Convenience is king. From drive-through drugstores to mail-order dry-cleaning, today’s consumers are continually looking for—and finding—ways to lighten their load of everyday tasks and chores. It may not be surprising then that people are also applying this principle to the way they feed themselves. “American consumers have permanently changed their eating habits. The era of three square meals a day has gone the way of the typewriter and vacuum tube,” research firm Packaged Facts, Rockville, Md., notes in a recent report. “More and more Americans eat smaller portions of food more frequently throughout the day, and there is universal agreement in the food industry that this megatrend is here to stay,” according to Packaged Facts (2013).

If consumers—at least some of them, anyway—are determined to let snack foods replace traditional meals, it makes sense that they would look to bars to fill this need. From cereal bars that eliminate the need for milk and a bowl at breakfast to protein-packed energy bars that make for easy on-the-go lunches and dinners, bars allow consumers to get the energy they need and the nutritional benefits they want in one convenient, easy-to-stow package.

That’s not to say that bars are only being eaten in place of meals. Because of their versatility and the apparently endless permutations they can take, there’s seemingly a bar for everyone, from athletes to people looking to lose weight to people simply trying to stave off the afternoon slump; to say the market is large is an understatement. “It’s huge, the bar space,” says Kara Nielsen, culinary director at Boulder, Colo.—based Sterling-Rice Group. “I always laugh when people say they’re going to start a new bar, and yet a few of them really seem to cut through the clutter.”

Sales in the snack bar/granola bar category, as defined by IRI, for the 52-week period ending Nov. 2, 2014, were $5.5 billion, according to IRI Infoscan data. The category experienced a 2.3% increase in dollar sales compared with a year ago, thanks to an increase in dollar sales of nearly 8.8% in the nutritional bar subcategory; all other subcategories saw a decline in dollar sales. Chicago, Ill.—based research firm Mintel attributes the growth within the nutritional bar subcategory at least in part to consumers’ concerns about the obesity epidemic and their corresponding desire for healthier foods. It predicts that this desire will drive overall category sales to $6.2 billion in 2018. Packaged Facts, though, suggests that as more cereal and granola bars incorporate aspects of nutritional bars at a lower price point, the growth in these subcategories may cannibalize sales from nutritional and energy bars (Packaged Facts, 2012).

Major players in the market include General Mills Inc., Minneapolis, Minn., which has found success in its Fiber One, Nature Valley, and LÄRABAR brands, and Kellogg Co., Battle Creek, Mich., whose Nutri-Grain and Special K brands top sales in the breakfast/cereal/snack bars sector, according to IRI Infoscan data. According to Mintel, these companies’ products account for more than 20% of the total market share.

As bars continue to evolve, though, the top of the bar market may be anyone’s game—as long as new companies can find a way to stand out above the crowd. To meet consumers’ demands for “clean” labels, great taste and texture, and “real”
ingredients, innovative companies are using alternative protein sources, changing flavor profiles, and going back to basics—and relying on forward-thinking ingredient suppliers to develop interesting, exciting products that are shaking up the category.

Reimagining the Protein Bar
People want bars that provide convenient energy on the go, but what else must they have to appeal to today’s consumers? In a word: protein. “You’d have to be blind to miss the big move to protein everyone’s talking about these days; it’s sort of like the point of entry for products in the category,” says Tom Vierhile, innovation insights director for Datamonitor Consumer. “It’s hard to imagine a snack bar that isn’t making some sort of a protein claim.” And these claims are only growing; according to Vierhile, the percentage of bars released in 2014 making high-protein claims was nearly 45%, compared with just 23.8% in 2011.

As these claims increase, the protein used within these bars has begun to take new and innovative forms. “Protein ingredients have long been represented in the bar space, but the protein sources are continuing to evolve,” says Teresa Penn, senior food technologist for Cargill Inc., Minneapolis, Minn. “In the past, proteins used in bars consisted mainly of dairy-based proteins such as whey or plant-based proteins such as soy. Now you are seeing many other sources of plant- and animal-based proteins in bars, including pulses, nuts, lamb, and bison.”

That’s not to say that there isn’t room for more traditional protein sources in this category: soy continues to star in a majority of new product launches. According to a report from Synergy Flavors Inc., Wauconda, Ill., referencing Mintel data, isolated soy protein is the most common vegetable protein source, finding its way into 57.6% of product launches in 2013 (Synergy). Soy ingredients can take a wide variety of forms, including crisps, powder, and nuggets, and according to Luping Ning, innovation lead, bars and confectionery, for St. Louis–based DuPont Nutrition & Health, manufacturers must pay attention to the types of proteins used in conjunction with other ingredients such as binders and inclusions to ensure a desirable texture over the course of the product’s shelf life, something that DuPont’s specially designed soy protein isolates can help with.

Whey protein, a complete protein for lean muscle, is also used extensively in bar formulations, particularly those designed for athletes. Whey protein provides a neutral flavor base and stability across processing methods, according to Hilmar Ingredients, Hilmar, Calif. In bar applications, the company’s Hilmar 9400 Whey Protein Isolate offers heat and acid stability, and its Hilmar 8370 Whey Protein Hydrolysate helps ensure bars are soft and pliable. Additionally, some bars employ a coating made from yogurt, particularly Greek yogurt, which Vierhile says is a way some companies use to communicate that their products are high in protein. Some products going this route include Nature Valley Greek Yogurt.
Dessert Bars Allow for Guilt-Free Indulgence

Many consumers are looking to bars to tide them over between meals or to replace a meal altogether, but for others, bars are a way for them to indulge in a small treat that they perceive to be healthier than a candy bar or other sweet item, according to Mintel. “You deserve it all—health, happiness, and daily indulgences,” says Skinnygirl Daily, Denver, Colo., on its website, and the company’s Skinnygirl Tasty Nutrition Bars seem positioned to bridge the gap between choosing a product that offers consumers functional benefits, such as the protein and fiber these bars provide, and one that satisfies their sweet tooth.

“We are…seeing more interest in leveraging indulgent, dessert-type flavors,” says DuPont’s Jean Heggie, and the snack aisle abounds with products that follow this trend. Fiber One recently introduced a Cookies & Crème flavor to its Fiber One Protein bar line, which it describes as an “enticing combination of creamy layers and cookie pieces” that deliver 6 g of protein in 140 calories. Special K Moments Indulgent Snack Bites, meanwhile, are positioned as a way to satisfy cravings while staying on track. The three-bite snacks, which are available in flavors such as Dreamy Coconut and Caramel Pretzel Bliss, contain just 70 calories.

A product’s texture can also signify indulgence. “You’re seeing some restlessness from companies in the market to try to come up with something new and different,” says Tom Vierhile of Datamonitor Consumer, “and by coming up with other traditional bar ingredients, according to Beata Klamczynska, food applications and technical services manager for Solazyme. “Because of its unique whole cell nature, AlgalVia Whole Algal Protein has limited interaction with other food ingredients and it is stable in a variety of temperatures,” she says. “The protected cell enables formulation with minimal impact on the application’s texture or viscosity.”

Another alternative protein comes in the form of cricket flour, a nutrient-dense protein source that can provide a wealth of functional benefits at very little cost to the environment. Crickets are a complete protein, and they can be raised using less water, feed, and space than other animal-based protein sources. Disappointed by the protein bars he saw on the market, Exo Inc. co-founder Gabi Lewis turned to the insects to build himself a better bar. After a successful Kickstarter fundraising campaign, he and his co-founder, Greg Sewitz, have scaled up production of their Exo bars, which contain approximately 40 dried and finely milled crickets. “To keep up with demand,” says Lewis, “we’ve built out a team, we’re releasing new flavors, and just pushing upward and upward and focusing on getting these bars into as many hands as possible, spreading the gospel of insect protein.”

For those consumers who aren’t looking to plant-based proteins for dietary reasons or aren’t yet ready to embrace insects, “it’s hard to do better in protein than eating meat,” says Vierhile, and the bar category has recently introduced options that put meat-based protein at the...
forefront. Austin, Texas–based EPIC offers a line of bars made from meat such as grass-fed bison, beef, and lamb. The bars celebrate the Paleo lifestyle, and as such, they do not contain gluten or added sugars. Omnibar, Missoula, Mont., combines beef raised on the founders’ ranch into bars with complex carbohydrates from fruits and vegetables to provide lasting energy. The company considers the bars to be “mini meals,” and these bars—like EPIC’s—come in savory flavors such as Mango Curry and Chipotle Barbecue that would fit in perfectly at lunch or dinner.

In fact, as more and more consumers look to bars for satiety and as meal-replacement options, savory bars like these are on the rise. “Savory bars are definitely continuing to see increased new product launches. Bars are the perfect vehicle to get consumers to try out new flavors and culinary trends in the market because of their reasonably low price and small serving size,” says Cargill’s Penn. “It will be exciting to see how the current culinary trends of smoked, sour, bitter, and tangy flavors play out in the snack bar arena.”

This trend can already be seen in some approaches to product development being explored by ingredient suppliers. Nestor Ramirez, division chef for Sensient Technologies Corp., Milwaukee, Wis., recently created a Moroccan Harissa Carrot & Lentil Oat Bar that incorporated the company’s Chili Blends Collection of spices. “Savory bars could potentially bolster new market segments, such as later day meal replacement, rather than just snacks,” says Ramirez, adding that savory bars could also allow formulators to be more creative with their developments while delivering on consumers’ desires for hotter, more flavorful foods. The bars contain Sensient’s vacuum-dried carrots, adding vegetable content to the finished product, something also seen in Simply Veggie Savoury Bars from Toronto, Canada—based Simply Protein; each of these bars provides 5 g of protein, 4 g of fiber, and one full serving of vegetables.

Savory bars may also lend themselves to an association with a certain type of lifestyle, such as meat bars and the Paleo diet or the Sundried Tomato & Basil and Black Olives & Walnuts bars offered by Mediterra, a new company founded by Greek native Telemaque Lavidas as a way to promote the Mediterranean diet. Lavidas saw the bar platform as an easy and convenient way to introduce the diet to Americans, and the full line touches on all aspects of the diet, including fruits, vegetables, and healthy fats. In adhering to the diet’s principles, the bars contain less sugar than conventional bars, and what is there comes mainly from honey and brown rice syrup. “The feedback from many people is, ‘Wow I can’t believe finally somebody is offering us an alternative to these super sweet bars on the market,’” according to Paul Pruett, Mediterra’s CEO. This formulation speaks to some consumers’ wish to avoid excessive sugar; according to Mintel, nearly a quarter of respondents reported not buying bars because they perceive them to be too high in sugar. The lower sugar content in Mediterra’s bars is also having an effect on the product’s placement within stores: some retailers are merchandising the savory bars within the liquor aisle, and the company says consumers have been purchasing the bars for use in cheese platters, paired with red wines and beer.

Another savory option comes from KIND LLC, New York, N.Y. The company’s STRONG & KIND bars pair almonds and pea protein crisps with hickory smoke, chipotle barbecue, and roasted jalapeño peppers, resulting in subtly sweet bars with exciting flavors. According to Scott McClure, R&D food scientist at Blue Diamond Growers, Modesto, Calif., “Bars are often limited in their flavor options due to the sweetness of the binders that hold their ingredients together. The key to moving into savory-forward flavors is finding a way to meld sweet and savory together. The subtle sweet flavor of almonds smoothes out spicy/savory/salty flavors and the light nutty flavor provides depth to the sweet binding ingredients.”

Overall, savory options like these seem aligned with the general move toward looking to protein-based bars as meal replacement options. For now, these meals seem to be skewing toward those later in the day; according to Mediterra, its savory bars are generally eaten after noon. But as tastes evolve and more consumers embrace protein at all eating occasions, perhaps savory bars will become part of a balanced breakfast. »
BARRED NO HOLDS

Building Better Texture
While consumers are mad about protein, they haven’t forgotten about fiber. In 2013, according to survey results mentioned by Vierhile, 82% of respondents were trying to incorporate a moderate or significant amount of fiber and protein into their diets. So it makes sense that the most successful new bars would include both fiber and protein. In order to do so, however, manufacturers must be mindful of how these are combined, both to create a desirable texture and to maintain proper shelf life over time, according to Penn.

“Both fiber and protein can be added to a bar formulation if done so at moderate levels,” explains Tonya Armstrong, senior applications scientist at Grain Processing Corp., Muscatine, Iowa. “For example, most new bars contain between 6 and 13 g of protein and 3 and 5 g of fiber per bar.” GPC’s TruBran® corn bran, which is made from yellow dent corn, contains 85% total dietary fiber, most of which is insoluble. The ingredient can be added to extruded snacks and cereals to add fiber without sacrificing flavor, color, or texture.

Additionally, varying textures of ingredients can help create a positive eating experience. “Marketers have come to recognize that texture is a big part of the sensory experience as well, creating multilayered bars each delivering a different textural dimension to the bar,” says Jean Heggie, strategic marketing lead, DuPont Nutrition & Health. According to McClure, almonds can add crunch to bars while keeping the ingredient list short, especially when multiple sizes and cuts of almonds are used together. Pecan Deluxe Candy Co., Dallas, Texas, meanwhile creates a variety of crisps, clusters, and other types of inclusions that can add unexpected texture and flavor to bar applications, such as a Mango Chile Quinoa Granola blend and Moroccan-spiced pecans.

Creating a ‘Cleaner’ Product
Consumers want both protein and fiber in their bars, but they also want those bars to have “cleaner,” simpler labels. There are now 116 million adults who have consumed at least one healthy-ingredient snack in the last 30 days—51% of the adult population as of 2013 (Packaged Facts, 2013). The market has appeared to respond with a range of bar products making claims that they contain “real” ingredients—
“just” fruit, nuts, and so on. Each variety of one such product, That’s it fruit bars, are made from two ingredients—an apple and one other kind of fruit, such as pineapple or strawberries, providing 3–5 g of fiber and 100 calories.

Bars like these, however, do not necessarily provide everything a consumer might be looking for, such as protein. “For formulators, it is often challenging to achieve high protein levels through the use of nuts, grains, and seeds alone—a concentrated protein source is often necessary,” says Heggie. At least one of KIND’s Fruit & Nut bars, for example, contains soy protein isolate and chicory root fiber in addition to its nuts, fruit, and seeds.

Speaking of seeds, according to Vierhile, the use of pumpkin, sesame, and other kinds of seeds is catching on in bar products. This trend is corroborated by Marilyn Stieve, business development manager, ingredient technologies, for Glanbia Nutritionals, Fitchburg, Wis. “There is a general trend in the bar category to continue to add grains and seeds to a variety of bar types,” she says. “Glanbia has responded to this trend with our growing portfolio of flaxseed, ancient grain, and chia ingredients.” Glanbia’s flaxseed solutions in particular can enable ALA/omega-3 nutrient content claims and add fiber, as well as help with shelf-life extension and binding.

Chia, meanwhile, appears as the main ingredient in several products on the market, including Chia Vitality Bars made by Mamma Chia, Carlsbad, Calif., which provide 1,000 mg of omega-3s, as well as protein and fiber. Health Warrior Chia Bars boast similar nutritional stats, and Health Warrior educates consumers about the nutrient-dense ingredient’s benefits on its website. BI Nutraceuticals, Long Beach, Calif., recently highlighted its chia ingredients in a Sugar Cane Fiber Bar with Raspberry–Chia Seed Filling at the Institute of Food Technologists’ Chicago Section suppliers’ night. Made with raspberry juice and chia seeds, the filling provides omega-3 fatty acids while adding an exciting flavor twist to the bar.

On the whole, ancient grains and seeds are increasingly popular as bar ingredients, according to Elizabeth Arndt, a research fellow with Ardent Mills, Denver, Colo. “Consumers desire bars that will sustain their energy, seeking options with higher fiber and protein, more wholesome ingredients, and whole grain nutrition. As a result, ancient grains are now appearing in more bar formulations.” The company offers a range of ancient grain ingredients ideal for use in bar applications, including amaranth, quinoa, millet, sorghum, teff, and buckwheat, which are available in whole seed and whole grain flour forms, as well as in multigrain blends. In addition, Ardent Mills’ Sustagrain barley, which has three times the fiber of oats and 10 times that of brown rice, can increase the fiber content of products without adding to their ingredient lists.

To comply with clean label desires and the move toward avoiding refined sugar, manufacturers might look to alternative binders, such as nut butters and dried fruit, as well as alternative sweeteners such as brown rice syrup, date syrup, and coconut sugar. In addition, maltitol syrups, such as the MALTSWEET® and HYSTAR® lines from Ingredion Inc., Westchester, Ill., offer binding properties and can be used to replace sugars and syrups in sugar-free applications; they can also provide cohesion, texture, plasticity, and humectancy. Ingredion’s Nutraflora ingredient, a prebiotic

![Image](image_url)
fiber, can also be used in baked, sheeted, and extruded bars to partially replace sugar and add humectancy, according to Ricardo Rodriguez, bakery and confectionery marketing manager.

“The market for sweeteners has never been more exciting, as bakers and snack food manufacturers seek to replace the sweeteners in their products with all-natural alternatives such as honey,” according to Catherine Barry, director of marketing for the National Honey Board. Barry reports that the bar category “has seen manufacturers flock to honey for its form, function, and marketability.” With 17 g of carbohydrates per tablespoon, honey is also a pure source of energy, something that manufacturers might consider when designing bars for endurance athletes.

A Bar for Everyone

Such athletes have often been the target of protein and energy bars, with marketing materials that feature images of muscular men eating these bars after a strenuous workout. While some products continue to take this tack, others have begun to focus on the needs of other groups. “Another trend we are noticing is bars targeting specific population segments,” says Penn. “For example, bars that meet children’s nutritional needs or bars positioned to the female consumer and her needs.”

A variety of bars designed for children focus on influencing kids’ health through their diet, but the challenge lies in creating products that parents will buy and that kids will want to eat. Packaged Facts suggests that a compromise might lie in how these bars are marketed; “transforming such ‘healthy’ offerings into fun and interactive products creates more appeal among younger demographics while still catering to parents’ desires for good nutrition (Packaged Facts, 2014).” Companies like Clif Bar & Co., Emeryville, Calif., are drawing on this concept to create products like Clif Kid ZBar that kids like and parents can get behind.

Positioned to help provide kids with the fuel they need to enjoy an active lifestyle, ZBars feature illustrations on their packages of kids zipping along outside on skateboards. Manufacturers producing bars for children should also be aware of parents’ concerns regarding childhood obesity, and forward-thinking companies might consciously self-regulate when it comes to the ingredients they use and the fat and calories the items contain (Packaged Facts, 2014).

On the women’s health side, thinkThin bars were created by a former model based on her recipe for nutritious snacks that she took along to photo shoots. Although the bars were designed to help women lose or maintain their weight, the greater message, according to the company’s website, is to help women feel good inside and out by taking care of themselves nutritionally. Similarly, Clif markets its Luna bars as “created by and for women...with the vitamins and minerals [their] bodies need to stay healthy.”

Now made with gluten-free oats, Luna bars may also appeal to consumers looking to avoid gluten, another practice that is on the rise. "Looking at snack bars, it’s definitely one of the more prominent claims," says Vierhile. "In terms of product claims, it’s just behind high fiber. That is definitely an area where we’re seeing a lot of new product activity as consumers try to self-diagnose and take gluten out of the diet for whatever reason.” Subscribers to the Paleo diet or those consumers looking to simplify their diets may also be drawn to products marketed as gluten-free.

Men have also been the target of some recent products. Vierhile believes that Clif’s line of Clif Builder’s bars, which contain up to 30 g of protein per bar, may be aimed toward male blue collar workers who could benefit from the sustained energy they provide. Procter & Gamble’s Meta Health Bars, which promote heart health and digestive wellness, are advertised in commercials starring former football player and current talk show host Michael Strahan.

These bars can be found in the medical products aisle alongside bars designed for specific health issues, such as Nutrisystem D bars that are intended to help control diabetes.

PLT Health Solutions, Morristown, N.J., introduced its Beneath Glycemic Balance Complex ingredient last year to reduce the glycemic index in carbohydrate-rich foods such as bars to help with blood sugar management.

There is also potential for manufacturers to create bar products to help promote energy; according to Vierhile, consumers are looking for products to help address stress and tiredness/fatigue. A recent prototype called the Buzz Bar created by Greg Kaminski, Synergy’s chef, contains 5 g of protein, 2.5 g of fat, 100 calories, and 2 g of fiber—along with a caffeine boost.
equivalent to a cup of coffee. Kaminski sees this type of bar as a suitable afternoon pick-me-up or ideal for college students busy studying.

Overcoming Category Challenges
Innovation abounds in the bar category, but success may be determined by how well manufacturers can reach their intended audience. Increasingly, consumers want to feel that they are connecting with companies on a personal level, such as through social media, and they are especially receptive to “cause” marketing and small companies that they see as being driven by a greater purpose. Whatever that cause may be, companies that are able to communicate a personal message stand out, and a larger, “faceless” company may have trouble creating and selling this kind of message (Packaged Facts, 2014).

Manufacturers may also be challenged by consumers who are turned off of buying bars because of their high price points; it will fall to marketers to convince consumers that the health benefits they offer are worth the cost (Packaged Facts, 2013). Additionally, since bars lend themselves to introducing new flavors and concepts—such as insect protein and the Mediterranean diet—some companies may choose not to focus future developments in the bar arena, instead looking for ways they can evolve their brands into new categories.

The creative companies who do choose to stay here, though, should continue to look for even more interesting ingredients for their formulations—Nielsen suggests that cheese crisps may be something to explore—and try to connect when possible with the specific demographic that would appreciate the product most. As illustrated by a new bar product by Mudd+Wyeth intended for dogs and their owners to share, there is sure to be an audience for anything—if you can find it.

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Online Exclusive
To learn more about the story behind Exo’s cricket bars, see Food Technology’s Online Exclusive, “Cricket-Powered Energy,” which can be found at http://www.ift.org/food-technology/online-exclusives.aspx.

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