

## Functional Confectionery: Finding the Sweet Spot

### Is there a place for healthiness in the indulgent world of candy, chocolate and gum?

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Consumers have a serious sweet tooth. Candy has practically become a staple of the U.S. diet, as candy and gum ranked fourth among 2009 food category sales in Food, Drug and Mass channels, behind carbonated beverages, milk and salty snacks—ahead of cereal—according to SymphonyIRI data. Per capita, the average U.S. consumer spent \$93 on confectionery products in 2008, according to the U.S. Department of Commerce.

The U.S. confectionery category as a whole generated about \$29 billion in retail sales in 2009, representing nearly 4% growth over the previous year, according to the National Confectioners Association (NCA), Washington, D.C. Chocolate candy represented approximately 58% of total confectionery sales, or \$17 billion, while gum accounted for \$3 billion. NCA estimated the global confectionery market at about \$150 billion.

An obsession with sweets, alongside a seemingly antithetical focus on health and wellness, has led to the evolution of the functional confectionery category, which Euromonitor International segments into three markets: medicated confectionery, fortified/functional gum and fortified/functional chocolate. Globally, these three categories accounted for more than \$11 billion in retail sales in 2010, growing 3% over the previous year, the market researcher claims. Functional/fortified gum represents 53% market share, while medicated confectionery comprises 45% and functional chocolate makes up the remaining 2%.

"Between 2005 and 2009 the whole category increased by 19% and we expect it to grow by 16% through 2014," said Ewa Hudson, head of health and wellness research at Euromonitor. "That is more or less similar growth to what has happened in the past."

Led by brands like Halls and Ricola, most medicated confectionery products are positioned as cough suppressants and are designed to deal with upper respiratory conditions and immune support. Ms. Hudson predicted the share of medicated confectionery would decrease slightly in favor of functional gum and chocolate.

Asia-Pacific is the largest market overall with sales of more than \$4 billion. This region also represents about half of the world's functional chocolate sales. Western Europe (\$4 billion) and North America (\$1 billion) are the next largest functional confectionery markets. However, Ms. Hudson predicted Latin America and Eastern Europe would see the fastest growth (25%), followed by Asia (20%) alongside slower growth in Western Europe (10%) and North America (5%) through 2015.

#### Market Drivers

Consumers no longer dismiss the notion that candy can offer health benefits, according to Tom Vierhile, director of Datamonitor's Product Launch Analytics. "A lot of the credit for that should go to the chocolate category, where dark chocolate products (especially products with high cacao contents) have helped hammer home this point the last few years," he said. "Press reports supporting the concept that dark chocolate can be 'good for you' have also helped."

Also propelling market growth, younger consumers are increasingly turning to quick and convenient functional foods as a means of dealing with day-to-day issues like stress and lack of energy, he added.

"Affordable indulgence woven into a healthy treat—that's the power of functional confectionery products," said Jenn Ellek, director of trade communications and marketing, NCA. "As consumers become increasingly health-conscious, the development of better-for-you items has become an important factor for manufacturers. They also realize that candy is a small pleasure that consumers will indulge in whether it is functional or not. At the end of the day, they want something that tastes good."

Ms. Ellek said new products continue to drive the confectionery category overall, noting that those released in the last two years account for 30% of sales. "So when we're thinking of functional products, manufacturers know—despite the economy and proven brands—they need to deliver new products to the consumers because that's really what drives this category."

## Stick with Gum

Growing in popularity among consumers and product manufacturers, functional gums represent one of the most promising product areas. Xylitol and baking soda are among the most common ingredients in these gums, which are designed to offer oral health benefits, said Euromonitor's Ms. Hudson.

Sales of sugar-free gum grew more than 7% in 2009, according to NCA. "Examples of fortified uses in gum include energy boost, smoking cessation, breath freshening, tooth whitening and calcium fortification," said NCA's Ms. Ellek.

Recently, Kraft's Cadbury North America subsidiary, Parsippany, NJ, launched Trident Vitality, an energy-boosting gum available in three varieties: Vigorate, Rejuve and Awaken. Vigorate gum contains a "burst" of citrus and strawberry with 10% of the Daily Value of vitamin C. Rejuve gum contains mint and white tea, and Awaken contains peppermint and ginseng. Cadbury has also introduced Stride Spark Sugarfree Gum, which is now available to U.S. consumers in two varieties: Kinetic Mint and Kinetic Fruit. This gum contains B6 and B12 vitamins, while claiming to contain 30% fewer calories than sugared gum.

New Rockstar Sugar Free Energy Gum, from Rockstar, Inc., has also hit stores in the U.S. and Canada. Iced Mint and Iced Orange flavors contain 80 mg of caffeine per serving (two pieces). The label states: "Caffeine - B-vitamins - Taurine - One pack equals 5, 8 oz. energy drinks." Company literature also states, "Rockstar energy gum is scientifically formulated to provide an incredible energy boost for those who lead active and exhausting lifestyles—from athletes to rock stars."

According to Datamonitor's Product Launch Analytics, the percentage of new gum products launched in the U.S. that claim to be "high" in a particular nutrient, grew from less than 4% in 2009 to nearly 12% in 2010. "The chewing gum category is beginning to see an influx of new items, including high profile launches like Stride Spark and Trident Vitality, introductions that take a Vitaminwater-like approach to introducing health benefits to the chewing gum category," said Datamonitor's Mr. Vierhile.

Moving forward with its commitment to the medical and functional foods market, in February, Nestle acquired CM&D Pharma Limited, which makes Fostrap, a chitosan-fortified chewing gum designed to treat hyperphosphatemia by binding to phosphorus in the saliva, thus reducing the total phosphate load in the gastrointestinal (GI) tract, according to the company. Fostrap chewing gum does not release either the chitosan, or the chitosan-phosphorus complex, into the GI tract and thus does not interfere with the absorption of other medications.

Jennifer Jackson-Luth, senior manager, Marketing Communications, Wm. Wrigley Jr. Co., Chicago, IL, said Wrigley is continually testing functional ingredients in its gums. "Our number one priority is ensuring great taste and a quality product. Technology is getting there, but we think there are improvements to be made on taste and quality. We're not interested in introducing a new product unless we are confident in its ability to be sustainable."

According to Ms. Jackson-Luth, the company has supported clinical research via the Wrigley Science Institute to back the oral health benefits of chewing sugar-free gum for more than 25 years. "Today Wrigley is furthering research about how gum can help manage weight, help reduce situational stress and increase focus, alertness and concentration."

Interest in functional gums has resulted in part from scientific evidence documenting the efficacy of chewing gum as a delivery system, according to Thomas Jahn, business development, Denmark-based Gumlink Nutraceuticals. "Various active ingredients (in gums) are backed by studies exhibiting an equal bioavailability to pills/capsules, and in some cases a faster one at that," he said.

Mr. Jahn also noted that functional confectionery products are typically positioned on specific health platforms. For example, gummies fortified with multivitamins are doing well in the children's health market, chocolate is mainly formulated with antioxidants and gum is mostly used for energy or oral care applications. "At Gumlink, we have—with our dual-layered compressed gum—developed around 15 concepts targeting practically all major application areas, since we see chewing gum as a no-brainer for a lot of these categories. As soon as chewing gum becomes more and more accepted as a delivery system this category will start to lift off."

Concepts include immune defense, weight management, joint health, **heart health** and energy. According to the company, "Oral care will see an enhanced focus during 2011 as Gumlink, in collaboration with strong partners, will be able to market concepts with a pharmaceutical touch such as chlorhexidine, oral care probiotics, antacids and also a new concept that in terms of efficacy comes quite close to matching the good old toothbrush."

Ms. Hudson also noted the potential of probiotics in the oral care market, particularly in the U.S. and Asia. However, manufacturers in the EU have been hesitant to launch new products or make claims on existing ones due to an unfavorable regulatory environment. "I think a number of manufacturers are a little bit skeptical right now and would prefer to wait and see what happens before they make any claims on their products," she said.

Another barrier for probiotic products has been a higher price point. "The price doesn't justify the cost of the ingredient alone," said Ms. Hudson. Still, if probiotic gum and mints attain mass-market appeal it could significantly boost sales of the whole category, she added.

## Chocolate's Recipe for Success

Delivering health benefits alongside exceptional taste has been a recipe for success in the functional foods market. Chocolate offers a unique opportunity to provide that profitable combination.

Laura Bergan, marketing manager for the food manufacturing division of Barry Callebaut, Americas region, said the company has been "looking at ways to re-invent chocolate through innovative research and development initiatives designed to harness the healthy components of cocoa and preserve them in new chocolate products."

Chocolate is a natural vehicle for health due to its naturally occurring cocoa flavonols, she added. "Dark chocolate is growing at a higher rate than milk chocolate products because consumers have learned there are higher flavonol levels in dark than milk." According to NCA, dark chocolate sales increased 9% in 2009 and will continue to grow, but at a slower pace than in previous years.

According to Barry Callebaut, its Acticoa preserves a maximum amount of the cocoa flavonols that occur naturally in the cocoa bean. "These cocoa flavonols are powerful components and may have a positive effect on both the body and mind," said Ms. Bergan. "Recent studies conducted in Europe have suggested that the dietary consumption of cocoa flavonols plays a potentially important role in supporting our health and well-being."

The company claims regular consumption of the cocoa flavonols found in Acticoa can help strengthen the body's natural resistance to environmental stressors; maintain cardiovascular health, including helping to maintain blood pressure, blood circulation and cholesterol at healthy levels; help maintain skin health, including increased skin elasticity and hydration as well as protection from the harmful effects of ultraviolet (UV) radiation caused by regular exposure to the sun.

Capitalizing on dark chocolate's antioxidant benefits for skin health, Frutels LLC offers its signature confectionery product intended to fight acne. Originally designed as a gummy candy to offer clear skin from the inside out, the company has now blended its nutritional vitamin formula with dark chocolate. The Frutels formula contains vitamins C and E, a full-spectrum vitamin B complex, zinc, choline and inositol, biotin and folic acid.

Companies are also adding protein and fiber to chocolate in order to satisfy consumer cravings for healthier products. For example, Mars' Snickers brand launched its Marathon Protein Bar in October 2010. Caramel Nut Rush (20 grams of protein) and Chocolatey Nut Burst (21 grams of protein) are both an "excellent source" of fiber (10 grams) and are low glycemic (index is 26).

### 'Super' Value Added?

Looking to add value to their confectionery products, many companies have started using real fruit or fruit juice ingredients as well as trendy superfruits. For example, Jelly Belly Superfruit Mix Jelly Beans feature Acai Berry, Barbados Cherry, Cranberry, Blueberry and Pomegranate flavors. According to the company, the products are "naturally sweetened" with evaporated cane juice and tapioca syrup and are an "excellent source" of vitamin C. The product is fat-free, gluten-free and each jellybean contains 4 calories.

Wrigley's Ms. Jackson-Luth said fruit flavors have been a key contributor to gum and candy growth. "Wrigley continues to introduce new flavors and innovations to leverage this trend and delight consumers." The company also recently rolled out Extra Dessert Delights, which contain 5 calories per stick of gum and offer consumers a "simple tool to avoid snack cravings."

Some experts also view chocolate as an underappreciated superfruit. Recent research conducted by scientists at the Hershey Center for Health & Nutrition—published in the *Chemistry Central Journal* in February—concluded that cocoa powder and dark chocolate had equivalent or significantly greater ORAC, total polyphenol content (TP) and total flavonol content (TF) values compared to other fruit powders and juices tested, such as blueberry, cranberry and pomegranate.

Various fruit powders and retail fruit products were obtained and analyzed for antioxidant capacity. Among the various powders that were tested, cocoa powder was the most concentrated source of ORAC and TF, according to researchers. Similarly, dark chocolate was a significantly more concentrated source of ORAC and TF than the fruit juices, the study concluded.

While a high antioxidant content serves chocolate well, its high calorie and fat content has been an obstacle in the functional food market. As manufacturers look to minimize unhealthiness in their products, alternative plant-based [sweeteners](#) are gaining importance.

According to Curtis Vreeland, principal of the confectionery market research firm Vreeland & Associates, agave nectar is a versatile [sweetener](#) with a low glycemic index and intense sweetness. "Agave can be used in a broad spectrum of confectionery applications, including energy bars and endurance gels. It joins tapioca, rice syrup and barley syrup as popular plant-based sweeteners. Stevia has also become quite accepted as a plant-based sweetener."

In terms of functional ingredients, chia seeds are popping up in more confectionery applications, according to Mr. Vreeland. "Not only are chia seeds a better source of omega 3 fatty acids than flaxseed, a popular plant-based alternative, they can be stored longer without becoming rancid," he said.

Cleveland, OH-based Fantasy Candies incorporates chia into some of its SweetDreams72 bars. According to owner/chocolatier Joel Fink, "the addition of chia seeds, fruits, nuts and spices allows us to replace by 25% the amount of chocolate in our bars, thus reducing their sugar and saturated fat content."

"Over the years scientists have discovered that chocolate is naturally packed with many healthy properties," said Mr. Vreeland.

Xan Confections, Irvine, CA, has taken chocolate's good-for-you benefits, fortified them, and categorized them into five functional platforms under the CocoXan brand: Coco [Heart](#) (with antioxidants), Coco Well (with Wellmune WGP), Coco Brain (with vitamins and DHA), Coco Pegggers (with [folic acid](#) and DHA omega 3 for new and soon-to-be mothers) and Coco PMS (with antioxidants and anti-inflammatory ingredients, sold under the tagline "Un-Bitch Yourself").

As the functional confectionery market evolves further, Datamonitor's Mr. Vierhile predicted more "healthy lifestyle-oriented launches" rather than those geared toward tackling specific and more complex medical issues like high cholesterol, heart disease and joint pain.

Confectionery is, first and foremost, an indulgence, he added. "Consumers are not necessarily oriented toward seeking out products that aid chronic health issues in this market. A safer bet going forward would be softer attempts to communicate functional benefits to consumers without getting too medical or claim-oriented. I suspect this means more of a focus on issues like energy and relaxation, versus addressing chronic disease symptoms."