



Children's supplements: Finding success at the intersection of sound science and appealing delivery forms

BY MAUREEN KINGSLEY

Multivitamins for children have been commercially available for decades. One of the most recognizable brands, Flintstones (by Bayer), debuted in 1968 and has been a mainstay of retail shelves ever since, with updated formulations and delivery forms appearing a handful of times in between.

While multivitamins for children remain popular with consumers, particularly in gummy form, other children's supplements are increasingly gaining traction in the market, particularly those targeting specific wellness areas. Christopher Gavigan, co-founder and chief purpose officer of The Honest Company, says the emergence of more-targeted children's supplements "helps consumers better navigate the crowded and confusing vitamin, mineral, and supplements aisle. That aisle contains many different ingredients, dosages, forms, and benefits being offered by many brands. By focusing on specific wellness benefits, we at Honest Company are able to clearly communicate the benefit the consumers will receive and

eliminate the guesswork for them of finding the right ingredient, dosage, and form for that benefit."

Megan DeStefano, Probiotics Global Marketing Leader, DuPont Nutrition & Health (Copenhagen), makes the point that "as birth rates decline globally, there is more money to spend on each child in a household." DuPont has been watching the children's health and wellness market "for some time," she says, and believes there is "tremendous opportunity for food, beverage, and supplement brands targeting children to be very successful—if they can deliver healthy and convenient products that appeal to children's tastes and parents' sensibilities," DeStefano says.

Leading the Pack: Supplements for Immune Health

DeStefano says DuPont surveyed parents and found that a top concern among them is their children's immune health, and she points to the common cold and allergies in particular.

For this reason, she says, "Consumer interest in probiotics is growing for all age groups. We believe more and more pediatricians are recommending probiotics for children, and we believe that as parents adopt probiotics into their daily routine, they will also introduce probiotics to their children."

DuPont offers the HOWARU Protect line of probiotics for children. HOWARU Protect Kids is "a unique and proprietary blend of probiotics that helps keep children healthy during cold and flu season," according to DeStefano, while HOWARU Protect EarlyLife "supports immune health of expectant mothers and infants." Applications for these ingredients include capsules, tablets, powders, and functional-food products.

Nena Dockery of Stratum Nutrition (St. Louis), which supplies the BLIS K12 and BLIS M18 probiotic ingredients formulated to function within the oral cavity, says "some of the original probiotics research in children focused on the investigation

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of potential benefits of certain probiotic strains in reducing the symptoms of post-antibiotic and infectious diarrhea.” But as the body of knowledge regarding the importance of indigenous bacteria has grown, Dockery points out, “so has the research delving into other areas where probiotics might be of value,” such as in oral health.

“We are now aware that specific oral-cavity bacteria provide unique dental and immune-health benefits in individuals for whom these microbes are part of the normal microbiota. This in part explains the rapid increase in interest in our BLIS probiotics,” she says. These ingredients, which are intended to remain within the oral cavity rather than fully enter the digestive system, are well suited to kid-friendly lozenge, chewing-gum, stick-pack, and chewable-tablet delivery forms.

Ingredient supplier Kerry’s (Beloit, WI) R&D director, Donald Cox, PhD, agrees with DeStefano and Dockery that targeted children’s supplements, particularly those focused on immunity, are taking hold and positioned for future growth. “The market opportunity is big for things like specialty supplements, and functional foods and beverages are growing. We are seeing an increase in more immune-health-targeted

formulations for children,” he says. He adds that Kerry has found that “parents tend to drive demand for immune-health products, because when a child gets sick, it impacts the whole family. The growing awareness of the importance of nutrition to help keep children healthy is moving consumers away from reactive, short-term fixes to more proactive, preventative approaches to health and wellness,” such as consumption of functional foods and supplements.

Kerry’s Wellmune ingredient, a beta-1,3/1,6-glucan derived from the cell wall

of a proprietary strain of yeast, is a “100% natural food, beverage, and supplement ingredient clinically proven to strengthen the immune system,” Cox says. Applications include a variety of functional foods and supplements.

Wellmune is currently incorporated into the OLLY-brand children’s gummy supplement, as well as a ready-to-drink dairy-based children’s beverage (Star of Hope Children’s Milk Smart) launched recently in China, and a fruity water beverage called Nurture for children aged two- to five-years-old that is marketed in the United Kingdom.

Supplements for Bone Health, Cardiovascular Health, and Increased Protein Intake

While children’s formulations geared toward immune health may currently reign, those targeting other wellness goals are gaining and maintaining popularity as well. Bone health, cardiovascular health, and increased protein intake rank among these, according to manufacturers and suppliers alike.

Wiley’s Finest, for one, recently formulated, manufactured, and brought to market its Beginners DHA product line, which confers both bone and cardiovascular benefits to children, says Christopher Speed, global sales manager and dietician at the company.



Smash-hit infant and children’s brand The Honest Company, Inc., added non-GMO gummy vitamins to its lineup this year.

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"We felt there was an enormous opportunity to address the nutritional needs of children, who are mostly all deficient in dietary vitamin K2, especially in the MenaQ7 vitamin K2 form [supplied by NattoPharma]," Speed says. "This ingredient, as well as omega-3s DHA and EPA, make this product line unique and worthwhile. Demand for it is very high, and we have been thrilled by the launch." He adds, "It is different from other

While multivitamins for children remain popular, condition-specific formulas are gaining market traction.

omega-3 products aimed at kids because it is the first child-specific product featuring MenaQ7 K2 on the market."

Eric Anderson, senior vice president of global sales and marketing for MenaQ7 supplier NattoPharma USA (Oslo, Norway), explains the mechanisms by which the MenaQ7 ingredient works: "K2 activates specific proteins that are circulating in the body but are inert. Two such proteins proven to be reanimated by K2 are Matrix GLA Protein [MGP] and osteocalcin, which directly support cardiovascular and bone health, respectively."

Mineral supplier Balchem/Albion (Clearfield, UT) sees "steady growth" in the children's bone-health space and others, says senior director of marketing Todd Johnson, Sr. He adds that "research seems to be shifting from 'essentiality' for bone health to perturbations in the normal metabolism of these ingredients, and the subsequent effect on bone health." This type of research is looking at genetic, biochemical, and metabolic changes that affect bone health, he says.

"However," Johnson says, "minerals are essential and proven for supporting children's health, and Albion continues to see steady



The protein trend is for everyone, kids included. This year, E-hydrate introduced a kids' version of its Protein On-the-Go pouch. Just add water and shake, and it turns into an ideal drink for lunch boxes or sports, the company says.

growth in this space, particularly with its calcium, magnesium, iron, and zinc." The supplier's most-requested mineral forms for children's supplements are Calcium Bisglycinate Chelate, Magnesium Bisglycinate Taste-Free, Iron Taste-Free, and Zinc Bisglycinate Chelate Taste-Free.

Answering heavy consumer demand for children's health and nutritional products formulated with more protein and less sugar is E-hydrate's KIDS Protein On-the-Go product. "There needed to be a product that addressed the ongoing sugar issue," says E-hydrate's Head of Social Marketing Michael Howard. "There is nothing like [Protein On-the-Go] on the market: low sugar, low calories, high protein. We were able to formulate a kids' product with all of these benefits without sacrificing taste."

The product is a pre-portioned, ready-to-mix protein and electrolyte beverage containing 10 g of tri-whey protein, 70 calories,

and 4 g of sugar. It is offered in cinnamon roll and milk chocolate flavors and has been "our fastest-growing SKU to date," Howard says. The product is intended for children ages three years and older, but Howard adds that it's also suitable for adults looking for a healthy snack, thereby opening up the market to any consumer aiming to increase protein intake in snack form via functional food.

Special Considerations for Children's Supplements: Safety First! Sweetness Second

Marketers, manufacturers, and suppliers alike all point to safety as being of primary importance when formulating supplements for children.

"Safety and efficacy are a constant consideration for dietary supplements, but it is never so important than when one is formulating for children," says Speed at Wiley's Finest. "Manufacturers must consider the

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NEXT UP: MOOD AND MENTAL-FOCUS PRODUCTS FOR KIDS?

Formulations for immune support, bone health, and cardiovascular health are hot right now, but what are some other wellness targets for which marketers of kids' supplements might develop products in the next few years?

DSM's Hugh Welsh predicts that parents will increasingly seek out mood and mental-focus products for their kids in the future; however, "many botanical products traditionally used for these products targeting adults have not been sufficiently studied in children," he says. "Products developed for this application will need to pass a lot of scrutiny. The materials used will need to be backed with sound science and will likely also need to have a healthy 'aura' surrounding them if they intend to gain wide acceptance."

For mood and mental-focus supplements, Welsh forecasts such ingredients as omega-3s, choline, magnesium, and B vitamins will



remain popular, but others not currently seen much in children's products, such as echinacea, chamomile, ginseng, ginkgo, and

bacopa, "may all have a place in future mood and focus products for children as more studies are conducted."

ingredients they are selecting, focusing on clinically validated ingredients demonstrating efficacious doses and proven mechanisms of action."

Hugh Welsh, President, General Counsel & Secretary, DSM North America (Parsippany, NJ), a supplier of nutrient premixes and custom formulations, adds that when developing children's products, "the scientific background of the materials used needs to be specifically looked at with children in mind. It is also critical to define the quantity of nutrients being delivered in a serving, and these need to be carefully evaluated for the target consumer."

Echoing Speed and Welsh, Stratum's Dockery states, "Foremost to consider is the safety and appropriateness of the ingredient or product. Multiple research studies should be conducted to establish efficacy and safety. This is particularly true for supplements intended for vulnerable populations, including children, pregnant and lactating women, and the elderly." She also adds that dosing is another important concern. "If the ingredient has been deemed to be safe," she explains, "there must be some way to establish proper dosing in children

to take into consideration their developing bodies. The effectiveness and safety of many ingredients depend on certain digestive processes as well as absorption into circulation. Metabolism in the liver must be taken into account, as a child's body may metabolize certain active components much more efficiently than an adult's."

After safety and science, flavor, method of delivery, and palatability are chief concerns for children's formulations. "The biggest thing you need to get right when producing for kids is that the product is palatable," says Wiley's Speed. "Flavoring, serving size, and mode of delivery are important. That's why we created Beginner's DHA with a strawberry/watermelon flavor: one small serving provides a lot of nutrition, and it also includes a syringe for easy delivery."

Kerry's Cox adds that "innovation is key" and can be accomplished within formulation ("manufacturers should leverage color, shape, and size without pushing taste boundaries," he explains), packaging ("think convenience, portion control, and 'play-ability'"), and credibility (in the form of "science-backed products").

DSM's Welsh agrees that format, flavor, and sweetness need to be developed for the child's palette. "The product needs to be attractive to the parents who do the purchasing, but also needs to appeal to the child for repeat purchase," he says. He admits there are challenges, too, to providing palatable, kid-friendly formulas. One of these is making the product sweet without including a large amount of sugar—a red-flag ingredient for today's parents.

"In many products, high-intensity sweeteners and sugar alcohols can be used in place of sugar, but these changes can require modification to the product matrix," Welsh explains. "Another challenge is to deliver flavors from fruit concentrates and powders, because the required volume can be difficult to incorporate into gummies and chewables. This is easier in instant beverages, but in those products nutrient solubility can present an additional challenge." ■

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