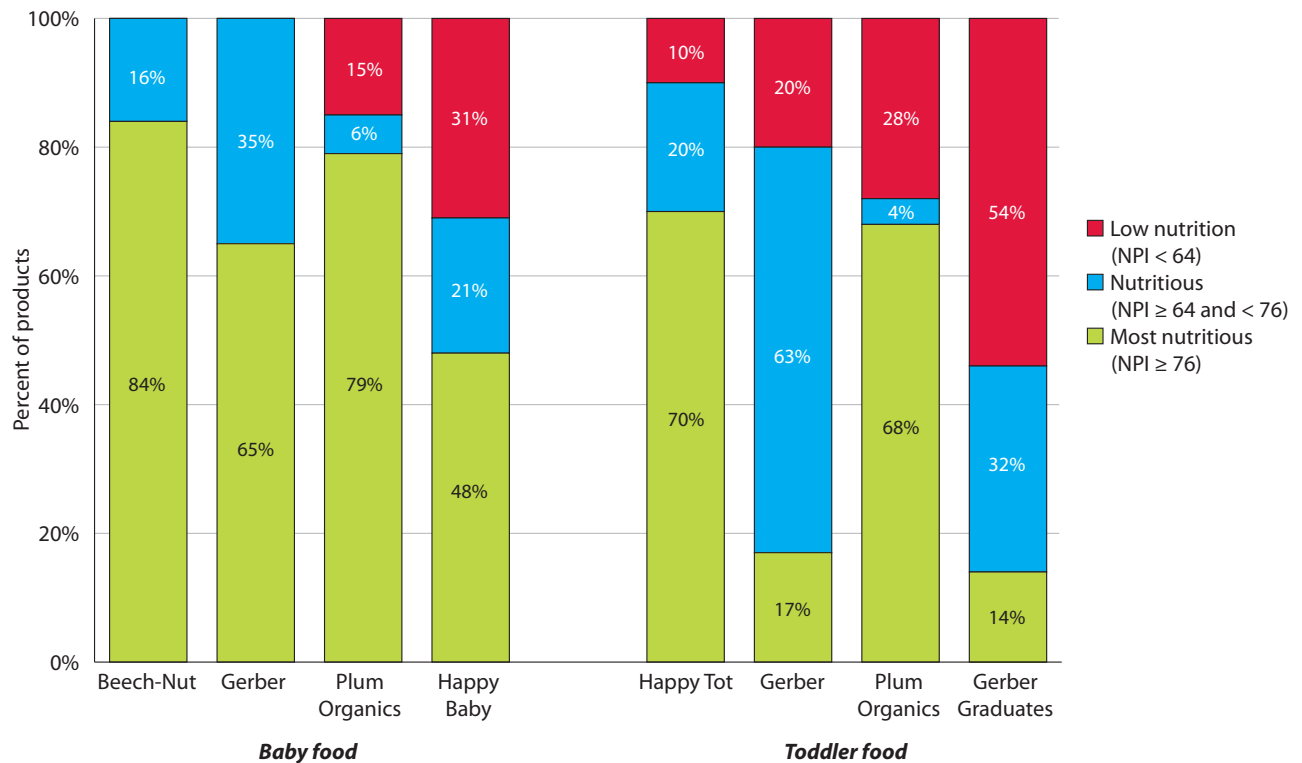


**Figure 1.** Distribution of products within brand by sub-category



Source: 2016 Rudd Center nutrition analysis

**Figure 2.** Distribution of products within brand by NPI score



Source: 2016 Rudd Center nutrition analysis

Baby food products in the pureed single food group, pureed mixed food, and textured mixed food sub-categories tended to be formulated with fewer ingredients, mostly fruits, vegetables, beans, and grains. These products were also low in sodium and did not include any added sweeteners. On the other hand, toddler products were more likely to contain additives, preservatives, and added sweeteners. For example, one-fifth of pureed mixed toddler food products contained added sugar, and the sodium content of bitesize food and meals products presents a concern at 235 mg, which is considered high for one serving at this age.<sup>2</sup> In addition, more than one-half of these products listed added sweeteners as ingredients in their nutrition facts panels.

In contrast to the generally nutritious content of most baby and toddler food products, the majority of fruit-based and grain-based snacks—including those marketed for babies—did not meet the minimum NPI score to qualify as nutritious. With a median NPI score of 36, fruit-based snacks for babies was the least nutritious sub-category. The beneficial nutrients in baby and toddler snacks (e.g., fiber, protein, fruit) did not compensate for their high energy, sodium, and/or sugar densities. Notably, more than 50% of baby and toddler snack products contained added sweeteners, including 95% of toddler grain-based snacks. These sweeteners included sugar, cane sugar, or sucrose, agave or corn syrup, dextrose, and lactose. Four Gerber Graduates products contained high fructose corn syrup.

### Nutrition by brand

As exemplified in the previous section, the nutrition scores of brands largely reflect the proportion of products they offer in each baby and toddler food sub-category (see **Figure 1**). As most baby and toddler food products met the minimum NPI score to qualify as nutritious, we further differentiated the nutrition quality of brands by calculating the percent of products scoring above and below the median NPI score for the nutritious products. For each brand, we identified products in the following three NPI score ranges: “low nutrition” products (NPI < 64, the cutoff for nutritious products), “most nutritious” products (NPI ≥ 76, the median score for baby and toddler food products with a nutritious NPI score), and “nutritious” products (with NPI scores ≥ 64 but < 76) (see **Figure 2**). Overall, 71% of baby food products were in the most nutritious NPI score range, and only 7% were below the nutritious NPI score cutoff. Toddler food products were distributed more evenly, with 35% in the most nutritious NPI score range and 34% below the nutritious NPI score cutoff.

**Baby food.** **Ranking Table 1** presents nutrition information for each brand and variety of baby food in our analysis. Within the baby food category, Beech-Nut consistently offered the most nutritious products. Its products were primarily in the pureed single food group and pureed mixed food sub-categories, and all met the NPI cutoff for nutritious food. Furthermore, 84% ranked in the most nutritious NPI score range. Six Beech-Nut pureed single food group varieties ranked among the 10

highest scoring baby food varieties (including Stage 1 and 2, Organic; and Stage 1, 2, and 3, Naturals). Only two Beech-Nut pureed mixed food varieties (Stage 2, Organic and Stage 2, Naturals) ranked in the bottom half of varieties analyzed.

Although Gerber did not offer any of the 10 most nutritious baby food varieties in our analysis, it was the only other brand with all its baby food products meeting the nutritious NPI score cutoff. In addition, 65% of Gerber baby food products ranked in the most nutritious NPI score range. Notably, the brand did not sell any baby food snacks. Gerber's three most nutritious varieties ranked in the top 20: 1st Foods, Organic, 1st Foods, and 2nd Foods, Organic (all in the pureed single food group sub-category).

Almost eight of 10 Plum Organics baby food products were in the pureed single food group and mixed food sub-categories and fell in the most nutritious NPI score range. Three Plum Organics varieties ranked in the 10 most nutritious baby food products, including Stage 1, Just Veggies/Fruits (ranked 2nd) and Stage 2, Second Blends (ranked 6th). However, 15% of the brand's baby food products were grain-based snacks, which all had NPI scores below the nutritious cutoff. These varieties, Little Yums and Super Puffs, had median NPI scores of 50 and 56, respectively.

Happy Baby had the lowest percentage of baby food products in the pureed single food group and mixed food sub-categories. As a result, it also had the lowest nutrition scores among the baby food brands examined. Less than one-half of Happy Baby products ranked in the most nutritious NPI score range, and 31% scored below the nutritious NPI cutoff. Just one Happy Baby pureed single food group (Stage 2, Clearly Crafted) ranked in the 10 most nutritious baby food varieties, and one other ranked in the top 20 (Stage 1, Starting Solids). Furthermore, Happy Baby offered six varieties of grain- and fruit-based snacks, five with low median NPI scores below 64. Notably, the two lowest scoring baby food varieties in our analysis were fruit-based snacks from Happy Family: Coconut Creamies and Yummy Yogis, with median NPI scores of 44 and 36, respectively.

**Toddler food.** **Ranking Table 2** presents nutrition information for each brand and variety of toddler food in our analysis. Happy Tot had the most toddler food products in the pureed single food group and pureed mixed food sub-categories, and approximately 90% of its products qualified as nutritious, the highest rate of any toddler food brand. Happy Tot also offered four varieties among the 10 most nutritious toddler food, with two pureed mixed food varieties ranking in the top five (Stage 4, Fiber & Protein and Super Foods). Although Happy Tot also offered toddler snacks, just one variety (Happy Munchies) fell below the NPI score cutoff for nutritious food.

The majority of Gerber toddler food products were bitesize food and meals, with a small number of pureed single food group products. Consequently, just 17% of Gerber's toddler products ranked among the most nutritious according to NPI score, although one variety did rank among the 10

most nutritious (Veggie and Fruit Pick-ups). However, 20% of Gerber's toddler food products were in the snack sub-categories and fell below the NPI nutritious score cutoff, including Lil' Beanies, Puffs, and Organic Puffs. Gerber brand Yogurt Melts tied with Gerber Graduates Yogurt Melts for the least nutritious toddler food offered, with very low median NPI scores of 34.

Almost seven of 10 Plum Organics toddler food brand varieties scored among the most nutritious varieties examined. The brand had the two most nutritious toddler food varieties (Super Smoothie and Mighty 4), and two additional varieties that ranked in the top 10 (Mighty 4, Mighty Veggie, and Fruit & Grain Mish Mash), all pureed mixed food. However, 28% of Plum Organics toddler food products did not meet the nutritious NPI score cutoff. The brand's Mighty 4 Mighty Sticks ranked in the bottom three toddler food varieties, with an NPI score of 44.

Of all the brands analyzed, Gerber Graduates offered the least nutritious products, with just 14% of its toddler food products scoring in the most nutritious NPI range. The most nutritious Gerber Graduates varieties were its Grabbers pureed single food group and pureed mixed food products (in pouch packaging), ranking number 10 and 14, respectively, in toddler food varieties. Furthermore, more than one-half of Gerber Graduates products did not qualify as nutritious and could not be advertised to children in the United Kingdom, contributing seven of the 10 lowest scoring varieties in our analysis. Additionally, Gerber Graduates grain-based snacks were the only products in our analysis to contain high fructose corn syrup (Gerber Graduates Cereal Bars, Arrowroot Cookies, and Animal Crackers cinnamon graham). In addition to Gerber Graduates Yogurt Melts (which tied with Gerber Yogurt Melts for lowest scoring product), Gerber Graduates Cereal Bars, Cookies, and Lil' Crunchies also ranked in the seven lowest scoring toddler food varieties, with NPI scores of 50 or below.

## Apples to apples

To place the nutrition scores of baby and toddler food in perspective, we also compared a sample of these products to comparable whole food or packaged food products marketed for older children and/or adults. The NPI scores of pureed single food group varieties were similar to scores of the raw or cooked whole fruit or vegetable (see **Table 6**). It is noteworthy that the NPI scores of simple ingredient products offered by different varieties of the same brand were almost identical.

Baby and toddler pasta products all qualified as nutritious products with NPI scores higher than 64, but these products were comparable in nutritional quality to children's pasta brands (see **Table 7**). When compared side by side, baby and toddler pasta products do not offer any clear nutritional advantage over pasta products for older children.

As noted earlier, most grain-based and fruit-based snacks for babies and toddlers did not qualify as nutritious according to NPI score. Furthermore, many of these products were not more nutritious than similar products marketed for older children and adults (see **Table 8**). For example, Gerber Graduates Lil' Crunchies have the same nutrition score as Cheetos Reduced Fat Puffs, and Gerber Graduates Lil' Twists and Plum Organics Mighty Sticks are less nutritious than Kashi Crackers. As noted earlier, fruit-based yogurt snacks scored the lowest in overall nutrition of the baby and toddler food products analyzed, and they even scored lower than other brands of yogurt/chocolate-covered fruit. Regular Cheerios, a common early finger food for babies, have a higher nutrition score than any finger food marketed for babies or toddlers.

## Baby and toddler drinks

Compared with baby and toddler food, there was less variation in nutrition content of baby and toddler drink brands within the infant formula, toddler milk, and nutritional supplement categories (see **Table 9**). The nutrition content of individual

**Table 6.** Nutrition of single food baby and toddler food versus whole fruits and vegetables

Apples	
Product name	NPI
Beech-Nut Classics, Naturals and Organic apples	78
Raw Apple, no skin	78
Gerber 1st Foods, Organic and 2nd Foods apples	78

Green beans	
Product name	NPI
Beech-Nut Naturals just green beans	88
Cooked Green Beans, without salt	88
Happy Baby Starting Solids green beans	86
Raw Green Beans	86
Gerber, Organic, Organic Pouch green beans	82
Beech-Nut Classics green beans	80

Carrots	
Product name	NPI
Cooked Carrots, without salt	86
Beech-Nut Naturals and Organic just carrots	84
Happy Baby Starting Solids carrots	84
Raw Carrots	82
Beech-Nut Classics sweet carrots	82
Gerber carrots, Organic Pouch mixed carrots	80

Bananas	
Product name	NPI
Raw Banana	78
Beech-Nut Classics and Naturals bananas	76
Gerber Organic Pouch, 1st and 2nd Foods bananas	74
Gerber Graduates Grabbers banana	70

Source: 2016 Rudd Center nutrition analysis

**Table 7.** Nutrition of baby and toddler pasta products versus other brands

Mac & cheese	
Product name	NPI
Plum Organics Mighty Mealtime	76
Gerber Organic mac & cheese with vegetables	74
Gerber mac & cheese with vegetables	72
Kraft Macaroni & Cheese Microwavable original flavor	70
Annie's Classic Macaroni & Cheese	70
Gerber Graduates Lil' Meals mac & cheese	68
Gerber Lil' Bits mac & cheese dinner	68
Gerber Lil' Entrees macaroni & cheese	66

Source: 2016 Rudd Center nutrition analysis

Ravioli	
Product name	NPI
Gerber Pasta Pick-Ups cheese & spinach ravioli	72
Gerber Lil' Entrees cheese ravioli	72
Gerber Pasta Pick-Ups ravioli	70
Gerber Pasta Pick-Ups cheese ravioli	68
Chef Boyardee Cheese Ravioli in tomato & meat sauce	68
Annie's Homegrown Cheesy Ravioli	68
Gerber Pasta Pick-Ups sweet potato & cheese ravioli	68
Gerber Pasta Pick-Ups chicken & parmesan cheese ravioli	66
Campbell's Ravioli's, beef ravioli in meat sauce	64

baby and toddler drink products analyzed is detailed in **Appendix A**. The nutrition panel of infant formula is highly regulated by the FDA and differs from other conventional foods.<sup>3</sup> In addition, the FDA requires infant formula to contain minimum amounts of certain nutrients per 100 calories, with maximum levels when appropriate. Therefore, the nutrient content of different infant formula brands did not vary greatly. The sugar content of infant formula is derived of corn syrup solids and lactose; only Gerber Good Start Soy and Similac Organic infant formula contained sucrose. We did not analyze the NPI scores for infant formulas as the NPI scoring formula gives higher values to products with greater protein and fiber, which are nutrients that should be given to infants with caution. Therefore, infant formulas have relatively low protein content and no dietary fiber.

Compared with infant formula, toddler milk had higher saturated fat and sodium content, as well as more protein. With one exception (Happy Tot Grow & Shine), toddler milk varieties had similar or higher sugar per serving compared with infant formula. Similac Go & Grow had the highest sugar content at 15 grams-per-serving. The sugar content of toddler milk is derived from corn syrup solids and lactose (as found in infant formula), as well as sugar, glucose syrup solids, honey, and corn syrup. Gerber, Nido, and Similac toddler milk contained either sugar or sucrose.

Only Nido, Gerber Good Start Grow, and Happy Tot Grow & Shine met the nutritious NPI scores for drinks, which is 70 or higher. The one transition toddler milk variety in our analysis (Enfagrow Toddler Transitions) had the lowest NPI score (58) of any of the

**Table 8.** Nutrition of baby and toddler grain-based snacks versus other brands

Crackers and cookies	
Product name	NPI
Gerber Graduates Lil' Whoos mild cheddar	56
Happy Baby Gentle Teethers banana & sweet potato	56
BelVita Bites mixed berry	56
Kashi Crackers fire roasted veggie	54
Plum Organics Little Yums blueberry & fig	54
Gerber Graduates Waffle Wheels banana cream	52
Stauffer's Animal Crackers	52
Gerber Graduates Lil' Twists broccoli & cheddar	50
Plum Organics Mighty Sticks apple carrot	48
Gerber Graduates Arrowroot Cookies	48
Nabisco Graham Crackers original	46
Gerber Graduates Banana Cookies	46
Gerber Graduates Animal Crackers, Lil' Biscuits	42

Finger foods	
Product name	NPI
Cheerios original	70
Gerber, Gerber Graduates Organic Puffs	56
Happy Baby Superfood Puffs	56
Plum Organics Super Puffs	56

Chips	
Product name	NPI
Happy Baby Superfood Munchies	68
Gerber Lil' Beans	60
Happy Baby Rice Cakes apple	54
Cheetos Puffs reduced fat	52
Gerber Graduates Lil' Crunchies apple & sweet potato	52
Quaker Popped apple cinnamon	52

Cereal bars	
Product name	NPI
Happy Tot Fiber & Protein Bars	68
Plum Organics Mighty 4 essential nutrition bar	58
Kashi Cereal Bar ripe strawberry	58
Kellogg's Nutri-Grain strawberry	52
Gerber Graduates Cereal Bars	50



**Table 9.** Nutrition content and NPI score for baby and toddler drink brands by category\*

Brand	Variety	# of products	NPI score	Serving size (g)	Calories (kcal)	Sat fat (g)	Sugar (g)	Sodium (mg)	Fiber (g)	Protein (g)
<b>Infant formula</b>										
Enfamil		8		170	100	2.3	11.2	36	0.0	2.3
Gerber Good Start		5		170	100	2.1	11.2	27	0.0	2.2
Similac		4		178	100	1.6	11.2	25	0.0	2.1
Plum Organics		1		169	100	2.1	10.4	24	0.0	2.1
<b>Toddler milk</b>										
Happy Tot	Grow & Shine	1	72	205	140	0.0	6.0	50	0.0	4.0
Nido		2	70	271	160	3.8	13.0	100	0.5	6.0
Gerber Good Start		1	70	205	130	0.5	10.0	50	0.0	4.0
Similac	Go & Grow	4	68	272	150	0.0	15.0	45	0.9	4.0
Enfagrow	Toddler Next Step	1	68	213	160	2.5	11.0	80	0.9	6.0
Enfagrow	Toddler Transitions	3	58	170	100	2.3	10.8	36	0.0	2.6
<b>Nutritional supplement</b>										
Pediasure Sidekicks		4	72	248	150	1.0	17.0	90	3.0	7.0
Pediasure	Grow & Gain	8	68	248	240	1.0	18.0	90	1.0	7.0

\*Medians per serving

Source: 2016 Rudd Center product analysis

drinks analyzed. This product was similar to infant formula, with more saturated fat and less dietary fiber and protein than other toddler milk varieties. This formulation would be healthy for an infant, but not the best choice for toddlers.

We also compared the nutrition content of toddler milk varieties with cow's milk at different levels of fat content, including flavored milk (see **Table 10**). The American Academy of Pediatrics (AAP) recommends children between 1 and 2 years of age drink whole milk.<sup>4</sup> The nutritional quality of specially formulated toddler milk products was not superior to regular whole milk. Both Enfagrow Toddler Next Step and Go & Grow by Similac were comparable in nutrition content and NPI score

to whole milk. However, Enfagrow Toddler Transitions scored even lower than whole chocolate milk.

The two nutritional supplement varieties analyzed (Pediasure Grow & Gain and Pediasure Sidekicks) both had very high sugar, at 17 to 18 grams-per-serving. Pediasure Grow & Gain had the most calories at 240 calories-per-serving, while Pediasure Sidekicks was comparable to toddler milk varieties at 150 calories-per-serving. Although both brands had nutritious NPI scores due to relatively high protein and fiber content, the sugar and calories in these products would be beneficial for sick or undernourished children but not for those at a healthy weight.

**Table 10.** Comparison of toddler milk products and cow's milk\*

Brand and product	NPI score	Calories (kcal)	Sat fat (g)	Total sugar (g)	Sodium (mg)	Fiber (g)	Protein (g)
Happy Tot Grow & Shine	72	68.2	0.0	2.9	24.3	0.0	1.9
<i>Milk, low-fat, fluid, 1% milkfat</i>	72	42.0	0.6	5.2	44.0	0.0	3.4
Nido Fortificada (Fortified)	70	59.1	1.8	4.1	38.8	0.0	2.2
Gerber Good Start Grow	70	63.3	0.2	4.9	24.3	0.0	1.9
<i>Milk, reduced-fat, fluid, 2% milkfat</i>	70	50.0	1.3	5.1	47.0	0.0	3.3
Nido Kinder 1+	70	70.2	0.9	5.5	35.1	0.4	2.2
<i>Milk, whole</i>	68	61.0	1.9	5.1	43.0	0.0	3.2
Enfagrow Toddler Next Step	68	75.0	1.2	5.2	37.5	0.4	2.8
Go & Grow by Similac**	68	55.2	0.0	5.5	16.6	0.3	1.5
<i>Milk, chocolate, reduced-fat</i>	66	78.0	1.2	9.6	66.0	0.7	3.0
<i>Milk, chocolate, whole</i>	62	83.0	2.1	9.5	60.0	0.8	3.2
Enfagrow Toddler Transitions Soy	60	58.7	6.9	1.1	21.1	0.0	1.9
Enfagrow Toddler Transitions	58	58.7	6.3	1.4	21.1	0.0	1.5
Enfagrow Toddler Transitions Gentlelease	58	58.7	6.2	1.4	23.5	0.0	1.5

\*Per 100 grams

\*\*All products have the same nutrient content

Source: 2016 Rudd Center product analysis

## Summary of baby and toddler food nutrition

Our analyses demonstrate considerable variation in the nutrition content and quality of baby and toddler food products, primarily due to nutritional differences between sub-categories. More than 90% of baby food products and almost two-thirds of toddler food products were in the pureed single food group, pureed mixed food, textured mixed food, or bitesize food and meal sub-categories, which all qualified as nutritious according to NPI score. However, toddler food products in these categories were more likely to contain added sweeteners, and toddler bitesize food and meals had relatively high sodium levels. In contrast, the majority of products in the snack sub-categories did not meet the minimum NPI score to qualify as nutritious. Fruit-based snacks for babies had the lowest median NPI scores.

Similarly, differences in nutrition quality of baby and toddler food brands largely reflect the proportion of products they offered in each sub-category. Beech-Nut and Gerber baby food products all had nutritious NPI scores, while 15% of Plum Organics baby food products and 31% of Happy Baby products were snack foods that did not qualify as nutritious choices for babies. Happy Tot had the most nutritious toddler food products, with approximately 90% of its products qualifying as nutritious (primarily in the pureed single food group and pureed mixed food sub-categories). In contrast, 28% of Plum Organics toddler food products and 54% of Gerber Graduates products, all in the snack sub-categories, did not qualify as nutritious according to NPI score. Based on

our analyses, many baby and toddler food and snacks are not superior nutritionally when compared with similar whole foods or products marketed for older children or adults.

There was less variation in nutritional quality between brands in the infant formula, toddler milk, and nutritional supplement drink categories. Most infant formula brands had multiple varieties designed for different infant feeding needs, including for newborns, supplementing breastmilk, and reducing fussiness, gas, or spit-up, as well as soy-based formula. NPI nutritional scoring does not apply to infant formulas. Compared with infant formula, toddler milk had higher saturated fat and sodium content, as well as more protein. However, the AAP recommends that children between 1 and 2 years old drink whole milk, and the nutritional quality of toddler milk brands was not superior to regular whole milk. Toddler milk products also contained added sweeteners, including sugar, glucose syrup solids, and honey, with Nido and Similac Go & Grow containing the highest sugar-per-serving (13 and 15g, respectively). Furthermore, Enfagrow Toddler Transitions had the lowest NPI score (58) of any of the drinks analyzed, with a formulation that would be healthy for an infant, but not the best choice for toddlers. Finally, the two nutritional supplement brands analyzed (Pediasure and Pediasure Sidekicks) had nutritious NPI scores due to relatively high protein and fiber content. However, the amount of sugar and calories in these products would be beneficial for sick or undernourished children but not for those with a healthy weight.

## Product packaging

In this section, we analyze marketing messages appearing on product packages and other special issues regarding packaging of baby and toddler food and drinks, including concerns about baby and toddler food products in pouch packaging, mismatches between baby and toddler food

product names and ingredients in the products, and potential consumer confusion over the difference between infant formula and toddler milk and their appropriate provision to babies and toddlers.

### On-package marketing

On-package marketing	Definitions
Nutrition-related messages	All explicit messages about product nutrition appearing on the product package, including ingredients, and vitamins and nutrients, as well as the absence of unwanted ingredients in the product.
Ingredients	Any messages about the product's ingredients, including the quality of the ingredients, their source, references to servings of a food group (fruit, vegetable, protein, etc.), and organic, natural, or real descriptions.
Vitamins and nutrients	Any messages describing the product as nutritious or nourishing, comparisons to breastmilk, and references to specific vitamins and nutrients, including DHA, Omega-3 or 9, vitamin D, calcium, lutein, iron, fiber, protein, and other vitamins.
Absence messages	Any messages about the absence of potentially unwanted ingredients in the product or packaging, including no artificial flavors, colors, or preservatives; unsweetened, unsalted, no added starch, gluten-free, and non-GMO; BPA-free packaging; and references to minimal processing.
Child development	Any messages regarding benefits to children's development and/or health, including supporting brain and cognitive development, physical development (including growth and motor coordination) and eating development (such as promoting chewing, product texture and small pieces, good for picky eaters, and promoting fruit and vegetable); eye health; digestive health (gas, colic, lactose intolerance); and less crying or better sleep.
Convenience	Any messages about ease of preparation, feeding, and/or clean-up of the product.
Child appeal	Any messages indicating that the product appeals to children, including brand characters, cartoon images, and direct claims that children will like the taste or will like the product in other ways (e.g., fun to eat).
Promotions	All messages describing promotional strategies, including endorsement by science or an authority (e.g., "scientifically proven," "pediatricians recommend"), trust and novelty appeals (e.g., "trusted by moms," "new/improved," "goodness" and "good for your baby"), as well as tie-ins with other brands (e.g., "made with Enfamil milk") and/or causes.

We report nutrition-related, child development, and other marketing messages appearing on 228 baby and toddler food and drink packages offered by the brands in our analysis. We present these messages by category, company, brand, and sub-category, including the proportion of packages that contained each type of message and the number of such messages appearing on these packages.

Nutrition-related messages were the most common type of message found on baby and toddler food and drink product packages (see **Table 11**). These messages appeared on every drink package examined, averaging 5.6 such messages on each package. They also appeared on 96% of food packages, averaging 5.7 messages each. Messages about the absence of potentially unwanted components were the most common type of nutrition-related message on baby and toddler food packages, averaging 2.6 of these messages on 96% of packages. More than nine out of 10 baby and toddler food packages included messages about product ingredients, averaging slightly fewer of these messages (1.9)

per package. All toddler food packages also featured more than two messages about vitamins and nutrients, whereas just one-half of baby food packages contained these messages. In addition, toddler food featured more nutrition-related messages on product packages compared with baby food.

Although the total number of nutrition-related messages appearing on drink packages was comparable to those on food packages, the types of messages differed. Vitamin and nutrient messages were more frequent on drink packages, comprising 4.4 of the 5.6 average total number nutrition-related messages appearing on these packages. However, just six of 10 drink packages had an ingredient message, and 67% had an absence message. Notably, 100% of nutritional supplement packages contained vitamins and nutrients, ingredient, and absence messages.

There were fewer child development messages on baby and toddler food and drink packages compared to nutrition-related messages, but their use varied greatly by category.

**Table 11.** On-package nutrition-related and child development messages by category

Category	# of pkgs	Nutrition-related messages								Child development messages	
		Vitamins and nutrients		Ingredients		Absence		All nutrition-related		% of pkgs	Avg # per pkg
		% of pkgs	Avg # per pkg	% of pkgs	Avg # per pkg	% of pkgs	Avg # per pkg	% of pkgs	Avg # per pkg		
Baby food	136	51%	1.7	94%	1.9	88%	2.8	94%	5.5	29%	1.7
Toddler food	65	100%	2.3	91%	1.9	97%	2.2	100%	6.2	75%	2.1
Infant formula	17	100%	4.7	53%	1.0	65%	1.1	100%	5.9	94%	3.1
Toddler milk	5	80%	3.8	40%	1.5	40%	1.0	100%	4.0	100%	2.6
Nutritional supplement	5	100%	3.8	100%	1.0	100%	1.0	100%	5.8	40%	2.5

Source: 2016 Rudd Center on-package marketing analysis

Infant formula (94%) and toddler milk (100%) had the highest percentage of products with child development messages, and the most messages per package (3.1 and 2.6, respectively). Three-quarters of toddler food analyzed also included approximately two messages per package. However, less than one-half of nutritional supplement packages featured child development messages, while baby food had the fewest, with 29% of packages averaging 1.7 such messages per package.

**Ranking Table 3** ranks all baby and toddler food and drink brands by total nutrition-related and child development messages on product packages. It also details the percentage of packages and average number per package by type of nutrition-related message.

### Nutrition-related messages on baby and toddler food packages

Plum Organics products led in nutrition-related messages on product packages in both the baby and toddler food categories, averaging 8.2 and 7.5 messages per package, respectively. For example, the Plum Organics Super Puffs box informs consumers that the snack is “made with real fruit and veggies,” “USDA organic,” and “baked with whole grains,”

has “14 vitamins and minerals,” and “10% of daily value of Vitamin A & iron, and 23 mg choline,” and comes in “BPA-free and recyclable packaging.” The package also explains that the product is a “perfect snack for baby,” because it “easily dissolves into grins and giggles,” “delights tiny taste buds,” and “encourages self-feeding.”

Happy Tot, Happy Baby, and Gerber baby food packages also ranked in the top-five for total nutrition-related messages, averaging more than seven per package on 100% of packages. On the other hand, Beech-Nut baby food had the fewest nutrition-related messages, averaging 2.5 such messages on 86% of its packages.

Baby and toddler food brands varied in the types of nutrition-related messages appearing on packages. Happy Baby packages featured the most ingredient messages (3.0 per package), promoting its products as “USDA organic,” providing a serving of fruits or vegetables or the % daily value of one or more nutrients, and describing its quality ingredients. Approximately one-half of Gerber toddler food packages and 100% of all other baby and toddler food brands (except Beech-Nut) averaged approximately two ingredient messages per package. The most common ingredient messages included organic, serving of a food group, and



Plum Organics and Happy Baby packages had the most nutrition-related messages





Beech-Nut baby food packages had the fewest nutrition-related messages

natural or real references (e.g., “naturally flavored with natural flavors”). Beech-Nut baby food packages also featured the fewest ingredient messages, averaging 1.2 per package.

Plum Organics and Happy Tot toddler food had the most messages about vitamins and nutrients, averaging 3.8 and 2.9 messages on 100% of packages, followed by Plum Organics baby food with 2.2 such messages per package. The most common messages described the product as nutritious or containing nourishing ingredients (e.g., “Our Love My Veggies pouches contain a full serving of organic nutritious veggies like beets & squash” by Happy Tot). Messages about fiber, protein, and specific vitamins (e.g., “Vitamins A, B12, E, C”) also were common. All other baby and toddler food brands averaged fewer than two messages about vitamins and nutrients on their packages.

As noted, messages about the absence of potentially unwanted ingredients were more common on baby food than on toddler food packages. Although Gerber baby food ranked fifth in nutrition-related messages in total, its packages featured the most absence messages, averaging 4.1 per package. Typical messages on Gerber baby food packages included “no artificial flavors or colors,” “unsweetened,” “unsalted,” and “no added starch.” Plum Organics baby food followed with 3.1 absence messages per package, including “BPA-free,” “non-GMO verified,” “no preservatives,” and “unsweetened.” The remaining brands averaged 1.5 to 2.4 absence messages on their packages. Notably, several brands emphasized the absence of sweeteners, such as Plum Organics Teensy Fruits (“no HFCS”) and Happy Baby Superfood Puffs (“made without cane syrup”), while 41% of Gerber Graduates packages promoted “no artificial sweeteners.” More than one-half of Happy Baby and 13% of Beech-Nut packages featured “gluten-free” messages.



Absence messages on Gerber and Gerber Graduates packages

**Nutrition-related messages by sub-category.** We also examined the average number of nutrition-related messages on product packages by sub-category and found considerable variation within brands (see **Table 12**). Snack food packages tended to include the most nutrition-related messages. Plum Organics toddler snacks featured 9.5 nutrition-related messages per package, more than any other brand and sub-category, followed by Plum Organics baby snacks, Happy Baby snacks, and Happy Tot snacks, which all featured eight or more nutrition-related messages on their packages.

Happy Tot and Happy Baby mixed food group products also averaged eight nutrition-related messages per package. Notably, both of these Nurture Inc. brands included the fewest nutrition-related messages on their pureed single food group products. On the other hand, Gerber and Gerber Graduates toddler food featured more nutrition-related messages on packages for their pureed single food group products than for their snacks.



**Table 12.** Nutrition-related messages on product packaging by food brand and sub-category

Brand	Category	Avg # of nutrition-related messages on product packages		
		Pureed single food group	Mixed food groups*	Snacks**
Plum Organics	Toddler food	n/a	7.3	9.5
Plum Organics	Baby food	7.4	7.3	8.5
Happy Baby	Baby food	6.8	8.0	8.1
Happy Tot	Toddler food	5.5	8.0	8.0
Gerber	Baby food	7.7	6.3	n/a
Gerber and Gerber Graduates	Toddler food	7.6	5.1	6.3
Beech-Nut	Baby food	2.6	2.3	n/a

\*Includes pureed and textured mixed food, and bitesize food and meals sub-categories

\*\*Includes grain-based and fruit-based snacks

Source: 2016 Rudd Center on-package marketing analysis

### Child development and other messages on baby and toddler food packages

The most common child development messages on baby and toddler food packages referenced helping children's eating development, including product texture and small pieces, and helping children grow, develop physically, and achieve motor coordination. Three-quarters of Gerber Graduates toddler food packages averaged 2.3 development messages per package, the most of any brand. Common messages promised that the product makes it easy for toddlers "to pick up and hold" their food, "easy to chew and swallow," "just right for self-feeding," "just right for spooning." Six of 10 Happy Baby packages averaged 2.1 development messages per package, such as "finger food for babies," "dissolves easily," and "gentle on gums." Happy Baby Yummy Yogis promoted the product as a "great first snack" with "live active cultures for baby's digestive health." All Happy Tot toddler

food packages and Plum Organics baby food packages also averaged approximately two development messages each. Plum Organics Stage 1 baby food pouches promoted the product in a unique way, suggesting that it helps "train tiny taste buds" and "train their little palates."

We also examined other marketing messages appearing on baby and toddler food packages, including messages promoting product convenience, its appeal to children, and other types of promotions. Baby and toddler food packages featured these other types of marketing messages less often than nutrition-related or child-development messages. However, toddler food packages were more likely than baby food packages to use all these appeals (see **Table 13**).

More than 40% of toddler food packages had a convenience message, including eight of 10 Plum Organics packages and 43% of Gerber Graduates packages. In contrast, just 8% of baby food packages had convenience messages, although 12% of Plum Organics baby food averaged two messages per package. The most common messages were easy to take "on-the-go" and "no mess."



Cartoon images appealing to children on Happy Baby packages



Child development messages on Gerber Graduates and Plum Organics packages

**Table 13.** Other marketing messages on product packages by food brand and category

Brand	# of pkgs	Convenience		Child appeal		Promotions	
		% of pkgs	Avg # per pkg	% of pkgs	Avg # per pkg	% of pkgs	Avg # per pkg
<b>Baby food</b>							
Beech-Nut	56	13%	1.0	13%	1.0	11%	1.0
Gerber	43	0%	0.0	72%	1.3	56%	1.0
Happy Baby	20	10%	1.0	100%	2.2	100%	1.0
Plum Organics	17	12%	2.0	100%	1.4	88%	1.3
<b>Toddler food</b>							
Gerber Graduates	32	43%	1.0	78%	1.3	75%	1.8
Gerber	13	23%	1.0	100%	2.2	33%	1.5
Plum Organics	10	80%	1.0	80%	1.5	80%	1.8
Happy Tot	10	20%	1.0	90%	1.3	100%	2.8

Source: 2016 Rudd Center on-package marketing analysis



Promotional messages on Happy Baby package

Three-quarters of toddler food packages and just over one-half of baby food packages featured messages promoting the products' appeal to babies or children. All Happy Baby and Gerber toddler food products averaged 2.2 such messages per package. Examples of messages with child appeal include cartoon images (e.g., octopus and starfish made from food, little birds and leaves on the bar code), as well as direct claims that the product appeals to children, such as "fun flavors to delight baby's budding palate" (Happy Baby) and "a taste toddlers love" (Gerber).

Plum Organics baby food used messages with child appeal on 100% of its packages, averaging 1.4 messages each. The brand's grain-based snacks (Little Yums and Super Puffs) had the most taste messages, including "unique veggie and fruit combination to delight tiny taste buds," "delight palates big and small with the unique flavor of spinach, apple & kale," "tasty bursts of color that make baby happy," and "inspire little snackers to eat their colors with flavorful combinations & a rainbow of nutritional goodness." The remaining brands used child-appeal messages on the majority of packages, with the exception of Beech-Nut where these messages appeared on just 13% of packages.

Approximately two-thirds of toddler food packages and one-half of baby food packages featured other types of promotional messages, including all Happy Baby and Happy Tot packages. Happy Tot had the most such messages, averaging 2.8 per package. Among the most common messages by Happy Baby

and Happy Tot were trusted by moms (e.g., "Meet the Moms of Happy Family: Shazi & Molly" with images of real moms who work for the company) and authority endorsements (e.g., "We're real moms, pediatricians and nutritionists"). Happy Baby also used comparative messages (e.g., "40% more Puffs than Gerber Organic Puffs") and promotion of other flavors (e.g., "Try all of our Happy Baby Puffs today"). Eight of 10 Plum Organics toddler food packages also averaged 1.8 promotional messages per package, focusing on product wholesomeness and good for your baby messages. Plum Organics also had the only cause-related promotion for The Full Effect, "Plum's program donating nourishing food to little ones in need across America," to address food insecurity.

### Nutrition-related messages on baby and toddler drink packages

In our examination of nutrition-related messages on drink packages, two infant formula brands, Gerber Good Start and Similac, had the most messages per package, averaging 6.8 and 6.5, respectively. PediaSure Sidekicks and PediaSure nutrition supplement followed with 6.0 and 5.5 nutrition-related messages per package. Toddler milk brands had the fewest of these messages among the drink brands examined, ranging from 3.7 per package for Enfagrow to 5.0 per package for Gerber Good Start toddler milk.

As noted earlier, messages about vitamins and nutrients were the most common nutrition-related messages on baby and toddler drink packages. They appeared on all drink packages, except for one-third of Enfagrow packages. Gerber Good Start infant formula had the most vitamin and nutrient messages, averaging 5.4 per package, such as "modeled after the complete nutrition of breastmilk," "unique blend of DHA, prebiotics and probiotics," protein, and iron. Nido and Gerber Good Start toddler milk followed with 4.0 vitamin and nutrient messages per package. The most common messages promoted these products as nutritious or nourishing, and they often featured specific vitamins and nutrients, such as choline and vitamin E.





Nutrition-related messages on Gerber Good Start infant formula

All nutritional supplement packages had one ingredient message, but just one-half of infant formula and 40% of toddler milk packages featured these messages. The most common message referenced “milk-based” ingredients. Similac infant formula and Enfagrow toddler milk had the most ingredient messages per package (averaging 1.3 and 1.5, respectively). Notably, Gerber Good Start and Nido toddler milk had no ingredient messages on their packages.

On average, one absence message was included on all nutritional supplement products, 65% of infant formula, and less than one-half of toddler milk packages. Gluten-free and non-GMO were the most common absence messages on baby and toddler drinks, but “milk-free” and “lactose-free” also appeared on soy-based products, such as Gerber Good Start Soy, Enfamil ProSobee, and Enfagrow Toddler Transitions Soy. Nido toddler milk was the only drink brand that did not contain any absence messages.

### Child development and other marketing messages on baby and toddler drink packages

With the exception of Pediasure Sidekicks and 12% of Enfamil infant formula packages, all baby and toddler drink brands featured child development messages on product packages. Similac infant formula packages had the most, averaging 4.3 such messages per package, including “DHA for brain,” “Lutein for eyes,” “Vitamin E for development,” “for fussiness and gas due to lactose sensitivity,” and “for breastfeeding moms who choose to introduce formula.” Enfagrow toddler milk followed, averaging 3.0 messages per package, such as “helps complete an uneven diet” and “helps support strong bones and teeth.” Enfamil infant formula averaged 2.9 child development messages on 88% of its packages. In general, messages about children’s brain and cognitive development were the most common child development messages on drink products (e.g., “brain-nourishing nutrients” on Enfamil Newborn), as well as digestive health messages (e.g., “easy

to digest proteins” on Enfamil for Supplementing). Enfamil Newborn, Enfamil Enspire, and Nido also claimed to help support children’s immune systems.

Other types of marketing messages tended to appear less frequently on baby and toddler drink packages compared with food packages (see **Table 14**). Some Enfamil infant formula



Child development messages on infant formula and toddler milk packages

**Table 14.** Other marketing messages on product packages by drink brand and category

Brand	# of pkgs	Convenience		Child appeal		Promotions	
		% of pkgs	Avg # per pkg	% of pkgs	Avg # per pg	% of pkgs	Avg # per pkg
<b>Infant formula</b>							
Enfamil	8	75%	1.2	88%	1.0	100%	2.1
Gerber Good Start	5	0%		40%	1.0	0%	
Similac	4	0%		50%	1.0	100%	2.3
<b>Toddler milk</b>							
Enfagrow	3	33%	1.0	100%	1.0	67%	3.0
Gerber Good Start	1	0%		0%		100%	1.0
Nido	1	0%		0%		0%	
<b>Nutritional supplement</b>							
Pediasure Sidekicks	3	0%		100%	1.0	100%	1.0
Pediasure	2	50%	1.0	100%	1.0	100%	1.0

Source: 2016 Rudd Center on-package marketing analysis

and Pediasure packages included a convenience claim, such as “easy to open” and “re-usable tub.” On the other hand, 100% of Pediasure, Pediasure Sidekicks, and Enfagrow toddler milk packages contained one message about child appeal. Brand characters were most common, such as an image of a giraffe with sunglasses and a measuring tape (Pediasure), or a baby owl featured in different colors on Enfamil and Enfagrow packages. Gerber Good Start and Nido toddler milk packages did not have any messages promising child appeal.

Enfagrow toddler milk also had the most promotional messages, averaging 3.0 on two-thirds of its packages, such as “#1 brand recommended by pediatricians,” “New! Improved formula,” and “This exclusive formula is only available from the Enfamil brand.” Among the infant formula brands, both Similac and Enfamil averaged more than two promotional messages on all packages. Some unique promotional messages included, “Free appointment with a registered dietitian or certified sleep consultant” (Gerber Good Start toddler milk), “If your baby's stomach doesn't agree with a Similac product, you can try another free” (Similac), and “#1 pediatrician recommended” (appearing on all Pediasure and Pediasure Sidekick products). Gerber Good Start infant formula and Nido toddler milk were the only brands with no promotional messages on their product packages.

We also examined specific disclaimers that often appeared on baby and toddler drink packages. Every package of infant formula carried a disclaimer for breastfeeding, such as “Breastfeeding is best for your baby” (Gerber Good Start), “Experts agree on the many benefits of breastmilk. If you choose to use infant formula, ask your doctor about Enfamil Gentlease”, and “Breastmilk is recommended. If you choose to use infant formula, the makers of Similac have a formula that is right for your baby.” However, no toddler milk carried this disclaimer, not even Enfagrow Toddler Transitions (for babies 9 to 18 months). All Similac and Enfamil infant formula packages and three of five Gerber Good Start infant formula packages advised consumers to “consult a physician” about



Child appeal and promotional messages on Pediasure package

product use. All Pediasure and Pediasure Sidekicks packages also carried this disclaimer. Enfagrow was the only toddler milk package to include this disclaimer, which appeared on one of three Enfagrow packages examined. All Pediasure and Pediasure Sidekicks packages also included the disclaimer, “Use as part of a healthy diet.”

### Special issues in baby and toddler food and drink packaging

In addition to the claims and other messages appearing on baby and toddler food and drink packages, we also identified additional issues in the packaging of these products that raise concerns about their potential effects on young children's diets. These concerns include the provision of food to babies and toddlers in pouches, baby and toddler food product names that may not accurately reflect the product ingredients, and potential consumer confusion about differences between infant formula and toddler milk varieties and appropriate provision to young children of different ages.

## Pouches versus other package types

Babies and toddlers must develop new motor skills to transition from a milk-based diet to table food and the family diet. Depending on packaging and product form (e.g., pureed vs. textured), manufactured baby and toddler food products can help promote motor skills,<sup>5,6</sup> including mouth skills such as lateral tongue movements, jaw movements, biting, and chewing. Other diet-related skills that require practice include visually tracking spoon movement, holding and driving the spoon, and self-feeding. However, serving young children pureed food, especially in pouch form, does not provide the opportunity to develop these eating skills. Furthermore, serving manufactured food to babies and toddlers does not allow them to experience different textures or varying flavors that occur naturally in food, while sucking on pouches does not even provide experience with the products' smell and colors. Pouches may also cause tooth decay from extended contact between the food and babies' teeth. As a result, experts recommend that parents provide pouches to babies only occasionally when other options are not available, and at those times serve the food with a spoon, not allowing the baby to suck on the pouch.<sup>7</sup> Unless indicated by a health professional, there is no reason to regularly serve pureed foods to toddlers, in pouch or any other form.

However, some baby and toddler food brands in our analysis offered their products primarily in pouch packages (see **Figure 3**). Only Beech-Nut and Gerber baby food and Gerber

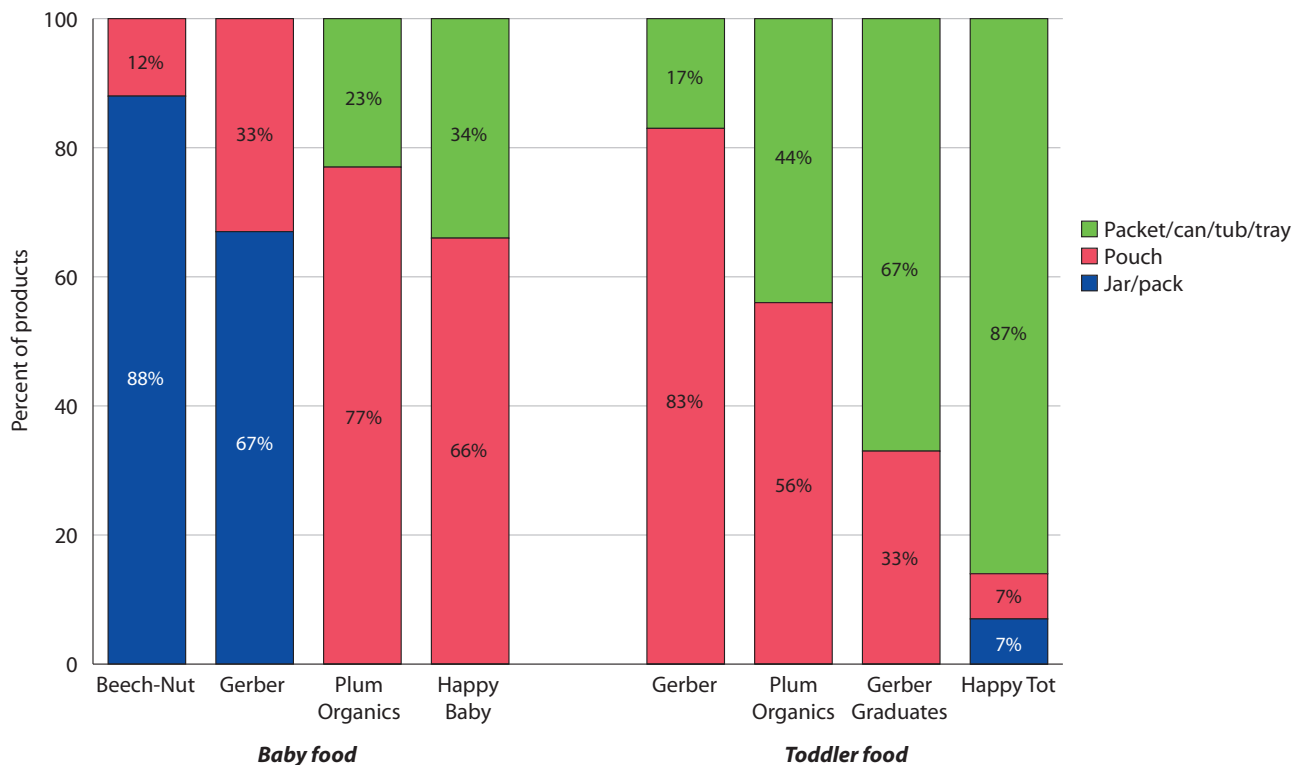
and Gerber Graduates toddler food offered the majority of their products in other types of packaging (jars for baby food and other types of packaging for toddler food). In contrast, both Plum Organics and Happy Family provided more than one-half of their products in pouch packaging, including 82% of Happy Tot toddler food and 78% of Plum Organics baby food and 56% of its toddler food products.

## Product names and their main ingredients

Public health advocates and lawyers have also suggested that the names used to describe different flavors of baby and toddler food may not reflect the actual ingredients in the products.<sup>8,9</sup> As a result, these product names may mislead parents about what they are feeding their children and/or their healthfulness. We compared the names of the 371 baby and 148 toddler food products in our analysis with their main ingredients, defined as the first five ingredients listed on the product's nutrition facts panel. We identified three levels of agreement between the product name and its main ingredients, ranging from the ingredients in the product name match all its main ingredients (Level 1) to most of the ingredients in the product name are present only in small quantities and omits most of the main ingredients from the product name (Level 3) (see **Figure 4**).

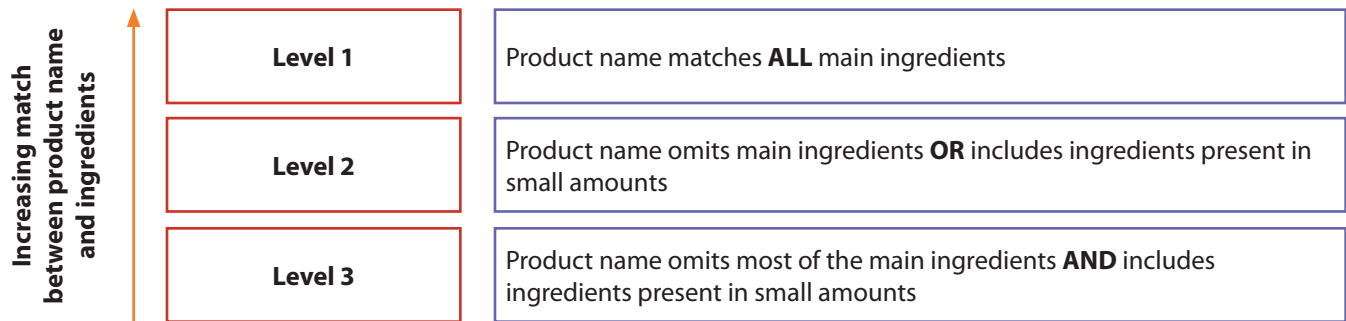
Approximately three-quarters of baby food names matched the main ingredients of the product, but less than 60% of

**Figure 3.** Packaging types offered by baby and toddler food brands



Source: 2016 Rudd Center product analysis



**Figure 4.** Levels of agreement between product names and main ingredients

toddler food names matched (see **Table 15**). Beech-Nut and Gerber baby food had the highest percentage of products with Level 1 agreement, at 93% and 82% of products, respectively. However, two-thirds of product names matched the ingredients for Nestle's toddler food brands (Gerber and Gerber Graduates), whereas 7% and 16%, respectively, had a poor match. For example, the dried broccoli in Gerber Lil' Beanies white cheddar & broccoli is the 10th of 11 ingredients on the nutrition facts panel. Most of the poor matches for Gerber Graduates were grain-based snacks with a fruit or vegetable in the product name. For example, in Gerber Graduates Waffle Wheels, banana cream, apple puree is a main ingredient while banana is present in small quantities.

Product names also matched the ingredients in two-thirds of Happy Baby products and 60% of Happy Tot products. However, Happy Baby products such as Happy Baby Hearty Meals Super salmon & vegetables included apple puree as the second ingredient after water. In another Happy Tot product, Super Morning bananas, blueberries, yogurt & oats, chia seeds were a main ingredient but oats were not.

Of all the baby and toddler food brands examined, Plum Organics product names had the poorest match with their

ingredients. Fewer than one-half of its baby food and just one-quarter of its toddler food had Level 1 matches. Some product names omitted main ingredients, such as Mighty 4 pumpkin, pomegranate, quinoa & Greek yogurt, where main ingredients include apple and banana purees, while pomegranate and quinoa were present in small quantities. Similarly, its Second Blends plum, berry & barley lists apple puree as the first ingredient on the nutrition facts panel. In Mighty 4 Essential Nutrition Bars (all flavors), sugar, apple powder, and rice starch were main ingredients, present in higher amounts than the ingredients in the product names, including strawberry/spinach, pumpkin/banana, and blueberry/carrot.

### Concerns about toddler milk

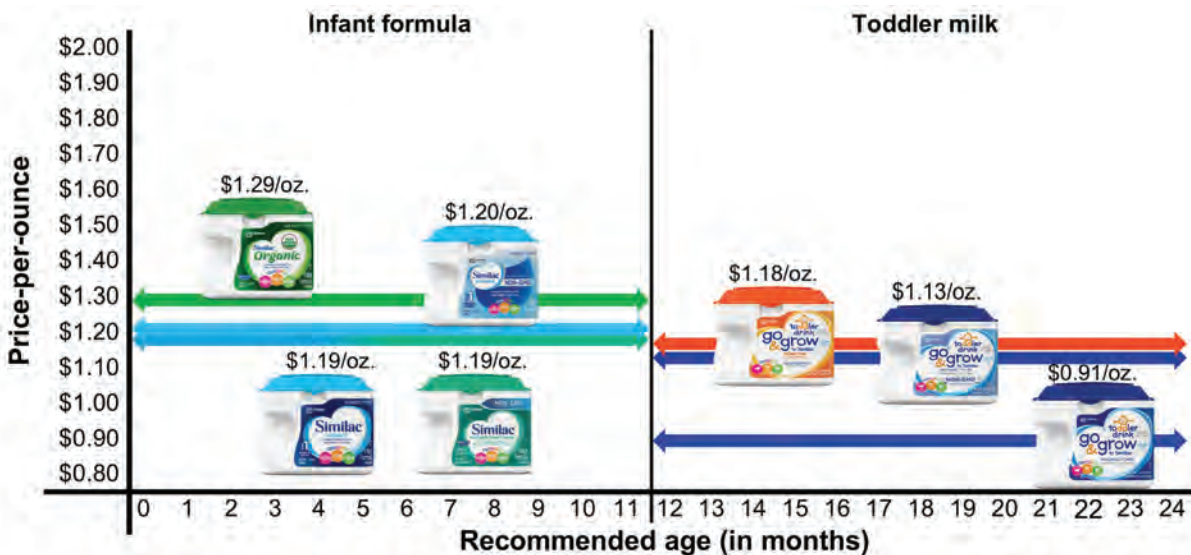
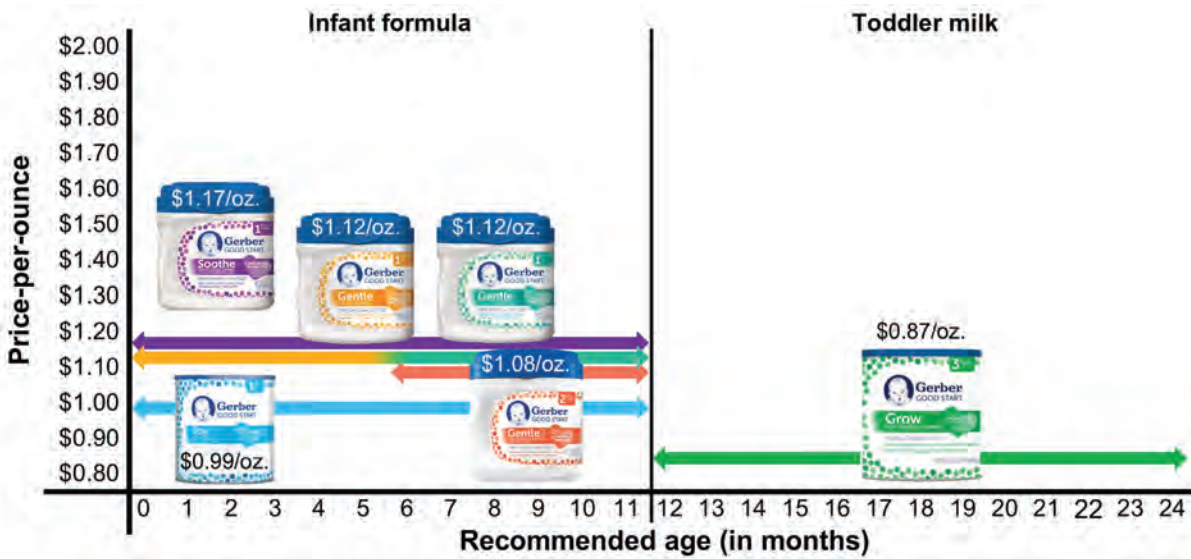
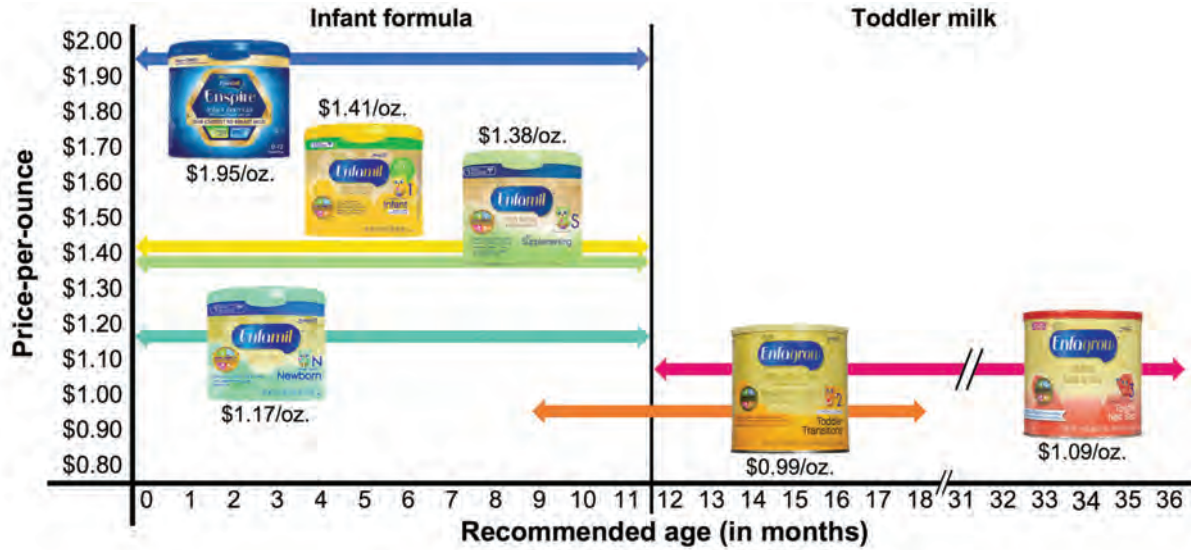
For babies who do not breastfeed exclusively, infant formula is designed to meet the specific dietary needs of babies younger than 12 months and provide an acceptable alternative. However, the AAP specifically recommends against serving "toddler formula" to children 1 to 2 years old, citing no proven advantages over whole milk.<sup>10</sup> Yet, as noted earlier, our analysis of toddler milk brands identified seven different varieties (including one transition variety for older babies and

**Table 15.** Agreement between product names and main ingredients by brand and category

Brand	# of products	Level 1	Level 2	Level 3
		(good match) % of products	(moderate match) % of products	(poor match) % of products
<b>Baby food</b>				
Beech-Nut	129	93%	6%	1%
Gerber	132	82%	16%	2%
Happy Baby	62	66%	23%	11%
Plum Organics	48	44%	44%	12%
<i>Total</i>	<i>371</i>	<i>78%</i>	<i>17%</i>	<i>5%</i>
<b>Toddler food</b>				
Gerber	30	67%	26%	7%
Gerber Graduates	63	65%	19%	16%
Happy Tot	30	60%	23%	17%
Plum Organics	25	24%	24%	52%
<i>Total</i>	<i>148</i>	<i>57%</i>	<i>23%</i>	<i>20%</i>

Source: 2016 Rudd Center product analysis

Figure 5. Comparison of infant formula and toddler milk packages by brand



toddlers) offered by four brands in our analysis (Enfagrow, Similac, Gerber Good Start, and Nido). Furthermore, toddler milk manufacturers claim that their products provide “extra nutrition” for picky eaters who may not be eating a well-balanced diet, a problem that would be better solved by providing a multivitamin.<sup>11</sup>

Other experts have raised concerns that packaging and pricing of toddler milk products has the potential to confuse parents and lead them to believe that toddler milk is an appropriate product to serve babies younger than 12 months. Toddler milk products have similar containers, colors, and branding as infant formula products from the same manufacturers. Additionally, toddler milk is less expensive providing an incentive for parents to feed their baby a toddler milk. However, toddler milk contains cow's milk protein, which is not recommended for infants. To evaluate this potential concern, we obtained images of infant formula and toddler milk packages from company websites for the brands in our analysis that offered products in both categories (Enfamil/ Enfagrow, Similac, and Gerber Good Start). We also obtained price-per-ounce for each product from the Babies “R” Us website, we used the original price whenever a product was on sale.

As highlighted in **Figure 5**, toddler milk was generally less expensive than infant formula, supporting concerns that parents may purchase toddler milk for their babies instead of an infant formula for financial reasons. Furthermore, similar packaging format, color, and branding of infant formula and toddler milk products does have the potential to confuse parents and lead them to believe that a less-expensive toddler milk is appropriate for their baby. Moreover, multiple product formulations aimed at different ages and stages of babies and toddlers likely confuses parents even further.

### Summary of product packaging

The majority of baby and toddler food and drink products included nutrition-related messages, averaging almost six of these messages per package. Baby and toddler drink packages contained more vitamin and nutrient messages (averaging 4.4 per package), while food packages focused

somewhat more on the absence of unwanted ingredients (2.6 absence messages vs. 2.0 vitamin and nutrient messages per package). Plum Organics products in both the baby and toddler food categories had the most nutrition-related messages, averaging 8.2 and 7.5 messages per package, respectively. Snacks tended to feature more nutrition-related messages than other sub-categories of baby and toddler foods. Plum Organics, Happy Baby, and Happy Tot snacks had from 8 to 9.5 messages per package. In the drink categories, Gerber Good Start and Similac infant formula packages had the most, averaging 6.8 and 6.5 nutrition-related messages per package.

Child development messages appeared on 85% of baby and toddler drinks and less than one-half of food packages (averaging 2.9 and 1.9 per package, respectively). Brands with the most of these messages included Similac infant formula (4.3 per package) and Gerber Graduates (2.3 per package). Among other types of marketing messages, 62% of baby and toddler food packages and 77% of drink packages mentioned the product's appeal to children, and 54% and 71%, respectively, included other types of promotional messages.

Additional product packaging issues raise further concerns. For example, 82% of Happy Tot and 56% of Plum Organics toddler food products came in pouch packaging, which does not promote young children's eating development skills. Experts recommend that pureed foods, especially in pouch form, should not be provided to toddlers. In addition, product names did not match the ingredient lists for more than one-half of Plum Organics toddler food products and more than 10% of Happy Baby and Plum Organics baby food and Gerber Graduates and Happy Tot toddler food products. These product names may mislead parents about what they are feeding their children and/or their healthfulness. Finally, multiple formulations of infant formula and toddler milk, packaged in similar containers and colors with similar branding, but aimed at different ages and stages of young children, likely confuse parents and may lead them to believe that less-expensive toddler milk is appropriate for their infants younger than 12 months.

## Traditional media advertising

In this section, we compare traditional advertising for baby and toddler food and drinks in 2015 and changes versus 2011. We present advertising spending in measured media, including TV, magazines, Sunday supplements, coupons, and the internet. We then provide data on adult exposure to baby

and toddler food and drink advertising on TV. In addition, we describe the content of these advertisements, including the specific varieties of brands promoted and the types of messages presented in the ads.

### Advertising spending

Advertising spending	Definition
Advertising spending	Total spending in 17 different media including, national (network, cable, and syndicated) and local (spot) TV, Spanish-language TV, internet, radio, magazines, newspapers, free standing insert coupons (FSIs), and outdoor advertising, measured by Nielsen.
TV spending	Spending on advertising in national (network, cable, and syndicated) and local TV, including Spanish-language programming.
Internet spending	Spending on advertising placed on third-party websites. Paid search campaigns, sponsorships, promotions, sweepstakes, partnerships, in-house advertising, and streaming advertising within applications are not included in these numbers. <sup>12</sup>
Magazine spending	Paid advertising appearing in nationally distributed magazines.
FSI coupon spending	Spending on coupons inserted into other publications, typically Sunday newspapers. These include individual coupons as well as coupon booklets, such as Red Plum and Smart Source.

Total advertising spending for baby and toddler food and drinks reached \$77.2 million in 2015 (see **Table 16**). Spending was highest for the nutritional supplement category at \$20.7 million, followed by toddler milk and baby food at almost \$17 million each. Toddler food spending reached \$13.2 million in 2015, while infant formula had the least amount of spending at just under \$10 million.

Total ad spending for all categories combined decreased by 9% from a total of \$84.6 million in 2011, but there was wide variation in changes by category. Nutritional supplement spending did not change from 2011 to 2015, and the category represented approximately one-quarter of total spending both years. Infant formula was the only category with a decline in spending, showing a substantial decrease of 68%. In contrast, toddler milk had a 74% increase in spending. As a result, the proportion of total spending devoted to toddler milk doubled over these five years, reaching 22% in 2015, while spending on infant formula fell from one-third of total ad spending in 2011 to just 13% in 2015. Spending on baby and toddler food also increased from 2011 to 2015. Notably, spending on

toddler food advertising increased by almost 50% during this period, accounting for 17% of total spending in 2015 versus approximately 10% in 2011.

From 2011 to 2015, ad spending on baby and toddler food showed similar trends, although the difference in spending between the two categories narrowed during this time (see **Figure 6**). Baby food advertising was lowest in 2013 at \$10.1 million, while toddler food spending was lowest in 2012 at \$7.8 million. Both categories showed a dramatic increase in ad spending from 2013 to 2014 when combined spending more than doubled (+115%) to reach \$45 million. Total baby and toddler food spending then decreased by one-third (-34%) from 2014 to 2015.

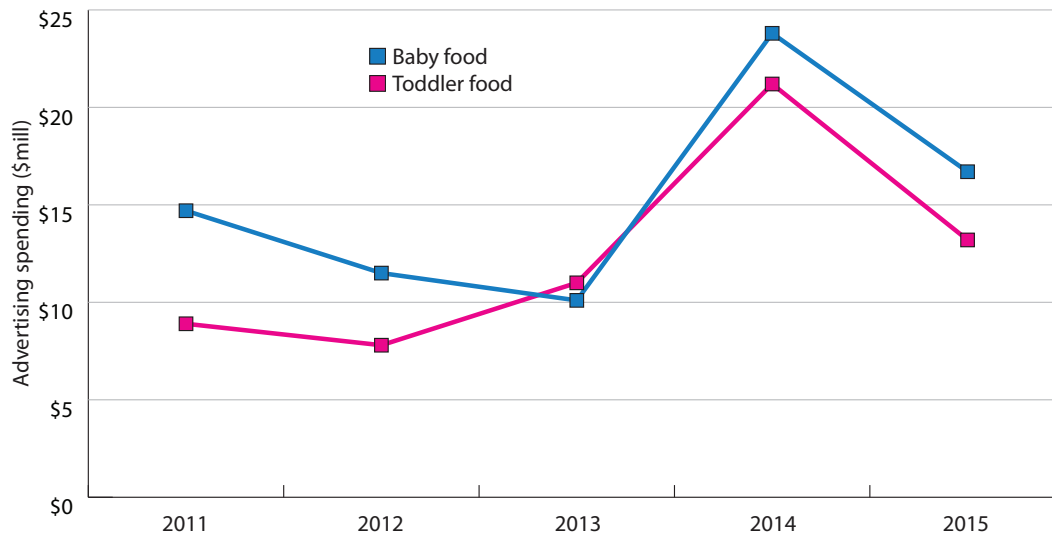
There was more variation in ad spending from 2011 to 2015 for baby and toddler drinks (see **Figure 7**). Infant formula spending followed a steady downward trend from 2011 to 2015, while toddler milk spending increased, effectively switching places with infant formula. Ad spending on toddler milk peaked in 2014 at \$22.9 million, and then declined by 27% from 2014

**Table 16.** Total advertising spending by category: 2011-2015

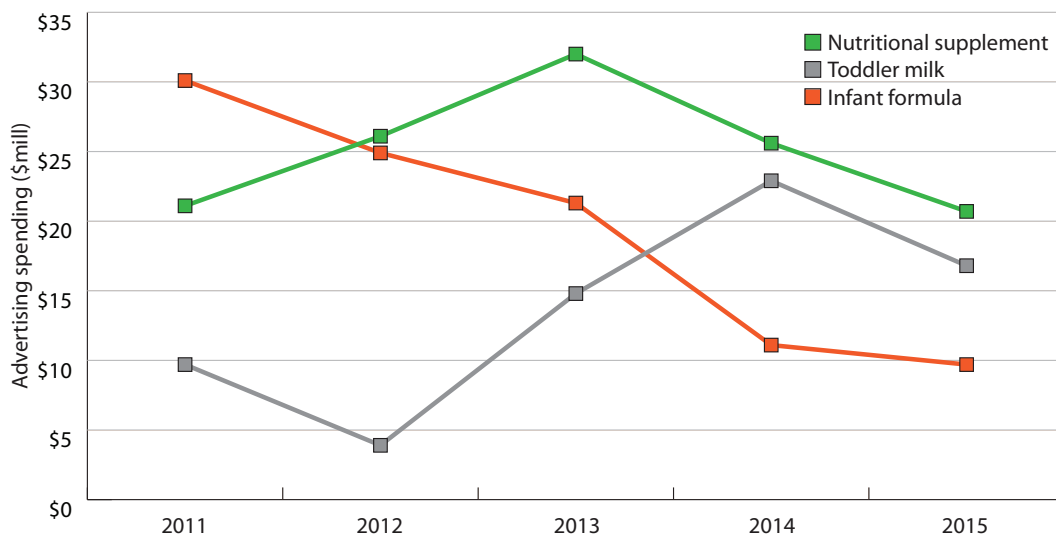
Category	Advertising spending (\$000)					Change 2011 to 2015
	2011	2012	2013	2014	2015	
Nutritional supplement	\$21,118.9	\$26,139.6	\$32,021.5	\$25,555.2	\$20,711.8	-2%
Toddler milk	\$9,672.4	\$3,885.0	\$14,836.0	\$22,919.1	\$16,823.7	74%
Baby food	\$14,748.9	\$11,541.3	\$10,075.8	\$23,750.6	\$16,721.4	13%
Toddler food	\$8,930.9	\$7,832.6	\$11,019.1	\$21,232.4	\$13,184.5	48%
Infant formula	\$30,082.6	\$24,860.8	\$21,252.5	\$11,066.6	\$9,746.4	-68%

Source: Rudd Center analysis of Nielsen data (2016)



**Figure 6.** Baby and toddler food advertising spending: 2011-2015

Source: Rudd Center analysis of Nielsen data (2016)

**Figure 7.** Baby and toddler drinks advertising spending: 2011-2015

Source: Rudd Center analysis of Nielsen data (2016)

to 2015. Although nutritional supplement spending remained nearly unchanged in 2015 compared to 2011, ad spending for the category peaked in 2013 at \$32.0 million—the most spending of any category in all five years.

### Advertising spending by media and category

Baby and toddler food and drink brands advertised almost exclusively on TV and magazines in 2015, representing 73% and 24% of total spending, respectively (see **Table 17**). Spending on all other media types (primarily internet and FSI coupons) accounted for only 3% of total expenditures. From 2011 to 2015, TV was the only media type in which spending increased—

adding \$9.2 million. In 2011, TV advertising was just over one-half of total ad spending, compared to nearly three-fourths of total ad spending in 2015. Spending on all other types of media declined by one-third or more from 2011 to 2015.

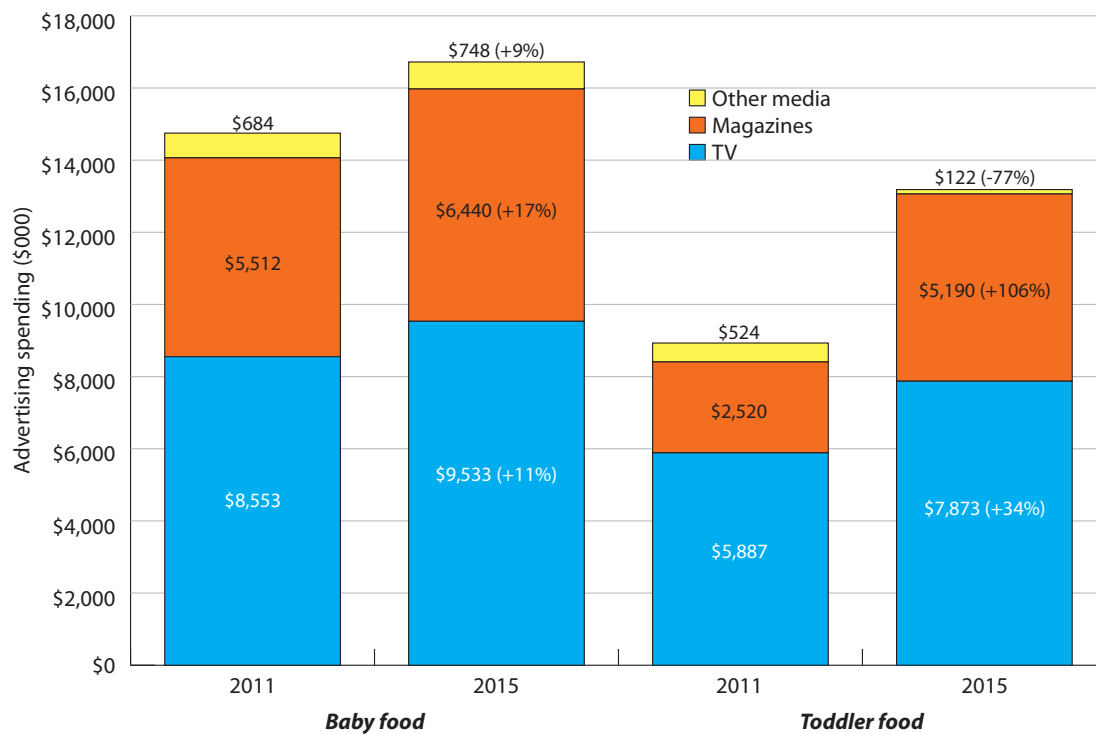
We also examined category differences in spending by type of media. In 2015, 39% of both baby and toddler food advertising was spent on magazines, while almost 60% was devoted to TV (see **Figure 8**). Less than 5% of baby food and less than 1% of toddler food ad spending was on all other media types. Compared to 2011, baby food advertising increased by almost 10% or more in all media. For toddler food, however, magazine advertising more than doubled and TV advertising increased by one-third from 2011 to 2015. Notably, in 2014, approximately \$1.3 million was spent advertising baby food



**Table 17.** Advertising spending by media type: 2011-2015

Media type	Advertising spending (\$'000)					Change 2011 to 2015
	2011	2012	2013	2014	2015	
TV	\$47,169.1	\$48,349.7	\$58,992.5	\$76,809.0	\$56,366.6	19%
Magazines	\$32,658.0	\$22,299.8	\$28,190.9	\$25,244.9	\$18,580.9	-43%
Internet	\$2,413.8	\$2,354.1	\$760.1	\$274.0	\$1,249.5	-48%
Coupon	\$1,363.2	\$1,122.7	\$1,186.3	\$1,303.0	\$897.9	-34%
Other	\$949.5	\$123.6	\$75.1	\$893.1	\$92.4	-90%

Source: Rudd Center analysis of Nielsen data (2016)

**Figure 8.** Changes in baby and toddler food advertising spending by media

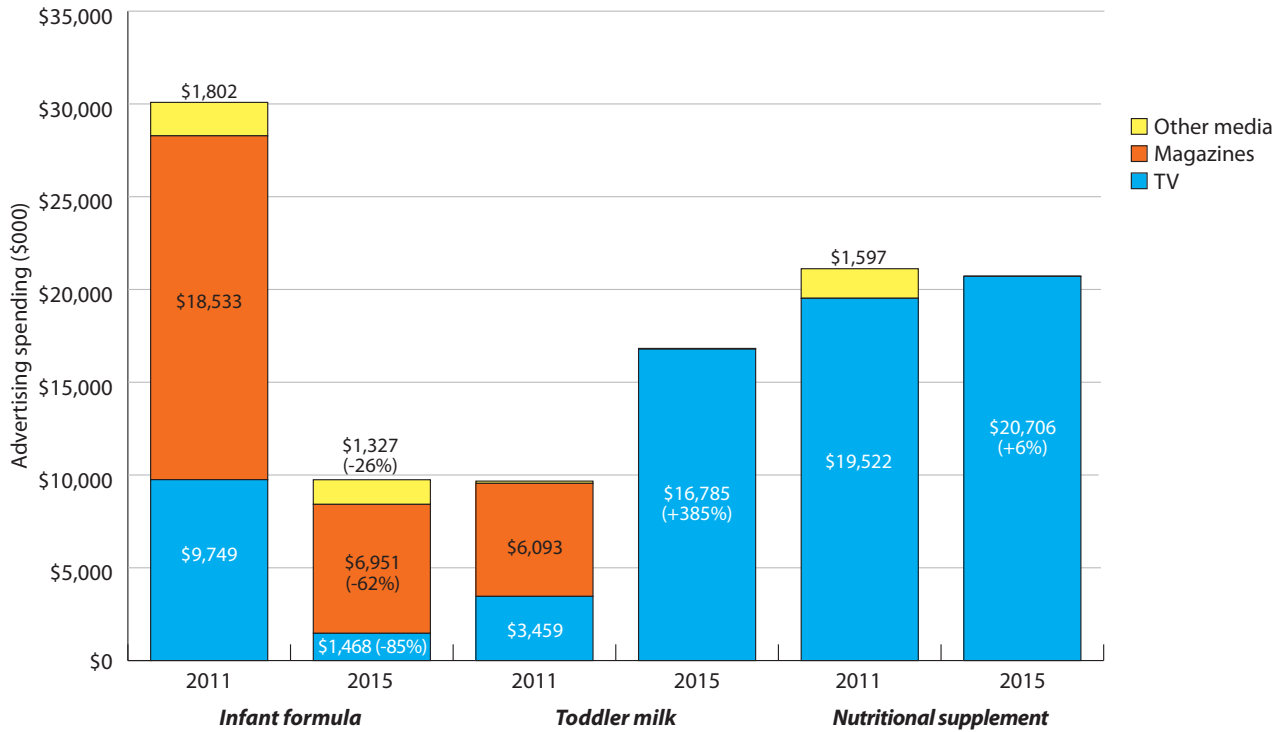
Source: Rudd Center analysis of Nielsen data (2016)

on other media (coupons, internet, newspapers, radio, and outdoors), versus approximately \$750,000 on other media (coupon, radio, and internet) in 2015.

There was wider variation in advertising spending by medium for baby and toddler drink categories (see **Figure 9**). In 2015, infant formula advertising appeared predominately in magazines (71%) and on TV (15%). Other media spending for infant formula consisted of internet advertising (10%) and coupons (3%). Notably, internet spending for infant formula was more than four times internet spending for all other categories combined. In contrast, nearly 100% of toddler milk advertising appeared on TV in 2015, with coupons and internet advertising combined accounting for less than 1%. Similarly, TV accounted for nearly 100% of nutritional supplement advertising in 2015, while coupon advertising represented less than 1%.

Compared to 2011, infant formula advertising in 2015 was substantially lower on both TV and magazines, while the amount of infant formula advertising spent on internet and coupons remained constant. On the other hand, from 2011 to 2015 toddler milk advertising shifted from predominately magazines (63% of the total) to almost exclusively TV; TV advertising increased by nearly five-fold and surpassed infant formula advertising on TV by 11 times. In 2011 as in 2015, nutritional supplement spending was dedicated to advertising primarily on TV, and TV advertising increased by 6% during this period. In other media, nutritional supplement advertising on the internet and coupons decreased by almost 100%. Notably, 2013 was the only year nutritional supplement advertising appeared in magazines, spending \$1.4 million.

**Figure 9.** Changes in baby and toddler drink advertising spending by media



Source: Rudd Center analysis of Nielsen data (2016)

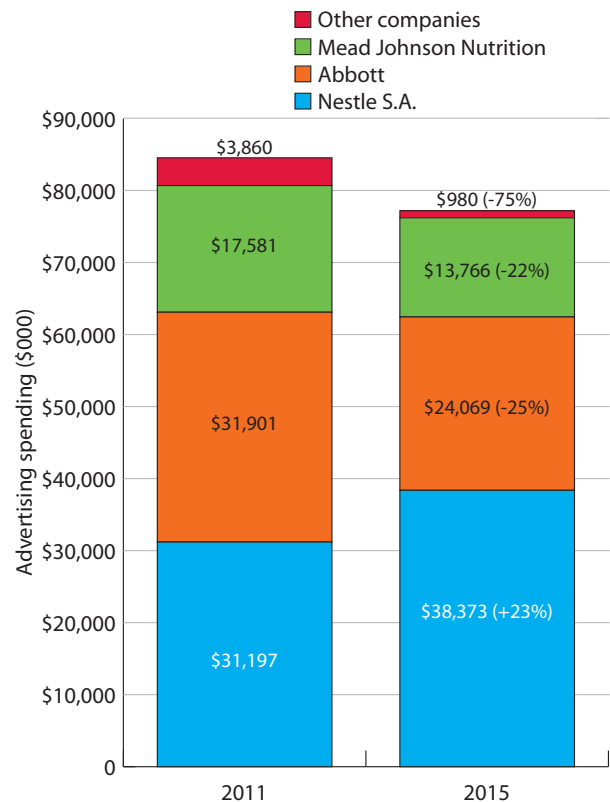
### Advertising spending by company, category, and brand

Six companies spent at least \$100,000 on advertising only in 2015, two additional companies also spent at that level in 2011. **Ranking Table 4** details total spending by company for baby and toddler food and drink brands advertised by these companies in 2011 and 2015, including spending on TV, internet, magazines, and FSI coupons. Three companies were responsible for 99% of all advertising spending in 2015. Nestle S.A. contributed 50% of total spending, followed by Abbott with 31% of total spending. Mead Johnson Nutrition contributed 18% of total spending. All other companies advertising baby and toddler food and drinks in 2015 contributed just 1% of total advertising spending combined. From 2011 to 2015, one of the top-three companies increased its advertising spending: Nestle spent an additional \$7 million (+23%) in 2015 compared to 2011 (see **Figure 10**). In contrast, both Abbott and Mead Johnson reduced advertising spending by approximately one-quarter. Total spending by all other companies combined also declined from \$3.9 million in 2011 to less than \$1 million in 2015.

**Ranking Table 4** also details total advertising spending for all baby and toddler food and drink brands advertised in 2011 and 2015. Sixteen brands advertised their products in 2015, including seven baby food brands, three brands of toddler food, three infant formula brands, two brands of toddler milk, and one nutritional supplement brand.

Nestle was the only company to advertise in four baby and toddler food and drink categories (see **Figure 11**). In 2015, 41%

**Figure 10.** Changes in advertising spending by company



Source: Rudd Center analysis of Nielsen data (2016)

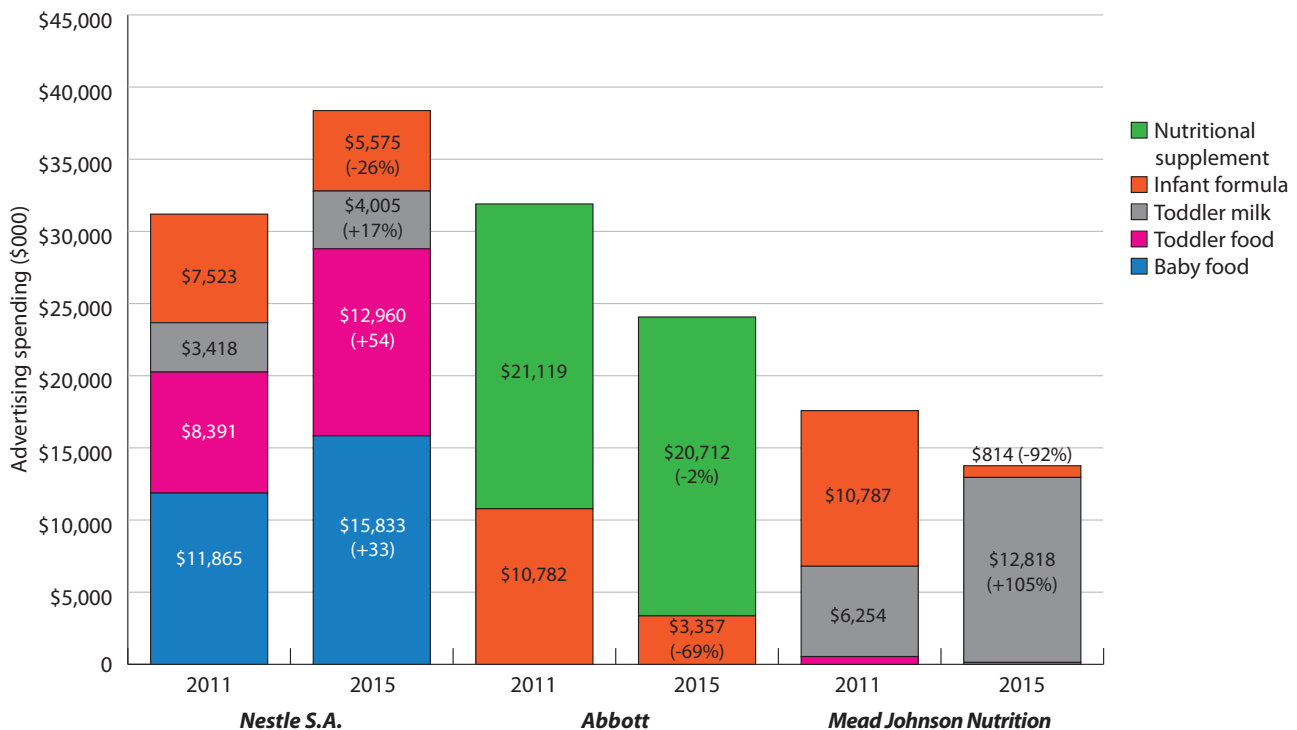
of Nestle spending promoted its Gerber brand baby food and 34% promoted toddler food (Gerber and Gerber Graduates), followed by infant formula (Gerber Good Start) and toddler milk (Nido, a Hispanic-targeted brand) at 15% and 10% of its advertising spending, respectively. Nestle spent more than any other company in three of these categories; the company was responsible for 95% of all baby food advertising spending, 98% of total toddler food advertising, and 57% of infant formula advertising. Abbott advertised two drink categories. The nutritional supplement category (Pediasure and Pediasure Sidekicks brands) represented 86% of the company's spending, while infant formula (Similac) represented 14%. Abbott was responsible for all nutritional supplement advertising and 34% of infant formula advertising. Mead Johnson advertised three categories, but 93% of its spending promoted its Enfagrow toddler milk brand, which represented 76% of all toddler milk advertising. Mead Johnson infant formula (Enfamil) and toddler food (Enfagrow brand) advertising represented only 6% and 1% of company spending, respectively.

From 2011 to 2015, the top-three companies all reduced spending on infant formula, ranging from a decrease of 26% for Gerber Good Start (Nestle), to 69% for Similac (Abbott), to 92% for Mead Johnson's Enfamil (a decline of nearly \$10 million). In contrast, Nestle and Mead Johnson both increased advertising spending on toddler milk during this period. Notably, Mead Johnson's promotion of Enfagrow toddler milk more than doubled from 2011 to 2015, while Nestle advertising spending for Nido reached slightly over \$4.0 million in 2015 (all on Spanish-language TV), a 17% increase from 2011. Nestle advertising for its Gerber and

Gerber Graduates baby and toddler food also increased by 33% and 54%, respectively, while Mead Johnson's toddler food promotion decreased by 75%. Abbott's total spending on nutritional supplement advertising remained nearly unchanged (-2%) during this period, although the company focused its advertising exclusively on Pediasure in 2015. Notably, ad spending for Pediasure Sidekicks peaked in 2013 at \$17.8 million, outspending Pediasure that year.

The other companies in our analysis spent almost \$900,000 combined in 2015 to advertise baby food brands, including Plum Organics from Campbell Soup Company, Beech-Nut from Hero AG, and Happy Baby from Nurture Inc., which also spent \$92,000 to advertise its Happy Tot brand toddler food. One additional baby food brand (Heinz from The Kraft Heinz Company) also spent a small amount (\$86,000) in radio advertising in 2015. As noted, advertising spending by these companies declined substantially from 2011 to 2015. Notably, Hero AG reduced its advertising spending on Beech-Nut baby food by \$1.5 million (-84%). Two additional companies had spent nearly \$1 million each in 2011, but did not advertise at all in 2015: Hain Celestial (Earth's Best Organic and Ella's Kitchen baby food brands) and Walmart (Parent's Choice infant formula). On the other hand, Campbell Soup almost tripled advertising spending on its Plum Organics baby and toddler food from 2011 to 2015 to rank fourth in total advertising spending at \$419,000. Plum Organics' advertising spending peaked in 2013 at approximately \$650,000. In addition, Nurture Inc. had not advertised its baby and toddler food brands in 2011, but ranked sixth in total spending in 2015 to support its Happy Baby, Happy Tot, and Happy Family brands.

**Figure 11.** Advertising spending by company and category



Source: Rudd Center analysis of Nielsen data (2016)

## TV advertising exposure

## TV advertising exposure Definitions

Gross rating points (GRPs)	Measure of the per capita number of TV advertisements viewed by a specific demographic group over a period of time across all types of programming. GRPs for specific demographic groups are also known as targeted rating points (TRPs).
Average advertising exposure	GRPs divided by 100. Provides a measure of the number of ads viewed by individuals in a specific demographic group, on average, during the time period measured.
Women:men targeted ratio	A measure of relative exposure for women versus men, calculated by dividing GRPs for women by GRPs for men.

In 2015, women viewed, on average, 63 English-language TV ads for baby and toddler food and drinks, slightly more than one ad per week, while men viewed almost 34 ads (see **Table 18**). Women saw twice as many ads for baby and toddler food compared with men and 80% more ads for baby and toddler drink categories combined. As companies appear to primarily target women with advertising for these categories, this section focuses on TV advertising viewed by women. This section analyzes advertising exposure to English-language TV ads only. Exposure to Spanish-language TV advertising is discussed in a later section of this report on advertising to Hispanic parents.

As found in the analysis of advertising spending, the nutritional supplement category was the most advertised on TV, contributing 40% of TV ads viewed by women for baby and toddler food and drinks in 2015. Approximately one in four TV ads were for baby and toddler food, split fairly equally between the two categories. Toddler milk represented just 11% of TV ads viewed by women, and infant formula was the least advertised category on TV averaging less than two ads viewed per year.

From 2011 to 2015, women's exposure to baby and toddler food and drink advertising on TV increased slightly (+8%), but changes varied widely by category. Exposure to baby and toddler food ads each increased by more than 50% during this period (see **Figure 12**). TV ads for both categories peaked in 2014 at 27 ads viewed by women for baby food and 23 ads for toddler food. From 2014 to 2015, TV ads viewed declined

somewhat, but they continued to be more than 50% higher than ads viewed in 2013.

Changes in women's exposure to baby and toddler drink advertising showed greater variation (see **Figure 13**). Toddler milk TV advertising increased from 0.1 ads in 2011 and 2012 to surpass ads for infant formula in 2013. Women's exposure to toddler milk ads peaked in 2014 at 13 ads viewed on average, and then declined in 2015. In contrast, infant formula TV advertising showed a steady decline of 85% from 2011 to 2015. Advertising exposure for the nutritional supplement category declined by 15% from 2011 to 2015, but these ads were consistently viewed more than any other baby or toddler food or drink category. Nutritional supplement ads peaked at 41 in 2013.

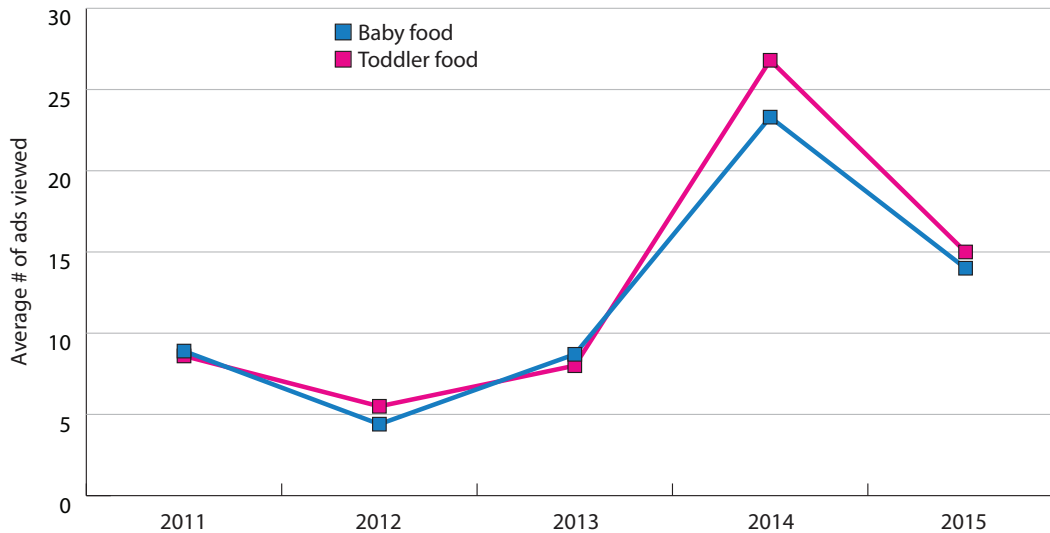
## TV advertising by company and brand

Just three companies advertised baby and toddler food and drinks on TV in 2015: Nestle S.A., Abbott, and Mead Johnson Nutrition (see **Ranking Table 5**). Nestle ranked first with approximately 30 TV ads viewed by women in 2015, followed by Abbott averaging 25 ads viewed. These two companies were responsible for 88% of baby and toddler food and drink ads viewed by women on TV in 2015. Mead Johnson ranked a distant third at approximately 7 ads viewed. From 2011 to 2015, Nestle TV advertising increased by 33% and Mead Johnson ads increased 46%, while women's exposure to Abbott's TV advertising declined 15%. Prior to 2015, Hero AG also advertised on TV in 2011 and 2014.

**Table 18.** TV advertising exposure for women and men by category, 2011 and 2015

	Women			Men			Women:men targeted ratio	
	2011	2015	Change	2011	2015	Change	2011	2015
<b>Baby and toddler food</b>								
Baby food	8.6	15.0	74%	4.8	7.7	60%	1.8	1.9
Toddler food	8.9	14.0	57%	4.9	6.8	39%	1.8	2.1
<b>Baby and toddler drinks</b>								
Nutritional supplement	29.4	25.0	-15%	16.3	15.2	-7%	1.8	1.6
Toddler milk	0.1	7.0	new	0.1	3.4	new	1.0	2.1
Infant formula	10.9	1.6	-85%	6.1	0.8	-87%	1.8	2.0

Source: Rudd Center analysis of Nielsen data (2016)

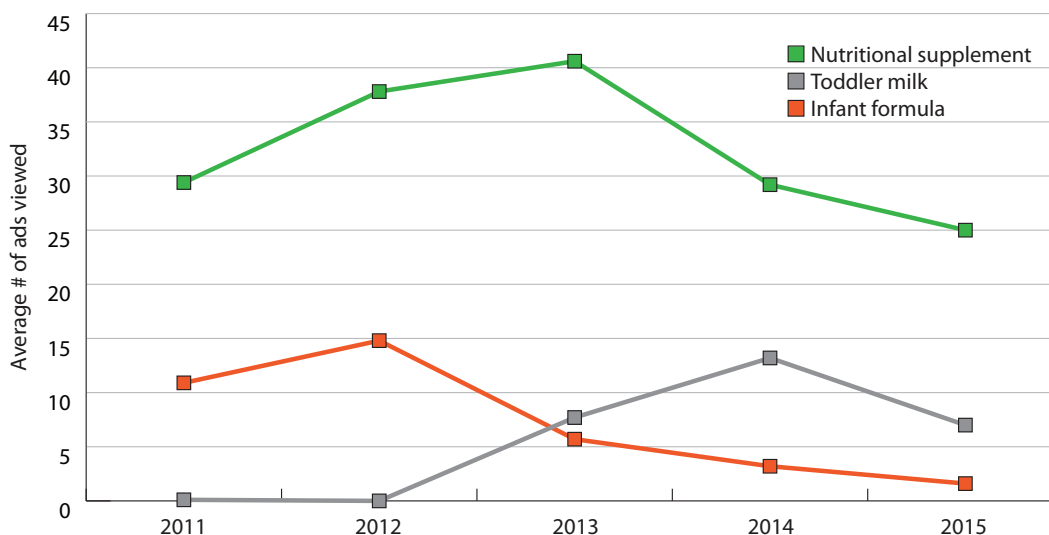
**Figure 12.** Baby and toddler food TV advertising exposure by women: 2011-2015

Source: Rudd Center analysis of Nielsen data (2016)

**Figure 14** shows the categories of baby and toddler food and drinks that the top three companies advertised on TV in 2011 and 2015. Nestle advertised Gerber baby food, Gerber Good Start infant formula, and Gerber Graduates toddler foods every year during this period. From 2011 to 2015, total Nestle ad exposure by women rose 33%. However, women saw 73% more TV ads for Nestle baby and toddler food, but fewer infant formula ads. Mead Johnson changed from advertising almost exclusively Enfamil infant formula in 2011 to almost exclusively Enfagrow toddler milk in 2015. Total Mead Johnson ads viewed by women rose 46% from 2011 to 2015. The company also advertised Enfagrow toddler food on TV in 2015, but at a low level. Abbott nutritional supplement TV advertising to women declined by 15% from 2011 to 2015. Notably, the company advertised two brands from 2011

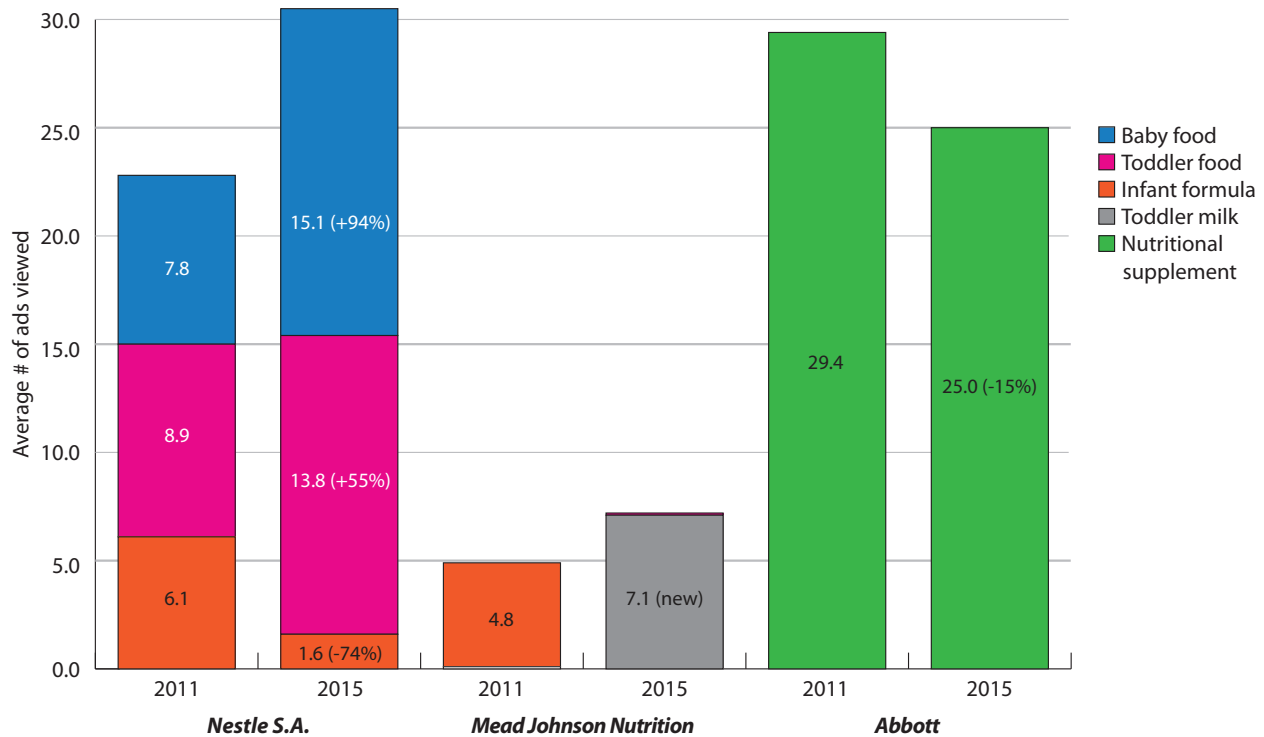
to 2013 (Pediasure and Pediasure Sidekicks), but just its Pediasure brand in 2014 and 2015.

In 2014 and 2015, Pediasure was the brand responsible for the most baby and toddler food and drink TV advertising seen by women, increasing by 77% from 2011 to 2015. Two Nestle brands, Gerber baby food and Gerber Graduates toddler food, ranked second and third in TV advertising to women in these two years. Both brands substantially increased their advertising from 2011 to 2015, by 94% and 55%, respectively. The brand that ranked fourth in 2015 TV advertising, Enfagrow toddler milk, had not advertised on TV prior to 2013. In contrast, Gerber Good Start infant formula reduced its TV advertising by 74% from 2011 to 2015. Two additional brands with previous TV advertising did not advertise on TV in 2015: Enfamil infant formula and Beech-Nut baby food (Hero AG).

**Figure 13.** Baby and toddler drinks TV advertising exposure by women: 2011-2015

Source: Rudd Center analysis of Nielsen data (2016)



**Figure 14.** Changes in TV advertising exposure for women by company and category

Source: Rudd Center analysis of Nielsen data (2016)

## Advertising by brand variety

In addition to reporting traditional advertising for companies and brands, we also examined the varieties that each baby and toddler food, infant formula, and toddler milk brand chose to highlight in their advertising, including advertising spending in all media and advertising to women on TV.

## Baby and toddler food

As noted, Gerber was the most advertised baby food brand from 2011 to 2015. More than one-half of the brand's 2015 spending promoted Gerber 3rd Foods, which was a newcomer in 2015 (see **Table 19**). Advertising spending on Gerber 2nd Foods also rose four-fold from 2011 to reach \$5.0 million in 2015. In addition, Gerber spent \$2.5 million promoting its brand in 2015, which was a substantial decline from 2011. Notably, these three Gerber varieties were the only baby food advertised on TV in 2015. Advertising for Gerber Nature Selects was discontinued in 2014, and the brand only advertised its Organic variety from 2012 to 2013, spending \$2 to \$3 million in those years.

Plum Organics advertised its Second Blends variety and the overall brand in 2015. Beech-Nut spent less than \$300,000 advertising its baby food in 2015. However, in 2014 it spent \$8.4 million promoting its brand and Just all-natural variety. The brand also advertised its Goya variety—a line of Hispanic-targeted baby food—in 2013 only, spending \$1.1 million. Heinz baby food spent less than \$100,000 on

advertising in 2015, interestingly the brand only advertised on spot radio. The remaining baby food brands featured all organic products. Nurture Inc. began advertising its Happy Baby and Happy Family brands in 2014, spending \$93,000 in 2015. Together, Hain Celestial brands (Ella's Kitchen and Earth's Best) spent almost \$1 million in 2011, but had virtually no advertising in 2015. These brands primarily promoted their brands overall, but Earth's Best also advertised its 2nd Baby Foods variety in 2011 and 2012.

In the toddler food category, Gerber Graduates spent more than \$5 million to advertise its Puffs snack food, which debuted in 2014 at more than \$7 million (see **Table 20**). The brand also spent approximately \$4 million each to advertise Lil' Entrees prepared meals and Grabbers pouches. These three varieties also advertised on TV in 2015, although women saw eight times as many ads for Puffs compared to the other varieties. From 2011 to 2015, spending on Grabbers doubled (+114%), while spending on Lil' Entrees increased by one-third (+33%). Some varieties of Gerber Graduates had advertised in previous years but did not advertise in 2015, including Fruit & Veggie Melts (spending over \$2 million in 2011, including on TV), Lil' Crunchies, Kids Selects 2+, and Dippers. Gerber Graduates brand advertising peaked in 2013 at almost \$2 million, but ended in 2014. The two remaining toddler food brands advertised during this period (Enfagrow and Happy Tot) promoted the brand overall but not specific varieties.

**Table 19.** Baby food advertising by brand and variety

Company	Brand	Variety	Total advertising spending (\$000)			Avg # TV ads viewed by women (18-49 yrs)*		
			2011	2013	2015	2011	2013	2015
Nestle S.A.	Gerber	3rd Foods	\$0.0	\$0.0	\$8,326.6	0.0	0.0	8.0
Nestle S.A.	Gerber	2nd Foods	\$1,012.5	\$0.0	\$5,011.0	0.0	0.0	4.4
Nestle S.A.	Gerber		\$6,115.1	\$393.1	\$2,495.2	4.4	0.0	2.6
Campbell Soup Company	Plum Organics	Second Blends	\$0.0	\$0.0	\$324.6			
Hero AG	Beech-Nut		\$1,809.3	\$451.0	\$286.0	0.8	0.0	0.0
Campbell Soup Company	Plum Organics		\$117.2	\$653.0	\$94.8			
The Kraft Heinz Company†	Heinz	Baby Foods	\$0.0	\$0.0	\$85.6			
Nurture Inc.	Happy Baby		\$0.9	\$0.0	\$63.3			
Nurture Inc.	Happy Family		\$0.0	\$0.0	\$29.6			
Hain Celestial Group Inc.	Ella's Kitchen		\$169.7	\$5.6	\$4.2			
Nestle S.A.	Gerber	Nature Select	\$4,737.2	\$5,294.2	\$0.0	3.4	8.0	0.0
Nestle S.A.	Gerber	Organic	\$0.0	\$2,159.6	\$0.0			
Hero AG	Beech-Nut	Goya	\$0.0	\$1,115.1	\$0.0		**	
Hain Celestial Group Inc.	Earth's Best		\$208.6	\$4.1	\$0.0			
Hain Celestial Group Inc.	Earth's Best	2nd Baby Foods	\$564.8	\$0.0	\$0.0			

\*Brands with ads on English-language TV

\*\*Advertised on Spanish-language TV only

†This company was not included in other analyses because it did not spend \$100,000 in 2015.

Source: Rudd Center analysis of Nielsen data (2016)

**Table 20.** Toddler food advertising by brand and variety

Company	Brand	Variety	Total advertising spending (\$000)			Avg # TV ads viewed by women (18-49 yrs)*		
			2011	2013	2015	2011	2013	2015
Nestle S.A.	Gerber Graduates	Puffs	\$0.0	\$0.0	\$5,294.5	0.0	4.5	4.5
Nestle S.A.	Gerber Graduates	Lil' Entrees	\$3,050.0	\$2,950.1	\$4,043.8	4.5	4.7	5.4
Nestle S.A.	Gerber Graduates	Grabbers	\$1,691.3	\$1,697.6	\$3,621.6	1.4	3.8	4.0
Mead Johnson Nutrition	Enfagrow		\$539.9	\$879.9	\$132.9	0.0	0.0	0.1
Nurture Inc.	Happy Tot		\$0.0	\$0.0	\$91.8			
Nestle S.A.	Gerber Graduates		\$1,562.7	\$1,874.4	\$0.0			
Nestle S.A.	Gerber Graduates	Fruit & Veggie Melts	\$2,086.6	\$0.0	\$0.0	3.0	0.0	0.0
Nestle S.A.	Gerber Graduates	Kids Selects 2+	\$0.0	\$1,347.9	\$0.0			
Nestle S.A.	Gerber Graduates	Lil' Crunchies	\$0.0	\$1,795.2	\$0.0			
Nestle S.A.	Gerber Graduates	Dippers	\$0.0	\$474.0	\$0.0			

\*Brands with ads on English-language TV

Source: Rudd Center analysis of Nielsen data (2016)

## Infant formula and toddler milk

As discussed earlier, Gerber Good Start was the most advertised infant formula brand in 2015, splitting its advertising primarily between its Soothe variety for colicky infants and its Gentle variety for easy digestion (see **Table 21**). Spending for Soothe was highest in 2015, while advertising for Gentle peaked in 2012 at more than \$6 million. Notably, Soothe was the only infant formula variety advertised on TV in 2015. Gerber Good Start advertised its Protect variety for advance immune support only in 2011 and 2012, including on TV, spending \$7.5 million. Gerber Good Start also spent less than \$100,000 on brand advertising in 2015.

In 2015, Similac spent the most to advertise its Sensitive variety for gas and fussiness at almost \$2 million. It also advertised the Similac brand and its Advance variety, formulated to be closest to breastmilk (spending less than \$1 million each). Advertising spending for Advance decreased by 92% from 2011 when spending had reached \$8.5 million. Similac also advertised its Supplementation product for babies transitioning from breastmilk in 2013 and 2014. Enfamil, the remaining infant formula brand advertising in 2015, split its spending between the brand and its Reguline variety for comfortable stools (introduced in 2014). Enfamil also spent \$8.5 million to advertise its Newborn variety in 2011, but this

**Table 21.** Infant formula advertising spending by brand and variety

Company	Brand	Variety	Total advertising spending (\$000)			Avg # TV ads viewed by women (18-49 yrs)*		
			2011	2013	2015	2011	2013	2015
Nestle S.A.	Gerber Good Start	Soothe	\$0.0	\$2,821.4	\$2,974.8	0.0	1.7	1.6
Nestle S.A.	Gerber Good Start	Gentle	\$0.0	\$5,067.6	\$2,519.1			
Abbott	Similac	Sensitive	\$0.0	\$4,581.8	\$1,777.8			
Abbott	Similac		\$2,337.2	\$502.2	\$887.9			
Abbott	Similac	Advance	\$8,445.1	\$3,142.5	\$691.1			
Mead Johnson Nutrition	Enfamil	Reguline	\$0.0	\$0.0	\$449.3			
Mead Johnson Nutrition	Enfamil		\$2,254.1	\$1,089.0	\$365.2			
Nestle S.A.	Gerber Good Start		\$34.9	\$51.5	\$81.0			
Abbott	Similac	Supplementation	\$0.0	\$1,980.8	\$0.0			
Mead Johnson Nutrition	Enfamil	Newborn	\$8,533.0	\$2,015.7	\$0.0	4.8	0.2	0.0
Nestle S.A.	Gerber Good Start	Protect	\$7,488.5	\$0.0	\$0.0	6.1	0.0	0.0
Walmart	Parent's Choice		\$989.9	\$0.0	\$0.0			

\*Brands with ads on English-language TV

Source: Rudd Center analysis of Nielsen data (2016)

**Table 22.** Toddler milk advertising spending by brand and variety

Company	Brand	Variety	Total advertising spending (\$000)			Avg # TV ads viewed by women (18-49 yrs)*		
			2011	2013	2015	2011	2013	2015
Mead Johnson Nutrition	Enfagrow		\$6,254.1	\$28.1	\$6,856.2	0.1	0.0	5.8
Mead Johnson Nutrition	Enfagrow	Toddler Next Step	\$0.0	\$11,745.9	\$5,962.3	0.0	7.7	1.2
Nestle S.A.	Nido	Nido 1+	\$2,142.2	\$3,061.9	\$3,982.2	**	**	**
Nestle S.A.	Nido		\$120.4	\$0.0	\$23.1	**	**	**
Nestle S.A.	Nido	Fortificada	\$1,155.7	\$0.0	\$0.0	**	**	**

\*Brands with ads on English-language TV

\*\*Advertised on Spanish-language TV only

Source: Rudd Center analysis of Nielsen data (2016)

variety was not advertised in 2015. Walmart advertised its Parent's Choice infant formula in 2011 and 2012 only.

In the toddler milk category, Enfagrow split its 2015 advertising spending between the brand and its Toddler Next Step variety (see **Table 22**). Of note, Toddler Next Step spending peaked in 2014 at \$18.3 million, then decreased by two-thirds to \$6.0 million in 2015. Toddler Next Step also had the most

TV advertising to women in this category. Nestle advertised primarily its Nido 1+ variety of toddler milk (for children ages 1 and older), reaching \$4.5 million in 2014 and declining slightly (-12%) in 2015. Nido Fortificada (fortified dry whole milk) also spent more than \$1 million in 2011, the only year it was advertised. In addition, Nido spent a small amount on brand advertising in 2015.

## Advertising content analysis

Advertising content analysis	Definitions
Multiple category and brand ads	In some cases, ads could not be assigned to just one of the categories analyzed. Multiple category ads promoted food or drink products in more than one category (e.g., both baby and toddler food). Brand ads promoted the brand generally, but not any specific products.
Main selling point	The general focus of the advertisement or what was being sold, including specific product(s), a promotion (e.g., coupon, cause, or contest), or just the brand overall. Only one main selling point was coded.
Product features	Any specific feature of the product communicated in the ad, including nutrition, supplement (i.e., filling a void in a child's diet), new/improved, taste/approved by children, natural/real, organic, convenience, satisfies children, scientific formula, and/or serving of vitamins/food group.
Indirect associations	Any implicit message or indirect attribute about the product implied by the ad, including humor, education, helping children learn, fear appeals, family bonding, bonding with peers, inspirational appeals, nutrition experts, and/or parent/child conflict.
Benefits	Any direct benefit to children from consuming the product, including digestive health, physical development, mental performance, crying, chewing, and happiness of children or parents. Pediatrician recommended is categorized as a separate type of benefit.

To assess the messages presented in advertising for baby and toddler food and drinks, we obtained copies of 264 English-language ads that appeared in magazines, on TV, and online videos between January 1, 2012 and December 31, 2015 for nine brands in our analysis. After removing duplicate ads, we obtained 136 unique English-language ads for the content analysis. The content analysis examined the main selling point of the ad, as well as specific product features, indirect associations, and benefits from consuming the product that were communicated in the ads. The content of Spanish-language ads is located in the section of this report on advertising to Hispanic parents.

Of the 136 English-language advertisements examined, 88 appeared in magazines, 38 on TV, and 10 were online videos. As creative executions for the TV and online video ads were

similar, we combined these ads in the analysis (see **Table 23**). TV/online video ads were split evenly between food and drink brands, but 60% of magazine ads promoted baby and toddler food brands.

The main selling points in ads differed substantially for baby and toddler food compared with drink brands. Over 80% of drink ads focused on selling a specific product(s) compared to approximately one-half of food ads. In contrast, almost four in 10 baby and toddler food ads focused on selling the brand overall, compared to just 10% of baby and toddler drink ads. An additional 15% of magazine ads for food and 11% of magazine ads for drinks focused on a promotion, but none of the TV/online video ads used a promotion as the main selling point.

**Table 23.** Main selling point in baby and toddler food and drink ads

Type of ad	# of ads	Main selling point		
		Specific product(s)	Promotion	Brand
<b>Baby and toddler food</b>				
Magazine ads	53	47%	15%	38%
TV/online video ads	24	63%	0%	38%
Total ads	77	52%	10%	38%
<b>Baby and toddler drinks</b>				
Magazine ads	35	80%	11%	9%
TV/online video ads	24	88%	0%	13%
Total ads	59	83%	7%	10%

Source: English-language advertising content analysis (2016)





**GOT A GERBER BABY?**  
SHOW US AND YOU COULD WIN \$50,000.

**Gerber BABY 2015 Photo Search**

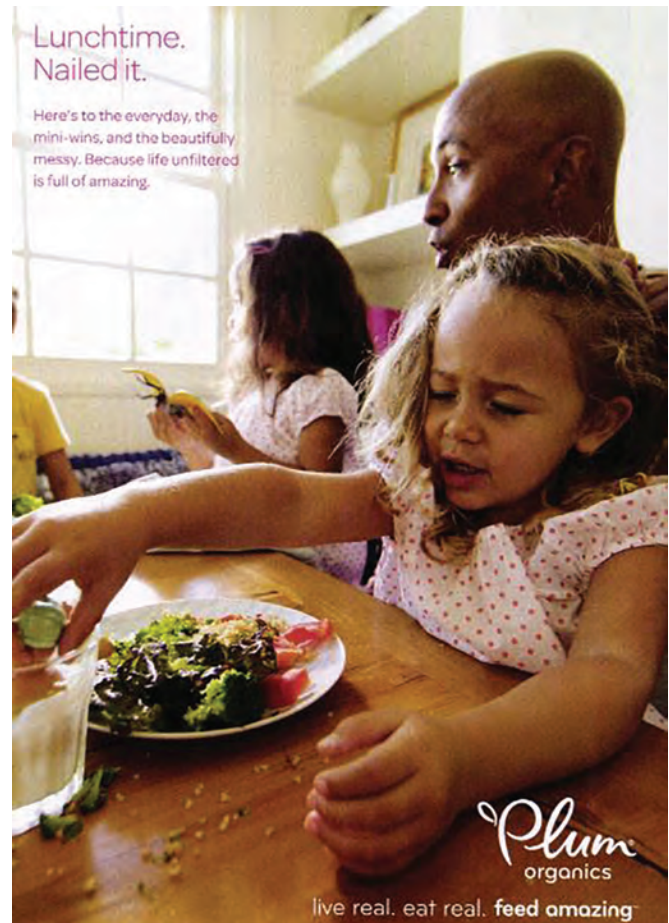
The search is on for Gerber's next spokesbaby! Submit a photo of your little one and you could win \$50,000 and the opportunity for your baby to appear in a Gerber ad. Photo entry dates: Sept. 8 - Oct. 23.

Enter to win at [Gerber.com/photosearch](http://Gerber.com/photosearch)

Gerber Start Healthy Stay Healthy

PHOTOS, VIDEO AND AUDIO CONTENT OF THE SUBMITTER(S) WILL BE MADE PUBLICLY AVAILABLE TO THE GENERAL PUBLIC AND WILL BE USED FOR PROMOTIONAL PURPOSES. THE SUBMITTER(S) WILL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMISSIONS FROM ANY THIRD PARTY. THE SUBMITTER(S) WILL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMISSIONS FROM ANY THIRD PARTY. THE SUBMITTER(S) WILL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMISSIONS FROM ANY THIRD PARTY. THE SUBMITTER(S) WILL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMISSIONS FROM ANY THIRD PARTY.

Gerber ad for a photo contest promotion



Lunchtime. Nailed it.

Here's to the everyday, the mini-wins, and the beautifully messy. Because life unfiltered is full of amazing.

Plum organics

live real. eat real. feed amazing

Plum Organics brand ad



**NEW**

Hoping your baby will have a comfortable poop?

New Enfamil® Reguline™ is designed to promote soft, comfortable stools.

Enfamil® Reguline™ is an everyday formula that offers complete nutrition along with important digestive and nutritional benefits:

- A clinically proven blend of prebiotics to help support an infant's digestive health
- Easy-to-digest proteins
- Complete nutrition, brain-boosting DHA and choline

\*Based on breast-feeding formula.

Enfamil ad selling a specific product

### Baby and toddler food ads

Advertisements for four food brands were included in the English-language content-analysis: Gerber, Plum Organics, and Beech-Nut baby food and Gerber Graduates toddler food (see **Table 24**). The two Nestle brands (Gerber and Gerber Graduates) comprised 70% of the baby and toddler food ads examined. Most brands advertised on TV and in magazines, except Plum Organics, which only advertised in magazines. Eight of Beech-Nut's nine ads appeared in magazines.

The brands also differed in the main selling point of their ads. Gerber Graduates chiefly advertised a specific product(s), with just one promotion and one brand ad. Conversely, the majority of Plum Organics ads promoted the brand overall. Gerber and Plum Organics were responsible for the majority of ads that focused on a promotion (4 and 3 ads, respectively).

Baby and toddler food brands were more likely to advertise specific product features (e.g., organic, natural/real) than benefits to children (e.g., satisfying picky eaters). Gerber Graduates and Beech-Nut communicated product features in 100% of their ads, averaging 2.5 and 1.9 features per ad, respectively. In contrast, Plum Organics and Gerber communicated benefits to babies in more than 40% of their ads and specific product features in approximately three-



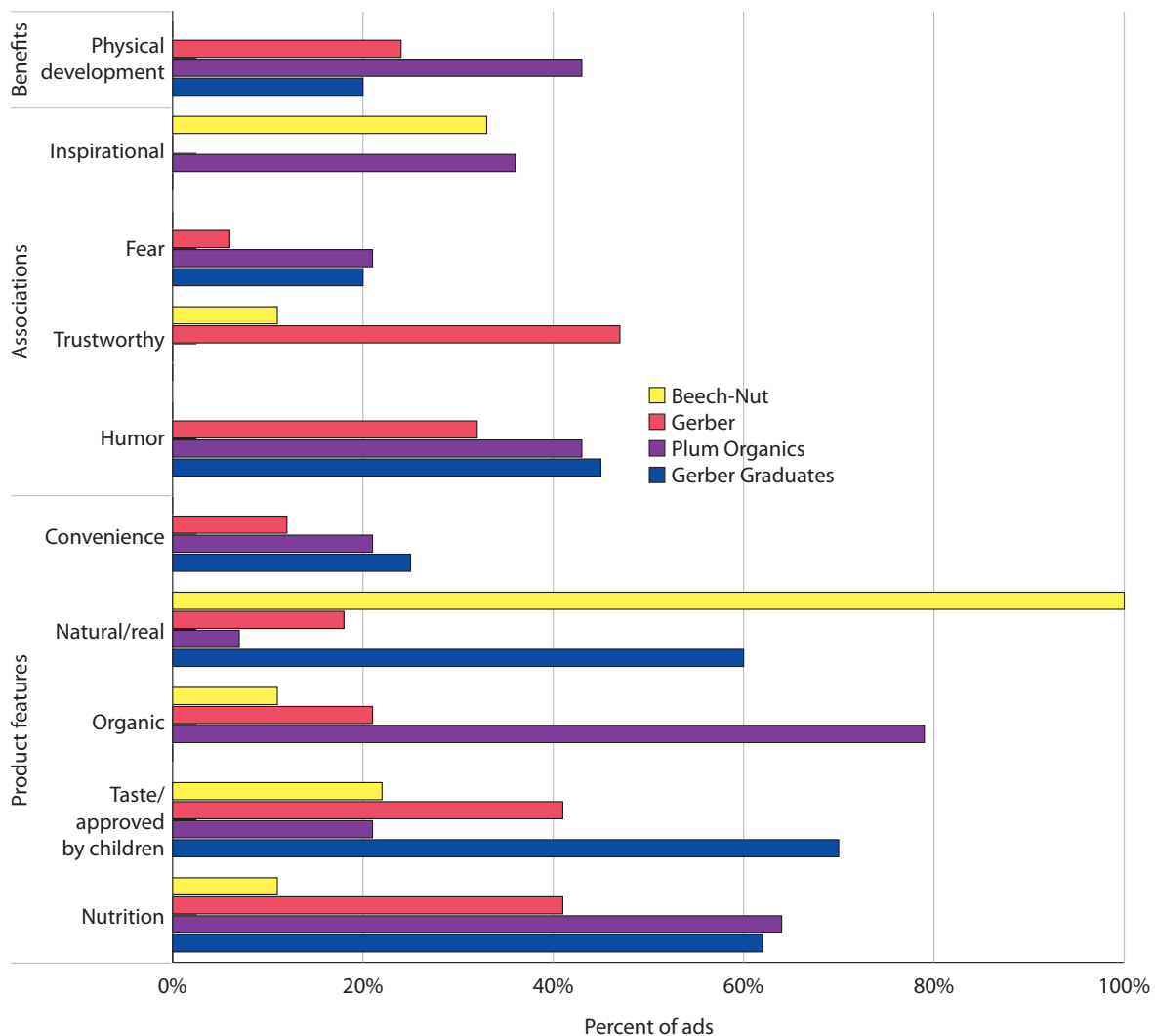
**Table 24.** Summary of baby and toddler food advertisement content by brand

Brand	Category	# of ads	% magazine	Main selling point			Product features		Associations		Benefits to children	
				Specific product(s)	Promotion	Brand	% ads	Avg # per ad	% ads	Avg # per ad	% ads	Avg # per ad
Gerber	Baby food	34	59%	44%	12%	44%	77%	2.0	74%	1.9	41%	0.6
Gerber Graduates	Toddler food	20	55%	90%	5%	5%	100%	2.5	70%	1.5	25%	0.8
Plum Organics	Baby food	14	100%	7%	21%	71%	79%	2.6	79%	1.8	43%	1.0
Beech-Nut	Baby food	9	89%	67%	0%	33%	100%	1.9	56%	1.2	11%	1.0

Source: English-language advertising content analysis (2016)

quarters. Baby and toddler food brands also frequently conveyed indirect associations in their ads, including more than 70% of ads for Gerber, Gerber Graduates, and Plum Organics. Beech-Nut ads used associations somewhat less frequently.

**Figure 15** presents the specific product features, associations, and benefits communicated in ads for the baby and toddler food brands examined, including any messages present in 20% or more of ads for at least one brand. **Appendix B** details all messages that appeared in ads for each brand.

**Figure 15.** Prominent product features, associations, and benefits in baby and toddler food ads

Source: English-language advertising content analysis (2016)

**Features.** Taste or “approved by children” was the most common product feature communicated in baby and toddler food advertising, ranging from 22% of Beech-Nut ads to 70% of Gerber Graduates ads. Some Gerber ads featured a baby taste testing panel showing their approval, while Gerber Graduates promised a “totally toddler” taste. Nutrition messages also appeared in more than 60% of Plum Organics and Gerber Graduates ads. For example, Gerber’s oatmeal cereal ads stated, “Gerber infant cereal contributes more nutrients to baby’s diet than any other baby food. With 10 essential vitamins and minerals, it’s the perfect complement to breastmilk, formula, and your photostream.” Gerber Graduates, Gerber, and Plum Organics claimed that their products were “nutritious” or formulated with “balanced nutrition” without providing further explanation.

All ads from Beech-Nut and 60% of Gerber Graduates ads promoted their products as natural. Beech-Nut ads claimed that its products were natural, “real,” “pure,” or “just” food. Plum Organics touted its products as organic (in addition to the product name) in 79% of ads. Beech-Nut and Gerber also promoted organic products in 11% and 21% of ads, respectively. Convenience was mentioned in 21% of Gerber Graduates and Plum Organics ads, including messages that the product packaging made preparation easy (i.e., easy to pour). Gerber Graduates stated that its Grabbers squeezable fruit and veggie pouches were ideal for “toddlers on the go go.”



Gerber Graduates product with a “totally toddler” taste

**this is not  
baby food.**



“Real” Beech-Nut products

**Associations.** Humor was the most frequent association used in baby and toddler food ads, with techniques such as irony, puns, and funny statements or situations used in approximately one-third of ads. Beech-Nut was the only brand that did not use this technique. In one Gerber Graduates Lil’ Entrees ad for example, Haley refuses to wear pants and puts them on her head instead. Plum Organics promoted itself as a trustworthy brand in almost one-half of its ads by emphasizing its organic ingredients and offering parenting tips on early childhood feeding. The brand directly connected product nutrition with helping parents make the best food choices for their families.

Inspirational concepts, such as supporting family values or helping children become their best selves, frequently appeared in both Beech-Nut and Plum Organics ads. For example, Plum Organics magazine ads featured the headline, “feed amazing” and asserted, “feed her amazing spirit from the very first bite.” Plum Organics also positioned itself as a nutrition expert more than all other baby and toddler food brands combined. The brand’s magazine advertisements featured quotes from “pediatrician advisors” discussing how nutrition can shape children’s metabolism and taste preferences. The only brand that did not promote itself as a nutrition expert was Beech-Nut.





Humor in a Gerber Graduates ad

Although parent/child conflicts and fear messages were not common in baby and toddler food ads, their presence at all was notable. Approximately 20% of Gerber Graduates and Plum Organics ads played on new parents' anxieties. For example, Plum Organics ads focused on the importance of setting a child's metabolism and taste preferences early for healthy eating. Similarly, 15% of Gerber Graduates ads focused on the difficulties of getting toddlers to eat properly.

**Benefits.** Gerber, Gerber Graduates, and Plum Organics all promoted the benefits of their baby or toddler food for children's physical development in the majority of food advertisements examined. Gerber implied that its products help children learn



Gerber product for "brain development and growth"



**Feed her amazing spirit from the very first bite.** Studies now show that what you feed your little one in those first few years can actually change her metabolism. Set her on a course for a healthy future, with nutritious, organic foods in culinary-inspired combinations. Because, amazing deserves amazing.



Learn more about our food philosophy & join the conversation:  
[/plumorganics](https://www.facebook.com/plumorganics) [@plumorganics](https://twitter.com/plumorganics) [www.plumorganics.com](http://www.plumorganics.com)

Plum Organics inspirational ad

**How will your baby learn to chew?  
 Bit by perfect bit.**



**At Gerber Chew University, our mission is to train tiny mouths to conquer big chewing challenges. That's why our Lil' Bits® recipes are made with perfectly-sized soft pieces. From tasty fruits & veggies to the complete nutrition of our new dinner varieties, the full line of Lil' Bits® recipes will help your little one earn a master's in chewing. Learn more at [Gerber.com/LearnToChew](http://Gerber.com/LearnToChew)**

"Gerber Chew University" helps babies master chewing

to chew, promoting “Gerber Chew University” where serving babies Lil’ Bits helps them “conquer big chewing challenges.” Gerber also connected the vitamins in its products to babies’ “brain development and growth.”

### Baby and toddler drinks

The English-language content analysis included advertisements for six baby and toddler drink brands (see **Table 25**). Due to the small number of different ads for Pediasure and Pediasure Sidekicks, we combined these ads into one Pediasure brand. Infant formula brands comprised 71% of the baby and toddler drink ads examined, and the majority appeared in magazines, while Pediasure and Enfagrow had more TV ads.

The main selling point in 83% of baby and toddler drink ads was to promote specific products, although Enfamil, Similac, Pediasure, and Enfagrow each had at least one brand ad. Enfamil, Similac, Gerber Good Start, and Enfagrow also had one ad featuring a promotion.

As with ads for baby and toddler food, nearly all baby and toddler drink ads communicated specific product features, averaging 2.1 per ad. However, drink ads were more likely to also communicate benefits to children from consuming the products: 73% of drink ads mentioned benefits to children compared to 34% of food ads. Eight of ten ads for drink brands also conveyed indirect product associations. Among the drink brands, Pediasure and Enfagrow communicated the most product features, associations, and benefits in its ads. For example, Enfagrow averaged 3.0 product features, 2.5 associations, and 1.8 benefits per ad.

**Infant formula.** Nutrition was the most common product benefit featured in infant formula ads, appearing in all ads except one for Similac (see **Figure 16**). DHA, L. Reuteri, probiotics, and lutein were commonly discussed in infant formula advertisements. One Similac advertisement stated, “Similac has LUTEIN to help you nourish more like breast milk. This is a critical time for your newborn’s developing brain

and eyes. That’s why, in addition to DHA, we have lutein, an important nutrient found in breast milk.” Another ad for Enfamil for Supplementing and Enfamil Newborn claimed these products, “have DHA and choline, nutrients found in breast milk and important vitamin D.” The majority of Gerber Good Start ads communicated that the product satisfies babies. For example, a Gerber Good Start Gentle magazine ad featured a smiling, giggling baby in the center with the text, “Comfort for baby means giggles for all,” with “Inspired by breast milk, Gerber Good Start Gentle formula has Comfort Proteins that are easy for tiny tummies to digest. Our complete nutrition with DHA is uniquely designed to bring comfort to babies and happiness for all” in smaller text below.

Enfamil advertised its scientific formula in more than one-half of ads. For example, one Enfamil ad proclaimed “Big News,” “in an independent clinical study, children fed Enfamil Infant during the first 12 months of life exhibited: An increased ability to pay attention and stay on task and a 16% higher score on an early measure of IQ.” This claim compared children consuming Enfamil infant formula to children consuming various discontinued Enfamil formulas without DHA. Gerber Good Start also promoted its scientific formula in 35% of ads, including one TV advertisement which stated, “It is the only formula to have the probiotic [L.Reuteri] clinically shown to reduce crying time by 50%.” All three infant formula brands also advertised new products in approximately one-quarter to one-third of their ads.

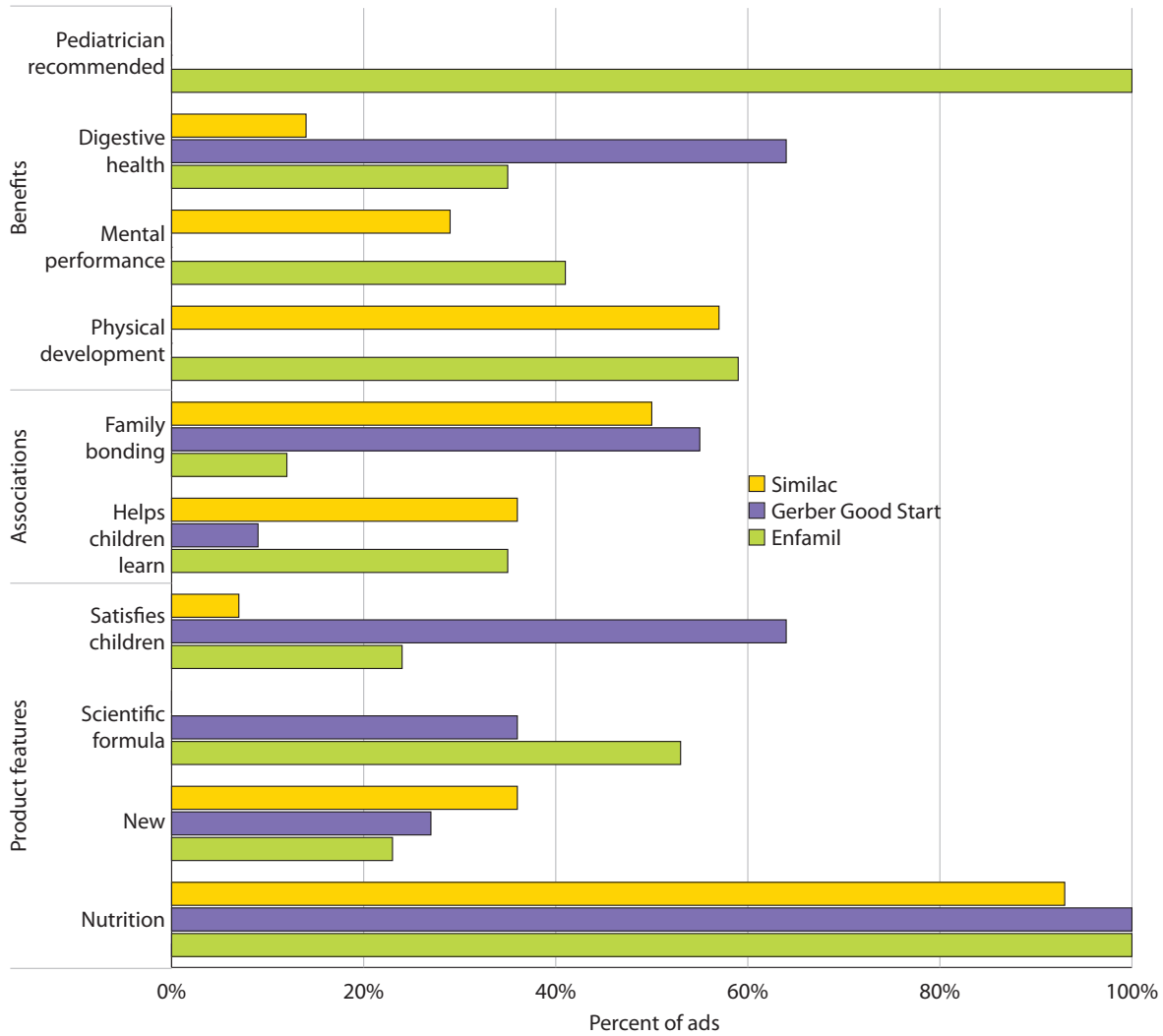
The association used most often in infant formula ads was family bonding, often depicting a mother cuddling with her baby. This message appeared in approximately one-half of Similac and Gerber Good Start ads, but just 10% of Enfamil formula ads. In addition, 29% of Similac ads featured moms bonding with each other, “Here’s to leaving the mommy judgment behind.” Approximately one-third of Similac and Enfamil infant formula ads also associated the product with helping babies learn. These messages primarily focused on a healthful ingredient, but did not explicitly connect the ingredient to the outcome. For example, a magazine ad for Enfamil Newborn and Enfamil Infant featured a baby sitting on

**Table 25.** Summary of baby and toddler drink advertisement content by brand

Brand	Category	# of ads	% magazine	Main selling point			Product features		Associations		Benefits to children	
				Specific product(s)	Promotion	Brand	% ads	Avg # per ad	% ads	Avg # per ad	% ads	Avg # per ad
Enfamil	Infant formula	17	82%	76%	6%	18%	75%	2.1	77%	1.6	88%	1.4
Similac	Infant formula	14	71%	86%	7%	7%	93%	1.3	86%	1.8	71%	1.3
Gerber Good Start	Infant formula	11	64%	91%	9%	0%	100%	2.0	73%	1.4	73%	1.1
Pediasure/ Pediasure Sidekicks	Nutritional supplement	9	11%	89%	0%	11%	89%	2.8	100%	2.5	44%	2.2
Enfagrow	Toddler milk	8	38%	75%	13%	13%	100%	3.0	75%	2.5	75%	1.8

Source: English-language advertising content analysis (2016)

**Figure 16.** Prominent product features, associations, and benefits in infant formula ads



Source: English-language advertising content analysis (2016)

a parent's lap looking at a book with the text, "When you feed your baby Enfamil today, you nourish milestones now and for years to come. In fact, Enfamil Infant is proven to foster learning through age 5. Enfamil routine infant formulas have a Neuro Complete blend that has clinically proven nutrients, like DHA, important for brain growth."

Infant formula ads also commonly promoted benefits to babies from consuming these products, including digestive health, physical development, and mental performance. The majority of Similac and Enfamil ads claimed that their products help babies develop physically. For example, Similac advertised its OptiGro and Early Shield blends for enhancing brain and eye development. Similac Advance ads also focused on nutrients associated with brain and eye development, "Now is the time when your baby's brain and eyes develop the most, which is why Similac has an exclusive brain and eye blend. In addition to having DHA, Similac has Lutein. Babies can get Lutein from breast milk and Similac formulas." One Enfamil ad featured a newborn and stated, "Enfamil staged nutrition has



Similac ad depicting moms bonding





Enfamil ad showing mom bonding with baby



Enfamil ad claims the product helps children increase their vocabulary

choline and brain-nourishing DHA. Enfamil's nutrition helps support milestones like grasping and walking."

All infant formula brands also promoted their products' benefits to babies' digestion, including 60% of Gerber Good Start ads. Gerber Good Start also claimed that its product reduces crying in 27% of ads. For example, one TV ad for its Soothe variety promoted "L. Reuteri, a protein in the infant formula that has been found to reduce crying time in seven days by 50%." Similac and Enfamil also promoted benefits to babies' mental performance. Enfamil claimed that its formula enhances babies' vocabulary, while Similac claimed to help

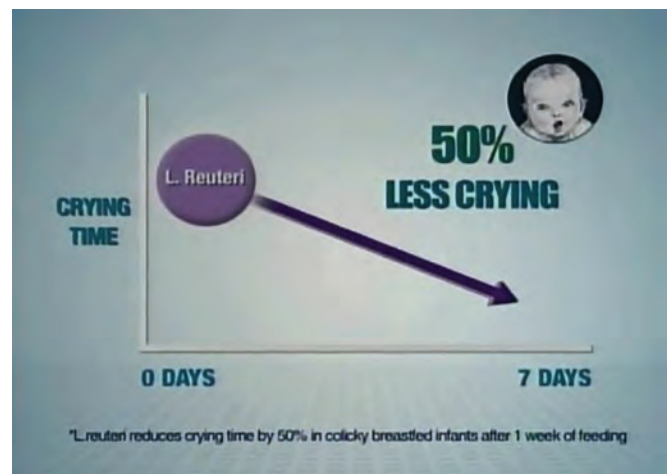


Similac with OptiGro to aid babies' development

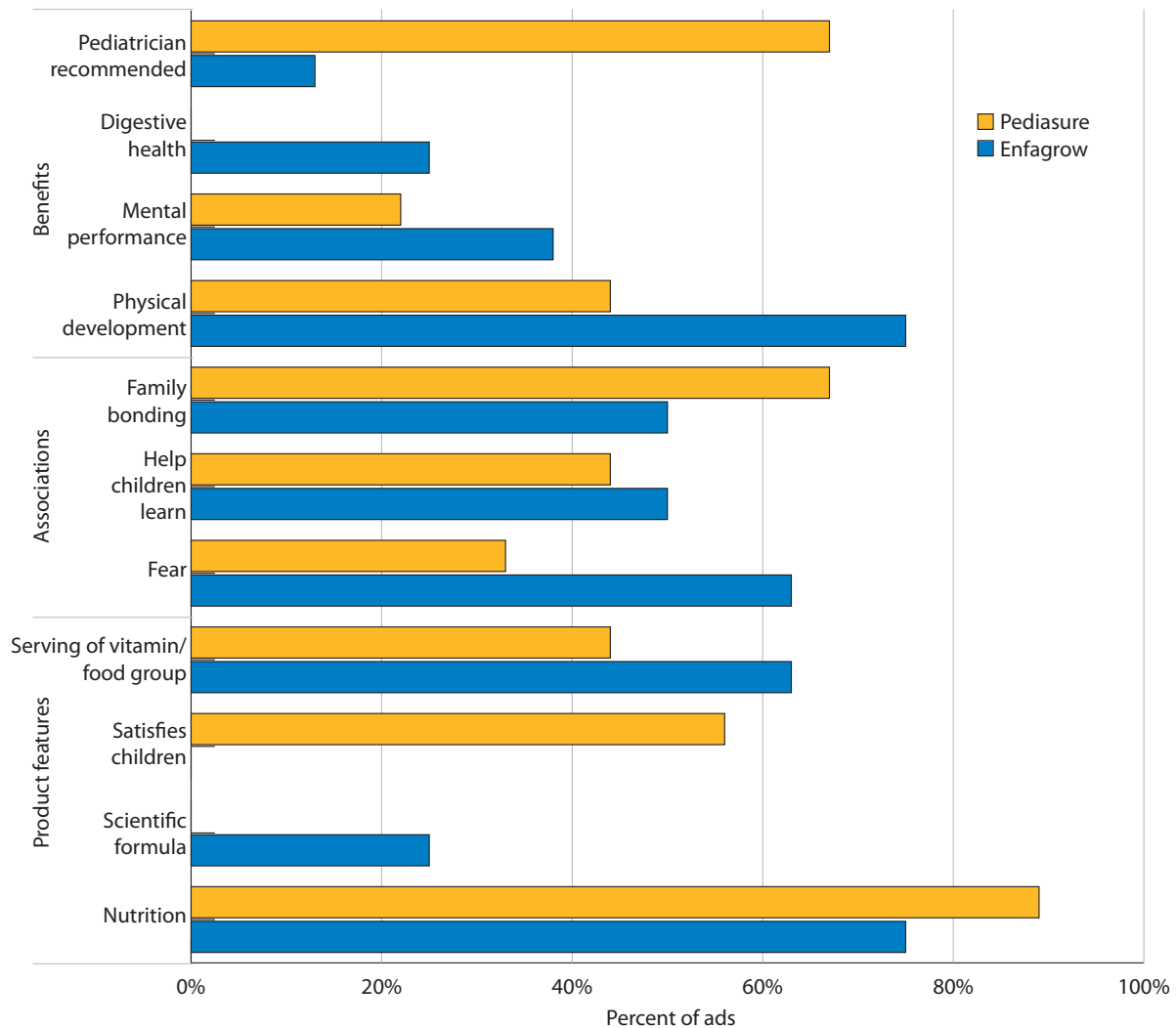
support babies throughout their first milestones. In addition, 100% of Enfamil ads stated that "Enfamil is the #1 brand recommended by pediatricians."

**Toddler milk and nutritional supplement brands.** As with all other product categories in this analysis, nutrition was the most common product feature mentioned in Enfagrow toddler milk and PediaSure nutrition supplement ads (see **Figure 17**). These brands also emphasized how their products provide vitamins or a serving of fruits and vegetables to supplement young children's diets. One Enfagrow TV ad said, "In fact, 85% of brain growth happens in the first three years, which is why it's important that children get DHA. Enfagrow Toddler has DHA, which toddlers may not be getting in their diets." Enfagrow also promoted the probiotics in its product. In addition, PediaSure advertised how the product satisfies children in over one-half of its ads, presenting it as a solution for picky eaters.

Associations with family bonding, helping children learn, and fear were all found in Enfagrow ads. One Enfagrow Toddler Next Step ad featured a toddler playing with a puzzle, but having difficulty putting the correct pieces into the holes. The voiceover says, "Is something missing from your toddler's nutrition? Maybe it's DHA, an important nutrient that can nourish the brain. But toddlers only get about 25% of the DHA many experts recommend. Toddler Next Step has DHA to help fill this gap. Because the brain grows most in the first three years, Enfagrow can help set the stage now for amazing moments to come." By the end of the ad, the toddler is able to easily identify the correct puzzle pieces, and mom and child bond by building a large tower together. Associations with family bonding and helping children learn were also present in PediaSure ads. For example, a TV ad featured sponges in a classroom answering the teacher's questions, playing on a playground, and in a music lesson, with the voiceover, "Kids are like sponges, they absorb everything. PediaSure has complete, balanced nutrition to help kids grow and absorb what's around them."



Gerber Good Start reduces crying

**Figure 17.** Prominent product features, associations, and benefits in toddler milk and nutritional supplement ads

Source: English-language advertising content analysis (2016)

Pediasure also used humorous messages in over one-half of its ads. Print and TV advertisements depicted “Princess Picky,” a little girl dressed in a princess costume. The majority

of Pediasure ads also focused on parent/child conflicts, more than any other drink brand. For example, a mother in one ad declared, “Tonight, my picky eater landed on a new way to avoid eating right. But I’m surprisingly calm. I’ve got nutritional assurance from Pediasure Sidekicks.” Later in the ad, the child drinks a Pediasure Sidekicks as the mother and child play together.



Enfagrow ad promoting the nutrition in Toddler Next Step

In another ad for Pediasure, the family dinner table lengthens as the ad depicts the mother fighting with her son about eating a balanced meal. The mother relays her concerns to a pediatrician who recommends adding Pediasure to her son’s diet. The end of the ad shows the child in his bed and the covers are too short, implying that the child has grown. Pediasure ads also promoted physical development and mental performance benefits from consuming the product, and 67% claimed that Pediasure was the “#1 pediatrician recommended brand,” without providing any more detail about this claim. These ads do include the disclaimer, “Use as part of a healthy diet.”





Enfagrow ad depicting mental performance

Approximately three-quarters of Enfagrow toddler milk ads implied that the product helps children’s physical development, particularly brain growth. For instance, one ad featured a toddler looking at shapes in a picture book as he consumes an Enfagrow pouch. The ad claims that this is an important time for learning, “Since 85% of brain growth is complete by age 3 and now is the time to nourish them.... Enfagrow has DHA, an important building block of the brain.” The brand also advertised its benefits for children’s mental performance and digestive health.



Pediasure Sidekicks message



Messages about children’s growth and learning featured in two Pediasure ads



Pediasure ad depicting a conflict at mealtime

## Summary of traditional advertising

In 2015, companies spent \$77.2 million advertising five categories of baby and toddler food and drinks, a 9% decrease compared to 2011. The majority of this advertising appeared on TV (74%) or in magazines (24%), with less than 3% of advertising spending on other media types. Nutritional supplement brands advertised the most at \$20.7 million almost exclusively on TV, followed by toddler milk and baby food. Infant formula had the least advertising spending at \$9.7 million, primarily in magazines. From 2011 to 2015, toddler milk and toddler food increased their advertising spending more than other categories (+74% and +48%, respectively). Infant formula was the only category to spend less in 2015 than in 2011 (-68%).

In 2015, just three companies (Nestle S.A., Abbott, and Mead Johnson Nutrition) were responsible for 99% of all advertising spending in the categories examined. Of the 16 brands advertising in 2015, Pediasure nutritional supplement from Abbott spent the most at \$20.7 million. Nestle brands dominated advertising in the baby food (Gerber at \$15.8 million), toddler food (Gerber Graduates at \$13 million), and infant formula (Gerber Good Start at \$5.6 million) categories, while Enfagrow was responsible for the majority of toddler milk advertising, spending \$12.8 million. Nido toddler milk (Nestle) and Similac infant formula (Abbott) also spent \$3 to \$4 million. Notably, Nido only advertised on Spanish-language TV. Three additional companies spent \$100,000 or more to advertise baby and toddler food in 2015: Campbell Soup Company (Plum Organics), Hero AG (Beech-Nut), and Nurture Inc. (Happy Baby, Happy Tot, and Happy Family brands).

Just six brands advertised on TV in 2015. Women saw the most TV ads for Pediasure (averaging 25 ads viewed in 2015), followed by Gerber (15 ads), Gerber Graduates (14 ads), and Enfagrow (7 ads). From 2011 to 2015, women's exposure to TV advertising for baby food and toddler food increased by more than 50%, and toddler milk was a new category that

had not been advertised on TV in 2011. In contrast, women's exposure to TV ads for infant formula went down 85%.

The baby food advertisements in this analysis promoted Gerber, Plum Organics, and Beech-Nut brands overall, as well as their pureed and mixed foods. Gerber Graduates had the only toddler food advertisements, which focused on its Puffs snack foods, Lil' Entrees, and Grabbers pouches. Baby and toddler food ads frequently promoted the products as nutritious with "real," natural, or organic ingredients. Gerber, Plum Organics, and Gerber Graduates also declared developmental benefits from consuming their products, including helping children learn to chew (Gerber).

In the infant formula category, Gerber Good Start focused the majority of its 2015 advertising on its Soothe and Gentle varieties, while Similac primarily advertised its Sensitive variety. Prior to 2015, Enfamil also extensively advertised its Newborn formula. Nearly 100% of infant formula ads emphasized specific nutrients in their products (e.g., DHA, lutein, and probiotics). Gerber Good Start also focused on supporting babies' digestive health, promoting "comfort for baby" and reduced crying. Similac and Enfamil emphasized their products' advantages for babies' mental development (e.g., brain growth and enhanced vocabulary for Enfamil; brain and eye development for Similac). Gerber Good Start and Enfamil also promoted their scientific formulas, and Enfamil claimed that it was the "#1 brand recommended by pediatricians."

The remaining brands, Enfagrow toddler milk and Pediasure and Pedisure Sidekicks nutritional supplement, emphasized similar messages in their advertisements, again focusing on product nutrition in the majority of ads. Both brands maintained benefits to children's mental performance and growth from consumption, and presented their products as a solution to picky eating. Both Pediasure and Enfagrow also claimed to be "#1 pediatrician recommended" brands.

## Digital media marketing

In this section, we examine three types of marketing used to promote baby and toddler food and drinks on the internet: websites sponsored by baby food companies, display

advertising placed on third-party websites, and earned media, including popular social media platforms and mom blogs.

### Company websites

Website exposure	Definitions
Average monthly unique visitors	Average number of adult (18-49 years) individuals visiting the website each month.
Average visits-per-month	Average number of times each unique visitor visits the website each month.
Average pages-per-visit	Average number of pages viewed during each visit by each visitor to the website.
Average minutes-per-visit	Average number of minutes each visitor spends on the website each time he or she visits.
Women:men targeted index	The percent of adult visitors to the website who are women divided by the percent of adult visitors to the website who are men. A targeted index greater than 100 indicates that women are more likely to visit the website compared to men.

In 2015, just four of the companies in our analysis maintained websites with enough adult visitors (18-49 years) to obtain exposure data from comScore. The three companies with the highest advertising spending in 2015 were responsible for three of these websites: Abbott (Similac.com), Mead Johnson Nutrition (Enfamil.com), and Nestle (Gerber.com). Hain Celestial Group, one of the smaller baby food companies, also had a website on the list (Hain.com), but was excluded from the analysis as the site promoted a wide variety of the company's brands, including chips, yogurt, and bread, in addition to Earth's Best Organics and Ella's Kitchen baby food. Of note, this analysis only examined websites on the internet. We do not report data on visits to mobile websites or apps on mobile devices, such as smartphones or tablets.

The three websites in this analysis all promoted products in multiple categories. Similac.com and Enfamil.com promoted their infant formula and toddler milk brands. Gerber.com promoted Gerber and Gerber Graduates baby and toddler food, as well as Gerber Good Start infant formula. In addition to detailed information about product nutrition and the appropriate developmental stage and/or dietary need served by each product, these sites also included extensive information about feeding young children, other types of parenting advice, money-saving offers, and customer

helplines. Gerber.com and Similac.com offered sections focused on breastfeeding tips and guidelines, while Enfamil.com emphasized supplementing breastmilk with infant formula. The sites all provided information about joining the brands' loyalty programs on their home page (Similac StrongMoms, Enfamil Family Beginnings, My Gerber), while Enfamil offered the opportunity to "Live Chat" with its "Family of Experts" and Gerber offered consultations with a lactation consultant, registered dietitian, and sleep consultant.

The number of unique monthly visitors to each website was relatively low. All sites averaged fewer than 100,000 adult visitors-per-month in 2015 (see **Ranking Table 6**). Enfamil.com and Similac.com had the most adult visitors (89,000 and 85,000 per month, respectively), while Gerber.com averaged 56,000. The majority of these visitors were women. Women were 4.5 times more likely to visit Gerber.com than men, 3.4 times more likely to visit Similac.com, and nearly three times more likely to visit Enfamil.com. The frequency of visits and amount of time that adults spent visiting the three websites varied. Similac.com was visited most frequently with 1.5 monthly visits-per-visitor. Adults spent the most time on Enfamil.com (2.2 minutes-per-visit), but they visited the most pages on Similac.com at 4.8 pages per visit.



## Display advertising on third-party websites

Display advertising	Definitions
Third-party websites	Websites from other companies where baby and toddler food and drink brands place their advertising.
Display advertising	Banner ads that appear on third-party websites as rich media files and traditional image-based ads (JPEG and GIF files). They are usually placed in a sidebar or "banner" at the top of a web page. On Facebook, these ads appear on the side of the screen, next to the newsfeed. Text, video, and html-based ads are not included.
Ads viewed per month	Average total number of display advertisements viewed each month.
Retailer websites	Third-party websites that primarily sell goods to consumers (e.g., Amazon.com, Target.com).
Family and parenting websites	Third-party websites that provide resources and guidance on a number of topics related to families and raising children, defined by comScore.
Social media websites	Third-party websites where individuals communicate or share with others on an online platform (e.g., Facebook.com, YouTube.com).

In 2015, 11 brands in our analysis advertised on third-party websites, averaging 60.8 million ads viewed per month (see **Ranking Table 7**). The four brands with the most banner advertising were the same brands featured on the most popular baby and toddler food and drink websites. Similac (promoting its infant formula and toddler milk products) and Gerber (promoting baby food, toddler food, and infant formula) averaged 16.9 million and 15.7 million ads, respectively, viewed monthly. Enfagrow toddler milk and Enfamil infant formula averaged collectively 16.6 million monthly ads viewed, with 60% of these ads promoting Enfagrow.

In contrast, the other brands in our analysis placed relatively few banner ads on third-party websites. In 2015, Nurture Inc. placed 3.8 million ads monthly for Happy Family products (including Happy Baby, Happy Tot, and Grow & Shine toddler milk). Four smaller brands, primarily advertising baby food, had less than 2 million monthly ads viewed, including Plum Organics, Earth's Best Organic, Beech-Nut, and Ella's Kitchen.



Infant formula and toddler milk brands placed the most ads on third-party websites



Banner ads featuring coupons and other promotions

The image shows two advertisements side-by-side. The left advertisement is for Similac, titled 'New Mom?' and 'Get inspired by What to Expect's Love-it Lists!'. It features a Similac product can and a 'WHAT TO EXPECT' logo. The right advertisement is for Enfagrow A+, titled 'Now with more DHA!' and 'Enfagrow A+ is an every day toddler nutritional drink with DHA, an important building block of the brain.' It features an image of an Enfagrow A+ can and a 'Shop Now' button. A disclaimer at the bottom of the right ad states: '\* Enfagrow A+ is a nutritional supplement. Not intended for infants under 12 months of age. † vs. our previous formulation'.

Ads appearing on retailer and parenting sites

The types of third-party websites where baby and toddler food and drink brands placed the most ads included retailer, social media, and family and parenting sites. Amazon.com featured the most banner ads, and Walmart.com, another retailer, ranked third (see **Table 26**). Additional retailer sites ranking in the top-10 included Target.com, eBay.com, and Diapers.com. Two large social media sites, Facebook.com and YouTube.com, ranked second and sixth in the number of display ads for baby and toddler food and drink brands. Family and parenting sites were also popular websites for ad placements, with CafeMom.com, BabyCenter.com, and WhatToExpect.com ranking among the top-10. However, overall the placement of baby and toddler food and drink ads was distributed across a large number of websites. Just 60% of the ads for brands in our analysis were placed on websites with 1 million or more ads viewed in 2015.

Notably, different brands placed varying emphasis on different types of websites. Gerber placed one-quarter of its ads on retailer websites, the highest proportion of any brand, followed by Enfagrow at 19% (see **Table 27**). Enfamil, Earth's Best Organic, and Happy Family also placed 10% or more of their ads on retail websites. Similac and Plum Organics had the most banner ads on family and parenting websites (16-17%), followed by Happy Family and Pediasure (approximately 10% each). Three brands placed 10% or more of their ads on social media websites: Pediasure, Similac, and Plum Organics.

**Table 26.** Third-party websites with the most advertising for baby and toddler food and drinks

Third-party website	Type of website	Total ads viewed in 2015 (000)
Amazon.com	Retailer	49,449
Facebook.com	Social media	41,915
Walmart.com	Retailer	28,076
CafeMom.com	Family and parenting	24,955
BabyCenter.com	Family and parenting	24,679
YouTube.com	Social media	17,093
Target.com	Retailer	14,454
eBay.com	Retailer	7,053
WhatToExpect.com	Family and parenting	5,132
Diapers.com	Retailer	2,045
BabyNameWizard.com	Family and parenting	1,562
TheBump.com	Family and parenting	1,291
Kohls.com	Retailer	1,043

Source: comScore Ad Metrix Advertiser report (January - December 2015)

**Table 27.** Proportion of banner ads viewed on retail, family/parenting and social media websites

Brand	Category	Retail websites		Family and parenting websites		Social media websites	
		2015 ads viewed (000)	% of total ads for the brand	2015 ads viewed (000)	% of total ads for the brand	2015 ads viewed (000)	% of total ads for the brand
Similac	Infant formula, toddler milk	14,805	7%	34,360	17%	20,571	10%
Gerber	Baby food, toddler food, infant formula	45,461	24%	1,535	1%	13,448	7%
Enfagrow	Toddler milk	22,746	19%	4,231	3%	9,382	8%
Enfamil	Infant formula	10,857	14%	3,943	5%	4,696	6%
Happy Family	Baby food, toddler food, infant formula	4,708	10%	5,058	11%	2,084	5%
Pediasure	Nutritional supplement	1,251	3%	4,338	10%	4,993	12%
Plum Organics	Baby food	681	3%	3,677	16%	2,166	10%
Earth's Best	Baby food, infant formula	1,227	14%	0	0%	290	3%
Beech-Nut	Baby food	239	3%	302	3%	641	7%
Pediasure Sidekicks	Nutritional supplement	1,411	3%	176	3%	399	7%
Ella's Kitchen	Baby food	0	0%	0	0%	337	6%

Source: comScore Ad Metrix Advertiser report (January - December 2015)

## Social media

In this section, we present marketing for baby and toddler food and drink brands that appeared on social media. We examine brands' accounts on popular social media platforms (Facebook, Twitter, Instagram, Pinterest, and YouTube), and document brand mentions in mom blogs.

### Social media platforms Definitions

Facebook	Brands maintain Facebook accounts where they post information about their brands and their products, share links to other sites, and upload photos and videos. A typical brand Facebook page contains multiple tabs with a variety of content (e.g., photos, likes, events, videos).
Facebook likes	Facebook users can "like" a brand and incorporate it into their network of friends. A brand's Facebook page lists the number of people who like the page and a link to invite users' friends to "like this Page." When the brand posts new content, a notification may appear on the "newsfeed" (i.e., Facebook home page) of individuals who like the brand. The brand also shows up on these individuals' Facebook accounts as something that they "like."
Facebook post	A message that a brand posts to its Facebook "timeline." These messages typically incorporate images, videos, polls, links to other pages within Facebook, and links to other websites and other social media. Posts also may appear on the "newsfeed" of individuals who like the brand for their friends to see. Individuals may share brand posts, which can appear on their friends' newsfeeds.
Twitter	Brands maintain Twitter accounts where they publish short messages called "tweets" that are posted on their own profile feed and timeline. Tweets can contain photos, hashtags, or videos. In addition, an account may "retweet" or repost others' tweets. Individuals can "follow" brands. "Followers" receive copies of brands' tweets on their own Twitter timeline.
Instagram	Instagram is an online mobile social networking service that enables brands to share pictures and videos and invite users to post their own brand content. From the "home" tab, Instagram users can view photos from brands they follow in a format similar to Facebook's newsfeed, where they can also "like" and comment on photos.
Pinterest	Pinterest is a social networking service that allows users to share content by posting (also known as "pinning") images or videos. Brands may organize their "pins" into "boards" where similar pins are placed together. Brands may also upload images or pin images found online using Pinterest bookmarks. Users who follow an account (i.e., followers) are notified when new content is "pinned."



## Social media platforms Definitions

YouTube	YouTube enables brands to upload and share videos for the public to view. Brands maintain their own YouTube channels with playlists of available videos. Playlists are groups of videos organized by theme. Anyone can watch the videos online, but users can also “subscribe” to a channel and receive alerts whenever the brand posts a new video. YouTube reports the number of views of its uploaded videos.
Hashtag	The hashtag (#) symbol is used to mark keywords or topics on social media platforms, including Twitter, Facebook, Instagram, and Pinterest. Users place a # before a relevant keyword or phrase in their posts to categorize and help identify these posts more easily in a search. Clicking on a hashtagged phrase in any message shows the viewer all other messages (including pictures and videos) marked with that keyword or phrase.

A total of seven companies in our analysis sponsored seven Facebook pages, six YouTube accounts, five Instagram and Twitter accounts, and four Pinterest accounts (see **Ranking Table 8**). On social media platforms, a single account might include posts for multiple brands (e.g., the Gerber account on Facebook included posts about Gerber baby food, Gerber Graduates toddler food, and Gerber Good Start formula). Beech-Nut, Enfamil, and Plum Organics had a presence on all social media platforms examined. Gerber had accounts on all platforms except Twitter, while Enfamil had accounts on all except Pinterest. Similac maintained a Facebook and YouTube account, while Pediasure only had a Facebook account. One additional brand (Nido USA) had a small presence on Facebook (27,000 followers), with the majority of posts in Spanish.

In comparing the brands in this analysis, Gerber dominated on social media platforms with the most likes on Facebook, followers in Instagram, and views on YouTube (more than 50 million), and the second highest followers on Pinterest. Other baby food brands with little or no TV advertising maintained a substantial social media presence. Beech-Nut followed Gerber with the second highest number of Facebook likes, while Happy Family had the most followers on Pinterest and the second highest on Twitter and Instagram. Plum Organics took the lead in Twitter with more followers than all other brands combined. Among the drink brands, Enfamil ranked third in Facebook likes, while Similac ranked second in YouTube, with more than 17 million views. Pediasure’s Facebook page had fewer than 74,000 likes. None of the drink brands had Pinterest accounts, and Enfamil was the only drink brand with an Instagram account.

Brands often posted similar content on their Facebook, Twitter, Instagram, and Pinterest accounts, and similar or the same videos on Facebook and YouTube. To encourage engagement, many brands posted questions or invited users to post and share pictures of their babies. Other common themes in social media posts included links to loyalty program information on company websites, coupons, and expert advice about nutrition and parenting.

**Gerber.** Gerber posts on Facebook focused on nutrition and often promoted Gerber Infant Cereal, Lil’ Beans snacks, and Gerber Good Start formula. Some posts mentioned the importance of iron with links to the Gerber website. Two posts included videos that received over 2.1 million views on Facebook. Other posts discussed how Gerber products help babies “master the art of chewing.”

Gerber posts often engaged users by requesting pictures of their babies to be featured on its various social media accounts, with the majority of Instagram posts using the hashtag #GrowingUpGerber. Gerber’s Pinterest account had



Gerber Facebook post explaining that Gerber Lil’ Bits helps babies learn to chew



seven different boards, including “feeding baby” and “toddler eats.” The pins under the “feeding baby” board featured advice on transition to solids and the importance of iron in a baby’s diet (e.g., “Did you know that babies’ natural iron stores run out around six months?”). Pins on the “toddler eats” board included tips on healthy eating, recipes for cookies and pancakes incorporating Gerber baby food as an ingredient, and a pin for Gerber Graduates Puffs described as the “ideal first finger food for baby.”

Gerber’s YouTube account had 120 videos, including many that were also posted on the brand’s Facebook account. Two YouTube playlists focused on its products (“Gerber 3rd Food with Lil’ Bits” and “Gerber TV”) and included ads, product reviews by parents showing their babies eating Gerber baby food, and short videos of families with the voiceover of a mother talking about Gerber Good Start Formula as the “formula for happiness.” Seven other playlists focused on guiding parents on how to feed babies and toddlers with titles including, “Bottle Feeding Tips with Baby Formula and Breastmilk,” “Starting Babies on Solids,” and “Baby Hunger Cues and Fullness Cues.” The two most popular videos had over 14 million views. One explained how Gerber Good Start Soothe formula addresses colic, crying, and fussiness, while a video for Gerber’s Chew U campaign showed how babies can “master the art of chewing” with Gerber Lil’ Bits. Other videos with a high number of views included one for Gerber Graduates Puffs (5.5 million) and another for Gerber Graduates Lil’ Entrees (2.2 million).

**Beech-Nut.** Beech-Nut Facebook posts focused mainly on its Organic and Naturals baby food varieties. Posts also included links to bloggers who endorsed the brand (e.g., ReallyAreYouSerious, BonBon Rose Girls, Redhead Baby Mama, BabyFoode) and links to the brand’s pages on other social media sites. On Twitter and Instagram, Beech-Nut’s posts typically featured the same messages as its Facebook posts, including requests for parents to share photos of their babies using the hashtag #TinyTasterTuesday. Some tweets linked to posts from Michelle Dudash, a registered dietitian and blogger for the Food Network, who partnered with Beech-Nut. The brand also used the hashtag #NotBabyFood in tweets describing Beech-Nut as “real food for babies.”

Beech-Nut’s Pinterest account had multiple boards. Pictures of coupons, often pinned by coupon bloggers, appeared on its

“coupon” board. Under its “products” board were pictures of various Beech-Nut baby food products and multiple pictures pinned by bloggers who reviewed Beech-Nut baby food. These pins often showed a picture of a package of Beech-Nut products sent to bloggers to review that included four glass jars packed with straw-like packing material in a rustic wood box (marked “Real Food for Babies”).

On YouTube, Beech-Nut posted 13 videos including a series in which new mothers shared stories about their own mothers ending with, “Find & share all of your #RealMomsKnowMother’s Day stories at [www.facebook.com/BeechNut](http://www.facebook.com/BeechNut).” Other videos featured Nicole Silber (a registered dietitian and pediatric nutrition specialist who is a Beech-Nut “partner”) giving advice on feeding babies and how Beech-Nut baby food is the best choice for babies. All of these videos were also posted on the brand’s Facebook page.

**Enfamil.** Enfamil social media accounts promoted both Enfamil infant formula and Enfagrow toddler milk. Its main Facebook page had a link marked “\$325 in FREE gifts.” Clicking on the link brought the user to an enrollment form for Enfamil Family Beginnings. The enrollment form explained that Enfamil Family Beginnings provides “free Enfamil infant formula and discounts” and “free informative articles, booklets and emails full of expert advice and nutrition tips.” To enroll, a user must provide personal information, including name, address, phone number, email address, baby’s birth date, and whether the person enrolling “expects to receive formula from the government-sponsored Women, Infants and Children program (which refers to itself as WIC).” The posts also promoted Enfamil special events and linked to articles on [Enfamil.com](http://Enfamil.com). Many Enfamil posts also encouraged user engagement, inviting parents to share pictures of their babies and asking them about their babies’ favorite activities or how their babies responded to their first haircut. On Twitter, several posts explained that Enfamil has experts who are “moms and dads, just like you” available to answer users’ questions. Other posts explained how Enfagrow contains “important nutrients for your child’s brain and body development” and can help “your child get good nutrition on the go” with links to the Enfamil website. Many Enfamil Instagram posts showed pictures of users’ babies and toddlers through #EnfaMoments or #EnfaMoms. Posts also described a monthly contest to win a diaper bag plus one month of formula.



Beech-Nut Facebook post linked to mom blogger Redhead Baby Mama



Enfamil Twitter posts encouraged users to post questions to “Enfamil Experts”

Enfamil uploaded 73 videos on its YouTube channel, but they were not widely viewed. The most viewed video (400,000+ views) explained how Enfamil Gentlease helps reduce fussiness, gas, and crying in babies, and another explained how Enfamil A.R. helps reduce baby spit up. Additional videos with 200,000 or more views discussed how Enfamil contains “brain-nourishing DHA.” One video included highlights from the “Enfagrow Toddler Bowl” which aired on TLC, Discovery Life Channel, and Discovery Family Channel in February 2015, and showed toddlers playing with footballs, toys, and bubbles, and toasting with single-serving ready-to-drink cartons of Enfagrow. Just 19 of these videos were posted on Enfamil’s Facebook page where views were quite low (less than 24,000).

**Happy Family.** Happy Family social media accounts featured both Happy Baby and Happy Tot brands. Its Facebook page included a link to a “newsletter sign up” for “Join Generation Happy” to receive “money saving coupons and special offers from us and our partners.” Posts for Happy Tot pouches and snacks linked to Target.com for purchasing and featured messages about nutrients in the products or pictures of toddlers eating Happy Baby or Happy Tot pouches. Other posts detailed Happy Family’s monthly donations to various non-profits and special events the brand was hosting. One unique campaign on Twitter featured many retweets from Happy Family “Happy Mommas,” which appears to be a network of regional brand ambassadors with separate social media accounts where they promote the brand and local brand-supported events. The Happy Family Pinterest account featured 52 different boards, including one with pins dedicated to reviews and giveaways where users were encouraged to go to the Happy Family Facebook page “to receive a free coupon today!”

The most popular Facebook video (“This Is Happy” with over 9 million views) showed a montage of clips depicting difficult and happy everyday moments in the lives of parents and children. Notably, the only mention of the brand was a Happy Family logo at the end. On YouTube, Happy Family had 26 videos with over 2.3 million views in total. “This Is Happy” was also the most popular video on Facebook (with over 2 million

views). Another video showed a baby sitting in a highchair refusing all of the homemade food her parents try to spoon feed her, but happily takes the Happy Baby pouch they offer.

**Plum Organics.** Many Plum Organics Facebook posts contained a few lines from a story and linked to PopSugar.com, a lifestyle website, to read the full story. PopSugar.com posted multiple sponsored stories written by mothers for Plum Organics in 2015. Posts also promoted discounts on the brand available from Target.com and Diapers.com and information about signing up to become a member of Club Plum to receive “exclusive savings.” Plum Organics Facebook posts also asked parents to submit pictures of their babies, featuring one picture per week of the “Plum Fan of the Week.”

One “featured video” on Facebook, “Parenting Unfiltered,” depicted the happy, sad, and frustrating moments in the lives of parents and had 3.7 million Facebook views. The same video also had 1.3 million views on YouTube. Other videos celebrated Mother’s Day and Father’s Day, starting with “Dear Dad” or “Dear Mom” on the screen in the same monologue style format with a man or woman sharing their private thoughts about parenting frustrations and mistakes in a humorous way. The Plum Organics brand was only present on the screen as the videos end.

Plum Organics Facebook post linked to a sponsored story on PopSugar.com

Happy Family Pinterest boards for snacks

**Similac.** Many of Similac’s Facebook posts focused on Go & Grow Food Mix-ins, recommending adding it to toddler food “to support growth and development” and “balance a toddler’s diet.” Notably, this product had some banner ads, but was not advertised in traditional media. A number of posts also featured Similac Go & Grow Toddler Drink to “help give your toddler nutrients she may be missing from milk alone, like



Similac's "The Mother 'Hood Official Video" on YouTube and Facebook

iron." All of these posts linked to the Similac website where a user could fill out a form to join Similac StrongMoms in order to "get information about toddler nutrition, feeding tips, and how to make the most of this exciting time." They also contained #WelcomeToToddlerhood, which linked to the Facebook posts with the same hashtag. Many of these posts featured positive comments about the product with #ad or #spon in them, indicating the people who posted were paid or compensated in some way for their posts.

Four Similac Facebook videos also featured Go & Grow toddler products, while the 10 remaining videos were dedicated to the brand's #EndMommyWars campaign. One of the most widely viewed videos (4.5 million views) was "The #EndMommyWars Film," a documentary-style film about how women judge others and feel judged about the best way to raise children, with discussions of judgments mothers experience for bottle- or breastfeeding raised throughout the film.

Similac's YouTube account had just 16 videos, but these received a total of 17.5 million views, primarily for two videos that were part of the #EndMommyWars campaign. "The #EndMommyWars Film" received 1.8 million views on YouTube, and "The Mother 'Hood Official Video" garnered over 8.5 million views. This video opens on a playground where mothers and fathers reveal how they negatively judge other parents' choices (e.g., cloth diapers versus disposable, bottle- versus breastfeeding, dads as primary caregivers versus moms as primary caregivers, etc.) and ends with all of the parents coming together in a positive way. The Similac brand is only mentioned at the end of the video. Other videos promoting Go & Grow Food Mix-ins and Go & Grow Toddler Drinks received 1.7 million and 3.1 million views, respectively. The video for Go & Grow Mix-ins suggested using the product "to enhance the foods you know they'll eat...without them knowing the difference."

**Pediasure.** Pediasure's Facebook posts mainly featured its Grow & Gain Shakes and often included ways to add the product to recipes, such as a banana shake, a graham cracker and marshmallow dessert, chocolate ice pops, and cheesecake. There were also posts explaining that "in-house dietitians created Pediasure specifically to help kids grow" and "if there's anything you ever wanted to know about growth, Pediasure or healthy eating let us know." Some posts requested users to share the name of a "mom who inspires you" and include a photo "for a chance for your #MomCrushMonday to be featured." As noted earlier Pediasure had no other social media accounts.

## Mom blogs

Mom blogs	Definitions
Blog	A regularly updated website or web page usually written by an individual ("blogger") who offers information in an informal style and often encourages feedback from readers. Companies use bloggers to encourage consumer engagement.
Mom blogger	Describes a female parent who maintains a blog focusing on information and opinions related to pregnancy, childbirth, parenting, and lifestyles.
Influencer	An online influencer is a third party with substantial reach and impact to shape consumers' purchase decisions. Top "influencers" include mom bloggers who have many followers and page views per month.

Our initial search identified 2,147 blog posts mentioning 12 baby and toddler food brands in our analysis in 2015. After reviewing each post and excluding posts that were duplicates or irrelevant (e.g., business news, non-U.S. based blogs, unrelated company activities, and references to adult consumption of brands) we obtained 1,375 posts for our

analysis. Happy Family, Happy Baby, and Happy Tot mentions were combined due to substantial overlap. Each post was designated as one of six types to describe the content and whether it likely resulted directly from companies' marketing programs.



Blog type	Definitions
Use/like/discuss	These posts contain mentions of a brand that the mom blogger uses and/or likes, with no mention of brand sponsorship.
Loyalty program endorsement	In these posts bloggers discuss how parents can save money on baby and toddler food and drink products by participating in loyalty programs.
Mom coupon blog	These posts list or link to manufacturers and/or retail coupons or indicate where the brand is sold at a reduced price.
Sponsored posts/product reviews	In these posts, the mom blogger indicates that she has received direct compensation, such as free items or monetary payment, from a company in return for posting information related to a brand or writing a review of a product.
Unique campaign	These posts mention 2015 brand-sponsored videos and contests receiving attention from bloggers, both paid and earned.
Other	Posts that could not be categorized as any of the other types.

Two types of posts did not appear to result from compensation by the brands mentioned. In “use/like/discuss” posts, mom bloggers often discussed brands her baby/child consumes, what brand is best for traveling, or in some cases what brand was the best choice for addressing her baby’s special needs (e.g., acid reflux, illness). None of these posts included disclaimers on the same page to indicate that the blogger was paid by the company for her post. Common “loyalty program endorsement” posts encouraged users to join loyalty programs to save money on baby and toddler items. Popular programs included Amazon Family (formerly Amazon Mom), Enfamil Family Beginnings, and Similac StrongMoms. None of these endorsements included disclaimers on the same page to indicate that the post was sponsored by a brand.

Three additional blog post types did appear to be sponsored by brands through some form of compensation to bloggers. “Mom coupon blog” posts commonly linked to retail websites, including Target.com, Walgreens.com, CVS.com, Walmart.com and Amazon.com. Some posts referenced a single brand, but more often the brand was included in a list of various products under “ad deals” or “coupon match up.” The majority of these posts did not contain disclaimers to indicate the post was sponsored, although links to other pages on the blog (i.e., “about this blog”) often revealed that the blogger received support from brands. For example, one blogger reported that she receives a small compensation when visitors click on an affiliate link. In “sponsored posts/product reviews,” the blogger included a disclaimer indicating that she received some form of compensation from the brand. In some cases, these bloggers also explained that they were brand ambassadors and/or mentioned companies that connect brands with online influencers. “Unique campaign” posts promoted the brand with a company-sponsored video or contest. This type of post differed from the others in that they did not mention specific products or benefits.

**Table 28** provides the number of blog posts by type for each brand in 2015. The majority of baby and toddler food and drink brands in our analysis were mentioned in mom blog

posts on average once per week or more. Similac, had the most blog post mentions, averaging almost one per day. Plum Organics, Gerber Graduates, Gerber, Enfamil, and Pediasure each had 150 to 200 mentions on mom blogs. Enfagrow and Pediasure Sidekicks had the fewest mentions. We identified just one mom blog post for Nido, which included a video of the blogger’s daily routine and providing Nido as part of giving the best to her child.

**Plum Organics.** Almost one-half of posts for Plum Organics were on mom coupon blogs. In one-third of the posts, Mom bloggers mentioned that their babies liked eating this food (e.g., “Our fav is Plum Organics!”), with frequent references to organic products. In 12% of Plum Organics posts, bloggers posted product reviews with sponsor disclaimers. Some sponsored reviews showed a colorful box of products from Plum Organics, which included a child-size backpack with the company logo. Others pictured the blogger’s child eating Plum Organics. In one sponsored review, the mom blogger explained, “Plum Organics is designed to train taste buds to love a variety of foods from the get-go and inspire a lifetime of healthy eating.” These mom blog reviews also offered readers the opportunity to enter a contest and get digital coupons. Some bloggers mentioned they were part of the “Savvy Sassy Moms Product Scouts Program” or that they received the product from Swaggable, two services that connect brands with bloggers. Another 7% of mentions were for a unique Plum Organics campaign promoting its “Parenting Unfiltered” video, with bloggers linking to Plum Organics social media accounts. As mentioned earlier, this video garnered over 5 million views on Facebook and YouTube.

**Gerber Graduates.** Almost nine of 10 blog posts for Gerber Graduate were mentions on mom coupon blogs, the highest percentage of any brand in this analysis. The brand was mentioned in relatively few blog posts discussing using and liking the products (9% of posts), and just 4% were sponsored posts or product reviews. These reviews had the following disclaimer: “Disclosure: As a participant in the Walmart Moms Program, I’ve received product samples and compensation



**Table 28.** Baby and toddler food and drink mentions on mom blogs

Brand	Category	Total # of posts	Use, like, discuss	% of brand posts				
				Loyalty program endorsement	Mom coupon blogger	Sponsored post or product review	Unique campaign	Other
<b>Baby and toddler food</b>								
Plum Organics	Baby food	199	34%	0%	48%	12%	7%	0%
Gerber Graduates	Toddler food	179	9%	0%	87%	4%	--	0%
Gerber	Baby food	152	66%	0%	12%	4%	16%	2%
Happy Family, Happy Baby, Happy Tot	Baby food; toddler food	75	39%	0%	57%	4%	--	0%
Beech-Nut	Baby food	52	2%	0%	23%	67%	--	8%
<b>Baby and toddler drinks</b>								
Similac	Infant formula	321	39%	8%	19%	1%	34%	0%
Enfamil	Infant formula	165	28%	19%	37%	9%	--	7%
Pediasure	Nutritional supplement	104	88%	0%	10%	2%	--	0%
Gerber Good Start	Infant formula	93	6%	8%	58%	19%	--	9%
Enfagrow	Toddler milk	22	5%	14%	41%	14%	--	27%
Pediasure Sidekicks	Nutritional supplement	14	0%	0%	54%	46%	--	0%

Source: Meltwater (January - December 2015)

for my time and efforts in creating this post. All thoughts and opinions are my own. Affiliate links have been used." Two other sponsored posts encouraged participation in a contest to win a free custom bib and NUK accessories. One asked readers to "join the conversation on Facebook and Twitter with the hashtag #GerberWinWinMoment."

**Gerber.** Approximately two-thirds of Gerber mentions were blogger discussions of the brand (not a particular product or category), and most discussed whether the blogger's baby resembles the Gerber baby in the brand's logo. Just 12% of Gerber blog mentions appeared on mom coupon blogs, the lowest percentage compared with other brands, and 4% were sponsored posts or reviews. In this Gerber campaign, bloggers reviewed 3rd Food Lil' Bits and explained how it helps babies "learn to chew" and "ease the transition to table food." These posts included the "Chew U" logo, a photo of the blogger's baby wearing a "Chew U" onesie, and a link to enter a contest. Another 16% of blog posts mentioned Gerber's annual

"Gerber baby" contests. Bloggers promoting this unique campaign often asked readers to vote for a particular baby with a link to vote. Finally, 2% of posts mentioned the "Gerber Baby Nutrition Kit" distributed by hospitals, explaining that a coupon is needed to receive the kit. One blogger added that an expectant mother should, "print out the coupon and take it to the hospital with you when you're ready to deliver. Give it to your nurse and they'll give you the kit. Just remember to put it in your hospital bag so you don't forget it in all the craziness of going into labor." Gerber's "Nutrition Kit" contains Gerber Good Start formula, a Gerber cozy blanket for breastfeeding, coupons, free samples, and feeding guides.

**Happy Family.** More than one-half of blog mentions for Happy Baby appeared on mom coupon blogs; in over one-third bloggers discussed how their babies eat these products. In these posts, bloggers often pointed out that it is organic or discussed the convenience of pouches. In one post, a blogger showed a package of Happy Tot Toddler Cookies and compared the sugar content per cookie to Oreos and Chips Ahoy, ending the post with, "I don't feel bad giving Naomi a couple of cookies once in a while because they are a healthier treat that tastes yummy." In two posts, bloggers provided links to the Happy Baby website, but there was no disclaimer on the post. One blogger mentioned a Happy Baby booth at a sustainability fair and another invited readers to join a Green Family Twitter Party hosted by Happy Family. Just three Happy Family posts were brand reviews. One blogger showed all the brands of organic food available at Walmart, including Happy Family. Her disclaimer explained that she is in the "Walmart Moms Program." Another reviewer showed pictures of her children holding Happy Family pouches, "Happy Family has products for everyone... from my 7 year old down to my 10 month old, these were a huge hit."



Are you an Expectant Mother?

Gerber "Nutrition Kit" distributed by participating hospitals



Packages of Beech-Nut and Plum Organics bloggers received for review

**Beech-Nut.** Among baby and toddler food brands Beech-Nut had the highest percentage of sponsored posts. Two-thirds were sponsored product reviews or posts of Beech-Nut Organics products. Most of the review posts included a picture of the blogger's baby eating Beech-Nut baby food or a jar of the food near the baby, links to the Beech-Nut website and/or social media, and a description of positive features of the product. Some bloggers also included a picture of the package sent for their review, and many included a chance for the reader to enter a contest to win a Beech-Nut product. All of these reviews included the same disclaimer, "I participated in an Influencer Activation on behalf of Influence Central for Beech-Nut. I received a free coupon to facilitate my review as well as a promotional item to thank me for my participation." Many added, "All opinions are my own." The one post that was sponsored, but not a review, focused on a Beech-Nut Mother's Day promotion. The blogger asked mothers to create their own videos and post them with #RealMomsKnow. She also shared videos on her website. Mom coupon blog mentions made up 23% of blogger posts about Beech-Nut, while 8% were classified as other. Among the "other" posts one mom blogger featured a "guest blog" written by a Beech-Nut marketing executive, and another posted a "FREE Mother's Day gift from Beech-Nut" link on her site. Both included disclaimers on other parts of their sites.

**Similac.** As discussed in the social media section, Similac released two popular videos for its "#EndMommyWars" campaign in 2015, which also garnered 109 mom blog mentions (34% of all blog posts for the brand). Similac's marketing efforts for this campaign also included an invitation to mom bloggers to join the "Sisterhood of Motherhood" (as noted in disclaimers on the blog posts). These posts included links to the videos on YouTube and other social media, requests for users to post their own videos, as well as links to Similac.com where the company promises to be "there to help you through the first few days and months of motherhood with confidence - and zero judgment." These videos also garnered significant attention from non-sponsored bloggers discussing their opinions about the videos with links to them.

More than one-third of Similac mentions were mom bloggers discussing the formula they feed their children. A few posts mentioned that a store brand is "as good as" or "has the same ingredients as" Similac, noting the expense of formula and that switching to store brands helps to save money. Mom coupon blog posts made up another 19% of mentions, and another 8% encouraged participation in the Similac StrongMoms loyalty program as a way to save money.

**Enfamil.** Over one-third of mentions for Enfamil appeared on mom blog coupon posts, and approximately one-quarter were

## My Thoughts On How To End The "Mommy Wars"

September 23, 2015

*This post is sponsored by Similac as part of my Sisterhood of Motherhood partnership. The Sisterhood of Motherhood is an initiative to celebrate all parents in a positive way with no judgment.*

As part of the #EndMommyWars initiative, we are encouraging consumers to share their mommy war story via a short, selfie-style video on the Similac Facebook page using the hashtag #EndMommyWars. I made my own video with my thoughts on how to end the mommy wars, and I hope you guys will too!

Sponsored post promoting Similac's #EndMommyWars campaign

mentions of using or liking the brand. One blogger discussed using Enfamil for her baby because “that’s what we were sent home with from the hospital.” Another commented that she used Enfamil because “it is what WIC allows us to have.” Nineteen percent of Enfamil posts encouraged parents to join Enfamil Family Beginnings loyalty program for coupons. One blogger showed the package of free formula she received without “signing up” and guessed it was the retailer Motherhood Maternity who shared her name. Joining Amazon Family was also mentioned as a way to save money on Enfamil formula. A small number of Enfamil posts were sponsored reviews (9%), with one mom blogger stating that, “Enfamil Reguline asked me to share my story.” The reviews focused on how Enfamil helps with “gassy babies,” and bloggers talked about their difficult experiences and the benefits of Enfamil.

Seven percent of Enfamil’s posts included other types of mentions. Some mom blog posts encouraged expectant mothers to register at stores such as Babies “R” Us, BuyBuy Baby, and Target for free items and discounts. Another mom blogger posted that she uses the “Enfamil Amazing Baby App” and described it as “awesome.” Two posts expressed negative attitudes toward Enfamil marketing, with one post discussing a campaign for Mother’s Day in which moms who use Enfamil received fresh tulips as a thank you for their loyalty to the brand. The blogger added that this was “coercive and predatory marketing.” Another raised the issue of hospitals including formula samples to new mother gift bags. She added that Enfamil “makes a lot of money by undermining your confidence in your body...Your worry that you won’t make enough milk is another dollar in their pocket.”

**Pediasure.** Nearly all mom blog posts about Pediasure were about using the brand (88%). The posts mainly chronicled mothers’ journeys with a child who has a severe illness. Just 10% of posts were on mom coupon blogs. Two blogger posts sponsored by Walmart explained that Walmart makes a donation to the Children’s Miracle Network with purchases of Pediasure and some other brands.

**Gerber Good Start.** More than one-half Gerber Good Start mentions were on mom coupon blogs. Sponsored posts made up 19% of mom blog mentions, including bloggers’ personal stories of how they spend time with their baby and/or cope with the challenges of motherhood using the #FormulaForHappiness hashtag. Clicking the hashtag brought the user to Gerber Twitter and Instagram posts. These posts also linked to [www.gerber.com/experts](http://www.gerber.com/experts) offering mothers a free 15-minute phone consultation with a Registered Dietitian, Lactation Consultant, or Sleep Consultant. These posts had one of the two following disclaimers, “Sponsored Post: This post is sponsored by Gerber Good Start Infant Formulas but the content and opinions are my own” or “Today’s post is sponsored by Gerber® Good Start® Gentle but the content and opinions are my own.”

Another 8% of mentions were loyalty program endorsements with blog posts encouraging readers to join Amazon Family to receive discounts on Gerber Good Start. Just 6% of

blog posts were moms explaining that they give Gerber Good Start formula to their babies. In other posts (9% of total), some bloggers mentioned that they received Gerber Good Start from PinchMe, a service that provides samples of various products in return for product reviews. However, these posts did not review the brand. Another post suggested to “Call 1-800-4-GERBER to sign up for the Gerber Multiple Births program, which includes Gerber Good Start formula.” Three posts encouraged expectant mothers to register on Amazon for a baby shower to receive an Amazon Baby Registry Welcome Box, mentioning that Gerber Good Start was included in the box. One of these posts also mentioned utilizing the baby registry at Target as a way to get free baby items.

**Enfagrow.** The total number of mentions for Enfagrow was small, and more than 40% were on mom coupon blogs. Within the loyalty program posts were two posts encouraging parents to join Amazon Family and one post endorsing Enfamil Family Beginnings for coupons. The sponsored reviews linked to Amazon.com. Just one post mentioned using or liking the brand. The other posts were about PinchMe, which showed a picture or list of items a blogger received for review, including Enfagrow, but did not include a review.

**Pediasure Sidekicks.** Seven of the 13 posts for Pediasure appeared on mom coupon blogs. The other six were sponsored posts from two bloggers who mentioned their partnership with Pediasure and discussed the benefits of adding Pediasure Sidekicks Fruit and Veggie Smoothie Mix to children’s diets as “a great way to fill in the gaps of those picky eaters.” They posted recipes, including ways to add the product to muffins, smoothie pops, and a peanut butter and jelly sandwich to turn it into a “power packed sandwich full of extra nutrients that help to fulfill their daily fruit and veggie servings with real dried strawberries, bananas, apples and sweet potatoes.”

## Summary of digital marketing

Just three websites offered by the companies in our analysis had enough internet visitors in 2015 to measure using comScore data: Enfamil.com (promoting Enfamil infant formula and Enfagrow toddler milk brands), Similac.com (promoting its infant formula and toddler milk), and Gerber.com (for its Gerber baby food, Gerber Graduates toddler food, and Gerber Good Start infant formula brands).<sup>13</sup> Similac, Gerber, and Enfamil/Enfagrow (combined) also placed the most banner ads on third-party websites, averaging approximately 16 to 17 million ad views per month each in 2015. Notably, Similac spent more than \$1 million to purchase internet advertising in 2015, more than 10 times the amount spent by any other brand analyzed. It is also interesting that Similac and Enfamil infant formula brands did not advertise on TV at all in 2015. The other baby food brands – Happy Family, Plum Organics, Earth’s Best Organic, Beech-Nut, and Ella’s Kitchen – also advertised on third-party websites in 2015, but purchased little or no advertising in other media. The most common third-party websites with advertising for baby and toddler food and



drink ads included retailer sites (e.g., Amazon.com, Walmart.com), social media sites (e.g., Facebook.com, YouTube.com), and parenting sites (e.g., CafeMom.com, BabyCenter.com). Of note, these numbers do not include visits to websites on mobile devices or advertising in mobile apps.

All brands in our analysis also utilized social media marketing in 2015. Brand presence and popularity on different social media platforms (Facebook, Twitter, Instagram, Pinterest, and YouTube) varied, but all brands appeared in mom blogs. There were many similarities in the types of techniques and engagement devices used. Brands frequently featured experts with advice for parents. For example, registered dietitians offered advice on feeding children in Beech-Nut Twitter posts and YouTube videos; Enfamil connected users with experts on Twitter; PediaSure Facebook posts offered experts' tips on healthy eating; and Gerber Good Start Twitter and Instagram posts offered parents a 15-minute consultation with a registered dietitian, lactation consultant, or sleep expert. Mom blog posts also connected users to experts with links to brand websites. Brands also commonly provided incentives to mom bloggers to post about their brands and invited posts from "regular" moms on other social media platforms to spread their messages virally. For example, YouTube and Facebook videos for Gerber Good Start and Beech-Nut presented personal stories from mothers; Happy Family retweeted

posts from mothers enlisted as regional ambassadors for the brand; Beech-Nut Facebook posts featured mom bloggers who support the brand; and Plum Organics promoted articles written by mothers on PopSugar.com. Similac sponsored an extensive #EndMommyWars campaign using entertaining but controversial videos that garnered more than 20 million views on Facebook and YouTube, supported by sponsored posts on mom blogs and Facebook posts with mothers sharing advice and inviting mothers to join the "Sisterhood of Motherhood." Plum Organics' "Parenting Unfiltered" video also attracted approximately 5 million views on Facebook and YouTube.

Engagement devices that appeared frequently on brands' social media posts included invitations for followers to submit pictures or share their stories. Gerber, Beech-Nut, Enfamil, and Plum Organics all provided hashtags to share babies' pictures, often with contests for the best pictures. PediaSure asked users to share pictures of "moms who inspire you," and Beech-Nut and Similac invited mothers to create their own videos and post them with specific hashtags. Links on the majority of posts allowed users to easily move from one social media platform to another or access the brand website. Other common messages on social media platforms and mom blogs included information about special offers, coupons, and loyalty programs to reduce the cost of baby food and infant formula.



## Advertising to Hispanic and black parents

This section documents advertising for baby and toddler food and drink brands with marketing targeted to Hispanic and black audiences. We first examine Hispanic-targeted marketing, including advertising spending and exposure to ads on Spanish-language TV, the content of Spanish-language TV and magazine ads, company website exposure

for Hispanic versus non-Hispanic audiences, and Spanish-language messages on product packages. We then quantify advertising spending and exposure to advertising on black-targeted TV networks, compare exposure to TV advertising by black versus white audiences, and examine company website exposure for black audiences.

### Marketing to Hispanic parents

#### TV advertising to Hispanic parents

#### Definitions

Spanish-language TV	TV programming presented on Spanish cable and broadcast networks (e.g., Univision, Telemundo). Exposure for Spanish-language TV advertising is calculated based on the number of persons living in Hispanic households as projected by Nielsen.
Hispanic targeted index	The percent of Hispanic adults (18-49 years) visiting a given website divided by the percent of non-Hispanic adults visiting. A targeted index over 100 indicates that Hispanic adults visited a given website disproportionately more than non-Hispanic adults on the internet. For example, Hispanic adults were twice as likely to visit a website with a targeted index of 200 compared to non-Hispanic adult visitors.

Three companies in our analysis spent \$16.1 million to advertise on Spanish-language TV in 2015, promoting just three toddler milk and nutritional supplement brands: Enfagrow (Mead Johnson Nutrition), Pediasure (Abbott), and Nido (Nestle S.A.) (see **Ranking Table 9**). These brands also made a substantial investment in Spanish-language TV in 2015. Enfagrow toddler milk spent \$6.9 million on Spanish-language TV advertising, which was more than one-half of its total TV advertising budget, and Pediasure devoted one-quarter of its TV advertising to Spanish-language, spending \$5.3 million. Nido toddler milk only advertised on Spanish-language TV. Notably, the \$4 million that Nestle spent to advertise Nido was 18% of the company's TV advertising spending across all its baby food brands. There was no advertising for baby or toddler food or infant formula brands on Spanish-language TV in 2015.

The three brands advertising on Spanish-language TV in 2015 also increased their investments in this medium from 2011 to 2015. Over the five years, their combined spending on Spanish-language TV advertising increased by more than 2.5 times. Both Pediasure and Nido spent approximately \$3 million on Spanish-language advertising in 2011, and both increased their spending in 2015, by 74% and 21%, respectively. Enfagrow did not advertise on Spanish-language TV in 2011 and 2012, but outspent all other brands examined in 2015.

**Table 29** presents all brands with advertising on Spanish-language TV from 2011 to 2015, including the specific varieties advertised. Notably, the only substantial investment in Spanish-language TV advertising by a food brand during these five years was by Beech-Nut, which advertised its Goya baby food variety exclusively on Spanish-language TV in 2013, spending almost \$1 million. However, the brand no longer sells these products. In 2011, Nestle also advertised Gerber Graduates on Spanish-language TV, but spent just \$5,000 on the campaign.

Among the brands advertising toddler milk on Spanish-language TV, Enfagrow focused primarily on Toddler Next Step from 2013 to 2015 and also advertised the brand in 2015. Notably, Enfagrow devoted more than three-quarters of its Toddler Next Step TV advertising to Spanish-language TV in 2015. Advertising for Nido milk peaked at \$4.2 million in 2014. In 2011, the company devoted approximately \$1 million to advertise Nido Fortificada, a powdered milk drink for children older than age 1. However, from 2012 to 2015 the company only advertised Nido 1+, a sweetened milk drink for toddlers 1 to 3 years old.

Pediasure spent approximately \$3 million in Spanish-language TV advertising from 2011 to 2013, and then sharply increased its spending to over \$6 million in 2014 and over \$5 million in 2015. The brand consistently allocated approximately one-quarter of its total TV advertising to Spanish-language. Pediasure Sidekicks also advertised on Spanish-language TV in 2012 and 2013, but the company discontinued all advertising (including English-language ads) for this brand by 2015.

**Figure 18** illustrates the trend in Spanish-language TV advertising spending for the five years examined using two-year moving averages. Enfagrow, Nido and Pediasure substantially increased their total investment in advertising to Spanish-speaking audiences during this time.

### Hispanic audience exposure to Spanish-language TV advertising

**Ranking Table 9** presents Hispanic women's exposure to advertising on Spanish-language TV by brand and company. As found with English-language TV advertising, Spanish-language TV advertising for the brands in our analysis was targeted primarily to women. During the five years examined,

**Table 29.** Spanish-language TV advertising spending by brand and variety: 2011-2015

Brand	Variety*	Category	Spanish-language TV spending (\$000)					% of total TV spending				
			2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
<b>Baby and toddler food</b>												
Beech-Nut	Goya	Baby food	\$0.0	\$0.0	\$973	\$0.0	\$0.0	**	**	100%	**	**
Gerber Graduates	Fruit & Veggie Melts	Toddler food	\$2.3	\$0.0	\$0.0	\$0.0	\$0.0	<0%	**	**	**	**
Gerber Graduates	Lil' Entrees	Toddler food	\$2.3	\$0.0	\$0.0	\$0.0	\$0.0	<0%	0%	0%	0%	0%
<b>Baby and toddler drinks</b>												
Pediasure		Nutritional supplement	\$3,019.1	\$3,001.4	\$2,627.6	\$6,136.5	\$5,252.7	29%	24%	19%	24%	25%
Enfagrow	Toddler Next Step	Toddler milk	\$0.0	\$0.0	\$4,156	\$3,318.8	\$4,572.1	**	**	37%	18%	77%
Nido	Nido 1+	Toddler milk	\$2,136.9	\$3,429.2	\$3,061.1	\$4,533.2	\$3,979.8	100%	100%	100%	100%	100%
Enfagrow	Brand	Toddler milk	\$0.0	\$0.0	\$0.0	\$0.0	\$2,321.0	**	**	**	**	34%
Nido	Brand	Toddler milk	\$0.0	\$0.0	\$0.0	\$1.7	\$10.7	**	**	**	100%	100%
Pediasure Sidekicks		Nutritional supplement	\$0.0	\$1,542.8	\$2,374.1	\$0.0	\$0.0	0%	12%	15%	0%	**
Nido	Fortified	Toddler milk	\$1,155.4	\$0.0	\$0.0	\$0.0	\$0.0	100%	**	**	**	**

\*Indicates advertising for the brand, but not a specific variety.

\*\*Brand did not advertise on TV that year.

Source: Rudd Center analysis of Nielsen data (2016)

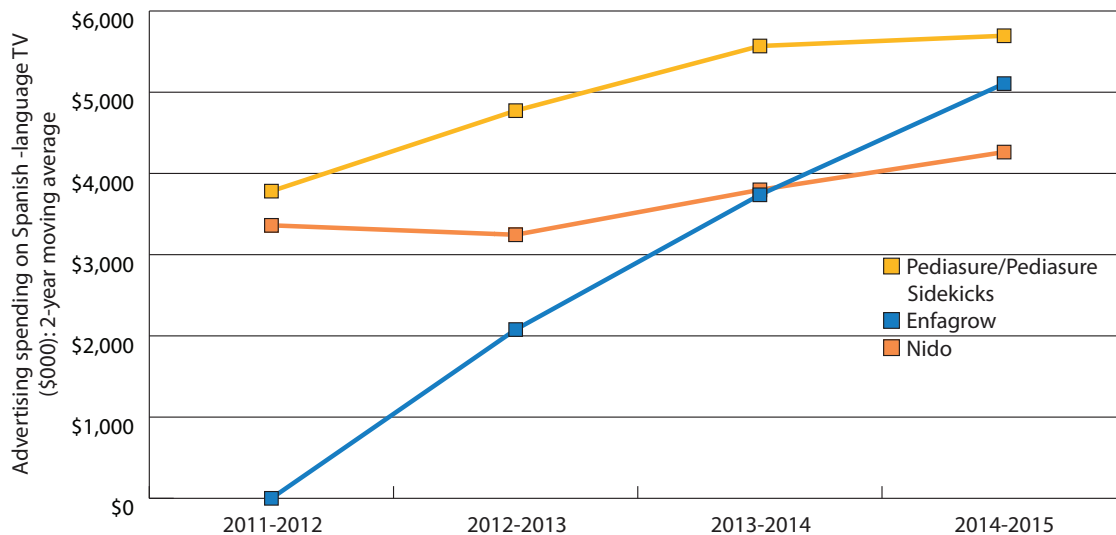
Hispanic women viewed 80% more ads on Spanish-language TV for baby and toddler food and drink brands compared with Hispanic men. Therefore, the following analyses present results for Hispanic women only.

On average, Hispanic women viewed almost 32 ads for Pediasure nutritional supplement and Enfagrow and Nido toddler milk on Spanish-language TV in 2015. Ads viewed on Spanish-language TV were in addition to advertising viewed by Hispanic women on English-language TV. Notably, on Spanish-language TV alone, Hispanic women viewed more

ads for toddler milk brands than women viewed on all English-language TV (on average 17.8 Spanish-language ads for Hispanic women vs. 7.0 English-language ads for all women).

From 2011 to 2015, the number of ads viewed by Hispanic women more than doubled for the three brands combined. As noted earlier, Enfagrow did not advertise on Spanish-language TV in 2011 or 2012. Hispanic women also viewed 25% more Spanish-language TV ads for Nido in 2015 than in 2011 and 76% more Pediasure ads. In 2013, Hispanic women also viewed a small number of TV ads for Beech-Nut Goya baby food.

**Figure 18.** Trends in Spanish-language TV advertising spending by brand\*



\*Shows the average for the two-year period.

Source: Rudd Center analysis of Nielsen data (2016)

## Content analysis of Spanish-language advertising

### Spanish-language advertising content analysis

	Definitions
Main selling point	The general focus of the advertisement or what is being sold, including specific product(s), a promotion (e.g., coupon, cause, or contest), or the brand overall. Only one main selling point was coded.
Product features	Any specific feature of the product communicated in the ad, including nutrition, supplement (i.e., filling a void in a child's diet), new/improved, taste/approved by children, natural/real, organic, convenience, satisfies children, scientific formula, and/or serving of vitamins/food group.
Indirect associations	Any implicit message or indirect attribute about the product implied by the ad, including humor, education, helping children learn, fear appeals, family bonding, bonding with peers, inspirational appeals, nutrition experts, and/or parent/child conflict.
Benefits	Any direct benefit to children from consuming the product, including digestive health, physical development, mental performance, less crying, chewing development, and happiness of children or parents. Pediatrician recommended is categorized as a separate type of benefit.

Twenty-seven unique Spanish-language ads that first appeared on TV and in magazines from 2012 to 2015 were included in the Spanish-language content analysis. Typically, these ads were Spanish translations of English-language ads (e.g., the voiceover script was translated into Spanish, with the same visuals as the English version). However, some ads had unique messages appealing to Hispanic populations. As noted earlier, Beech-Nut Goya baby food and Nido toddler milk only advertised on Spanish-language TV. We assessed the messages presented in Spanish-language ads using the same codebook developed for the English-language content analysis. **Appendix B** includes tables detailing all messages appearing in the Spanish-language ads in our analysis.

Three-quarters of ads in this analysis were for Enfagrow, Pediasure, and Nido (see **Table 30**). Two baby food brands (Gerber and Beech-Nut) and one infant formula (Similac) also advertised in Spanish. Enfagrow, Nido, and Beech-Nut had both Spanish-language magazine and TV ads, while Pediasure and Gerber only advertised in Spanish on TV, and Similac only advertised in Spanish in magazines.

The majority of Spanish-language ads promoted specific product(s), with just seven focusing on promotions or brand

messages. One Gerber TV ad featured a promotion to mail in bar codes for giveaways. An Enfagrow promotional magazine ad urged parents to answer an online quiz about the benefits of DHA to win gift cards. A Nido promotional ad offered a pamphlet with advice to mothers inside each can, while the brand ad featured the Nido family of products, one for every stage of development.

**Pediasure and Enfagrow.** The messages appearing in Spanish-language ads for Pediasure and Enfagrow were similar to the messages in their English-language ads (see **Figure 19**). Product nutrition was emphasized in almost all ads, with the majority promoting the products as a supplement to children's nutrition. Most Pediasure ads also emphasized that the product satisfies children. In contrast to their English-language ads, these brands also commonly promoted new/improved versions of their products in Spanish.

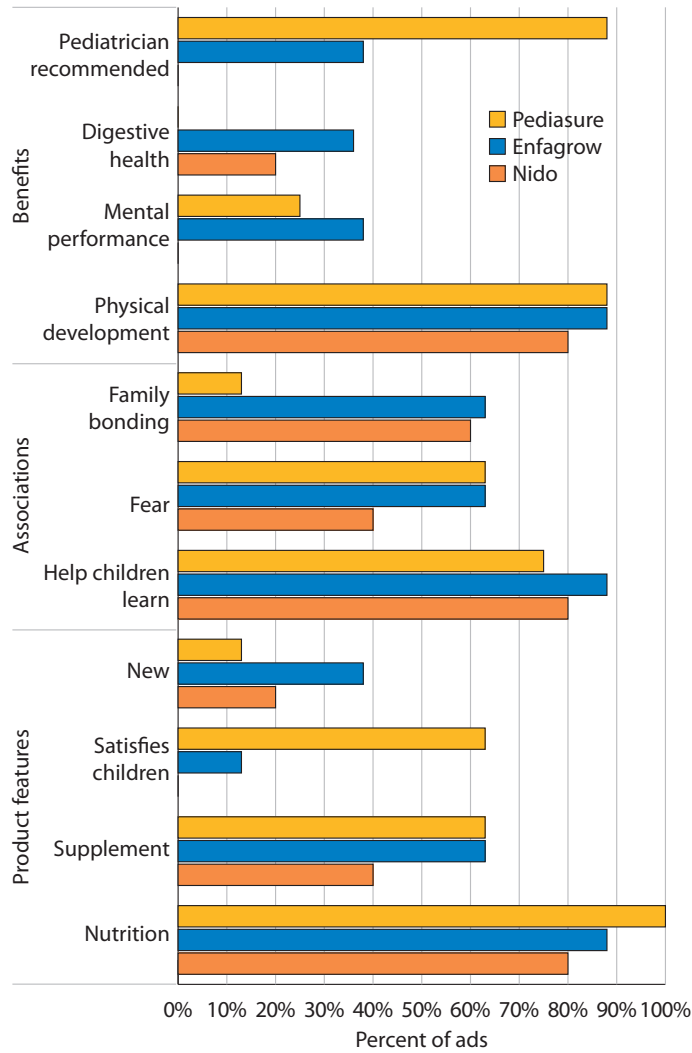
Nearly all Pediasure and Enfagrow ads also communicated benefits to children, primarily their physical development, as well as mental performance, and digestive health. For example, one Spanish-language Enfagrow ad emphasized how the product helps children's brain develop, highlighting the child's brain while she consumes the product. Another Enfagrow

**Table 30.** Summary of Spanish-language TV and magazine advertising content by brand

Brand	Category	# of ads	Magazine ads	Main point of the ad			Messages in the ads		
				Specific product(s)	Promotion	Brand	Any features	Any benefits	Any associations
Enfagrow	Toddler milk	8	50%	88%	13%	0%	88%	88%	88%
Pediasure	Nutritional supplement	8	0%	100%	0%	0%	100%	100%	100%
Nido	Toddler milk	5	20%	60%	20%	20%	80%	80%	100%
Gerber	Baby food	2	0%	50%	50%	0%	100%	0%	50%
Beech-Nut	Baby food	2	50%	0%	0%	100%	50%	0%	100%
Similac	Infant formula	2	100%	50%	0%	50%	100%	100%	100%

Source: Spanish-language ad content analysis (2016)

**Figure 19.** Messages in Spanish-language ads for toddler milk and nutritional supplement brands



Source: Spanish-language ad content analysis (2016)

ad featured a toddler with the highlighted text pointing to his brain, “sustained concentration” and “learning.” The ad later shows the child correctly counting a series of blocks. An Enfagrow ad that also appeared in English depicted a child correctly fitting puzzle pieces after consuming Enfagrow.

Many of the Spanish-language ads for PediaSure were translated versions of the same ads shown on English-language TV, including an ad depicting a child’s growth after consuming PediaSure by showing that the blanket no longer covers his feet when his mother tucks him in, and another that depicts children as sponges with the voiceover stating that PediaSure helps children “absorb” their world. Approximately one-third of Spanish-language Enfagrow ads and nearly all PediaSure ads also claimed that the products are recommended by pediatricians.

As in the English-language ads, parents’ fears about their children’s diets were emphasized in the majority of PediaSure and Enfagrow ads. For example, one Enfagrow magazine



Enfagrow Spanish-language ads depicting brain development and mental performance





Parents' fears highlighted in an Enfagrow ad

ad asks, "Is something missing in your child's nutrition?" Pediasure ads that appeared on both English and Spanish-language TV included one that depicted a mother giving her son a doughnut because she fears that he eats almost nothing. Later in the ad, the voiceover states that these conflicts are driving the mother and son apart, showing the physical distance between them growing as the family table becomes longer. Pediasure Sidekicks' "Princess Picky" ad also appeared in Spanish.

**Nido.** Although Nido only advertised in Spanish, the messages in these ads were similar to ads for Enfagrow and Pediasure. Nearly all focused on the product's nutrition, including frequent messages that Nido helps supplement children's diet. The product also promoted its benefits for children's physical development (focusing on growth) and digestive health and implied that Nido helps children learn. For example, in one Nido ad, a little girl measures her height against the height of her mother, and the voiceover states that the product has the necessary nutrients to help children grow at least 6 centimeters every year. Another claims that Nido contains more nutrients than regular milk. An aspirational magazine ad for Nido depicts, "Theo, 18 months. Future ping-pong champion."

**Other brands.** Beech-Nut ads for its Hispanic-targeted Goya variety presented no specific benefits for children, but they did depict Goya products as convenient, tasty/approved by children, and having natural ingredients. Notably, these ads also included inspirational messages aimed directly at Spanish-speaking parents, emphasizing that Goya products expose babies to "Latino flavors" and the flavors of their parents' childhood, "Our baby foods are made with natural ingredients and they allow you to feed your children with the flavors of your childhood like guava, mango and rice pudding."

Gerber's Spanish-language ads promoted its baby food as nutritious, tasty, and convenient. For example, a TV ad shows a mother struggling to mash a banana for her baby and presents the product as a way for her to spend less time preparing food and more time bonding with her baby. Of note, this ad only appeared on local spot TV in 2015, so it was not included in the TV advertising data. Similac featured a digestive health message in one ad and physical development



Nido ad depicting a child's growth

IMAGÍNASE SI TOMARA UNA LECHE ESPECIALMENTE FORMULADA PARA ÉL.

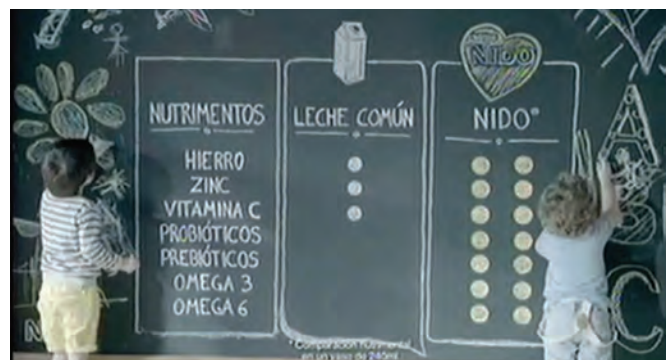
La formulación especial de NIDO 1+ tiene todas las bondades de la leche y además vitaminas, minerales y prebióticos que apoyan el crecimiento, desarrollo y el saludable sistema inmunológico de los niños de 1 año en adelante.

¿Y si ya les estás dando NIDO 1+ a tus hijos?

NIDO. Tu amor. Su futuro.™

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Inspirational message in a Nido ad



Nido ad promotes benefits over plain milk



Beech-Nut Goya ad promotes Latino flavors



Mother struggles to prepare baby food in a Gerber baby food ad



Happiness and mother-child bonding in a Similac ad

benefits in both ads, emphasizing that the infant formula is nutritious, comforts babies, and reduces crying and irritability. These ads also communicated mother-child bonding, “To help you enjoy every moment of happiness. Similac Sensitive for lactose intolerance.”

### Spanish-language on product packaging

We also analyzed Spanish-language information on product packages. In the baby and toddler food categories, all Gerber baby food and Gerber Graduates toddler food packages included some information in Spanish, as did the majority of Beech-Nut baby food and Gerber toddler food packages (see **Table 31**). However, this information consisted primarily of one or two lines in Spanish on the package, such as “best by,” “listen for pop when opening,” and “do not use if button is up” for Beech-Nut and the availability of a telephone helpline “en español” on Gerber packages. A small number of Gerber 2nd Food packages provided more extensive product information and/or food preparation directions in Spanish. Notably, Happy Family and Plum Organics brands did not include any Spanish-language information on their packages.

In contrast, Spanish-language information appeared on the majority of drink packages in our analysis. Furthermore, all Enfagrow and Nido toddler milk packages and four out of five Gerber Good Start infant formula packages included extensive product information in Spanish, such as directions





Spanish-language information on Beech-Nut, Nido, and Gerber Good Start packages

for preparation and use, nutritional information, and nutrition-related messages. All packages for Pediasure and Pediasure Sidekicks nutritional supplement brands and Similac infant formula also featured some Spanish-language information, such as “Se habla español.” Of the drink brands examined, only Enfamil infant formula and Gerber Good Start toddler milk did not contain any Spanish-language information on their packages.

**Table 31.** Spanish-language information on product packages

Brand	Category	# of packages	Spanish-language information (% of packages)	
			Any Spanish	Detailed product information
<b>Baby and toddler food</b>				
Gerber	Baby food	43	100%	28%
Gerber Graduates	Toddler food	32	100%	0%
Beech-Nut	Baby food	56	79%	0%
Gerber	Toddler food	13	69%	0%
Plum Organics	Baby and toddler food	37	0%	n/a
Happy Baby, Happy Tot	Baby and toddler food	30	0%	n/a
<b>Baby and toddler drinks</b>				
Enfagrow	Toddler milk	3	100%	100%
Nido	Toddler milk	1	100%	100%
Similac	Infant formula	4	100%	0%
Pediasure Sidekicks	Nutritional supplement	3	100%	0%
Pediasure	Nutritional supplement	2	100%	0%
Gerber Good Start	Infant formula	5	80%	80%
Enfamil	Infant formula	7	0%	n/a
Gerber Good Start	Toddler milk	1	0%	n/a

Source: Rudd Center product package analysis (2016)

### Hispanic visitors to company websites

The three websites with data in comScore also had enough Hispanic visitors to measure. However, these sites all averaged fewer than 10,000 Hispanic adult visitors per month in 2015 (see **Table 32**). As found for all adult visitors, Enfamil.com and Similac.com had the most Hispanic visitors. Notably, Hispanic adults were less likely to visit these websites compared with non-Hispanic adults, evidenced by Hispanic targeted indices of 58 or lower. Also as found with all visitors, Hispanic women were approximately 1.5 to 3 times as likely to visit these websites compared with Hispanic men. Notably, the Nido website (NestleNido.com) did not have enough visitors to measure exposure through comScore.

**Table 32.** Hispanic adults visiting company websites

Website	Categories	Avg monthly unique visitors (000)	Hispanic targeted index	Women targeted index
Enfamil.com	Infant formula, toddler milk	8.3	58	186
Similac.com	Infant formula	6.7	48	294
Gerber.com	Baby food, toddler food, infant formula	5.1	57	136

Source: comScore Media Metrix Key Measures Report (18-49 years for January - December 2015)

## Marketing to black parents

## TV advertising to black parents

## Definitions

Black-targeted TV	TV networks with an audience consisting of 50% or more black viewers, including BET, VH1, TV1, and Centric.
Black:white targeted ratio: TV	GRPs for black women (18-49 years) divided by GRPs for white women (18-49 years). Provides a measure of relative exposure to TV advertising for black versus white women.
Black:white targeted index: websites	The percent of black adults (18-49 years) visiting a given website divided by the percent of white adults visiting. A targeted index over 100 indicates that black adults visited a given website disproportionately more than white adults on the internet. For example, black adults were twice as likely to visit a website with a targeted index of 200 compared to white adult visitors.

In 2015, just two companies spent a sizeable amount to advertise on black-targeted TV (see **Ranking Table 10**). Abbott spent almost \$900,000 advertising Pediasure, while Nestle spent \$270,000, two-thirds of which promote Gerber baby food. Nestle also advertised Gerber Good Start infant formula and Gerber Graduates toddler food on black-targeted TV. Mead Johnson spent just \$2,000, to advertise Enfagrow toddler milk on black-targeted TV networks. Notably, none of these brands devoted more than 5% of their total TV advertising spending to black-targeted TV in 2015.

Compared with 2011, most brands in our analysis substantially reduced black-targeted TV advertising in 2015. In 2011, Abbott spent more than \$3 million to advertise Pediasure and Pediasure Sidekicks on black-targeted TV networks, representing approximately 15% of the brands' total TV advertising spending. However, total spending for these brands declined by 70% from 2011 to 2015. Mead Johnson also spent approximately \$440,000 to advertise Enfamil infant formula on black TV networks in 2011, 12% of its total TV advertising budget, but the brand did not advertise on TV at all in 2015. On the other hand, Gerber baby food and Gerber

Good Start infant formula increased advertising on black-targeted TV, by 700% and over 400%, respectively.

### TV advertising spending on black-targeted TV by brand and variety

Advertising spending on black-targeted TV networks fluctuated by year for the brands in our analysis (see **Table 33**). In the baby and toddler food categories, Gerber had comparably high levels of advertising on black-targeted TV in 2014 and 2015. The brand promoted its Lil' Bits and 2nd Foods in 2015, but primarily advertised the Gerber brand in 2014, without focusing on specific products. Gerber Graduates black-targeted TV advertising peaked in 2014 at \$138,000, splitting its advertising between Lil' Entrees and Puffs. Beech-Nut advertised its baby food on black-targeted TV in 2014 only, focusing on the brand. Beech-Nut devoted 6% of its TV advertising to black-targeted TV networks in 2014, but none of the other baby or toddler food brands allocated more than 2% of their TV advertising budgets to black-targeted TV networks in any of the years examined.

**Table 33.** Black-targeted TV advertising spending by brand: 2011-2015

Brand	Category	Black-targeted TV spending (\$000)					% of total TV spending				
		2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
<b>Baby and toddler food</b>											
Gerber	Baby food	\$22.1	\$12.8	\$15.5	\$170.5	\$177.6	<1%	<1%	<1%	2%	2%
Gerber Graduates	Toddler food	\$18.2	\$6.4	\$21.6	\$138.0	\$14.5	<1%	<1%	<1%	1%	<1%
Beech-Nut	Baby food	\$0.0	\$0.0	\$0.0	\$327.2	\$0.0	0%	**	0%	6%	0%
<b>Baby and toddler drinks</b>											
Pediasure	Nutritional supplement	\$1,579.6	\$1,293.7	\$867.2	\$1,404.0	\$899.8	15%	10%	6%	6%	4%
Gerber Good Start	Infant formula	\$14.4	\$11.1	\$14.2	\$119.0	\$78.2	<1%	<1%	<1%	5%	5%
Enfagrow	Toddler milk	\$0.0	\$0.0	\$741.8	\$613.0	\$1.9	0%	**	7%	3%	<1%
Pediasure Sidekicks	Nutritional supplement	\$1,423.6	\$1,180.4	\$1,106.6	\$0.0	\$0.0	16%	9%	7%	0%	**
Enfamil	Infant formula	\$442.6	\$555.3	\$0.0	\$0.0	\$0.0	12%	12%	0%	**	**

\*\*Brand did not advertise on TV that year

Source: Rudd Center analysis of Nielsen data (2016)



In the baby and toddler drink categories, Pediasure and Pediasure Sidekicks dominated advertising spending on black-targeted TV networks all five years. However, as noted Pediasure spending declined dramatically from 2011 to 2015 and the company stopped advertising Sidekicks on black-targeted TV in 2013. The portion of its advertising budget allocated to black-targeted TV also declined during this period. In 2015, Pediasure devoted just 4% of its total TV advertising to black-targeted TV. Among the other brands, Enfagrow advertising targeting black audiences peaked in 2013 at \$742,000, when the brand devoted 7% of its total TV advertising spending to black-targeted TV.

From 2013 to 2015, Gerber Good Start was the only infant formula with advertising on black-targeted TV networks, promoting its Soothe variety for “fussiness and gas.” However, in 2011 and 2012, Mead Johnson spent approximately \$500,000 per year in black-targeted TV advertising for Enfamil infant formulas. The brand allocated 12% of its TV advertising budget for the Enfamil Newborn variety in 2011 and 12% of Enfamil advertising in 2012 to black-targeted TV.

### Black audience exposure to TV advertising

Although advertising spending for baby and toddler food and drinks on TV networks that target black viewers declined by two-thirds from 2011 to 2015, black women viewed comparable numbers of TV ads in total (on all TV networks) both years. In 2011, they viewed on average 96.0 TV ads for the five categories compared with 99.3 ads in 2015. Exposure peaked in 2014 when black women viewed 151.6 TV ads for the brands in our analysis. In 2015, black women viewed almost 40 ads per year for nutritional supplement brands, followed by ads for baby and toddler food at approximately 25 and 23 ads per year, respectively (see **Table 34**). Exposure to ads for toddler milk and infant formula averaged less than 10 ads per year.

As found with TV advertising to all women, there was a similar decline in infant formula advertising to black women and similar increases in TV ads for toddler food and toddler milk. However, black women’s exposure to baby food ads more than doubled during this time period, which was almost twice the

**Table 34.** TV ad exposure for black women by category: 2011-2015

Category	Avg # ads viewed by black women					
	2011	2012	2013	2014	2015	Change 2011 to 2015
Nutritional supplement	54.1	66.0	66.7	47.5	39.5	-27%
Baby food	11.2	7.7	12.2	41.9	25.0	123%
Toddler food	13.8	6.2	13.3	35.6	22.8	65%
Toddler milk	0.0	0.0	13.2	20.8	9.3	n/a
Infant formula	16.9	23.3	8.3	5.8	2.7	-84%

Source: Rudd Center analysis of Nielsen data (2016)

increase in baby food ads viewed by all women. In contrast, nutritional supplement ads viewed declined at a greater rate for black women compared with all women. As observed with ads viewed by all women, ads for infant formula viewed by black women peaked in 2012 and nutritional supplement ads were highest 2013, while ads for baby food, toddler food and toddler milk were highest in 2014.

**Ranking Table 10** provides the average number of ads viewed by black women by brand and company, including targeted ratios of ads viewed by black compared with white women. In 2015, black women viewed the most ads for the two brands with the most advertising spending on black-targeted TV: Pediasure and Gerber baby food. However, due to higher TV advertising spending on all networks, black women viewed more ads for Gerber Graduates toddler food and Enfagrow toddler milk than they viewed for Gerber Good Start infant formula (which spent disproportionately more on black-targeted TV networks). From 2011 to 2015, black women’s exposure to advertising increased for Gerber baby food, Gerber Graduates toddler food, Pediasure, and Enfagrow toddler milk, while it decreased for Gerber Good Start and Enfamil infant formulas.

Compared with white women, black women viewed 60 to 80% more ads for all brands in 2015, which was comparable to differences in TV viewing time. In 2015, black women spent 59% more time watching TV compared with white women.<sup>14</sup> However, there were differences by brand. Black women viewed just 30% more ads for Enfagrow toddler milk compared with white women. The highest targeted ratio was observed in 2011, when black women viewed approximately twice as many TV ads for Pediasure and Pediasure Sidekicks than white women viewed.

### Black visitors to baby and toddler food and drink websites

The three websites with data in comScore also had enough black visitors to measure. However, all sites averaged fewer than 8,000 black adult visitors per month in 2015 (see **Table 35**). Similac.com and Gerber.com had the highest black targeted indices, but black adults were approximately 20 to 25% less likely to visit these sites compared with white adults.

**Table 35.** Black adults visiting company websites

Website	Category	Avg monthly unique visitors (000)	Black: white targeted index	Black women: men targeted index
Similac.com	Infant formula	7.7	74	542
Enfamil.com	Infant formula	5.3	48	179
Gerber.com	Baby food, infant formula	5.3	79	308

Source: comScore Media Metrix Key Measures Report (18-49 years for January - December 2015)

Black adults were approximately 50% less likely to visit Enfamil.com. As found with Hispanic and all adult visitors, women were much more likely to visit these sites than were men.

## Summary of marketing to Hispanic and black parents

Just three brands in our analysis invested in Spanish-language TV advertising in 2015: Enfagrow (Mead Johnson Nutrition) and Nido (Nestle S.A.) toddler milk and Pediasure nutritional supplement (Abbott). These brands devoted a substantial amount of their advertising budgets to Spanish-language TV and increased their Spanish advertising from 2011 to 2015. Enfagrow spent the most and allocated the highest proportion of its budget to Spanish-language TV – almost \$7 million in 2015, more than one-half of its total TV advertising spending. Notably this brand did not advertise at all prior to 2013. Pediasure ranked second, allocating \$5.3 million and one-quarter of its total TV advertising budget to Spanish-language in 2015, a 74% increase versus 2011. Finally, Nido toddler milk only advertised in Spanish media, spending almost \$4 million on Spanish-language TV in 2015, an increase of 21%. In 2013, Beech-Nut also spent almost \$1 million to promote a Latino-targeted variety (Goya), but these products were later discontinued. Pediasure Sidekicks also spent almost \$3 million in Spanish-language TV advertising in 2012 and 2013.

Enfagrow, Nido, and Pediasure used similar messages to promote their brands on Spanish-language TV, emphasizing that their products help fill the gaps in young children's nutrition.

These brands also implied that serving these products to young children will help them grow and develop cognitive skills. Nido explicitly compared the nutrients in its product to regular milk. Enfagrow and Nido created ads specifically for Spanish-language media, while Pediasure translated its English-language ads to Spanish. Most brands in our analysis, with the exception of Plum Organics and Happy Baby/Happy Tot, provided some information on their packages in Spanish. However, only Enfagrow and Nido provided detailed product information in Spanish on all their packages.

However, we found little evidence of marketing targeted to black parents in 2015, and advertising on black-targeted TV declined compared with previous years. In 2015, the brands in our analysis spent just over \$1 million in black-targeted TV advertising, but only Pediasure, Gerber baby food, and Gerber Good Start infant formula invested a noticeable amount of their total TV advertising budgets to this medium (2% for Gerber and 4-5% for Pediasure and Gerber Good Start). In contrast, in 2011 the brands in our analysis spent \$3.5 million in black-targeted TV advertising, approximately three times the total amount spent in 2015. Brands that had invested considerably more in black-targeted TV prior to 2015 included Enfagrow, which allocated \$740,000 and 7% of its TV budget to black-targeted networks in 2013. In 2011 and 2012, Pediasure and Pediasure Sidekicks also averaged \$2.7 million per year in black-targeted TV advertising, approximately 15% of its total advertising spending. In addition, Enfamil infant formula averaged approximately \$500,000 and 12% of its total advertising budget on black-targeted TV those same years.

The majority of baby and toddler food products offered by companies in this report are nutritious options for young children. However, many of the products and marketing messages documented in this report do not support expert recommendations for encouraging lifelong healthy dietary preferences and eating habits. Policy makers, health professionals, and the public health community should do more to counteract these marketing practices and support parents in their efforts to feed their infants and young children a healthful diet.

In the context of the entire food industry, the market for baby and toddler food and drinks is relatively small: \$6.5 billion in sales annually.<sup>1</sup> By comparison, the market for food and beverages aimed at children 2 to 14 years old has been estimated at \$23 billion, approximately 4% of the total U.S. food and beverage market.<sup>2</sup> The amount of marketing to promote baby food sales is also relatively low. In 2015, companies spent \$77 million to advertise baby and toddler food, infant formula (also known as breastmilk substitutes), toddler milk (also known as toddler or follow-up formula), and nutritional supplements for young children in all media. By comparison, bottled water and fruits

and vegetables were the least advertised food products intended for consumption by all ages, and these categories spent \$92 million and \$98 million respectively in 2015.<sup>3</sup>

The number of companies and brands marketing products in the baby and toddler food and drink market is also relatively small. Eight brands from three companies were responsible for 99% of advertising spending and all TV advertising exposure in 2015: Gerber, Gerber Graduates, Gerber Good Start, and Nido from Nestle S.A.; Pediasure and Similac from Abbott; and Enfagrow and Enfamil from Mead Johnson Nutrition. One brand dominated advertising in each category: Gerber baby food, Gerber Graduates toddler food, Gerber Good Start infant formula, Enfagrow toddler milk, and Pediasure nutritional supplement. Four additional baby and toddler food brands spent \$100,000 or more in advertising in magazines and online, including Plum Organics (Campbell Soup Company), Beech-Nut (Hero A.G.), and Happy Baby and Happy Tot (Nurture Inc.).

Nonetheless, the marketing of products intended for babies and toddlers has the potential to impact the diets and eating habits of very young children, and should support health professionals and the public health community in their efforts to encourage parents to feed their children a healthful diet.

**Table 36** summarizes recommendations from nutrition, medical, and public health experts – including the Academy

**Table 36.** Expert recommendations for feeding infants and young children

#### Birth to 6 months

- Breastmilk is the optimal choice for infants under 6 months old.<sup>5,6,7</sup>
- The WHO recommends that newborns be fed breastmilk exclusively for the first six months.<sup>8</sup> AAP and the Academy of Nutrition and Dietetics recommend exclusive breastfeeding until around 6 months, but also advise that solid food (e.g., iron-fortified infant cereal) may be introduced between 4 to 6 months, if the baby is developmentally ready.<sup>9,10</sup>

#### 6 to 12 months

- Around 6 months, infants should be introduced to solid food, beginning with foods rich in iron and zinc, such as fortified infant cereal. From 6 to 8 months, babies should be introduced to pureed or mashed foods and gradually transition to lumpy foods and soft finger foods.<sup>11</sup>
- Between 8 to 12 months, babies may start eating minced, chopped foods and harder finger foods, including table foods. Encouraging babies to self-feed when ready is recommended.<sup>12</sup>
- Optimally, breastfeeding should continue for at least 1 year.<sup>13</sup> Infant formula is the only acceptable alternative to breastmilk for babies under 12 months old.
- During this time, babies' diets should include varied and positive exposures to the taste, flavors, and textures of fruits and vegetables.<sup>14</sup> The Academy of Nutrition and Dietetics recommends against adding sugar, salt, or honey to babies' food.<sup>15</sup>

#### 1 to 2 years

- Toddlers' diets should help them transition to the family diet by supporting development of gross and fine motor skills, such as self-feeding, and preferences for the taste, flavors, and texture of table food. During this time, they should learn to enjoy the foods eaten by the rest of the family.<sup>16</sup>
- For all children, a healthy diet should consist of a variety of fruits and vegetables every day and limited consumption of added sugar, saturated fat, and sodium.<sup>17</sup> The American Heart Association recommends against serving products with added sugar to children under age 2.<sup>18</sup>
- The WHO and AAP recommend that toddlers continue breastfeeding until age 2.<sup>19,20</sup> Whole milk should replace infant formula at 12 months.<sup>21,22</sup> The American College of Family Physicians and the AAP do not recommend serving toddler milk.<sup>23,24</sup>

of Nutrition and Dietetics, the American Academy of Pediatrics (AAP), and the World Health Organization (WHO) – regarding feeding young children. Following these recommendations encourages children to acquire healthy dietary preferences, supports healthy growth, and can prevent obesity and other diet-related diseases.<sup>4</sup>

Importantly, parents who follow these recommendations would not need to purchase many of the commercially available baby and toddler food and drink products in this analysis. Furthermore, manufacturers are constrained by a limited number of children younger than age 3 to consume these products. Therefore, to grow their sales companies must find new strategies to encourage parents to purchase products that, in effect, compete with breastmilk, whole milk (for toddlers), and homemade or table food from the family diet, and in many cases are not consistent with expert recommendations on a healthy diet and feeding practices. As this examination reveals, marketing for baby and toddler food, infant formula, and toddler milk and nutritional supplements may encourage parents to feed their young children products that do not contribute to a healthy diet or optimal feeding practices.

### Baby and toddler food nutrition and marketing

Our analysis found that the nutritional quality of most baby and toddler foods examined was high. We used NPI score to measure the overall nutritional composition of foods; foods with a score of 64 or higher qualify as nutritious. An impressive 100% of all fruit, vegetable, and meal products offered by all brands qualified as nutritious according to NPI score, including all pureed and textured single food group (i.e., fruits and vegetables) and mixed food products for babies (typically fruits and vegetables plus grain or dairy ingredients), as well as bitesize food and meals for toddlers. Furthermore, the majority of fruit, vegetable, and meal products had very high NPI scores of 76 or more.

On the other hand, just four of the 80 snack food products in our analysis had a nutritious NPI score. These snacks included grain-based products, such as cookies, cereal bars, and puffs, as well as fruit-based snacks, including yogurt melts and fruit snacks. With a median NPI score of 36, Happy Baby fruit-based snacks (Coconut Creamies and Yummy Yogis) had the lowest nutrition scores in our analysis. Notably, one-half of snacks for babies and 83% of toddler snacks contained added sweeteners, including high fructose corn syrup in some Gerber Graduates snacks. Furthermore, these products were no better in nutritional quality than snack foods aimed at older consumers, such as Kashi cereal bars, Cheetos reduced fat puffs, and animal crackers. Original Cheerios, with an NPI score of 70, remains a better choice of early finger foods for babies. Despite their lower nutritional quality, baby and toddler snacks also featured many nutrition-related messages on packages, averaging 7.3 messages per

package for snack foods versus 5.6 per package for the more nutritious fruit, vegetable, and meal products in our analysis.

Beyond providing nutrients, foods offered to babies and toddlers must support development of healthy eating behaviors and habits. However, many of the products in our analysis did not meet these developmental standards. For example, serving toddlers pureed food in pouch form does not promote the development of eating skills or allow them to experience the different textures or varying tastes, flavors, smells, and colors that occur naturally in food. Experts do not recommend serving toddlers pureed food,<sup>25</sup> yet 45% of the nutritious toddler food products in our analysis were pureed foods in pouches. In addition, the majority of baby and toddler snacks, as well as 31% of the nutritious baby and toddler foods examined, either failed to list main ingredients in the product name (e.g., Happy Tot Super Foods Coconut Mixed Berry includes apple puree as the first ingredient and pear juice as the fourth, while coconut milk is the sixth) or included ingredients in the product name that were not listed as one of the first five ingredients on the nutrition facts panel (e.g., in Gerber Lil' Beanies white cheddar and broccoli, cheddar and broccoli are the 8th and 10th ingredients on the nutrition facts panel). This practice may mislead parents about the content of the products they serve their children.<sup>26</sup> In addition, Nestle's corporate policy on responsible marketing of breastmilk substitutes states that it will support the WHO's recommendation for exclusive breastmilk feeding until 6 months, followed by the introduction of nutritious complementary foods,<sup>27</sup> but the company's Gerber brand offered 1st Foods for "supported sitters" (4-6 months).

Notably, there was wide variation between brands in the nutrition content and marketing of their baby and toddler food products (see **Table 37**). Beech-Nut baby food stood out as the brand with the most nutritious products – 100% had a nutritious NPI score, 84% had a high score of 76 or more, and not one contained added sweeteners. The company also had the most responsible marketing practices. Beech-Nut products averaged just 2.5 nutrition-related messages on their packages, and product name and main ingredients matched for 93% of its products. In addition, 100% of Gerber baby food products had nutritious NPI scores, and the brand did not offer any baby snack foods.

In contrast, the other baby and toddler food brands engaged in marketing practices that raise concerns. The product name and ingredients did not match for one-third or more of all Plum Organics baby and toddler food products and Happy Tot fruit, vegetable, and meal products. Three-quarters to 100% of Gerber Graduates, Plum Organics, and Happy Tot foods for toddlers came in pouches, and Gerber Graduates spent \$3.6 million in 2015 to advertise its Grabbers toddler pouches. Gerber Graduates also spent \$5.3 million to advertise its Puffs toddler snack foods; with a median NPI score of 56, these products fell below the cut-off of 64 to qualify as nutritious and all contained added sugar. Furthermore, Happy Baby, Happy Tot, and Plum Organics snack foods averaged more



**Table 37.** Nutrition content and marketing of baby and toddler food brands

Company	Brand	Category	# of products	2015 ad spending (\$000)	Product nutrition		Concerning marketing practices		
					% nutritious products (NPI ≥ 64)	% above median nutrition (NPI ≥ 76)	Avg # of related nutrition-messages per package	% pouches	% name/ingredient mismatch
<b>Fruits, vegetables, and meals*</b>									
Hero AG	Beech-Nut	Baby food	129	\$286.0	100%	84%	2.5	12%	7%
Nurture Inc.	Happy Baby	Baby food	41	\$63.3	100%	73%	7.1	100%	12%
Nestle S.A.	Gerber	Baby food	132	\$15,832.7	100%	65%	7.2	33%	18%
Campbell Soup Company	Plum Organics	Baby food	41	\$419.4	100%	93%	7.4	90%	49%
Nestle S.A.	Gerber/Gerber Graduates	Toddler food	53	\$7,665.4	100%	74%	5.9	43%	28%
Campbell Soup Company	Plum Organics	Toddler food	18	\$0.0	100%	94%	7.3	78%	67%
Nurture Inc.	Happy Tot	Toddler food	25	\$91.8	100%	80%	7.4	100%	36%
<b>Snack foods**</b>									
Nurture Inc.	Happy Tot	Toddler food	5	\$0.0	40%	20%	8.0	0%	60%
Nurture Inc.	Happy Baby	Baby food	21	\$0.0	10%	0%	8.1	0%	76%
Nestle S.A.	Gerber/Gerber Graduates	Toddler food	40	\$5,294.5	0%	0%	6.3	0%	42%
Campbell Soup Company	Plum Organics	Baby food	7	\$0.0	0%	0%	8.5	0%	100%
Campbell Soup Company	Plum Organics	Toddler food	7	\$0.0	0%	0%	9.5	0%	100%

Highlighted cells identify products and practices that raise potential concerns

\*Includes products in the pureed single food group, pureed mixed food, and textured mixed baby food and pureed single food group, pureed mixed, and bitesize food and meals toddler food sub-categories

\*\*Includes grain-based and fruit-based snack sub-categories

than eight nutrition-related messages on product packages, while the product name did not match its main ingredients on 100% of Plum Organics snack foods.

### Infant formula marketing

On a positive note, there was a substantial reduction in traditional advertising for infant formula from 2011 to 2015. Advertising for infant formula declined by two-thirds during this period, from more than \$30 million in 2011 to less than \$10 million in 2015. Just two brands – Gerber Good Start and Similac – spent more than \$1 million in advertising in 2015. On TV, women viewed on average less than two infant formula ads in 2015, a decline of 85% versus 2011. However, infant formula brands also had the most advertising on the internet compared to other brands in our analysis, and they were among the most active users of social media. For example, one video from Similac’s #EndMommyWars social media campaign garnered 4.5 million views on Facebook and another video in the campaign received 8.5 million views on YouTube. The brand also received 321 mentions on mom blogs, more than any other brand in our analysis.

Infant formula manufacturers have pledged that they will not discourage breastfeeding in their educational and promotional materials,<sup>28,29</sup> which they have implemented by placing disclaimers on product packages, websites, and TV

and magazine advertising noting that breastfeeding is best for babies. These materials also include disclaimers that caregivers should consult with a pediatrician before use, as required by law.<sup>30</sup> However, marketing for infant formula on social media and banner advertising on third-party websites *did not* include these disclaimers. Furthermore, infant formula brands engaged in most of the practices that the WHO has identified as “aggressive and inappropriate” marketing of breastmilk substitutes that effectively serve to discourage breastfeeding.<sup>31</sup> For example, the WHO calls for infant formula labels to only provide necessary information, yet our analysis showed that infant formula packages averaged 5.9 nutrition-related and 3.1 child development messages each. Gerber Good Start, Enfamil, and Similac all offered expert advice on children’s nutrition, development, and breastfeeding, featuring access to experts on packages, websites, and social media. They also focused their internet and social media promotion on loyalty programs offering money-saving deals that enabled brands to maintain ongoing relationships with pregnant women and new mothers. Notably, the WHO specifically discourages both practices in its latest guidelines for ending inappropriate promotion of foods for infants and young children.<sup>32</sup> As one market research company noted, “Positioning formula brands as a go-to source for parenting and breastfeeding represents a type of oblique marketing that can help keep the spotlight on formula brands even when moms decide to breastfeed.”<sup>33</sup>

Other common marketing strategies may normalize infant formula use or even present it as the best choice for babies. For example, infant formula companies frequently engaged “real” moms to promote their brands by sharing pictures and experiences through social media and enlisting mom bloggers to write about their support, which may help reinforce mothers’ decision to begin feeding infant formula to their babies. Gerber Good Start and Enfamil also frequently promoted their “scientific” formulas, and all brands devoted the majority of their advertising to specialty formulas, which the American Academy of Family Physicians does not recommend for most babies due to their higher cost and lack of evidence to support their advertised benefits.<sup>34</sup> Despite this recommendation, companies advertised their specialty infant formula products the most in 2015, including Gerber Good Start Soothe (“for babies experiencing excessive crying, colic, fussiness, and gas”) and Gentle (“inspired by the complete nutrition and the gentleness of breastmilk”), Similac Sensitive (“complete nutrition for fussiness, gas or mild spit-up”) and Advance (“designed to be closer than ever to breast milk”), and Enfamil Reguline (“designed to help babies produce soft comfortable stools”). Advertising for these products presents infant formula as the “scientifically proven” solution to problems common to nearly all babies and may lead parents to believe that formula would be better for their babies than breastmilk. We also found many examples of structure/function claims that the FDA has expressed concerns about on infant formula labels.<sup>35</sup> These claims linked ingredients in infant formula to children’s development, including brain and eye health, enhanced vocabulary, IQ, and milestones like grasping and walking. Of note, under proposed new guidelines from the FDA, companies would be required to provide well-designed clinical trials to substantiate all such structure/function claims on infant formula product labels.<sup>36</sup>

### Toddler milk and nutritional supplements

Toddler milk brands (Enfagrow and Nido) spent almost \$17 million in 2015, an increase of 74% compared with 2011. At the same time that Mead Johnson reduced advertising spending on its Enfamil infant formula by 92%, it more than doubled advertising for Enfagrow toddler milk. Of note, the American Academy of Family Physicians and the AAP specifically recommend against “toddler formula” stating, “There is no evidence of advantage over whole milk in terms of growth or development; head-to-head trials are needed. Because toddler formulas are significantly more expensive than whole milk, family physicians can counsel parents against routine use. Parents who remain concerned about picky eaters could be directed toward a multivitamin instead.”<sup>37</sup> Furthermore, most toddler milk products contain added sugars, including sugar, glucose syrup solids, honey, and corn syrup, which are not recommended for children of this age and could condition a preference for a greater level of sweetness.<sup>38</sup>

Similarly, the nutritional supplement products aimed at toddlers (Pediasure and Pediasure Sidekicks) average 17 to 18 grams of sugar per serving, which is comparable to an 8-ounce sports drink.<sup>39</sup> Pediasure contains 240 calories per serving and is formulated for children with acute malnutrition, failure to thrive, and those who cannot consume a normal diet due to illness.

However, advertising for Pediasure implies that the product will resolve common concerns for parents of many young children: picky eating and that their child is “behind the growth curve.” Pediasure spent almost \$21 million on advertising to consumers in 2015 – more than any other brand in our analysis – and the brand was responsible for more than one-third of TV ads for all baby and toddler food and drink products viewed by women. Abbott discontinued advertising for Pediasure Sidekicks in 2014 after the company settled with the NY State Attorney General for a misleading claim in its advertising. However, it increased advertising for Pediasure by 85% from 2011 to 2015.

Furthermore, Pediasure, Enfagrow, and Nido were the only brands in our analysis to advertise on Spanish-language TV in 2015, spending \$16 million. Nido (a brand targeting Latinas) only advertised in Spanish, but Enfagrow and Pediasure outspent Nido and devoted a high percentage of their budgets – 54% and 25%, respectively – to Spanish-language TV. By comparison, a previous analysis showed that the most highly advertised food and beverage brands devoted on average 8% of their TV advertising budgets to Spanish-language TV.<sup>40</sup> Marketing that recognizes the importance of Hispanic consumers is laudable, but advertising for sugar-sweetened drinks targeted to Hispanic parents raises public health concerns due to higher rates of overweight and obesity among Hispanic children and may contribute to health disparities affecting Latino communities.<sup>41</sup>

The messages used to advertise drinks targeted to toddlers also raises concerns. As found with infant formula, messages in Enfagrow, Nido, and Pediasure ads promoted the products as beneficial for children’s development, especially growth and mental performance. For example, one Enfagrow ad states, “85% of brain growth happens in the first three years, which is why it’s important that children get DHA. Enfagrow Toddler has DHA, which toddlers may not be getting in their diets.” Pediasure claims to be “clinically proven nutrition to help kids grow” with the footnote “studied with children at risk for malnutrition.”<sup>42</sup> These brands also promoted their products as a solution for picky eating, which is a common reaction from toddlers when introduced to new foods,<sup>43</sup> capitalizing on parents’ fears that their young children do not get adequate nutrition. Despite the AAP’s recommendation that toddlers do not need to drink toddler milk, Enfagrow claims to be the “#1 brand recommended by pediatricians” with the footnote, “among products labeled for toddlers under 2.” Pediasure also claims to be the “#1 brand recommended by pediatricians.” Finally, product packaging, design, and branding for toddler milk products are difficult to distinguish from infant formula

products offered by the same manufacturers. This finding supports concerns raised by the WHO and others that caregivers may not understand the difference and substitute less expensive toddler milk for infant formula.<sup>44,45</sup> The introduction of “transition” formula for children from 9 to 18 months (e.g., Enfagrow Toddler Transitions) further obfuscates the difference. This practice also may lead parents to infer that toddler milk is the appropriate next stage of drink to serve their child who is too old for infant formula.

## Recommendations

In summary, the nutritional quality of all baby and toddler foods in this analysis, with the exception of snacks, was very high. Beech-Nut and Gerber baby food also marketed their products in a way that supported most expert recommendations on best practices for feeding infants. In addition, traditional advertising for infant formula declined substantially from 2011 to 2015.

However, we also found many examples of marketing messages that imply that commercially prepared baby and toddler food, infant formula, toddler milk, and nutritional supplements are nutritionally superior and/or provide developmental advantages compared with breastmilk or whole milk and table food for toddlers. Common marketing themes also present commercial products as a “solution” to normal stages of children’s development, such as crying and not sleeping through the night for babies or picky eating for toddlers. Furthermore, this marketing often promotes products that experts do not recommend serving to young children – including sugar-sweetened snacks, toddler milk, and energy-dense nutritional supplements – and implies that these products are beneficial for most young children. Many do not support the development of dietary behaviors toward foods, the family’s diet, and healthy eating of nutritious foods, particularly fruits and vegetables.

Additional research is required to understand the impact of this marketing on parents’ purchases and their attitudes about serving commercially prepared products to their children. However, policy makers, health professionals, and the public health community have the opportunity to take action to address the misinformation that parents receive through marketing for baby and toddler food, infant formula, and toddler milk and nutritional supplements.

## Further research

As a first step, studies are needed to understand how many parents serve the marketed products to their young children. The U.S. National Centers for Chronic Disease Prevention and Health Promotion (CDC) tracks breastfeeding rates for children 12 months and younger.<sup>46</sup> Similar monitoring of breastfeeding and formula use among toddlers would be beneficial. Studies should also examine infant and toddler consumption of commercially prepared baby food products. One market research study suggests that many parents

purchase these products, with almost two-thirds of mothers with children younger than age 2 serving store-bought baby snacks (e.g., puffs, yogurt drops) and/or baby treats (e.g., cookies).<sup>47</sup> This study also found that 44% of parents with children younger than age 1 use formula, as well as an estimated 24% of mothers with children between ages 1 and 2,<sup>48</sup> and that 16% of parents with children younger than age 2 serve them nutritional shakes (e.g., Pediasure). Studies should also examine whether parents serve these products only occasionally or whether they constitute a substantial portion of young children’s diets.

It is also important to conduct research to understand why parents serve these products and whether the marketing affects their understanding and attitudes about feeding practices that contribute to their children’s good health and nutrition. Commercially prepared baby food products are generally more expensive than products recommended by pediatricians and nutritionists, including breastmilk, whole milk, fruits and vegetables, and family meals prepared for babies and toddlers. Therefore, it is important to understand whether parents purchase commercially prepared products primarily because of time and convenience, or whether they mistakenly believe the products are better for their young children. In its proposed guidance on structure/function claims on infant formula labels, the FDA also calls for consumer testing to “determine consumer understanding of each claim in context.”<sup>49</sup> Research to understand how parents interpret all the messages presented in marketing for baby and toddler food, toddler milk, and nutritional supplements, in addition to infant formula, will be important. Furthermore, this research would help determine whether marketing messages lead parents to believe that nutritionally poor products (e.g., baby and toddler snacks) and those that are not the best options for toddlers (e.g., toddler milk, pureed food in pouches) may actually benefit their children’s mental and physical development and/or help teach them good eating habits.

Additional research would also help inform the expansion of the Dietary Guidelines for Americans to include infants and toddlers to age 2 beginning with the 2020-2025 edition, as mandated by Congress in the 2014 Farm Bill.<sup>50</sup> For the first time, the Dietary Guidelines will provide an authoritative source to support or discourage the provision of specific food products to children under age 2, as well as recommend feeding practices that foster healthy food preferences and eating habits. Research into healthy nutrition and development of healthy food and dietary behavior messages is especially timely given this new United States Department of Agriculture (USDA) mandate.

## Policy actions

An estimated 135 countries have adopted at least some key provisions of the WHO International Code of Marketing for Breast-Milk Substitutes to address “aggressive and inappropriate” marketing of infant formula and complementary foods, and 39 countries have passed legislation to adopt most

of the key provisions.<sup>51</sup> The United States Congress could follow their lead and pass laws consistent with the WHO guidance. Provisions in the original WHO Code<sup>52</sup> and the recent WHO Guidance<sup>53</sup> would curtail all marketing – including nutrition-related, child-development, and other marketing messages on product packages; marketing online and in social media; and expert guidance and loyalty programs offered by infant formula and baby food companies – for infant formula, toddler milk, and baby food for children under 6 months.

Recently, the U.S. Food and Drug Administration (FDA) has taken an important first step to ensure that all claims on baby and toddler food labeling are truthful and not misleading, issuing proposed guidance that structure/function claims on infant formula labels must be supported by high quality scientific evidence.<sup>54</sup> The FDA could also regulate structure/function claims on toddler milk products, as well as other types of claims that serve to discourage breastfeeding or mislead parents to believe that these products benefit their babies or toddlers in some way, including direct comparisons of infant formula to breastmilk. The U.S. Federal Trade Commission (FTC) should similarly regulate claims made in advertising. In addition, state attorneys general can take action to stop manufacturers from making misleading claims on product packaging and in their marketing messages.

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) can also help address marketing practices that discourage breastfeeding and other recommended feeding practices for babies and toddlers through requirements for participating suppliers. WIC provides vouchers for nutritious foods to over 8 million low-income women, infants, and children annually,<sup>55</sup> and the program offers peer breastfeeding support, which has been effective at increasing breastfeeding rates among WIC participants.<sup>56</sup> WIC encourages breastfeeding as the best source of nutrition for infants, but also offers vouchers for WIC-approved formula and complementary foods to participating women. In federal fiscal year 2010, the program spent \$927 million on formula and \$328 million on infant fruits and vegetables and cereal.<sup>57</sup> State WIC programs use a competitive bidding process to select the formula and baby food providers for WIC participants for the state. WIC also allows states to include “toddler” formula (including Enfagrow and Similac toddler milk) in their WIC packages,<sup>58</sup> although research is needed to understand the extent and requirements for providing formula for children older than 12 months in individual state packages. The USDA could use WIC’s considerable purchasing power and leverage to encourage alternatives to infant formula provision through the retail grocery system. Current law already allows states the option to bulk-purchase formula from a manufacturer, create labels free from unnecessary marketing messages (similar to tombstone ads on tobacco products), and directly distribute the product to WIC families through a variety of shipping and delivery channels. This alternative should be tested.

## Providing expert guidance and advocacy to empower parents of babies and toddlers

Policymakers, health professionals, and public health advocates can also do more to provide guidance to caregivers to help encourage the development of healthy eating habits and to counteract misinformation that may be communicated through marketing of baby and toddler products. Importantly, Healthy Eating Research (HER), a national program of the Robert Wood Johnson Foundation (RWJF), convened an expert panel to develop evidence-based recommendations for promoting healthy nutrition and feeding patterns for infants and toddlers from birth to 24 months. The panel has identified best nutrition and feeding practices, with an emphasis on healthy eating, dietary quality, portion sizes, and mealtime environments. These best practice recommendations are expected to be released in early 2017. The expansion of the Dietary Guidelines for Americans to include infants and toddlers to age 2 beginning with the 2020-2025 edition will also be an important step forward.<sup>59</sup> Government-sponsored child nutrition education programs through WIC, SNAP, CACFP, and Head Start could also strengthen their efforts to address the messages that parents receive through marketing for baby and infant food and drinks that may not conform with expert recommendations. In particular, WIC nutrition counselors meet individually with low-income mothers to counsel them on feeding their young children. The USDA should ensure that the information provided by counselors reflects the current science and expert recommendations on what and how to feed young children.

Pediatricians and other health providers can also ask caregivers about their provision of marketed products, such as toddler milk, baby and toddler snacks, nutritional supplements, and pureed food in pouches, in addition to discussions about breastfeeding and infant formula. In most cases, pediatricians will be able to counsel parents that these products are unnecessary for their child and not worth the added expense. Healthcare providers serving Hispanic communities in particular should be aware of the extensive marketing for toddler milk and nutritional supplement brands aimed at Latina mothers. Advice from trusted health professionals can help correct misperceptions that these products benefit their children’s growth and brain development, or that they are necessary to compensate for picky eating. Healthcare professionals can also file complaints through the Better Business Bureau’s National Advertising Division (NAD) system against infant formula and other manufacturers for misleading information in advertising,<sup>60</sup> including the lack of reliable scientific evidence to support claims about benefits for their children from consuming these products.

Advocates for children’s health can also help raise awareness about the marketing practices used to encourage purchases of baby and toddler food and drinks, including challenging the



nutrition advice provided by companies' paid experts, utilizing social media and parent blogs to help counteract these messages, and calling for consumer protection actions to address misleading information conveyed through marketing. Advocacy efforts aimed at counteracting this marketing and communicating best feeding practices for toddlers and babies upon introduction to complementary foods would help establish healthy eating practices for the next generation.

### Food manufacturers

Participating members of the International Association of Infant Formula Manufacturers (IFM) and other manufacturers could also agree to abide by the WHO provisions on marketing of breastmilk substitutes in the United States, as they do in countries where many of their U.S. marketing practices are illegal. At a minimum, they should discontinue practices that position infant formula as equivalent to breastmilk and messages that may lead caregivers to infer that formula might provide advantages over breastmilk. Companies should also discontinue disproportionate marketing of products that health professionals have determined are not necessary for most young children, as well as nutritionally poor products

and those that do not promote development of healthy eating habits. Furthermore, manufacturers should discontinue the other potentially misleading claims and practices identified in this report. To accomplish these objectives, the food industry could expand the Children's Food and Beverage Advertising Initiative (CFBAI) self-regulatory program for improving food advertising to children<sup>61</sup> to incorporate marketing of all products intended for children's consumption, including baby and toddler food and drinks.

Marketing of food and drinks intended for young children should help parents ensure that their children develop lifelong healthy food preferences and eating habits. However, many of the marketing practices documented in this report encourage parents to feed their young children "formulas," often positioning them as comparable or better than breastmilk or whole milk (for toddlers). Others imply that commercial baby and toddler foods – including nutritionally poor snack foods – may have benefits over foods that parents prepare themselves, such as mashed or cut-up whole fruits and vegetables or age-appropriate foods that the rest of the family are eating. This marketing undermines public health efforts to create a culture of health for our youngest and most vulnerable children.

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# Nutritional content of baby food

## Ranking by median NPI score then by sugar grams-per-serving

Includes median calories, fat, saturated fat, sodium, fiber, and sugar per serving by brand, variety, sub-category, and packaging type\*

Best

Rank	Company	Brand	Variety	Sub-category	# of products	NPI score		Serving size (g)	Calories (kcal)	Sat fat (g)	Sodium (mg)	Fiber (g)	Sugar (g)	Added sweeteners	
						Median	Range							% of products	
1	Hero AG	Beech-Nut	Stage 2, Organic	Pureed single food group	13	82	74-92	60	35	0	0.0	1.0	6.0	0%	
2	Campbell Soup Company	Plum Organics	Stage 1, Just Veggies/Fruits	Pureed single food group	6	82	78-90	92	53	0	2.5	2.0	6.5	0%	
3	Hero AG	Beech-Nut	Stage 3, Naturals	Textured mixed foods	8	82	74-86	120	75	0	12.5	3.0	8.5	0%	
4	Hero AG	Beech-Nut	Stage 2, Naturals	Pureed single food group	27	80	74-90	60	35	0	0.0	1.0	6.0	0%	
5	Hero AG	Beech-Nut	Stage 1, Naturals	Pureed single food group	8	80	68-88	60	35	0	0.0	2.0	6.5	0%	
6	Campbell Soup Company	Plum Organics	Stage 2, Second Blends	Pureed single food group	8	80	76-86	113	70	0	2.5	3.0	10.0	0%	
7	Hero AG	Beech-Nut	Stage 1, Organic	Pureed single food group	6	80	68-86	60	35	0	0.0	2.0	6.0	0%	
8	Hero AG	Beech-Nut	Stage 2, Veggies/Fruities on-the-go	Pureed single food group	16	80	74-84	99	60	0	5.0	2.0	10.5	0%	
8 (tie)	Campbell Soup Company	Plum Organics	Stage 2, Second Blends	Pureed mixed foods	14	80	74-84	99	60	0	5.0	2.0	4.5	0%	
10	Nurture Inc.	Happy Baby	Stage 2, Clearly Crafted	Pureed single food group	8	80	72-82	113	70	0	10.0	2.0	9.0	0%	
11	Hero AG	Beech-Nut	Stage 1, Classics	Pureed single food group	3	80	78-80	71	60	0	40.0	0.0	0.0	0%	
12	Nurture Inc.	Happy Baby	Stage 1, Starting Solids	Pureed single food group	6	79	72-86	99	65	0	5.0	2.0	9.0	0%	
13	Hero AG	Beech-Nut	Stage 3, Classics	Textured mixed foods	6	79	70-86	170	120	0	15.0	3.0	11.5	0%	
14	Campbell Soup Company	Plum Organics	Stage 2, Grow Well	Pureed mixed foods	4	79	76-82	99	90	0	7.5	2.5	12.0	0%	
15	Nestle S.A.	Gerber	1st Foods, Organic	Pureed single food group	6	79	74-82	90	48	0	7.5	1.0	8.0	0%	
16	Nestle S.A.	Gerber	1st Foods	Pureed single food group	10	79	70-82	71	50	0	5.0	1.0	7.0	0%	
17	Hero AG	Beech-Nut	Stage 3, Organic	Textured mixed foods	8	78	68-90	120	100	0	10.0	2.0	4.5	0%	
18	Hero AG	Beech-Nut	Stage 2, Classics	Pureed single food group	23	78	68-86	113	70	0	5.0	2.0	11.0	0%	
19	Nestle S.A.	Gerber	2nd Foods, Organic	Pureed single food group	20	78	68-82	99	60	0	12.5	1.0	10.0	0%	
20	Campbell Soup Company	Plum Organics	Stage 3, Hello Meals	Textured mixed foods	4	78	76-80	96	60	0	5.0	2.0	1.0	0%	
21	Nurture Inc.	Happy Baby	Stage 2, Clearly Crafted	Pureed mixed foods	2	78	78-78	113	90	0	10.0	2.0	12.5	0%	
21 (tie)	Campbell Soup Company	Plum Organics	Stage 3, Meals	Pureed mixed foods	3	78	78-78	113	80	0	150.0	2.0	3.0	0%	
23	Nurture Inc.	Happy Baby	Stage 3, Hearty Meals	Textured mixed foods	6	77	74-80	113	75	0	30.0	1.5	3.0	0%	
24	Nestle S.A.	Gerber	2nd Foods, Organic	Pureed single food group	33	76	68-84	113	70	0	5.0	1.0	12.0	0%	
25	Hero AG	Beech-Nut	Stage 2, Classics	Pureed mixed foods	7	76	70-82	113	70	0	25.0	1.0	6.0	0%	

continued

Nutritional content of baby food cont'd

Rank	Company	Brand	Variety	Sub-category	# of products	NPI score		Serving size (g)	Calories (kcal)	Sat fat (g)	Sodium (mg)	Fiber (g)	Added sweeteners	
						Median	Range						Sugar (g)	% of products
26	Nurture Inc.	Happy Baby	Stage 2, Simple Combos	Pureed single food group	10	76	74-80	113	80	0	10.0	2.0	12.0	0%
27	Campbell Soup Company	Plum Organics	Stage 1, Hello Morning	Pureed mixed foods	2	76	74-78	99	65	0	0.0	2.5	8.0	0%
28	Nestle S.A.	Gerber	2nd Foods	Pureed mixed foods	15	76	70-78	113	80	0	20.0	1.0	9.0	0%
29	Nestle S.A.	Gerber	3rd Foods, Organic	Pureed mixed foods	4	76	66-76	120	80	0	25.0	1.0	15.5	0%
30	Nurture Inc.	Happy Baby	Stage 2, Homestyle Meals	Pureed mixed foods	6	75	70-82	99	70	0	5.0	1.5	7.5	0%
31	Nurture Inc.	Happy Baby	Stage 1, Clearly Crafted	Pureed single food group	2	75	72-78	99	75	0	5.0	1.0	10.5	0%
32	Nestle S.A.	Gerber	3rd Foods, Lil' Bits	Textured mixed foods	19	74	68-84	142	120	0	50.0	2.0	6.0	0%
33	Hero AG	Beech-Nut	Stage 2, Organic	Pureed mixed foods	3	74	70-80	60	35	0	0.0	1.0	5.0	0%
34	Nestle S.A.	Gerber	2nd Foods, Organic	Pureed mixed foods	8	74	68-78	113	80	0	15.0	1.0	6.0	0%
35	Nestle S.A.	Gerber	2nd Foods, Organic	Pureed single food group	4	73	68-82	113	65	0	7.5	1.5	11.0	0%
36	Nestle S.A.	Gerber	2nd Foods, Organic	Pureed mixed foods	10	73	70-78	99	80	0	5.0	1.0	9.5	0%
37	Nestle S.A.	Gerber	3rd Foods, Organic	Pureed single food group	3	72	70-76	120	80	0	15.0	1.0	15.0	0%
38	Hero AG	Beech-Nut	Stage 2, Naturals	Pureed mixed foods	1	72	72-72	60	35	0	0.0	1.0	5.0	0%
38 (tie)	Nurture Inc.	Happy Baby	Stage 2, Simple Combos	Pureed mixed foods	1	72	72-72	99	70	0	10.0	1.0	10.0	0%
40	Nurture Inc.	Happy Baby	Superfood Munchies	Grain-based snacks	2	68	68-68	7	30	0	10.0	0.0	0.0	0%
41	Nurture Inc.	Happy Baby	Gentle Teethers	Grain-based snacks	2	56	56-56	8	30	0	10.0	0.0	0.9	100%
41 (tie)	Nurture Inc.	Happy Baby	Superfood Puffs	Grain-based snacks	6	56	56-56	7	25	0	0.0	0.0	1.0	0%
41 (tie)	Campbell Soup Company	Plum Organics	Super Puffs	Grain-based snacks	4	56	56-56	7	25	0	0.0	0.0	1.0	100%
44	Nurture Inc.	Happy Baby	Rice Cakes	Grain-based snacks	3	54	54-54	6	25	0	0.0	0.0	1.0	0%
45	Campbell Soup Company	Plum Organics	Little Yums	Grain-based snacks	3	50	50-54	5	20	0	5.0	0.0	0.9	100%
46	Nurture Inc.	Happy Baby	Coconut Creamies	Fruit-based snacks	3	44	40-44	7	30	0	10.0	0.0	4.0	0%
47	Nurture Inc.	Happy Baby	Yummy Yogis	Fruit-based snacks	5	36	34-36	7	30	0	15.0	0.0	4.0	100%

Worst

\*Includes all baby food products from companies with \$100,000 or more in total advertising spending in 2015. Products within varieties are combined by sub-category and packaging type. Source: Rudd Center nutrition analysis (August 2016)

# Nutritional content of toddler food

## Ranking by median NPI score then by sugar grams-per-serving

Includes median calories, fat, saturated fat, sodium, fiber, and sugar per serving by brand, variety, sub-category, and packaging type\*

Best

Rank	Company	Brand	Variety	Sub-category	# of products	NPI score		Serving size (g)	Calories (kcal)	Sat fat (g)	Sodium (mg)	Fiber (g)	Sugar (g)	Added sweeteners	
						Median	Range							% of products	
1	Campbell Soup Company	Plum Organics	Super Smoothie	Pureed mixed foods	2	85	84-86	113	75	0.0	12.5	3.5	7.0	0%	
2	Campbell Soup Company	Plum Organics	Mighty 4	Pureed mixed foods	7	82	80-86	113	80	0.0	25.0	2.0	9.0	0%	
3	Nurture Inc.	Happy Tot	Stage 4, Fiber & Protein	Pureed mixed foods	4	82	82-84	113	70	0.0	2.5	3.0	11.0	0%	
4	Campbell Soup Company	Plum Organics	Mighty 4, Mighty Veggie	Pureed mixed foods	3	82	80-82	113	70	0.0	35.0	3.0	10.0	0%	
5	Nurture Inc.	Happy Tot	Stage 4, Super Foods	Pureed mixed foods	10	80	74-86	120	90	0.0	2.5	3.0	14.0	0%	
6	Nurture Inc.	Happy Tot	Love My Veggies	Pureed single food group	3	80	78-82	120	60	0.0	35.0	2.0	10.0	0%	
7	Campbell Soup Company	Plum Organics	Fruit & Grain Mish Mash	Pureed mixed foods	2	80	80-80	90	70	0.0	0.0	1.5	11.0	0%	
8	Nestle S.A.	Gerber	Veggie Pick-Ups/ Fruit Pick-Ups	Bitesize foods and meals	4	78	76-82	100	40	0.0	22.5	1.0	7.5	0%	
9	Nurture Inc.	Happy Tot	Plus	Pureed mixed foods	3	78	74-80	120	70	0.0	15.0	3.0	11.0	0%	
10	Nestle S.A.	Gerber Graduates	Grabbers	Pureed single food group	13	76	70-80	120	70	0.0	5.0	1.0	14.0	0%	
11	Nurture Inc.	Happy Tot	Super Morning	Pureed mixed foods	2	76	74-78	113	80	0.0	7.5	3.0	10.0	0%	
12	Campbell Soup Company	Plum Organics	Mighty 4, Mighty Mealtime	Bitesize foods and meals	4	76	74-76	152	120	0.5	52.5	3.0	2.5	0%	
13	Nurture Inc.	Happy Tot	Greek Yogurt	Pureed mixed foods	3	74	70-76	120	130	1.0	25.0	2.0	21.0	0%	
14	Nestle S.A.	Gerber	Grabbers	Pureed mixed foods	2	74	74-74	120	85	0.0	15.0	2.0	10.0	0%	
15	Nestle S.A.	Gerber	Lil' Entrees	Bitesize foods and meals	9	72	66-76	152	120	1.5	300.0	2.0	4.0	78%	
16	Nestle S.A.	Gerber Graduates	Grabbers	Pureed mixed foods	5	68	66-76	120	100	0.0	30.0	1.0	16.0	80%	
17	Nestle S.A.	Gerber	Pasta Pick-Ups	Bitesize foods and meals	7	68	66-72	85	80	0.5	170.0	1.0	1.0	100%	
18	Nestle S.A.	Gerber Graduates	Lil' Meals/Lil' Pastas	Bitesize foods and meals	8	68	66-70	170	125	1.3	315.0	1.0	3.0	25%	
19	Nestle S.A.	Gerber Graduates	Pudding Grabbers	Pureed mixed foods	3	68	66-68	99	100	0.5	35.0	0.0	11.0	100%	
20	Nurture Inc.	Happy Tot	Love My Veggies Freeze-Dried	Fruit-based snacks	2	67	56-78	7	28	0.0	10.0	1.0	3.0	0%	
21	Nestle S.A.	Gerber	Yogurt Blends	Pureed mixed foods	2	66	66-66	99	110	0.0	50.0	0.0	12.0	100%	
22	Nurture Inc.	Happy Tot	Fiber & Protein Bars	Grain-based snacks	2	64	60-68	25	90	0.0	2.5	4.0	7.5	100%	
23	Nurture Inc.	Happy Tot	Happy Munchies	Fruit-based snacks	1	62	62-62	7	25	0.0	0.0	1.0	4.0	0%	
23 (tie)	Campbell Soup Company	Plum Organics	Teensy Fruits	Fruit-based snacks	2	62	62-62	10	35	0.0	0.0	1.0	8.0	0%	
25	Nestle S.A.	Gerber	Lil' Beans	Grain-based snacks	2	60	60-60	15	70	0.0	70.0	1.0	0.9	100%	
26	Nestle S.A.	Gerber Graduates	Bitty Bites	Grain-based snacks	2	60	60-60	15	50	0.0	35.0	0.0	2.0	100%	

continued



Nutritional content of toddler foods cont'd

Rank	Company	Brand	Variety	Sub-category	# of products	NPI score		Serving size (g)	Calories	Sat fat (g)	Sodium (mg)	Fiber (g)	Added sweeteners	
						Median	Range						Sugar (g)	% of products
27	Nestle S.A.	Gerber Graduates	Fruit & Veggie Melts	Fruit-based snacks	2	58	58-58	7	25	0.0	15.0	0.0	4.0	0%
28	Campbell Soup Company	Plum Organics	Mighty 4, Bar	Grain-based snacks	3	58	54-58	19	70	0.0	50.0	1.0	5.0	100%
29	Nestle S.A.	Gerber	Puffs, Organic	Grain-based snacks	2	56	56-56	7	25	0.0	0.0	0.0	1.0	100%
29 (tie)	Nestle S.A.	Gerber Graduates	Puffs	Grain-based snacks	8	56	56-56	7	25	0.0	0.0	0.0	1.0	100%
31	Nestle S.A.	Gerber Graduates	Lil' Whoos/Lil' Twists	Grain-based snacks	4	53	48-56	15	60	0.3	97.5	0.9	1.0	50%
32	Nestle S.A.	Gerber Graduates	Cereal Bars	Grain-based snacks	2	50	50-50	19	70	0.0	42.5	0.9	8.0	100%
33	Nestle S.A.	Gerber Graduates	Other snack varieties	Grain-based snacks	4	47	42-52	7	28	0.0	17.5	0.0	1.5	100%
34	Nestle S.A.	Gerber Graduates	Cookies	Grain-based snacks	2	47	46-48	7	28	0.0	15.0	0.0	2.0	100%
35	Nestle S.A.	Gerber Graduates	Lil' Crunchies	Grain-based snacks	6	44	44-54	7	35	0.0	50.0	0.0	0.0	67%
36	Campbell Soup Company	Plum Organics	Mighty 4, Mighty Sticks	Grain-based snacks	2	44	40-48	10	40	0.5	37.5	0.5	2.0	100%
37	Nestle S.A.	Gerber	Yogurt Melts, Organic	Fruit-based snacks	2	34	34-34	7	30	0.0	20.0	0.0	4.0	100%
37 (tie)	Nestle S.A.	Gerber Graduates	Yogurt Melts	Fruit-based snacks	4	34	34-34	7	30	0.0	20.0	0.0	4.0	100%

Worst

\*Includes all toddler food products from companies with \$100,000 or more in total advertising spending in 2015. Products within varieties are combined by sub-category and packaging type. Source: Rudd Center nutrition analysis (August 2016)

# Marketing messages on product packages

## Ranking by average number of total nutrition-related messages per package, then by child development messages\*

Includes the percent of packages for each brand featuring each type of message and the average number of messages on packages with any message

Most



Least

Rank	Company	Brand	Category	Nutrition-related messages								Child development messages		
				Total # of packages	Ingredients		Vitamins and nutrients		Absence		Total nutrition-related messages		% of packages with messages	Avg # per package
					% of packages with messages	Avg# per package	% of packages with messages	Avg # per package	% of packages with messages	Avg # per package	% of packages with messages	Avg # per package		
1	Campbell Soup Company	Plum Organics	Toddler food	10	100%	2.0	100%	3.8	100%	2.4	100%	8.2	60%	1.0
2	Nurture Inc.	Happy Tot	Toddler food	10	100%	2.4	100%	2.9	100%	2.2	100%	7.5	100%	2.0
3	Campbell Soup Company	Plum Organics	Baby food	17	100%	2.2	100%	2.2	100%	3.1	100%	7.5	100%	1.9
4	Nurture Inc.	Happy Baby	Baby food	20	100%	3.0	100%	1.7	100%	2.6	100%	7.3	60%	2.1
5	Nestle S.A.	Gerber	Baby food	43	100%	2.1	58%	1.4	100%	4.1	100%	7.1	23%	1.0
6	Nestle S.A.	Gerber Good Start	Infant formula	5	40%	1.0	100%	5.4	100%	1.0	100%	6.8	100%	2.4
7	Abbott	Similac	Infant formula	4	75%	1.3	100%	4.3	100%	1.3	100%	6.5	100%	4.3
8	Abbott	Pediasure Sidekicks	Nutritional supplement	3	100%	1.0	100%	4.0	100%	1.0	100%	6.0	0%	0.0
9	Nestle S.A.	Gerber Graduates	Toddler food	32	100%	1.7	100%	1.8	97%	2.3	100%	5.8	75%	2.3
10	Abbott	Pediasure	Nutritional supplement	2	100%	1.0	100%	3.5	100%	1.0	100%	5.5	100%	2.5
11	Mead Johnson Nutrition	Enfamil	Infant formula	8	38%	1.0	100%	4.5	25%	1.0	100%	5.1	88%	2.9
12	Nestle S.A.	Gerber Good Start	Toddler milk	1	0%	0.0	100%	4.0	100%	1.0	100%	5.0	100%	2.0
13	Nestle S.A.	Gerber	Toddler food	13	54%	2.0	100%	1.8	92%	1.8	100%	4.6	67%	2.0
14	Nestle S.A.	Nido	Toddler milk	1	0%	0.0	100%	4.0	0%	0.0	100%	4.0	100%	2.0
15	Mead Johnson Nutrition	Enfagrow	Toddler milk	3	67%	1.5	67%	3.5	33%	1.0	100%	3.7	100%	3.0
16	Hero AG	Beech-Nut	Baby food	56	86%	1.2	13%	1.0	71%	1.5	86%	2.5	0%	0.0

\*Includes all baby and toddler food and drink brands from companies with \$100,000 or more in total advertising spending in 2015. Source: Rudd Center on-package marketing analysis (2016)

# Advertising spending

## Ranking by total advertising spending in 2015\*

Includes total spending in all measured media\*\*

Most  
↓  
Least

Rank	Company	Brand	Category	Total advertising spending (\$000)			2015 advertising spending by medium (\$000)				
				2011	2015	Change	TV	TV% of total	Internet	Magazines	FSI coupon
1	Abbott	Pediasure	Nutritional supplement	\$11,219.5	\$20,711.8	85%	\$20,706.3	100%	\$0.0	\$0.0	\$5.4
2	Nestle S.A.	Gerber	Baby food	\$11,864.7	\$15,832.7	33%	\$9,528.4	60%	\$55.0	\$6,020.7	\$228.7
3	Nestle S.A.	Gerber Graduates	Toddler food	\$8,391.0	\$12,959.9	54%	\$7,770.3	60%	\$0.0	\$5,189.6	\$0.0
4	Mead Johnson Nutrition	Enfagrow	Toddler milk	\$6,254.1	\$12,818.5	105%	\$12,792.0	100%	\$1.7	\$0.0	\$24.2
5	Nestle S.A.	Gerber Good Start	Infant formula	\$7,523.3	\$5,575.0	-26%	\$1,468.3	26%	\$6.7	\$4,019.0	\$81.0
6	Nestle S.A.	Nido	Toddler milk	\$3,418.3	\$4,005.2	17%	\$3,992.8	100%	\$12.4	\$0.0	\$0.0
7	Abbott	Similac	Infant formula	\$10,782.3	\$3,356.8	-69%	\$0.0	0%	\$1,007.2	\$2,349.6	\$0.0
8	Mead Johnson Nutrition	Enfamil	Infant formula	\$10,787.1	\$814.5	-92%	\$0.0	0%	\$2.4	\$582.6	\$229.5
9	Campbell Soup Company	Plum Organics	Baby food	\$117.2	\$419.4	258%	\$0.0	0%	\$0.0	\$419.4	\$0.0
10	Hero AG	Beech-Nut	Baby food	\$1,809.3	\$286.0	-84%	\$4.9	2%	\$5.5	\$0.0	\$269.0
11	Mead Johnson Nutrition	Enfagrow	Toddler food	\$539.9	\$132.9	-75%	\$103.0	78%	\$0.0	\$0.0	\$29.5
12	Nurture Inc.	Happy Tot	Toddler food	\$0.0	\$91.8	new	\$0.0	0%	\$91.8	\$0.0	\$0.0
13	Nurture Inc.	Happy Baby	Baby food	\$0.0	\$63.3	new	\$0.0	0%	\$32.7	\$0.0	\$30.6
14	Nurture Inc.	Happy Family	Baby food	\$0.0	\$29.6	new	\$0.0	0%	\$29.6	\$0.0	\$0.0
15	The Hain Celestial Group Inc.	Ella's Kitchen	Baby food	\$169.7	\$4.2	-98%	\$0.0	0%	\$4.2	\$0.0	\$0.0
	Abbott	Pediasure Sidekicks	Nutritional supplement	\$9,874.2	\$0.0	-100%					
	The Hain Celestial Group Inc.	Earth's Best Organic	Baby food	\$773.4	\$0.0	-100%					
	Walmart	Parent's Choice	Infant formula	\$989.9	\$0.0	-100%					

## COMPANY RANKINGS

Most  
↓  
Least

Rank	Company	Total advertising spending (\$000)			2015 advertising spending by medium (\$000)				
		2011	2015	Change	TV	TV% of total	Internet	Magazines	FSI coupon
1	Nestle S.A.	\$31,196.8	\$38,372.8	23%	\$22,759.9	59%	\$74.1	\$15,229.3	\$309.7
2	Abbott	\$31,901.2	\$24,068.7	-25%	\$20,706.3	86%	\$1,007.2	\$2,349.6	\$5.4
3	Mead Johnson Nutrition	\$17,581.1	\$13,765.8	-22%	\$12,895.0	94%	\$4.1	\$582.6	\$283.2
4	Campbell Soup Company	\$117.2	\$419.4	258%	\$0.0	0%	\$0.0	\$419.4	\$0.0
5	Hero AG	\$1,809.3	\$286.0	-84%	\$4.9	2%	\$5.5	\$0.0	\$269.0
6	Nurture Inc.	\$0.0	\$184.7	new	\$0.0	0%	\$154.1	\$0.0	\$30.6
7	The Hain Celestial Group Inc.	\$943.2	\$4.2	-100%	\$0.0	0%	\$4.2	\$0.0	\$0.0
	Walmart	\$989.9	\$0.0	-100%					

\*Includes all brands from companies with \$100,000 or more in total advertising spending in 2011 or 2015.

\*\*Includes spending in 17 different media including television, magazine, internet, radio, newspaper, freestanding insert (FSI) coupons, and outdoor advertising.

Source: Rudd Center analysis of Nielsen data (2016)

# Television advertising exposure for women

## Ranking by ads viewed by women (18-49 years) in 2015

Includes average number of ads viewed by women on national (network, cable, and syndicated) and spot TV

Most  
↓  
Least

Rank	Company	Brand	Category	Average # ads viewed					Change 2011 to 2015	Women:men targeted ratio*
				2011	2012	2013	2014	2015		2015
1	Abbott	Pediasure	Nutritional supplement	14.2	18.6	20.1	29.2	25.0	77%	1.64
2	Nestle S.A.	Gerber	Baby food	7.8	5.4	8.0	21.7	15.1	94%	1.99
3	Nestle S.A.	Gerber Graduates	Toddler food	8.9	4.4	8.7	23.2	13.8	55%	2.02
4	Mead Johnson Nutrition	Enfagrow	Toddler milk	0.1	0.0	7.7	13.2	7.1	new	2.12
5	Nestle S.A.	Gerber Good Start	Infant formula	6.1	8.6	5.4	3.2	1.6	-74%	2.02
6	Mead Johnson Nutrition	Enfagrow	Toddler food	0.0	0.0	0.0	0.0	0.1	new	**
	Hero AG	Beech-Nut	Baby food	0.8	0.0	0.0	5.1	0.0	-100%	**
	Abbott	Pediasure Sidekicks	Nutritional supplement	15.2	19.2	20.5	0.0	0.0	-100%	**
	Mead Johnson Nutrition	Enfamil	Infant formula	4.8	6.3	0.2	0.0	0.0	-100%	**

### COMPANY RANKINGS

Most  
↓  
Least

Rank	Company	Average # ads viewed					Change 2011 to 2015	Women:men targeted ratio*
		2011	2012	2013	2014	2015		2015
1	Nestle S.A.	22.8	18.3	22.2	48.1	30.4	33%	2.00
2	Abbott	29.4	37.8	40.5	29.2	25.0	-15%	1.64
3	Mead Johnson Nutrition	4.9	6.3	7.9	13.2	7.2	46%	2.14
4	Hero AG	0.8	0.0	0.0	5.1	0.0	-100%	**

\*Ads viewed by women compared with men  
 \*\*Not advertised on TV in 2015  
 Source: Rudd Center analysis of Nielsen data (2016)



# Company website exposure

## Ranking by average unique adult visitors (18-49) per month in 2015

Includes websites featuring primarily baby food and/or drink brands\*

Most  
↓  
Least

Rank	Company	Website	Brand	Category	Average unique visitors per month				2015 average for all adult visitors (18-49 years)		
					Men	Women	Total	Women:men targeted ratio	Avg visits-per-month	Avg time spent (min)	Avg pages-per-visit
1	Mead Johnson Nutrition	Enfamil.com	Enfamil Enfagrow	Infant formula Toddler milk	22.4	66.6	89.0	2.9	1.2	2.2	3.6
2	Abbott	Similac.com	Similac	Infant formula, toddler milk	19.1	66.0	85.1	3.4	1.5	2.0	4.8
3	Nestle S.A.	Gerber.com	Gerber Gerber Good Start Gerber Graduates	Baby food Infant formula Toddler food	9.9	45.9	55.9	4.5	1.4	1.3	4.4

\*Includes websites with enough adult visitors (18-49 years) for comScore to measure.  
Source: comScore Media Metrix Key Measures Report (18-49 years for January - December 2015)

# Display advertising on third-party websites

## Ranking by average monthly ads viewed

Includes average number of ads viewed by all viewers

Most



Least

Rank	Company	Brand	Category	Advertised varieties	Average # of monthly ads viewed (000)	Ads viewed per viewer per month
1	Abbott	Similac	Infant formula	Advance; Alimentum; Expert Care; For Spit Up; For Supplementing; Sensitive; Total Comfort	16,947.3	3.6
			Toddler milk	Go & Grow		
2	Nestle S.A.	Gerber	Baby food	Gerber 2nd Foods; 3rd Foods; Cereal; Fruit and Grain Organic Pouches	15,698.7	2.8
		Gerber Graduates	Toddler food	Gerber Graduates Grabbers; Lil' Entrees; Lil' Pastas; Puffs; Yogurt Melts		
		Gerber Good Start	Infant formula	Gerber Good Start Gentle; Soothe; Supplementing		
3	Mead Johnson Nutrition	Enfagrow	Toddler milk	Toddler Next Step	10,100.2	2.8
4	Mead Johnson Nutrition	Enfamil	Infant formula	A+; For Supplementing; Gentlease; Infant; Newborn; Nutramigen; Reguline	6,488.6	3.0*
5	Nurture Inc.	Happy Baby	Baby food	Happy Baby Pouches; Puffs	3,770.9	2.5
		Happy Tot	Toddler food	Happy Tot Pouches		
			Toddler milk	Happy Tot Grow & Shine		
6	Abbott	Pediasure	Nutritional supplement	Grow & Gain; Shakes With Fiber	3,474.2	2.7*
7	Campbell Soup Company	Plum Organics	Baby food	Grow Well Pouches; Little Yums; Super Puffs	1,882.4	2.5
			Toddler food	Mighty 4 Bars; Mighty 4 Pouches; Mighty Sticks; Mashups (for kids)		
8	The Hain Celestial Group Inc.	Earth's Best Organics	Baby food	Jars; Pouches	746.6	3.1
			Infant formula			
9	Hero AG	Beech-Nut	Baby food	Just; Naturals; Organics	731.5	2.5
10	Abbott	Pediasure Sidekicks	Nutritional supplement	Sidekicks; Fruit and Veggie Smoothie Mix	453.2	2.9
11	The Hain Celestial Group Inc.	Ella's Kitchen	Baby food	Pouches	444.4	3.5

## COMPANY RANKINGS

Most



Least

Rank	Company	Average # of monthly ads viewed (000)
1	Abbott	20,874.7
2	Mead Johnson Nutrition	16,588.8
3	Nestle S.A.	15,698.7
4	Nurture Inc.	3,770.9
5	Campbell Soup Company	1,882.4
6	The Hain Celestial Group Inc.	1,191.0
7	Hero AG	731.5

\*Estimated, ads viewed per viewer are not reported separately for these brands.  
Source: comScore Ad Metrix Advertiser report (January - December 2015)

# Social media marketing

## Ranking by Facebook likes in 2016

Includes information for brands on social media platforms and mom blogs in 2016

Most



Least

Rank	Company	Account	Brand	Category	Social media platforms					Mom blog posts*
					Facebook likes	Twitter followers	Instagram followers	Pinterest followers	YouTube views (000)	
1	Nestle S.A.	Gerber	Gerber Gerber Graduates Gerber Good Start	Baby food Toddler food Infant formula	6,450,220	**	133,539	5,846	51,263	424
2	Hero AG	Beech-Nut	Beech-Nut	Baby food	470,993	8,834	6,971	1,848	293	52
3	Mead Johnson Nutrition	Enfamil	Enfamil Enfagrow	Infant formula Toddler milk	363,382	2,858	7,712		2,608	187
4	Nurture Inc.	Happy Family	Happy Baby Happy Tot Happy Tot	Baby food Toddler food Toddler milk	326,208	37,532	22,106	6,553	2,325	75
5	Campbell Soup Company	Plum Organics	Plum Organics	Baby food Toddler food	286,006	179,742	19,534	3,223	2,196	199
6	Abbott	Similac	Similac Go & Grow	Infant formula Toddler milk	147,000	**	**	**	17,459	321
7	Abbott	Pediasure US	Pediasure Pediasure Sidekicks	Nutritional supplement Nutritional supplement	73,386	**	**	**	**	117

\*Combined totals for brands within the same company

\*\*No account

Source: Social media marketing analysis (August 2016)

# Advertising on Spanish-language TV

## Ranking by advertising spending on Spanish-language TV in 2015

Includes Spanish-language advertising spending and average number of ads viewed on Spanish-language TV by Hispanic women

Most  
↓  
Least

Rank	Company	Brand	Category	Ad spending on Spanish-language TV (\$000)				Spanish-language % of total TV ad spending			Average # of ads viewed by Hispanic women (18-49 years)			
				2011	2013	2015	Change 2011 to 2015	2011	2013	2015	2011	2013	2015	Change 2011 to 2015
1	Mead Johnson Nutrition	Enfagrow	Toddler milk	\$0.0	\$4,156.0	\$6,893.3	New	0%	35%	54%	0.0	7.4	8.7	New
2	Abbott	Pediasure	Nutritional supplement	\$3,019.1	\$3,001.4	\$5,252.7	74%	29%	18%	25%	7.8	9.4	13.8	3%
3	Nestle S.A.	Nido	Toddler milk	\$3,292.3	\$3,061.1	\$3,990.5	21%	96%	100%	100%	7.3	8.1	9.1	25%
	Abbott	Pediasure Sidekicks	Nutritional supplement	\$0.0	\$2,374.1	\$0.0	**	0%	15%	***	0.0	6.6	0.0	**
	Hero AG	Beech-Nut	Baby food	\$0.0	\$973.6	\$0.0	**	0%	100%	0%	0.0	2.7	0.0	**
	Nestle S.A.	Gerber Graduates	Toddler food	\$4.7	\$0.0	\$0.0	-100%	0%	0%	0%	<0.0	0.0	0.0	**

### COMPANY RANKINGS

Most  
↓  
Least

Rank	Company	Ad spending on Spanish-language TV (\$000)				Spanish-language % of total TV ad spending			Average # of ads viewed by Hispanic women (18-49 years)			
		2011	2013	2015	Change 2011 to 2015	2011	2013	2015	2011	2013	2015	Change 2011 to 2015
1	Mead Johnson Nutrition	\$0.0	\$4,156.0	\$6,893.3	New	0%	36%	54%	0.0	7.4	8.7	New
2	Abbott	\$3,019.1	\$5,001.7	\$5,252.7	74%	16%	17%	25%	7.8	16.0	13.8	76%
3	Nestle S.A.	\$3,297.0	\$3,061.1	\$3,990.5	21%	15%	19%	18%	7.3	6.2	9.1	25%
	Hero AG	\$0.0	\$973.6	\$0.0	**	0%	100%	0%	0.0	2.7	0.0	**

\*\* Brand did not advertise on Spanish-language TV in 2011 or 2015

\*\*\*No TV advertising

Source: Rudd Center analysis of Nielsen data (2016)



# Black-targeted television advertising

## Ranking by advertising spending on black-targeted TV networks in 2015\*

Includes advertising spending on black-targeted TV networks and average number of ads viewed by black women on national (network, cable, and syndicated) TV

Most  
↓  
Least

Rank	Company	Brand	Category	Ad spending on black-targeted TV networks (\$000)			% of total TV ad spending		Average # ads viewed by black women (18-49 years)			Black:white targeted ratio**	
				2011	2015	Change	2011	2015	2011	2015	Change	2011	2015
1	Abbott	Pediasure	Nutritional supplement	\$1,579.6	\$899.8	-43%	15%	4%	26.7	39.5	48%	2.04	1.63
2	Nestle S.A.	Gerber	Baby food	\$22.1	\$177.6	703%	0%	2%	11.2	24.9	122%	1.55	1.72
3	Nestle S.A.	Gerber Good Start	Infant formula	\$14.4	\$78.2	441%	0%	5%	9.0	2.7	-70%	1.56	1.77
4	Nestle S.A.	Gerber Graduates	Toddler food	\$18.2	\$14.5	-20%	0%	0%	13.7	22.7	65%	1.66	1.71
5	Mead Johnson Nutrition	Enfagrow	Toddler milk	\$0.0	\$1.9	new	0%	0%	0.0	9.3	new	***	1.31
	Mead Johnson Nutrition	Enfamil	Infant formula	\$442.6	\$0.0	-100%	12%	***	7.9	0.0	-100%	1.65	***
	Abbott	Pediasure Sidekicks	Nutritional supplement	\$1,423.6	\$0.0	-100%	16%	***	27.4	0.0	-100%	1.92	***

### COMPANY RANKINGS

Most  
↓  
Least

Rank	Company	Ad spending on black-targeted TV networks (\$000)			% of total TV ad spending		Average # ads viewed by black women (18-49 years)			Black:white targeted ratio**	
		2011	2015	Change	2011	2015	2011	2015	Change	2011	2015
1	Abbott	\$3,003.2	\$899.8	-43%	8%	4%	54.0	39.5	-27%	1.98	1.63
2	Nestle S.A.	\$54.7	\$270.3	394%	<0%	1%	33.9	50.4	48%	1.60	1.72
3	Mead Johnson Nutrition	\$442.6	\$1.9	-100%	11%	<0%	7.9	9.4	19%	1.65	1.30

\*Black-targeted TV networks include BET, VH1, TV1, and CNTRC

\*\*Ads viewed by black women compared with white women

\*\*\* No TV advertising

Source: Rudd Center analysis of Nielsen data (2016)

We used a variety of data sources and methods to provide a comprehensive analysis of food and drink products intended for babies and toddlers in the United States. Through publicly available data, we document and evaluate the nutrient content of baby and toddler food, infant formula, toddler milk, and nutritional supplements for children under age 3 and the marketing practices used to promote these products in 2015. We also document changes in advertising compared with 2011 whenever possible.

Our analyses include evaluation of the nutrition content and nutritional quality of baby and toddler food and drink products; marketing messages on product packages and other packaging issues; advertising spending in all media, TV advertising exposure (primarily viewed by women), and messages and other content of magazine and TV advertisements; marketing in digital media, including visits to company websites, display advertising on third-party websites, and marketing in social media on social media platforms, YouTube, and “mom blogs;” and targeted marketing of baby and toddler food and drinks to Hispanic and black parents.

We did not have access to food industry proprietary documents, including privately commissioned market research, media, and marketing plans or other strategic documents. Therefore, we do not attempt to interpret companies’ goals or objectives for their marketing practices. Rather, we provide transparent documentation of: 1) the nutrient content of baby and toddler food and drink marketing to parents; 2) the amount of advertising in traditional and digital media and the messages used to promote these products on packages and in the media, including marketing targeted to Hispanic and black parents; and 3) changes in advertising that occurred from 2011 to 2015.

### Scope of the analysis

We define baby and toddler food and drinks as products that companies indicate are specifically intended for babies or children under age 3. Five product categories are included in the analysis: baby food, toddler food, infant formula, toddler milk, and nutritional supplement. This analysis does not include baby juice, refrigerated yogurt, or cereal products. We also exclude specialty formulas intended for infants or toddlers with specific dietary needs (e.g. pre-term infants or protein allergies) and products designed to be added to other food or drinks (e.g., “mix-ins”).

We used Nielsen data to identify brands from companies with \$100,000 or more in total advertising spending on baby and toddler food and drinks in 2015. These brands are included in the market and nutrition analyses.

We assigned a company, brand, variety, category and sub-category designation to all baby and toddler food and drink products offered by the advertised brands as previously identified.

**Company** refers to the company that owns the brand, as listed on the product package or the official brand website.

**Brand** refers to the main marketing unit for each product. In most cases, we use the brand names designated by Nielsen. However, we designate separate brands for products identified by the company as being made specifically for baby or toddler consumption. For example, Happy Family is separated into Happy Baby and Happy Tot, and Gerber Graduates is a separate brand of toddler food. However, Gerber brand offered varieties for both babies and toddlers, so some of its products are included in the baby food category, while others are in the toddler food category.

In most cases, we also designate **varieties** within brands to identify a subset of products that differ substantially in stage, nutritional quality, packaging type, or other features (e.g., organic vs. natural fruit puree).

- Most baby food brands differentiate their products by **stage**, indicating the appropriate age to serve the products in the product name or on the official brand website (e.g. Beech-Nut Stage 1 for babies at 4 months, Gerber 1st Foods for babies that are “supported sitters”). Each stage is listed as a separate variety.
- Other varieties differ by types of ingredients or other product characteristics. For example, Beech-Nut includes Classics, Naturals, and Organic versions of its baby food. As a result, Beech-Nut varieties include Stage 1, Classics; Stage 1, Naturals; and Stage 1, Organic; as well as Stage 2 and Stage 3 varieties of each.

**Product** refers to each specific flavor or modification of a brand or variety.

The following **categories** are used to describe the baby and toddler food and drinks in our analysis:

- **Baby food** includes food products that companies indicate are specifically intended for infants younger than 12 months.
- **Toddler food** includes food products that companies indicate are intended for children 1 to 3 years old.
- **Infant formula**, referred to by the Federal Food, Drug, and Cosmetic Act (FFDCA) as “a food which purports to be or is represented for special dietary use solely as a food for infants by reason of its simulation of human milk or its suitability as a complete or partial substitute for human milk.”<sup>1</sup>
- **Toddler milk** includes powdered milk drink supplements with nutrients or formulations specifically for toddlers 1 to 3 years old, as indicated on the product package and/or the official brand website.

- **Transition formula** is a sub-category of toddler milk that brands have specified as appropriate for both babies younger than 12 months and for older children, as indicated on the product package and/or the official brand website (e.g., Enfagrow Toddler Transitions for children 9-18 months). These products use the nutrition facts panel for infant formula.
- **Nutritional supplement** includes products identified as containing a "dietary ingredient" that enhances the diet and nutritional value of the products for children under 3 years old and that are consumed alone as a food or meal. We do not include supplements that are added to other foods (e.g., mix-ins).

In some analyses, we also use the following **sub-categories** to describe the type of baby food or toddler food according to the texture and/or ingredients in the product:

- **Pureed single food group** refers to fruits and vegetables ground, pressed, blended, or sieved to the consistency of a soft creamy paste or thick liquid. For this analysis, fruits and vegetables are considered as one food group.
- **Pureed mixed food** refers to fruits, vegetables, and other ingredients ground, pressed, blended, or sieved to the consistency of a soft creamy paste or thick liquid. These products consist mainly of fruits and vegetables plus grain or dairy products.
- **Textured mixed food** refers to food ground, pressed, or blended to the consistency of a thick puree with lumps or small pieces that require very little chewing. These products also consist mainly of fruits and vegetables plus grain or dairy products.
- **Bitesize food and meals** include products with pieces of food small enough to be eaten in one mouthful and that require chewing (e.g., fruit or vegetable cubes, small pasta pieces), typically served as finger foods for babies.
- **Grain-based snacks** include foods with grains as the main ingredients that are typically consumed on their own outside of main meals, require minimal preparation, and are easily portable.
- **Fruit-based snacks** include foods with fruit as the main ingredients that are customarily consumed on their own outside of main meals, require minimal preparation, and are easily portable.

## Nutritional content

We compiled nutrition information for the baby and toddler food and drink brands in our analysis from company or brand websites from May to June 2016. Researchers called companies' customer service lines when nutrition and/or ingredient information was unavailable online. We were able to retrieve nutrition information for all brands analyzed through one of these methods.

The nutrition information for baby and toddler food and drinks is reported per serving size as stated on products' nutrition facts panels. We also identify the specific ingredients listed on the nutrition facts panels. The nutrition for products in each category are evaluated separately due to significant differences in nutritional content by category.

The following measures for nutrition content are reported by brand, as well as by variety when there were notable differences between products within a brand:

- **Nutrition information** refers to serving size (g), calories (kcal), fat (g), saturated fat (g), sugar (g), sodium (mg), fiber (g), and protein (g) per serving as provided on the product nutrition facts panel. Medians and ranges are reported for baby and toddler food and drink brands and varieties.
- **Ingredient information** refers to the presence or absence of specific components of a product as indicated on the ingredient list on the nutrition facts panel.
- **Main ingredient** describes any ingredient listed as one of the first five components of a product as indicated on the ingredient list of the nutrition facts panel.
- Products with **added sweeteners** include products with any type of added sugar listed in the nutrition facts panel, including syrups (agave, corn, cane, brown rice, glucose, and high fructose corn), sugar, dextrose, sucrose, lactose, fructose, and honey. Grams of added sugars are not specified in the nutrition labels, therefore amounts are not reported in this analysis.

## Nutritional Profiling Index (NPI) score

The NPI score is based on the nutrition rating system established by University of Oxford researchers for the Food Standards Agency in the United Kingdom.<sup>2</sup> Their Nutrient Profiling model (NPM) is currently used by the U.K. Office of Communications (OFCOM) to identify nutritious foods that can be advertised to children on TV.<sup>3</sup> Additionally, the model has been approved by Food Standards Australia New Zealand to identify products that are permitted to use health claims in their marketing.<sup>4</sup> The NPM provides one score for a product based on total calories and composition of both nutrients to limit (e.g., saturated fat, sugar, and sodium) and nutrients and food groups to encourage (e.g., fiber, protein, and unprocessed fruit, nut, and vegetable content).

The NPM has several advantages over other nutrient profiling systems. Researchers developed the model without food industry funding; and its development and scoring method is publicly documented and transparent. Further, it has been validated to reflect the judgment of professional nutritionists.<sup>5</sup> The model also produces a continuous score that provides a relative evaluation of products, in contrast to threshold models that simply classify foods as "healthy" or "unhealthy." In addition, the model includes only nutrients that are reasonable and well-justified based on existing nutrition science. In particular, the model does not award points for

micronutrient fortification, thereby not rewarding vitamins and minerals added to inherently unhealthy products.

However, it is difficult to interpret the original scores produced by the NPM as it is reverse scored (i.e., a higher score indicates a product of worse nutritional quality). Scores range from +34 (worst) to -15 (best). Therefore, we created a Nutrient Profiling Index (NPI) score using the following formula:  $\text{NPI score} = (-2) * \text{NPM score} + 70$ . For example, a relatively nutritious food with an NPM score of -3 would receive an NPI score of 76  $(-2 * -3 + 70)$ . This recalculation produces a score from 0 (poorest nutritional quality) to 100 (highest nutritional quality) that is easier to interpret and compare.

We calculated the NPI score for all baby and toddler food, toddler milk, and nutritional supplement products in our analysis. To identify baby and toddler food with a healthy nutrient composition, we used the cut-offs established by OFCOM in the United Kingdom to identify healthy products that can be advertised on children's TV programs or during programs with a disproportionate number of viewers younger than 16 years old.<sup>6</sup> An NPM score of 3 or lower translates to a revised NPI score of 64 or higher to qualify as a nutritious food product that can be advertised to children on TV. Drink products must have an NPI score of 70 or higher to qualify as nutritious. We did not score infant formula, as the NPI scoring model gives higher values to products with greater protein and fiber, which are nutrients that should be provided to infants in limited amounts.

Additionally, we identified a subset of the most nutritious food products with an NPI score of 76 or higher, which was the median NPI score for all baby food products with a healthy NPI score.

## Product packaging

In this section, we analyze the marketing messages appearing on product packages and other issues regarding packaging of baby and toddler food and drinks, including concerns about baby and toddler food products in pouch packaging, mismatches between product names and ingredients in the products, and potential consumer confusion over the difference between infant formula and toddler milk.

### Messages on product packages

In the content analysis of the marketing messages that appear on baby and toddler food and drink product packaging, researchers used a coding manual adapted from previous analyses of on-package marketing for other food categories, including sugary drinks<sup>7</sup> and candy.<sup>8</sup> Researchers visited local supermarkets to take pictures of baby and toddler food and drink packages for pilot coding. After coders conducted a preliminary assessment of the marketing messages on the product packages, inconsistencies were discussed and the coding manual was modified to clarify discrepancies

and include additional marketing messages that appeared frequently on these packages. The final codebook included the following types of messages:

- **Nutrition-related** messages involve any explicit information about product nutrition, including ingredients, vitamins and nutrients, and the absence of unwanted ingredients:
  - **Ingredients** describe messages about the product's ingredients, including the quality of the product ingredients, their source (e.g., "farm-fresh/farm-grown"), references to servings of a food group (e.g., fruit, vegetable, protein), organic, natural, and real descriptions (e.g., made with "real" yogurt).
  - **Vitamins and nutrients** include mentions describing the product as nutritious or nourishing (including any words with the root "nutri," such as "nutrient rich") and mentions of specific vitamins and nutrients, including DHA, Omega-3 or 9, vitamin D, calcium, lutein, iron, fiber, protein, and other vitamins.
  - **Absence** messages describe the lack of potentially unwanted ingredients in the product or its package, such as no artificial flavors, colors, or preservatives; unsweetened, unsalted, no added starch, gluten-free, BPA-free packaging, non-GMO; and references to minimal processing.
- **Child development** messages convey benefits to children's development and/or health from consuming the product, including supporting brain/cognitive development, physical development (including growth and motor coordination), and eating development (such as promoting chewing, product texture and small pieces, good for picky eaters, and promoting a fruit or vegetable); eye health; digestive health (gassiness, colic, lactose intolerance); and less crying or better sleep.
- **Convenience** includes messages that the product is easy to prepare or ready-to-eat, good for on-the-go, and easy to clean up.
- **Child appeal** messages indicate that the product appeals to children, including brand characters, cartoon images, and direct claims that children will like the taste or will enjoy the product in other ways (e.g., fun to eat).
- **Promotions** describes other types of marketing strategies, including endorsement by scientific studies or an authority (e.g., "scientifically proven," "recommended by pediatricians"), trust and novelty appeals (e.g., "trusted by moms," "new/improved," "goodness," and "good for your baby"), and tie-ins with other brands (e.g., "made with Enfamil milk") or causes.
- Specific product **disclaimers** include statements referencing breastmilk and indications that the consumer should consult with a pediatrician.



- **Spanish-language** indicates packages with one or two lines of information in Spanish (e.g., a phone line “en español”), as well as more detailed product information and/or product use instructions in Spanish.

Using the list of products obtained for the nutrition analysis (described earlier), researchers selected every third product within each variety of each brand for coding. If a variety included fewer than four products, all products on the list were included. The most available package type that could be compared across different brands was selected for coding. If products were available in multiple forms of packaging with similar messages, the larger package type was coded. The following **package types** were coded by category and sub-category:

- Baby and toddler food (pureed single food group, pureed mixed foods, textured mixed foods, and bitesize food and meals): Jars, single-serving pouches, pack of two tubs (e.g., 2.5-oz, 4-oz, and 5-oz), and trays.
- Baby and toddler food (grain-based and fruit-based snacks): Packets, cans, bottles, and boxes.
- Infant formula and toddler milk: Large cans (e.g., 20-oz).
- Nutritional supplement: Multipack of six bottles.

Researchers collected the data by surveying product packages in two large supermarkets in Hartford and West Hartford, Connecticut in June 2016. Six researchers conducted in-store surveys in pairs to ensure that all messages were recorded. If a selected product was not available, another product of the same variety with similar ingredients and packaging was coded instead. As infant formula and toddler milk products were not stocked on the supermarket shelves (they are often kept in a locked display), researchers took pictures of the packages for coding. Two researchers analyzed the images and coded all claims. Researchers recorded the existence of each type of message and the specific messages. They also wrote in any additional messages that were not included on the coding form, such as “Certified organic by CCOF.” All messages were recorded regardless of their location on the package, excluding messages on the nutrition facts panel.

Duplicates of packages coded in both stores were removed from the analysis. In addition to analyzing on-package messages by brand and variety, we combined them to report averages by category and sub-category. Ingredients, vitamins and nutrients, and absence messages were coded separately and combined for total nutrition-related messages per package. The proportions of packages containing any of each type of message and the average number appearing on packages with the message are reported.

### Special issues in product packaging

We conducted additional packaging analyses to evaluate issues that have been raised about baby and toddler food and drink products.

We classify products according to three main types of baby and toddler food packaging:

- **Jars** are mostly used for pureed or textured foods. Caregivers must use a spoon to feed the child.
- **Pouches** are mostly used for pureed or textured foods and enable the child to self-feed by using a sucking motion.
- **Packet, can, tub or trays** are used for bitesize food and meals, and grain-based and fruit-based snacks. These products are typically designed for self-feeding.

We also compared the names of 371 baby and toddler food products and their main ingredients (defined as the first five ingredients listed on the product’s nutrition facts panel) to determine whether the product names accurately conveyed their ingredients. We identified three levels of agreement between product names and main ingredients:

- **Level 1:** Product name matches ALL main ingredients.
- **Level 2:** Product name omits main ingredients OR includes ingredients present in small amounts.
- **Level 3:** Product name omits most of the main ingredients AND includes ingredients present in small amounts.

Finally, we compared infant formula and toddler milk products for the same brands, including colors and branding on the package, age range (in months) as indicated on the product package and/or the official brand website, and the price-per-ounce for each product. The regular price-per-ounce was obtained from the Babies “R” Us website,<sup>9</sup> disregarding sales or special temporary pricing.

### Traditional media

To analyze advertising spending and TV advertising exposure, we licensed data from Nielsen for 2011 to 2015 for all brands and brand varieties of products in Nielsen’s “Infant foods” category (PCC F124). We also include brand varieties in Nielsen’s “Milk” (PCC F131) and “Nutritional Supplement” (PCC D215) categories that meet our definitions of toddler milk and nutritional supplements for children.

All advertised brand varieties (as identified by Nielsen) are categorized by product category, company, and brand. We report these results at the category, company, brand, and variety levels. Our brand analyses focus on companies with \$100,000 or more in advertising spending in 2015, but company results include all brands that meet our definition of baby food, toddler food, toddler milk, infant formula, or nutritional supplement. In some sections, we also include brands with little or no advertising in 2015, but with notable marketing in previous years.

### Advertising spending

Nielsen tracks total advertising spending in 17 different media, including national (network, cable, and syndicated) and local

(spot) TV, Spanish-language TV, internet, radio, magazines, newspapers, free standing insert coupons (FSIs), and outdoor advertising. Our measure of **total advertising spending** includes advertising expenditures in all 17 measured media provided by Nielsen. **TV spending** includes spending just on TV, including all national (network, cable, and syndicated), local, and Spanish-language TV.

To identify advertising spending on TV targeted to black and Hispanic viewers, we used targeted network distributor filters predefined by Nielsen for black-targeted TV and Spanish-language TV.

- **Black-targeted TV** includes cable TV providers (Black Entertainment Television [BET], Centric, NBA TV, VH1, and TV One [TV1]) and syndicated TV (Badami Productions and Central City Productions).
- **Spanish-language TV** includes network TV stations (Azteca, Estrella TV, MundoMax, MTV Tr3s [MT3], Telemundo, Unimas, and Univision) and cable TV providers (DSC Familia, Discovery En Espanol, ESPN Deportes, Fox Deportes, Galavision, GOL TV, MTV Tr3s [TR3S], Univision Deportes, and NBC Universo).

### TV advertising exposure

To measure exposure to TV advertising, we also licensed gross rating points (GRP) data from Nielsen for the aforementioned time period and categories. GRPs measure the total audience delivered by a brand's media schedule, expressed as a percentage of the population that was exposed to each commercial over a specified period of time across all types of TV programming. GRPs are the advertising industry's standard measure to assess audience exposure to advertising campaigns, and Nielsen is the most widely used source for these data.<sup>10</sup> GRPs, therefore, provide an objective assessment of advertising exposure. In addition, GRPs can be used to measure advertisements delivered to a specific audience, targeting a specific age group or other demographic characteristic (also known as target rating points or TRPs), and provide a per capita measure to examine relative exposure between groups. For example, if a baby food brand had 2,000 GRPs in 2015 for women and 1,000 GRPs for men, then we can conclude that women saw twice as many ads for that brand in 2015 compared with men.

In the TV advertising analyses, we obtained 2011 through 2015 GRP data for women and men 18 to 49 years old. These data provide total exposure to national (network, cable, and syndicated) and local (spot market) TV combined. We also obtained GRPs for advertising viewed by black and white women and men 18 to 49 years on national TV only, as Nielsen does not provide spot market GRPs by viewers' race at the individual level. To assess exposure by Hispanic women and men ages 18 to 49 to Spanish-language advertising, we provide GRP data for advertising that occurred on Spanish-language TV.

Nielsen calculates GRPs as the sum of all advertising exposures for all individuals within a demographic group, including multiple exposures for individuals (i.e., gross impressions), divided by the size of the population, and multiplied by 100. GRPs can be difficult to interpret, so we also use GRP data to calculate the following TV advertising measures:

- **Average advertising exposure** is calculated by dividing total GRPs for a demographic group during a specific time period by 100. It provides a measure of ads viewed by individuals in that demographic group during the time period measured. For example, if Nielsen reports 2,000 GRPs for women for a brand in 2015, we can conclude that on average all women viewed 20 ads for that brand in 2015.
- **Targeted ratios.** As GRPs provide a per capita measure of advertising exposure for specific demographic groups, we also used GRPs to measure relative exposure to advertising between demographic groups. We report the following targeted GRP ratios:
  - **Women:men targeted ratio** = GRPs for women (18-49 years)/GRPs for men (18-49 years)
  - **Black:white targeted ratio** = GRPs for black adults (18-49 years)/GRPs for white adults (18-49 years)

A targeted ratio greater than 1.0 indicates that on average persons in the group of interest (women or black adults) viewed more advertisements than persons in the comparison group, (men or white adults). A targeted ratio of less than 1.0 indicates that the person in the group of interest viewed fewer ads.

### TV advertising content analysis

We conducted a content analysis to evaluate the messages and marketing techniques used in advertisements that appeared on TV, online videos, and magazines. Using the AdScope database from Kantar Media, we obtained digital copies of all baby and toddler food advertisements from 10 brands that aired nationally in the United States from January 1, 2012 through December 31, 2015. Researchers viewed each ad and removed duplicates, including 15-second shortened versions of 30-second ads and ads for brands not included in the content analysis (e.g., baby food from Parent's Choice).

We used the coding manual developed for previous studies as the basis for the coding manual for the present study.<sup>11</sup> Three coders were trained to review the advertisements and code them for all items in the manual. Two coders analyzed the English-language ads and one coder analyzed both English- and Spanish-language ads. All coders participated in several pre-test group sessions, during which the project manager and coders evaluated 10 to 15 food advertisements during each session. Following these sessions, the project manager resolved coder disputes and revised and finalized the coding manual.

The final coding manual included six main types of messages:

- **Main selling point** describes the general focus of the ad or the product being sold, including specific product(s), promotion(s) (e.g., coupon, cause or contest), or the brand overall. Only one main selling point was coded.
- **Features of the product** includes any specific feature of the product communicated in the ad. Specific features coded include, **new/improved** if the ad discussed a new product or an improvement to an old one; **nutrition** for claims about the nutrition or nutrients in the product; **organic** if the ad mentioned organic ingredients or organic formulation (this was NOT included if organics was part of the brand's name); **natural** for ads with the words “natural,” “real,” “pure,” or similar words to describe the food; **taste** for messages about the flavor or texture of the product; **scientific formula** for language about the product being “clinically proven” or based on “scientific studies;” **supplement** for claims about “filling the gaps” in a child’s nutrition; **convenience** for mentions about being easy to prepare or portable; **satisfies children** for descriptions of soothing the child or satisfying picky eaters; **taste/approved by children** for references that the product has been tested by children or children love the product; and **servings of food group/vitamins** for mentions that the product provides a particular portion of an ingredient (e.g., “25% of the DV of calcium”).
- **Benefits** describe messages that communicate any direct benefit to children from consuming the product. Specific benefits coded include, **digestive health** for messages about digestion, regularity, or colic; **physical development** for messages about enhancing growth or reaching a “milestone” like grasping; **mental performance** for implications that the product helps children’s mental ability; **crying** if the product promises to reduce crying; **chewing** for messages that the product helps children’s ability to chew; and **happiness** if the ad portrayed a happier child and/or parent. Pediatrician recommended is categorized as a separate type of benefit.
- **Indirect associations** describe implicit messages and indirect attributes of the product implied in the ad. Specific indirect associations coded include, **education** when the ad portrayed or suggested a connection to school or college; **fear appeals** to parents’ worries about their children, such as nutrients missing in their diet; **humor** for ads with comedic elements (obvious or subtle), irony, or sarcasm; **family bonding** for depictions of families spending quality time together; **bonding with peers** for depictions of parents together and/or parents accepted by other parents; **nutrition experts** if the ad portrayed the companies as experts in child feeding; **parent/child conflict** for portrayals of disagreements between parent and child; **inspirational message** showing motivational aspects of child-rearing; and **help children learn** describing children reaching milestones like learning vocabulary

Reliability testing was conducted using a sample of 26 magazine ads and 15 TV/online video ads from the final inventory. Each coder coded the same subset of ads. Given the relatively small number of total ads in this content analysis, percent agreement was used to measure inter-rater reliability. For magazine ads, values ranged from 69% to 100% agreement. For TV/online video ads, percent agreement ranged from 56% to 100% agreement with 93% of the items receiving over 80% agreement. Items with lower than 60% agreement were discussed and redefined for clarity prior to moving forward with the final coding. The remaining advertisements were randomly assigned to the three coders, with one Spanish-speaking researcher coding all Spanish ads. Final coding occurred over a five-week period.

## Digital media marketing

We document three types of marketing to adults on the internet: visitors to company websites, display advertising placed on other (i.e., third-party) websites, and earned mentions in social media and blogs.

## Food company website exposure

To identify company websites, we obtained a list of websites from comScore Media Metrix for the companies in our analysis with data available during January through December 2015. For the purposes of this analysis, a **website** is defined as all pages containing the same stem URL. For example, Gerber.com is the website of interest, and www.gerber.com/products/baby-food is an example of a secondary page contained within the site. Websites were excluded if the home page did not predominantly feature baby or toddler food or drink products, either depicted visually or included in a product list. Non-consumer websites (e.g., a site designed for medical professionals) and corporate sites for investors were also excluded.

We obtained data on exposure to these websites from comScore Media Metrix Key Measures Report.<sup>12</sup> The company captures the internet behavior of a representative panel of about 350,000 users in the United States.<sup>13</sup> It is the nation’s largest existing internet audience measurement panel. The firm collects data at both the household and individual level using Session Assignment Technology, which can identify computer users without requiring them to log into an account. The company uses these panel data to extrapolate its findings to the total U.S. population. Companies participating with comScore can also have census tags placed on their web content and advertisements to further refine audience estimates. Using the comScore panel, we identified individuals’ exposure to company websites, including exposure for both men and women. The Media Metrix database provides internet exposure data for all websites visited by at least 30 of their panel members in a given quarter.<sup>14</sup> Media Metrix also provides exposure information by visitor age, gender, ethnicity, and race for higher volume websites.

For each quarter during the January through December 2015 period, we used the Media Metrix Key Measures Report to collect the following data for available websites: total unique visitors, total visits, average minutes-per-visit, and average visits per unique visitor. When enough website traffic was recorded in a given quarter, we also collected these measures separately for black and Hispanic visitors.

For each website in our analysis, we report the following website exposure measures:

- **Average unique visitors per month** for white, black, and Hispanic women and men (18-49 years). This measure was calculated by adding average total unique visitors per month (reported quarterly by comScore, from January through December 2015) for each demographic group and dividing by four (to reflect four quarters).
- **Average visits-per-month, average pages-per-visit, and average time spent (min) per visit** for each unique visitor. Average monthly numbers (reported quarterly by comScore, from January through December 2015) were divided by the number of quarters for which data were available for each website. These numbers are reported for all adult visitors.

For each of the demographic groups with data, we also report a **targeted index**, which measures the extent to which visitors in that demographic group are over- or underrepresented among all visitors to a website compared to total internet visitors. Targeted indices greater than 100 signify that the demographic group is overrepresented on a website; and targeted indices less than 100 signify that it is underrepresented. For example, if 40% of black adults visited Gerber.com, but 20% of all other adults visited the site, the black adult targeted index for Gerber.com would be 200.

- **Women:men targeted index** was calculated by dividing the proportion of adult women (18-49 years) visiting the website by the proportion of adult men visiting the website. First, the percent of men or women who visited the website was obtained by averaging the number of monthly unique men and women visitors to the website for the four quarters of 2015 and dividing that number by the total number of men or women who visited all sites on the internet in 2015. The percent of women visiting the website was then divided by the percent of men visiting the website and multiplied by 100 to get the targeted index.
- **Black:white** and **Hispanic:non-Hispanic targeted indices** were calculated by dividing the proportion of black or Hispanic adult (18-49 years) visitors to the website by the proportion of white or non-Hispanic adult visitors to the website. First, the percent of black or Hispanic adults who visited the website was obtained by averaging the number of monthly unique black or Hispanic visitors to the website for the four quarters of 2015 and dividing that number by the total number of black or Hispanic adults who visited all sites on the internet in 2015. The same calculations were repeated for all white or non-Hispanic adults visiting the website during the four quarters of 2015. The percent of black or Hispanic

adults visiting the website was then divided by the percent of white or non-Hispanic adult visitors to the website and multiplied by 100 to get the targeted index. Targeted indices of women to men were also calculated for black and Hispanic adults.

### Display advertising on third-party websites

Data for exposure to baby and toddler food and drink brand advertising on third-party websites (i.e., websites sponsored by other companies) were extracted from the comScore Ad Metrix Advertiser Report.<sup>15</sup> comScore Ad Metrix monitors the same panel of users as comScore Media Metrix but tracks advertisements that are completely downloaded and viewable on a user's web browser. Ad Metrix measures individual exposure to display ads presented in rich media (SWF) and traditional image-based ads (JPEG and GIF). It does not capture text, video, or html-based ads. Ad Metrix also identifies the unique user viewing the advertisement, the third-party website on which the advertisement was viewed, and the company sponsoring the advertisement.

Third-party website data were collected for January through December 2015. During the time period of our analysis, Ad Metrix did not report demographic information about viewers of these advertisements. Consequently, we cannot differentiate between exposure by any specific demographic group, including Hispanic or black adults.

The Product Dictionary from comScore was used to identify the display advertisements for the baby and toddler food companies in our analysis. comScore provides display ad data for companies and websites in its dictionary that were viewed at least ten times by comScore panel members on the internet or on a specific publisher site. Ad Metrix captures copies of the actual display ads (i.e., creatives) that appeared on third-party websites. Researchers reviewed the creatives to identify companies that advertised baby and toddler foods and examined the display advertisements to determine the proportion of ads promoting baby and toddler foods. Companies with more than 50% of their ads promoting baby and toddler food products are included in the analysis. All other companies were excluded.

Measures available from comScore for each month include total display ads viewed (i.e., the number of advertisements fully downloaded and viewed on publisher websites), advertising exposed unique visitors (i.e., the number of different individuals exposed to advertisements on a publisher website), and average frequency of ads viewed per unique visitor by advertisers. This information is available for the total internet and for individual publisher (i.e., third-party) websites. The Key Measures Report was used to extract the average number of unique visitors to third-party websites.<sup>16</sup>

- **Average unique visitors per month**<sup>17</sup> was calculated by adding the number of unique visitors exposed to advertising for a brand or promotion reported monthly from January through December 2015 and dividing by 12.



- **Average number of ads viewed per viewer per month** was calculated by averaging the number of ads viewed per viewer for the brand or promotion for each month from January through December 2015.

We also analyzed the placement of display advertisements on three types of websites where these ads appeared most often. **Family & youth-parenting** sites are categorized by comScore and include sites with resources and guidance on a number of topics involved with raising children. We identify third-party websites as **retailers** if the website primarily sells products to consumers. We define **social media** websites as sites in which individuals share or network with others on an online platform. The total ads viewed on each type of website and individual website was calculated from comScore as well as the number of ads placed on individual websites and website types by each brand included in the analysis.

### Social media marketing

Finally, we measure companies' marketing for baby and toddler food and drink brands on the most popular social media platforms. We also examine brand activity on mom blogs.

We identified available social media accounts sponsored by baby and toddler food companies in various ways. First, we identified all social media links listed on company websites for the baby and toddler food and drink brands in our analysis. Of note, not all brands maintained separate websites. Many companies included multiple brands on the same website (e.g., Enfamil.com included both Enfamil and Enfagrow brands, Gerber.com included Gerber baby food, Gerber Graduates, and Gerber Good Start brands). We then searched within five popular social media platforms using the company and brand as keywords: Facebook, Twitter, Instagram, Pinterest and YouTube. We excluded: 1) pages that were not created or managed by the brand or company (e.g., Facebook community pages); 2) pages for non-U.S. users or with the majority of content in a foreign language; and 3) brands with fewer than 50,000 followers on any social media platform. Our search identified social media accounts that included multiple brands. For example, on Facebook, Instagram, Pinterest, and YouTube, the "Gerber" account included posts about Gerber baby food, Gerber Graduates toddler food, and Gerber Good Start infant formula. Similarly, "Enfamil" social media pages featured posts for Enfamil infant formula and Enfagrow toddler milk.

In August 2016, researchers recorded the following for each account identified above:

- **Likes for Facebook** accounts. Each brand's Facebook page lists the number of people who like the page and a link to invite users' friends to "like this Page." When the brand posts new content, a notification may appear on the "newsfeed" (i.e., Facebook home page) of individuals who like the brand.

- **Followers on Twitter, Instagram, and Pinterest.** Twitter, Instagram, and Pinterest pages list the number of followers for each account. Individuals can choose to "follow" brand accounts. Followers receive copies of a brand's new posts or notification new content was added to the brand page.

- **Views on YouTube** channels. YouTube enables companies to upload and share videos for the public to view. Brands maintain their own YouTube channels with playlists of available videos. Playlists are groups of videos organized by theme. Anyone can watch the videos online, but users can also "subscribe" to a channel and receive alerts whenever the company posts a new video. YouTube reports the number of views of its uploaded videos.

We conducted a qualitative review of the content of these social media accounts to identify brands promoted in posts, engagement devices used (e.g., requesting users to share photos or stories, providing a link to the brand's website or other social media, encouraging users to utilize the experts the brand provides), and content of videos available for users to view (appearing on Facebook and YouTube).

We also examined **posts** about the brands in our analysis that appeared on **mom blogs**. Mom blog posts describe entries in words and/or pictures that appear on a mom blogger's site and include the name of the brands in our analysis. Posts may contain links to other posts where the brand is mentioned (e.g., hashtags), a brand's website, or a brand's social media pages (e.g., Facebook, Twitter, Instagram). Some mom blogs report 300,000 or more page views per month (e.g., DearCrissey.com and RageAgainstTheMinivan.com).

We used Meltwater to identify posts from mom bloggers appearing from January 1 through December 31, 2015. Meltwater is a web-based media intelligence platform that monitors news media, online publications, and social media.<sup>18</sup> We utilized the social media database to search mom blogs for relevant brand and company keywords. Meltwater's platform monitors thousands of mom blogs, including the top-50 U.S. mom bloggers in 2014.<sup>19</sup>

First, we identified 19 keywords found in mom blogs to use in the Meltwater search (e.g., mom\*, baby, review, contest, sample). Of note, we also included the search term "dad" to collect posts by dad bloggers, but none of the dad blogs identified met the criteria for inclusion in our analysis. We searched Meltwater's social media blog database for these keywords, along with company and brand names that appeared in blogs posted from January 1 to December 31, 2015. The initial search returned millions of hits, including many unrelated posts such as news about stock prices and other stories or references to names not related to the brands in our analysis (e.g., "Gerber" is also a popular surname and part of the name of a life insurance company). To remove unrelated blog posts, specific eliminating words were used in subsequent searches, such as NYSE, NASDAQ, invest\*, earning, insurance, and theft. After refining the search terms and eliminating duplicates, the search returned 2,247 blog posts for the brands in our analysis.

Researchers then reviewed each post and removed irrelevant posts not detected by Meltwater's program (e.g., additional duplicates, business news, non-U.S. based blogs, unrelated company activities, and references to adult consumption of brands), obtaining 1,375 posts for analysis. The researchers then coded each blog post that mentioned a baby or toddler food or drink brand as one of the following types:

- **Use/like/discuss** posts contain mentions of a brand that the mom blogger uses and/or likes, but do not appear to be sponsored by a brand. For example, mom bloggers described the products her baby consumes, best brand for traveling, and in some cases her choice for addressing her baby's specific needs (e.g., acid reflux, illness). None of these posts contained disclaimers on the same page as the mention to indicate the post is sponsored by a company.
- **Loyalty program endorsement** posts discuss how parents can save money on specific products by participating in loyalty programs, including Amazon Family (formerly Amazon Mom), Enfamil Family Beginnings, and Similac StrongMoms. None of these endorsements contained disclaimers on the same page as the endorsement to indicate that the post was sponsored.
- **Mom coupon blogger** posts list or link to a manufacturer or retailer or indicate where the brand is sold at a reduced price. Sometimes these posts referred to a single brand, but more often the brand was included in a list of various products (including other types of products) under "good deals" or "on sale this week." The majority of these posts did not contain disclaimers to indicate the post was sponsored, but clicking on other links on the page (i.e., about this blog) often revealed the blogger's support from brands. For

example, one blogger reported that she receives a small compensation when visitors click on an affiliate link. Posts with coupon links and those endorsing a loyalty program are coded as a loyalty program endorsement.

- **Sponsored post or product review** includes posts in which the blogger indicates that she has received direct compensation, such as free items or monetary payment from a company in return for posting information related to a brand or writing a review of a product. The majority of these posts contain disclaimers to comply with Federal Trade Commission (FTC) rules.<sup>20</sup> To arrange this transaction, companies may contact a blogger directly or utilize a business that connects brands with bloggers (e.g., BzzzAgent.com, InfluenceCentral.com, Influenster.com, TapInfluence.com, and SavvySassyMoms.com).<sup>21</sup>
- **Unique campaign** posts mention 2015 brand-sponsored videos or contests. Some of these posts had disclaimers indicating the blogger received compensation from the brand.
- **Other** posts could not be categorized as one of the types listed above.

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The Rudd Center report entitled "Nutrition and marketing of baby and toddler food and drinks" is an independent publication and has not been authorized, sponsored, or otherwise approved by the companies cited within this report, including: Abbott, Campbell Soup Company, The Hain Celestial Group Inc., Hero AG, Mead Johnson Nutrition, Nurture Inc., or Walmart.

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Table A1. List and description of infant formulas and toddler drinks

Company	Product category	Brand	Product name	Marketing description	NPI score*	Added sweeteners	Prebiotics
Abbott	Infant formula	Similac	Similac Advance	For baby's first year	-	Lactose	Galactooligosaccharides
Abbott	Infant formula	Similac	Similac Advance Non-GMO	A non-GMO option for your baby's first year.	-	Lactose	Galactooligosaccharides
Abbott	Infant formula	Similac	Similac for Supplementation	For breastfeeding moms who choose to introduce formula	-	Lactose Sugar, < 2%	Galactooligosaccharides
Abbott	Infant formula	Similac	Similac Organic	Organic baby formula	-	fructooligosaccharides <sup>1</sup>	Fructooligosaccharides
Campbell Soup Company	Infant formula	Plum Organics	Plum Organics Grow Well Organic Infant Formula With Iron Milk Based Powder	A really important first food made mostly of cow's milk and plant-based oils and supplemented with a whole host of minerals and vitamins mandated by the FDA to ensure baby grows well.	-	Lactose	
Mead Johnson Nutrition	Infant formula	Enfamil	Enfamil A.R.	Infant formula for spit-up	-	Lactose	Galactooligosaccharides
Mead Johnson Nutrition	Infant formula	Enfamil	Enfamil for Supplementing	Gentle nutrition when moms choose to introduce formula to supplement breastmilk.	-	Corn syrup solids	
Mead Johnson Nutrition	Infant formula	Enfamil	Enfamil Gentlease	Baby formula designed to ease fussiness, gas and crying in 24 hours	-	Corn syrup solids	
Mead Johnson Nutrition	Infant formula	Enfamil	Enfamil Infant	Formulated after the changing nutrition of breastmilk for babies aged 0 through 12 months.	-	Lactose	Galactooligosaccharides
Mead Johnson Nutrition	Infant formula	Enfamil	Enfamil Newborn	Formulated after the changing nutrition of breastmilk for babies through 3 months.	-	Lactose	Galactooligosaccharides
Mead Johnson Nutrition	Infant formula	Enfamil	Enfamil ProSobee	A soy-based formula designed to ease fussiness and gas due to sensitivity to milk-based formula.	-	Corn syrup solids	
Mead Johnson Nutrition	Infant formula	Enfamil	Enfamil Reguline	Infant formula that is designed to promote comfortable stools	-	Corn syrup solids, lactose	Galactooligosaccharides
Mead Johnson Nutrition	Infant formula	Enfamil	Enfamil	Company's infant formula with closest nutrition to breast milk, designed to provide complete nutrition for babies through 12 months.	-	Lactose	Galactooligosaccharides
Nestle S.A.	Infant formula	Gerber Good Start	Gerber Good Start Gentle	Modeled after the complete nutrition and gentleness of breastmilk for babies up to 12 months.	-	Lactose	Galactooligosaccharides
Nestle S.A.	Infant formula	Gerber Good Start	Gerber Good Start Gentle 2	Modeled after the changing protein levels in breastmilk for babies 6-12 months introduced to solid foods.	-	Lactose	Galactooligosaccharides
Nestle S.A.	Infant formula	Gerber Good Start	Gerber Good Start Gentle for Supplementing	To supplement breastfeeding for birth to 12 months	-	Lactose	
Nestle S.A.	Infant formula	Gerber Good Start	Gerber Good Start Soothe	Soothing nutrition for babies experiencing excessive crying, colic, fussiness, and gas up to 12 months.	-	Corn	
Nestle S.A.	Infant formula	Gerber Good Start	Gerber Good Start Soy	For babies with milk or lactose intolerance up to 12 months.	-	Sucrose	
Mead Johnson Nutrition	Toddler milk (transitions)	Enfagrow	Enfagrow Toddler Transitions	Tailored for toddlers 9-18 months	58	Corn syrup solids	Galactooligosaccharides, polydextrose
Mead Johnson Nutrition	Toddler milk (transitions)	Enfagrow	Enfagrow Toddler Transitions Gentlease	Designed for toddlers 9-18 months experiencing fussiness and gas.	58	Corn syrup solids	
Mead Johnson Nutrition	Toddler milk (transitions)	Enfagrow	Enfagrow Toddler Transitions Soy	Designed for toddlers 9-18 months experiencing fussiness and gas when soy is preferred.	60	Corn syrup solids	
Abbott	Toddler milk	Similac	Go & Grow by Similac	A milk-based Toddler Milk designed to help balance your toddler's diet	68	Lactose	Galactooligosaccharides
Abbott	Toddler milk	Similac	Go & Grow by Similac Non-GMO	A non-GMO option for helping balance your toddler's diet	68	Lactose	Galactooligosaccharides



## Appendix Table A

Company	Product category	Brand	Product name	Marketing description	NPI score*	Added sweeteners	Prebiotics
Abbott	Toddler milk	Similac	Go & Grow by Similac Sensitive	Complement to toddler nutrition, suitable for children with lactose sensitivity.	68	Corn syrup, sugar	Galactooligosaccharides
Abbott	Toddler milk	Similac	Go & Grow by Similac Vanilla	Complement to toddler nutrition	68	Lactose, sucrose	Galactooligosaccharides
Mead Johnson Nutrition	Toddler milk	Enfagrow Gerber Good Start	Enfagrow Toddler Next Step	Flavored milk drink supplement for toddlers 1-3 years.	68	Corn syrup solids	Galactooligosaccharides, polydextrose
Nestle S.A.	Toddler milk	Gerber Good Start	Gerber Good Start Grow	Nutrition specially designed for toddlers 12-24 months	70	Sugar	
Nestle S.A. <sup>2</sup>	Toddler milk	Nido	Nestlé Nido Fortificada (Fortified)	Nido Fortificada is dry whole milk with added vitamins and minerals to help support healthy growth and development.	70		
Nestle S.A.	Toddler milk	Nido	Nestlé Nido Kinder 1+	Nestlé nido kinder 1+ is a powdered milk beverage with 13 vitamins and minerals to help support your child's healthy growth and development. Nido 1+ also contains prebio1, an exclusive blend of fiber. Fiber helps to maintain a healthy digestive system.	70	Sugar, lactose, honey, oligofructose <sup>1</sup>	Oligofructose, inulin
Nurture Inc.	Toddler milk	Happy Tot	Happy Tot Grow & Shine	Milk drink specially formulated organic toddler milk enhanced with age-specific nutrients	72	Glucose syrup solids	
Abbott	Nutritional supplement	Pediasure	Pediasure Grow & Gain Banana	Clinically proven nutrition to help kids grow, and nutritious supplement for kids falling behind growth	68	Sugar, fructooligosaccharides	Fructooligosaccharides
Abbott <sup>3</sup>	Nutritional supplement	Pediasure	Pediasure Grow & Gain Berry	Clinically proven nutrition to help kids grow, and nutritious supplement for kids falling behind growth	68	Sugar, fructooligosaccharides	Fructooligosaccharides
Abbott <sup>4</sup>	Nutritional supplement	Pediasure	Pediasure Grow & Gain Chocolate	Clinically proven nutrition to help kids grow, and nutritious supplement for kids falling behind growth	66	Sugar, fructooligosaccharides, <2% sucralose	Fructooligosaccharides
Abbott <sup>5</sup>	Nutritional supplement	Pediasure	Pediasure Grow & Gain Strawberry	Clinically proven nutrition to help kids grow, and nutritious supplement for kids falling behind growth	68	Sugar, fructooligosaccharides*	Fructooligosaccharides
Abbott	Nutritional supplement	Pediasure	Pediasure Grow & Gain Vanilla	Clinically proven nutrition to help kids grow, and nutritious supplement for kids falling behind growth	68	Sugar, fructooligosaccharides	Fructooligosaccharides
Abbott <sup>6</sup>	Nutritional supplement	Pediasure	Pediasure Grow & Gain with Fiber Strawberry	Clinically proven nutrition to help kids grow, and nutritious supplement for kids falling behind growth	70	Sugar, fructooligosaccharides	Fructooligosaccharides
Abbott	Nutritional supplement	Pediasure	Pediasure Grow & Gain with Fiber Vanilla	Clinically proven nutrition to help kids grow, and nutritious supplement for kids falling behind growth	70	Sugar, fructooligosaccharides	Fructooligosaccharides
Abbott	Nutritional supplement	Pediasure	Pediasure Grow and Gain Shake Mix Vanilla + 6fl oz of 1% milk	Clinically proven nutrition to help kids grow, and nutritious supplement for kids falling behind growth	70	Corn syrup, sugar	
Abbott	Nutritional supplement	Pediasure	Pediasure Sidekicks Chocolate	Pediasure Sidekicks is nutrition to help fill gaps. Each shake is a source of 7g protein, 3g fiber*, and 25 essential vitamins and minerals for kids who are growing fine but missing key nutrients.	72	Sugar, fructooligosaccharides	Fructooligosaccharides
Abbott	Nutritional supplement	Pediasure	Pediasure Sidekicks Fruit & Veggie Smoothie Mix Strawberry Banana	Pediasure Sidekicks Smoothie Mix provides one full serving of combined fruits and vegetables* and the top 4 nutrients low in kids' diets in every smoothie.	70	Sugar, fructooligosaccharides	Fructooligosaccharides
Abbott	Nutritional supplement	Pediasure	Pediasure Sidekicks Strawberry	Pediasure Sidekicks is nutrition to help fill gaps. Each shake is a source of 7g protein, 3g fiber*, and 25 essential vitamins and minerals for kids who are growing fine but missing key nutrients.	72	Sugar, fructooligosaccharides	Fructooligosaccharides

## Appendix Table A

Company	Product category	Brand	Product name	Marketing description	NPI score*	Added sweeteners	Prebiotics
Abbott	Nutritional supplement	Pediasure	Pediasure Sidekicks Vanilla	Pediasure Sidekicks is nutrition to help fill gaps. Each shake is a source of 7g protein, 3g fiber*, and 25 essential vitamins and minerals for kids who are growing fine but missing key nutrients.	72	Sugar, fructooligosaccharides	Fructooligosaccharides

\*NPI score is not used for infant formula

<sup>1</sup> FOS are oligosaccharide fructans, used as an alternative sweetener

<sup>2</sup> Only lists ingredients not found in regular dry whole milk

<sup>3</sup> Natural & artificial flavor #10, FD&C red#3 food coloring

<sup>4</sup> FD&C red #3

<sup>5</sup> Natural & artificial flavor #10, FD&C red #3 food coloring

<sup>6</sup> Red #3 food coloring

Table A2. Nutrition content of individual infant formulas and toddler drinks

Company	Product category	Brand	Product name	NPI score*	Serving size (g)	Total Calories (Kcal)	Calories / 100g	Saturated fat (g)	Total sugar (g)	Sodium (mg)	Dietary fiber (g)	Protein (g)
Abbott	Infant formula	Similac	Similac Advance	-	177.5	100.0	56.4	1.6	11.2	25.0	0.0	2.1
Abbott	Infant formula	Similac	Similac Advance Non-GMO	-	177.5	100.0	56.4	1.6	11.2	25.0	0.0	2.1
Abbott	Infant formula	Similac	Similac for Supplementation	-	177.5	100.0	56.4	1.6	11.3	25.0	0.0	2.1
Abbott	Infant formula	Similac	Similac Organic	-	177.5	100.0	56.4	1.8	10.9	24.0	0.0	2.1
Campbell Soup Company	Infant formula	Plum Organics	Plum Organics Grow Well Organic Infant Formula With Iron Milk Based Powder	-	169.2	100.0	59.1	2.1	10.4	24.0	0.0	2.1
Mead Johnson Nutrition	Infant formula	Enfamil	Enfamil A.R.	-	169.9	100.0	58.9	2.1	11.3	40.0	0.0	2.5
Mead Johnson Nutrition	Infant formula	Enfamil	Enfamil for Supplementing	-	169.9	100.0	58.9	2.3	10.8	36.0	0.0	2.3
Mead Johnson Nutrition	Infant formula	Enfamil	Enfamil Gentlelease	-	169.9	100.0	58.9	2.3	10.8	36.0	0.0	2.3
Mead Johnson Nutrition	Infant formula	Enfamil	Enfamil Infant	-	169.9	100.0	58.9	2.3	11.3	27.0	0.0	2.0
Mead Johnson Nutrition	Infant formula	Enfamil	Enfamil Newborn	-	169.9	100.0	58.9	2.3	11.2	27.0	0.0	2.1
Mead Johnson Nutrition	Infant formula	Enfamil	Enfamil ProSobee	-	169.9	100.0	58.9	2.3	10.6	36.0	0.0	2.5
Mead Johnson Nutrition	Infant formula	Enfamil	Enfamil Reguline	-	169.9	100.0	58.9	2.3	11.1	36.0	0.0	2.3
Mead Johnson Nutrition	Infant formula	Enfamil	Enspire	-	169.9	100.0	58.9	2.2	11.2	27.0	0.0	2.1
Nestle S.A.	Infant formula	Gerber Good Start	Gerber Good Start Gentle	-	170.2	100.0	58.8	2.1	11.3	27.0	0.6	2.2
Nestle S.A.	Infant formula	Gerber Good Start	Gerber Good Start Gentle 2	-	170.2	100.0	58.8	2.1	11.9	27.0	0.6	1.9
Nestle S.A.	Infant formula	Gerber Good Start	Gerber Good Start Gentle for Supplementing	-	169.7	100.0	58.9	2.3	11.2	27.0	0.0	2.2
Nestle S.A.	Infant formula	Gerber Good Start	Gerber Good Start Soothe	-	169.7	100.0	58.9	2.1	11.2	27.0	0.0	2.2
Nestle S.A.	Infant formula	Gerber Good Start	Gerber Good Start Soy	-	170.2	100.0	58.8	2.0	11.1	27.0	0.0	2.5
Mead Johnson Nutrition	Toddler milk (transitions)	Enfagrow	Enfagrow Toddler Transitions	58	170.4	100.0	58.7	10.8	2.3	36.0	0.0	2.6
Mead Johnson Nutrition	Toddler milk (transitions)	Enfagrow	Enfagrow Toddler Transitions Gentlelease	58	170.4	100.0	58.7	10.5	2.3	40.0	0.0	2.6
Mead Johnson Nutrition	Toddler milk (transitions)	Enfagrow	Enfagrow Toddler Transitions Soy	60	170.4	100.0	58.7	11.8	1.9	36.0	0.0	3.3
Abbott	Toddler milk	Similac	Go & Grow by Similac	68	271.6	150.0	55.2	0.0	15.0	45.0	0.9	4.0
Abbott	Toddler milk	Similac	Go & Grow by Similac Non-GMO	68	271.6	150.0	55.2	0.0	15.0	45.0	0.9	4.0
Abbott	Toddler milk	Similac	Go & Grow by Similac Sensitive	68	271.6	150.0	55.2	0.0	15.0	45.0	0.9	4.0
Abbott	Toddler milk	Similac	Go & Grow by Similac Vanilla	68	271.6	150.0	55.2	0.0	15.0	45.0	0.9	4.0
Mead Johnson Nutrition	Toddler milk	Enfagrow	Enfagrow Toddler Next Step	68	213.4	160.0	75.0	2.5	11.0	80.0	0.9	6.0
Nestle S.A.	Toddler milk	Gerber Good Start	Gerber Good Start Grow	70	205.4	130.0	63.3	0.5	10.0	50.0	0.0	4.0
Nestle S.A.	Toddler milk	Nido	Nestlé Nido Fortificada (Fortified)	70	270.6	160.0	59.1	5.0	11.0	105.0	0.0	6.0

continued

## Appendix Table A

Company	Product category	Brand	Product name	NPI score*	Serving size (g)	Total Calories (Kcal)	Calories / 100g	Saturated fat (g)	Total sugar (g)	Sodium (mg)	Dietary fiber (g)	Protein (g)
Nestle S.A.	Toddler milk	Nido	Nestlé Nido Kinder 1+	70	270.6	160.0	59.1	2.5	15.0	95.0	1.0	6.0
Nurture Inc.	Toddler milk	Happy Tot	Happy Tot Grow & Shine	72	205.4	140.0	68.2	0.0	6.0	50.0	0.0	4.0
Abbott	Nutritional supplement	Pediasure	Pediasure Grow & Gain Banana	68	247.8	240.0	96.9	1.0	18.0	90.0	1.0	7.0
Abbott	Nutritional supplement	Pediasure	Pediasure Grow & Gain Berry	68	247.8	240.0	96.9	1.0	18.0	90.0	1.0	7.0
Abbott	Nutritional supplement	Pediasure	Pediasure Grow & Gain Chocolate	66	247.8	240.0	96.9	1.0	23.0	90.0	1.0	7.0
Abbott	Nutritional supplement	Pediasure	Pediasure Grow & Gain Strawberry	68	247.8	240.0	96.9	1.0	18.0	90.0	1.0	7.0
Abbott	Nutritional supplement	Pediasure	Pediasure Grow & Gain Vanilla	68	247.8	240.0	96.9	1.0	18.0	90.0	1.0	7.0
Abbott	Nutritional supplement	Pediasure	Pediasure Grow & Gain with Fiber Strawberry	70	247.8	240.0	96.9	1.0	18.0	90.0	3.0	7.0
Abbott	Nutritional supplement	Pediasure	Pediasure Grow & Gain with Fiber Vanilla	70	247.8	240.0	96.9	1.0	18.0	90.0	3.0	7.0
Abbott	Nutritional supplement	Pediasure	Pediasure Grow and Gain Shake Mix Vanilla + 6fl oz of 1% milk	70	210.5	240.0	114.0	2.0	18.0	210.0	0.0	12.0
Abbott	Nutritional supplement	Pediasure	Pediasure Sidekicks Chocolate	72	247.8	150.0	60.5	1.0	17.0	90.0	3.0	7.0
Abbott	Nutritional supplement	Pediasure	Pediasure Sidekicks Fruit & Veggie Smoothie Mix Strawberry Banana	70	184.6	150.0	81.3	1.0	17.0	85.0	3.0	6.0
Abbott	Nutritional supplement	Pediasure	Pediasure Sidekicks Strawberry	72	247.8	150.0	60.5	1.0	17.0	90.0	3.0	7.0
Abbott	Nutritional supplement	Pediasure	Pediasure Sidekicks Vanilla	72	247.8	150.0	60.5	1.0	17.0	90.0	3.0	7.0

\*NPI score is not used for infant formula



Table B1. Product features by brand in English-language content analysis

Brand	N=# of ads	Nutrition	Supplement	Organic	Natural/real	New	Taste/approved by children	Convenience	Satisfies children	Scientific formula	Serving of vitamin/food group	% any features	# per ad
<b>Baby and toddler food</b>													
Beech-Nut	9	11%	0%	11%	100%	33%	22%	0%	0%	0%	11%	100%	1.9
Gerber	34	41%	0%	21%	18%	12%	41%	12%	0%	0%	6%	77%	2
Gerber Graduates	20	62%	0%	0%	60%	20%	70%	25%	0%	0%	10%	100%	2.5
Plum Organics	14	64%	0%	79%	7%	0%	21%	21%	0%	14%	0%	79%	2.6
Total	77	41%	0%	25%	36%	14%	43%	16%	0%	3%	7%	86%	2.2
<b>Infant formula, toddler milk, and nutritional supplement</b>													
Enfamil	17	100%	0%	0%	0%	23%	0%	6%	24%	53%	12%	100%	2.1
Gerber Good Start	11	100%	0%	0%	0%	27%	0%	0%	64%	36%	0%	100%	2
Similac	14	93%	0%	0%	7%	36%	0%	0%	7%	0%	0%	93%	1.3
Enfagrow	8	75%	63%	0%	0%	0%	0%	0%	0%	25%	63%	75%	3
Pediasure	9	89%	22%	0%	11%	0%	44%	0%	56%	0%	44%	89%	2.8
Total	59	93%	12%	0%	3%	20%	7%	2%	29%	25%	19%	93%	2.1

Table B2. Product associations by brand in English-language content analysis

Brand	N=# of ads	Humor	Education	Help children learn	Fear	Trustworthy	Family bonding	Bonding with peers	Inspirational	Nutrition experts	Parent/child conflict	% any associations	# per ad
<b>Baby and toddler food</b>													
Beech-Nut	9	0%	0%	11%	0%	11%	11%	0%	33%	0%	0%	56%	1.2
Gerber	34	32%	18%	29%	6%	47%	0%	0%	0%	9%	0%	74%	1.9
Gerber Graduates	20	45%	0%	5%	20%	0%	10%	0%	0%	10%	15%	70%	1.5
Plum Organics	14	43%	0%	7%	21%	0%	0%	0%	36%	36%	0%	79%	1.8
Total	77	34%	8%	17%	12%	22%	4%	0%	10%	13%	4%	71%	1.7
<b>Infant formula, toddler milk, and nutritional supplement</b>													
Enfamil	17	0%	6%	35%	41%	18%	12%	0%	0%	12%	0%	77%	1.6
Gerber Good Start	11	9%	0%	9%	18%	0%	55%	0%	0%	0%	9%	73%	1.4
Similac	14	0%	0%	36%	7%	21%	50%	29%	0%	14%	0%	86%	1.8
Enfagrow	8	0%	0%	50%	63%	0%	50%	0%	13%	0%	13%	75%	2.5
Pediasure	9	56%	0%	44%	33%	0%	67%	11%	0%	0%	44%	100%	2.5
Total	59	10%	2%	34%	31%	10%	42%	9%	2%	7%	10%	81%	1.9

Table B3. Product benefits by brand in English-language content analysis

Brand	N=# of ads	Digestive health	Physical development	Mental performance	Chewing	Crying	Happiness of children or parents	Pediatrician recommended	Any benefits for children	# per ad
<b>Baby and toddler food</b>										
Beech-Nut	9	0%	0%	11%	0%	0%	0%	0%	11%	1
Gerber	34	0%	24%	0%	18%	0%	0%	0%	41%	0.6
Gerber Graduates	20	0%	20%	0%	5%	0%	0%	0%	25%	0.8
Plum Organics	14	0%	43%	0%	0%	0%	0%	0%	43%	1
Total	77	0%	23%	1%	9%	0%	0%	0%	34%	0.7
<b>Infant formula, toddler milk, and nutritional supplement</b>										
Enfamil	17	35%	59%	41%	0%	6%	6%	100%	88%	1.4
Gerber Good Start	11	64%	0%	0%	0%	27%	46%	0%	73%	1.1
Similac	14	14%	57%	29%	0%	0%	7%	0%	71%	1.3
Enfagrow	8	25%	75%	38%	0%	0%	0%	13%	75%	1.8
Pediasure	9	0%	44%	22%	0%	0%	13%	67%	44%	2.2
Total	59	29%	48%	27%	0%	3%	14%	41%	73%	1.5

Table B4. Product features by brand Spanish-language content analysis

Brand	Total # of ads	Nutrition	Supplement	Organic	Natural/real	New	Taste/approved by children	Convenience	Satisfies children	Scientific formula	Serving of vitamin/food group	% any features	# per ad
Enfagrow	8	88%	63%	0%	0%	38%	13%	0%	13%	0%	50%	88%	2.6
Pediasure	8	100%	63%	0%	0%	13%	25%	0%	63%	0%	0%	100%	2.6
Nido	5	80%	40%	0%	0%	20%	0%	0%	0%	0%	0%	80%	1.4
Gerber	2	50%	0%	0%	0%	0%	50%	50%	0%	0%	0%	100%	1.5
Beech-Nut	2	0%	0%	0%	100%	50%	50%	50%	0%	0%	0%	50%	2.5
Similac	2	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	2
Total ads	27	82%	44%	0%	7%	22%	19%	7%	30%	0%	15%	89%	2.3

Table B5. Product associations by brand Spanish-language content analysis

Brand	Total # of ads	Humor	Education	Help children learn	Fear	Trustworthy	Family bonding	Bonding with peers	Inspirational	Nutrition experts	Parent/child conflict	% any associations	# per ad
Enfagrow	8	0%	0%	88%	63%	0%	63%	0%	0%	0%	0%	88%	2.1
Pediasure	8	25%	0%	75%	63%	0%	13%	13%	0%	0%	13%	100%	2
Nido	5	0%	0%	80%	40%	0%	60%	0%	20%	0%	0%	100%	2
Gerber	2	0%	0%	0%	50%	0%	0%	0%	0%	0%	50%	50%	1
Beech-Nut	2	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	1
Similac	2	0%	0%	50%	0%	0%	50%	0%	0%	0%	50%	100%	1.5
Total ads	27	7%	0%	67%	48%	0%	37%	4%	11%	0%	11%	93%	1.9

Table B6. Product benefits by brand in Spanish-language content analysis

Brand	Total # of ads	Digestive health	Physical development	Mental performance	Chewing	Crying	Happiness of children and parents	Pediatrician recommended	Any benefits for children	# per ad
Enfagrow	8	38%	88%	38%	0%	0%	0%	38%	88%	1.6
Pediasure	8	0%	88%	25%	0%	0%	0%	88%	100%	1.1
Nido	5	20%	80%	0%	0%	0%	0%	0%	80%	1
Gerber	2	0%	0%	0%	0%	0%	0%	0%	0%	0
Beech-Nut	2	0%	0%	0%	0%	0%	0%	0%	0%	0
Similac	2	50%	100%	0%	0%	0%	50%	50%	100%	1.5
Total ads	27	19%	74%	19%	0%	0%	4%	41%	78%	1.1