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LEGISLATION, REGULATIONS AND STANDARDS

FDA to Discuss Protecting Food Against Intentional Adulteration

The U.S. Food and Drug Administration (FDA) has <u>announced</u> a public meeting on February 20, 2014, in College Park, Maryland, to "discuss its proposed rule to require domestic and foreign food facilities that are required to register under the Federal Food, Drug, and Cosmetic Act (the FD&C Act) to address hazards that may be intentionally introduced by acts of terrorism." The agency has proposed the requirement as part of its implementation of the Food Safety Modernization Act. FDA will accept comments until March 31. *See Federal Register*, December 24, 2013.

FSIS Issues New Compliance Guidelines for Hog Facilities

The Food Safety and Inspection Service (FSIS) is <u>requesting</u> comments on its draft guidance for controlling *Salmonella* in hog slaughter facilities. Intended to "provide information on best practices to prevent, eliminate or reduce levels of *Salmonella* on hogs at all stages of slaughter and dressing," FSIS issued the guidance in response to recent *Salmonella* outbreaks implicating pork. Stating that facilities improving contamination control at appropriate processing locations will "likely produce raw pork products that have fewer pathogens, including *Salmonella*," the *Salmonella* Action Plan describes steps involved in the hog slaughter process and production of raw products, with each step targeting best practice recommendations for *Salmonella* contamination control. It also includes information on farm rearing and transport intended for establishments to share with their suppliers and producers. Comments will be accepted until March 7, 2014. *See Federal Register*, January 6, 2014.

Meanwhile, a <u>report</u> from the Pew Charitable Trusts argues that FSIS is not doing enough to fight *Salmonella* outbreaks caused by contaminated meat products, particularly chicken. *See Pew Charitable Trusts News Release*, December 19, 2013.



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NIOSH Seeks Comments on Draft Exposure Limits for Diacetyl

The National Institute for Occupational Safety and Health (NIOSH) of the Centers for Disease Control and Prevention (CDC) has <u>issued</u> a request for comments on Chapter 6 and a new section of Chapter 8 of its draft document, "Criteria for a Recommended Standard: Occupational Exposure to Diacetyl and 2,3-pentanedione." Details about diacetyl, a butter-flavoring chemical used in baked goods and microwave popcorn, and pentanedione, a flavoring agent, appear in Issue <u>403</u> of this *Update*. Comments will be accepted until February 10, 2014. *See Federal Register*, December 26, 2013.

Ad Watchdog Upholds Complaint Against Naked Juice Antioxidant Claims

The U.K. Advertising Standards Authority (ASA) has **upheld** a complaint alleging that PepsiCo International Ltd. t/a Naked Juice made antioxidant health claims on its Website that were unauthorized by the EU Register of Nutrition and Health Claims for Foods (the EU Register). According to ASA, Naked Juice argued that health claim guidance issued by the European Commission failed to establish whether the term "antioxidant""was a specific health claim or a non-specific, general health claim." As a result, the company considered that the term was a non-specific, general health claim, "and it was therefore permissible to use it, provided it was accompanied by a specific health claim which was authorized on the EU Register" – in this case, specific claims about the Vitamin C contents of the "Green Machine" and "Mango Machine" smoothies singled out in the complaint.

But ASA disagreed with this reasoning, ultimately concluding that both the commission's and the U.K. Department of Health's guidance documents "were unequivocal in setting out that a claim that a food contained antioxidants was an example of a health claim which must be authorized on the EU Register." To this end, ASA ruled that "the claims 'ANTIOXIDANT' and 'ANTIOXIDANT FAMILY' were not references to a general, non-specific benefit of the product for overall health, but were specific health claims, because the terms 'antioxidant' referred to the function of a substance on the body." It also rejected the claim, "Juice Smoothies loaded with nature's elite fighting force to defend your body against free radicals (those nasty little molecules that attack your cells and could have an impact on your overall health)," for the same reason.

In addition, ASA took issue with the rewording of Naked Juice's Vitamin C health claims, noting that the guidance documents cited by Naked Juice "warned against picking sentences or phrases from an EFSA [European Food Safety Authority] opinion when adapting the wording of an authorized claim, because it could increase the risk of changing the meaning of the claim." The



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ruling determined that the reworded claims about juice smoothies not only exaggerated the authorized health claims, but related to the product itself rather than a nutrient, substance, food, or food category as required by EFSA. The Website's antioxidant claims were therefore deemed in breach of advertising codes, and Naked Juice was instructed "to ensure that they retained the meaning of, and did not exaggerate, any authorized health claims if they reworded them to aid consumer understanding."

Maine Governor Signs GM Labeling Bill

Maine Gov. Paul LePage (R) has signed a bill (L.D. 718) that will require labeling for foods containing genetically modified (GM) ingredients if at least five other states or a state with a population of at least 20 million passes similar legislation. Restaurants will be exempt from the disclosure requirements, and alcoholic beverages and medical foods would not be required to carry the required labels. Those products subject to the law's provisions would be required to contain "a conspicuous disclosure that states 'Produced with Genetic Engineering," and such products could not described or identified as "natural."

LITIGATION

Organic Labeling-Based Claims Dismissed as Preempted

Addressing a question of first impression, a California appeals court has dismissed a putative class action alleging that Herb Thyme Farms mislabeled its certified organically grown herbs as "USDA Organic" because the contents included a mix of organically and conventionally grown herbs. *Quesada v. Herb Thyme Farms, Inc.*, No. B239602 (Cal. Ct. App., 2d Dist., Div. 3, decided December 23, 2013). According to the court, on appeal, the plaintiff changed her theory of liability from alleged violations of state consumer protection laws to violation of the California Organic Products Act of 2003, a federally approved state organic program. She cited *Farm Raised Salmon Cases*, 42 Cal. 4th 1077 (2008), to counter the trial court's conclusion that her claims were preempted under federal law.

Distinguishing Farm Raised Salmon Cases, the court was guided instead by Aurora Dairy Corp. Organic Milk Marketing & Sales Practices Litigation v. Aurora Organic Dairy, 621 F.3d 781 (8th Cir. 2010), in which the court determined that "state consumer law claims against a certified grower alleging mislabeling are preempted if these claims rely on proof of facts that, if found by the certification agent, would have precluded certification, or would have caused a revocation or suspension of certification." According to the court, the federal Organic Foods Product Act of 1990 manifests Congress's "intention to preclude private enforcement through state consumer lawsuits in order to



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achieve its objective of establishing a national standard for the use of 'organic' and 'USDA Organic' in labeling agricultural products."

Dismissing the claims on preemption grounds, the court did not address Herb Thyme's invocation of the primary jurisdiction doctrine as an alternative ground to affirm the lower court's judgment.

Court Denies Class Cert. in Ben & Jerry's "All Natural" Suit

A federal court in California has denied the plaintiff's motion for class certification in a suit alleging that Ben & Jerry's Homemade deceives consumers by using "all natural" on labels for ice cream, frozen yogurt and popsicle products that contain alkalized cocoa. *Astiana v. Ben & Jerry's Homemade, Inc.*, No. 10-4387 (U.S. Dist. Ct., N.D. Cal., decided January 7, 2014). Additional details about the lawsuit appear in Issue <u>366</u> of this *Update*. The action followed the court's September 2012 denial of final approval for a class-action settlement in the case on the basis of issues raised by *Dennis v. Kellogg*, 697 F.3d 858 (9th Cir. 2012).

Among other matters, the court agreed with the defendant that the plaintiff failed to establish that the class was ascertainable and that common issues predominate over individual issues. While the case was initially brought on behalf of a nationwide class of consumers, in its current posture, a Californiaonly damages class was at issue. According to the court, the problem with ascertaining the class, defined as "persons who bought Ben & Jerry's labeled 'all natural' which contained alkalized cocoa processed with a synthetic ingredient," was that the plaintiff had not shown "that a means exists for identifying the alkali in every class member's ice cream purchases. . . . Defendant uses cocoa that is sourced from as many as 15 different suppliers," one of which "did not know which alkalizing agent was used in every instance" in the cocoa provided to Ben & Jerry's. Other sources provided Ben & Jerry's with "mix-in" ingredients made from alkalized cocoa, and they also "did not identify the specific alkalizing agent used in processing the alkalized cocoa."

As to predominance, the court determined that the plaintiff failed to meet "her burden of showing that there is a classwide method of awarding relief that is consistent with her theory of deceptive and fraudulent business practices, false advertising, or common law fraud (or the alternative theory of restitution based on quasi-contract)." Apparently, the plaintiff did not offer expert testimony to demonstrate "that the market price of Ben & Jerry's ice cream with the 'all natural' designation was higher than the market price of Ben & Jerry's without the 'all natural' designation... More importantly, plaintiff has not offered any expert testimony demonstrating a gap between the market price of Ben & Jerry's 'all natural' ice cream and the price it purportedly should have sold for if it had not been labeled 'all natural'—or any evidence



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demonstrating that consumers would be willing to pay a premium for 'all natural' ice cream that was made with cocoa alkalized with a 'natural' alkali and did in fact pay such a premium."

The court also found that the plaintiff's claims were not typical of the class, "in part because she has not identified an ascertainable class." The defendant contrasted the plaintiff's deposition testimony that the "all natural" label was all that mattered in her purchasing decision with an expert survey showing that 97 percent of consumers said that it did not matter if the product contained cocoa processed with a synthetic alkali. The company further noted that the plaintiff claimed injury on the basis of "disruption" to her "vibe," but presented no evidence that other consumers shared this view. She also sought to represent a class of consumers who purchased 27 products that she did not purchase.

Suit Fails Against Cantaloupe Farm Auditor

A federal court in Oklahoma has dismissed, without leave to amend, claims filed against the company that audited Jensen Farms before a 2011 *Listeria* outbreak sickened dozens of consumers, including the plaintiff, who allegedly contracted listeriosis from the strain linked to the farm's cantaloupe and was hospitalized for a month. *Underwood v. Jensen Farms*, No. 11-348 (U.S. Dist. Ct., E.D. Okla., decided December 31, 2013). Auditor Primus Group, Inc. allegedly gave the farm a "superior" rating and 96-percent score after a July 25, 2011, audit, and the plaintiff became ill on September 2.

The court determined that the plaintiff could not show that the auditor owed him a duty under Oklahoma law because "the connection between the July 25, 2011, audit and the onset of Plaintiff's illness [was] too remote in both time and circumstance. Significantly, Plaintiff has failed to plead facts sufficient to establish that the contaminated cantaloupe would not have been distributed if Primus had given Jensen Farms unsatisfactory audit results. To impose a duty on auditors absent a showing that such auditors maintained some control over the distribution of the manufactured goods would be illogical and impose an unreasonable burden on third-party auditors."

The court also rejected the plaintiff's attempt to impose liability under the *Restatement (Second) of Torts* §§ 311 and 324A or as a third-party beneficiary of the audit contract between Primus and Jensen Farms. In addition, the court determined that the plaintiff failed to sufficiently plead causation and made insufficiently conclusory allegations pertaining to his negligent hiring, selection and monitoring claim against Primus. Because the plaintiff failed to file a motion for leave to amend and "his only request for leave to amend came at the end of his Response to Primus' Motion to Dismiss," the court found that it failed to comply with the relevant pleading rules and thus struck his request for leave.



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Information about the lawsuit that Jensen Farms has filed against the auditor appears in Issue <u>501</u> of this *Update*.

Consumer-Fraud Litigation Against Chewing Gum Maker Dismissed

A federal court in California has dismissed with prejudice the second amended complaint in a putative class action alleging that Wrigley Sales Co.'s chewing gum and candy products are misbranded because the labels state that they are "sugar free." *Gustavson v. Wrigley Sales Co.*, No. 12-1861 (U.S. Dist. Ct., N.D. Cal., San Jose Div., decided January 7, 2014). The court determined that the product labels do not violate federal regulations, the plaintiff failed to adequately plead her alleged regulatory violations, and the plaintiff "is attempting to impose a labeling requirement that is 'not identical to' federal requirements." Thus the court ruled that the "sugar free" component of the complaint was preempted and any further amendment of the complaint would be futile.

The court dismissed the remainder the complaint relating to the defendant's alleged failure to disclose that the products "are sweetened with nutritive and non-nutritive sweeteners or to detail the percentage of the product that nonnutritive components comprise," because the second amended complaint added no new factual allegations since the court previously dismissed these allegations for failure to state a claim. The court also noted that "to the extent Gustavson asserts claims based on statements appearing on a Wrigley website that Gustavson does not claim to have viewed, these claims fail for lack of standing."

Bumble Bee Tuna Labeling Suit Trimmed

A federal court in California has granted in part the motion for summary judgment filed by Bumble Bee Foods in a putative class action alleging that certain labeling claims either deceived consumers or violate state and federal law. *Ogden v. Bumble Bee Foods, LLC,* No. 12-1828 (U.S. Dist. Ct., N.D. Cal., San Jose Div., order entered January 2, 2014). Information about the complaint is included in Issue <u>436</u> of this *Update.*

The court agreed with Bumble Bee that the plaintiff failed to raise a genuine issue of material fact regarding her standing to pursue consumer-fraud claims based on the company's purported statements about vitamin A and iron, because those statements were made on the nutrition information panel, which the plaintiff "does not claim to have read in connection with purchasing the product." Other similar statements appeared on the company's Website, and "Ogden concedes that she did not visit this website prior to purchasing the Sardines Mediterranean Style product." Any claims based on purported health-related product representations or the use of a heart symbol on



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a product were also dismissed because they either also appeared on the Website only or "Ogden failed to explain why she believes Bumble Bee's use of the heart symbol on this product was unlawful."

While the plaintiff withdrew her breach of warranty claims under the Song-Beverly Consumer Warranty Act and Magnuson-Moss Warranty Act, the court found them foreclosed as a matter of law because the state law does not apply to consumables and the federal law applies to products that cost more than five dollars and where the number of named plaintiffs exceeds 100. According to the court, "Ogden has not produced evidence that she paid more than five dollars for any Bumble Bee product she purchased, and she is the only named plaintiff in this suit."

The court further granted the company's motion for summary judgment as to the remedies of restitution, disgorgement and restitution based on "Unjust Enrichment/Quasi Contract." Apparently, the plaintiff failed to provide any evidence of the amount of restitution to which she was entitled. In all other respects, the court denied the motion and will allow the claims relating to Omega-3 nutrient content and front-of-package disclosures to proceed. A motion for class certification is pending.

Twinings Prevails on Health-Based Allegations for Its Tea Products

A federal court in California has granted in part the motion for summary judgment filed by Twinings North America in a putative class action alleging that the company misbrands its tea products by stating that they are a "Natural Source of Antioxidants" and "a natural source of protective antioxidants." *Lanovaz v. Twinings N. Am., Inc.,* No. 12-2646 (U.S. Dist. Ct., N.D. Cal., San Jose Div., order entered January 6, 2014). Regarding the plaintiff's claims that the company's labels imply protection from disease, the court found the product representations "too general to relate to a 'health-related condition'" and thus dismissed these claims.

As to causation, the issue was whether the plaintiff admitted in her deposition that she did not rely on the green tea and Earl Gray tea labels or the company's Website when making her purchasing decisions. The court refused to read her deposition transcript as narrowly as the company urged and found that the label was part of the reason for her initiating and continuing product purchases.

The court refused to find as a matter of law that the company's "natural source" statement is not a nutrient content claim. The court further rejected the company's claim that the plaintiff cannot establish an injury sufficient for Article III standing. While the court acknowledged that the plaintiff "may have significant difficulty proving damages, that is not an issue for standing. Paying more than she otherwise would have because of unfair competition is enough to establish standing."



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FDA Will Not Say If GM Ingredients Are "Natural"

In a January 6, 2014, <u>letter</u>, the U.S. Food and Drug Administration (FDA) responded to three federal courts that stayed litigation involving whether food companies deceive consumers by labeling products with genetically modified (GM) ingredients as "natural," stating that it would not make a determination on the issue to resolve a private litigation-related request. *Cox v. Gruma Corp.*, No. 12-6502 (U.S. Dist. Ct., N.D. Cal.); *Barnes v. Campbell Soup Co.*, No. 12-5185 (U.S. Dist. Ct., N.D. Cal.); *In re General Mills, Inc. Kix Cereal Litig.*, No. 12-0249 (U.S. Dist. Ct., D.N.J.).

Describing the complexities of determining what "natural" means in both a broad and narrow context and the variety of stakeholder interests involved, FDA stated that if it "were inclined to revoke, amend, or add to [current] policy, we would likely embark on a public process" and would have to involve other agencies such as the U.S. Department of Agriculture. Because the agency is devoting significant resources to Food Safety Modernization Act rulemaking under "statutory and/or court-ordered deadlines," FDA said it must prioritize its actions given "limited resources." FDA's current policy on the use of the term "natural" on food labels is that it means "nothing artificial or synthetic (including all color additives regardless of source) has been included in, or has been added to, a food that would not normally be expected to be in the food."

SEC Files Suit Against Diamond Foods over Financial Reporting

The U.S. Securities and Exchange Commission (SEC) has filed a complaint against Diamond Foods, Inc. and two former executives alleging that the company "materially misstated its financial results in multiple SEC Forms 10-Q, 10-K, and 8-K from at least February 2010 and ending in September 2011. In this timeframe, Diamond reported artificially inflated earnings per share that beat Wall Street earnings estimates on a quarterly and yearly basis." *SEC v. Diamond Foods, Inc.*, No. 14-0123 (U.S. Dist. Ct., N.D. Cal., filed January 9, 2014). Information about shareholder litigation involving the alleged price manipulation and financial misstatements at the root of the SEC's complaint appear in Issue <u>464</u> of this *Update*.

According to the SEC, Diamond Foods has agreed to pay \$5 million to settle the charges, and former CEO Michael Mendes has agreed to a settlement. The claims against former CFO Steven Neil continue. SEC claims that increasing walnut prices and pressure to meet or exceed Wall Street stock analyst earnings estimates led Neil to orchestrate a scheme that provided two special payments to appease the growers while excluding portions of those payments from year-end financial statements. *See SEC Press Release*, January 9, 2014.



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Oregon AG Sues 5-Hour ENERGY® Makers Seeking Information

Oregon Attorney General (AG) Ellen Rosenblum has reportedly filed an action in state court against the companies that make and promote 5-hour ENERGY[®], a drink purportedly linked to adverse incidents including fatalities, seeking to enforce her demand for information about the product. The lawsuit against Innovation Ventures, Living Essentials and Microdose Sales, filed in Multnomah County Court, apparently seeks enforcement of the AG's Civil Investigative Demand for information under the state's Unlawful Trade Practices Act (UTPA).

According to a news source, the AG says she has "reason to believe that respondents have made misleading statements regarding 5-hour Energy in three issue areas: (1) whether users experience 'no crash' when using the product; (2) a 'Doctors Recommend' advertising campaign; and (3) the product's suitability for children, all potentially in violation of . . . the UTPA." She seeks an order requiring the respondents to respond to her demand with unredacted documents, a request she alleges the defendants have "stead-fastly refused."

5-hour ENERGY[®] reportedly submitted a petition before the AG filed the action, seeking to "set aside, abate or modify" the investigative demand and claiming that it has submitted some 60,000 pages of documents covering six years, as well as 1,900 pages in response to follow-up questions as part of a 33-state investigation into whether fraudulent health claims have been made for the product. In a statement, the companies said that they "have cooperated and worked collaboratively with officials taking part in the inquiry of 5-hour ENERGY[®] advertising, including producing all of the necessary information for in-depth scientific review of 5-hour ENERGY[®] products." *See Courthouse News Service* and *OregonLive*, December 31, 2013; *ABCNews. go.com*, January 3, 2014.

OTHER DEVELOPMENTS

New UK Campaign Asserts That "Sugar Is the New Tobacco"

A group of international health experts has launched a new campaign intended to reduce the amount of sugar in processed foods and beverages sold in the United Kingdom (U.K.). Modeled after the Consensus Action on Salt and Health and chaired by Queen Mary University of London Professor of Cardiovascular Medicine Graham MacGregor, Action on Sugar includes a number of U.K. scientists and academics as well as National Obesity Forum Chair David Haslam and University of California, San Francisco, Professor of Clinical Pediatrics Robert Lustig.



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The campaigners aim to set gradual sugar reduction targets for the food industry similar to those established for salt content, warning that failure to meet such targets would prompt the group to pursue legislation or a sugar tax. They also seek to (i) educate the public about "the impact of sugar on their health," (ii) identify children as "a particularly vulnerable group whose health is more at risk from high sugar intakes," and (iii) ensure that nutrition labels clearly display the sugar content of all processed foods.

"Sugar is the new tobacco," said University of London Professor of Clinical Epidemiology Simon Capewell in a January 9, 2014, press release. "Everywhere, sugary drinks and junk foods are now pressed on unsuspecting parents and children by a cynical industry focused on profit not health. The obesity epidemic is already generating a huge burden of disease and death. Obesity and diabetes already costs the UK over £5 billion every year. Without regulation, these costs will exceed £50 billion by 2050."

Hundreds Affected by Pesticide-Contaminated Frozen Foods in Japan

As many as 1,700 people in Japan have reportedly become ill after eating frozen food allegedly contaminated with the pesticide malathion, a chemical used to kill aphids in corn and rice fields.

The food, which included frozen pizza and chicken nuggets and apparently contained 2.6 million times the permitted level of the pesticide, has been traced to manufacturer Maruha Nichiro Holdings. The company has issued a public apology and recalled some 6.4 million packages of frozen food—1.2 million of which have reportedly been recovered. Authorities say it is unclear how the items became contaminated and will continue to investigate. *See BBCNewsAsia.com* and *YahooNewsCanada.com*, January 8, 2014.

MEDIA COVERAGE

Consumer Groups Harness Power of Social Media to Influence Food Industry

A recent *New York Times* article highlights how groups such as the Center for Science in the Public Interest as well as individual consumers have harnessed the power of social media to bring their concerns directly to food companies. Titled "Social Media as a Megaphone to Pressure the Food Industry," the article describes several instances in which consumer-backed petitions circulated on Facebook, Twitter or other platforms have purportedly influenced food company policies, resulting in product reformulations or labeling changes.



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Speaking with one spokesperson for Kraft Foods Group, *Times* writer Stephanie Strohm specifically notes that one of the challenges facing companies "when confronted by consumers demanding change is getting them to understand how complicated that change can be... Food companies must work with suppliers to determine what's possible, then supplies have to make the new ingredient in bulk." These changes can also involve regulators if replacement ingredients require approval for new applications. "Instead of relying on a P.R. firm, you have analytical tools to quantify how big an issue it is and how rapidly it's spreading and how influential the people hollering are," one consultant was quoted as saying. "Then you can make a decision about how to respond. It happens much more quickly." *See The New York Times*, December 30, 2013.

SCIENTIFIC/TECHNICAL ITEMS

Researchers Explore Food Addiction in Light of DSM-5 Criteria

York University researchers have published a qualitative study examining "how obese women with and without binge eating disorder (BED) experience overeating in relation to the *DSM-5* [*Diagnostic and Statistical Manual*] symptoms of addiction." Claire Curtis & Caroline Davis, "A Qualitative Study of Binge Eating and Obesity From an Addiction Perspective," *Eating Disorders*, January 2014. According to the study, the recently-published *DSM-5* includes a new category for "Addiction and Related Disorders" that addresses "both substance use disorders (SUDs) and non-substance addictions" in addition to providing new diagnostic guidelines.

Using these expanded criteria, the authors interviewed 12 obese women with BED and 12 without BED, concluding that "both groups of women endorsed *DSM-5* SUD criteria (in relation to food) in their narratives," although there were "visible qualitative differences in how the women experienced these symptoms." More specifically, Curtis and Davis reported that while both groups expressed a desire to reduce their food intake, participants with BED "focused on the uncontrollable aspect of binge eating" and were more likely to describe their symptoms as a "craving," "urge," "desire," or "constant thought."

"Except for one person in the non-BED group, all participants in our study met two or more criteria for a substance-use diagnosis (with food as the substance) as specified in the *DSM-5*," the study suggests. "All those who self-identified as 'addicted' to food emphasized that it was only the highly palatable 'junk food' to which they felt dependent. The sweet foods they craved the most included candy, chocolate, cookies, brownies, ice cream, and cakes. Given that many of these foods are also high in fat, it may not be sugar alone that is driving their addictive feelings, but especially when it occurs in combination with fat."



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In a related development, University of California, San Francisco, pediatric endocrinologist Robert Lustig discusses the concept of food addiction in a January 2, 2014, *Atlantic* article titled "The Sugar Addiction Taboo." In particular, he wonders whether food can truly be addictive "in the same way that alcohol, tobacco, and street drugs are," raising questions about the necessity of fructose in the diet in addition to examining research focused on sugar's effects on the brain. "The concept of sugar addiction will continue to evoke visceral responses on both sides of the aisle," opines Lustig in the end. "One thing most agree on is that sugar should be safe—and rare... The industry feeds our sugar habit to the detriment of our society. We need food purveyors, not food pushers."

Researchers Review Studies Assessing SSBs and Weight Gain for Conflicts of Interest

After analyzing reporting biases for 17 systematic reviews (SRs) assessing the association between sugar-sweetened beverages (SSBs) and weight gain, EU researchers have allegedly <u>concluded</u> that financial conflicts of interest may influence the outcomes of such studies. Maira Bes-Rastrollo, et al., "Financial Conflicts of Interest and Reporting Bias Regarding the Association between Sugar-Sweetened Beverages and Weight Gain: A Systematic Review of Systematic Reviews," *PLoS Medicine*, December 2013. Selected from PubMed, Cochrane Library and Scopus databases, the SRs under scrutiny were classified as either finding a positive association between SSB consumption and weight gain or finding no association at all.

"Among those reviews without any reported conflict of interest, 83.3% of the conclusions (10/12) were that SSB consumption could be a potential risk factor for weight gain," report the study's authors. "In contrast, the same percentage of conclusions, 83.3% (5/6), of those SRs disclosing some financial conflict of interest with the food industry were that the scientific evidence was insufficient to support a positive association between SSB consumption and weight gain or obesity." Although the authors acknowledged that their review could not rule out the existence of publication bias among those studies not declaring any conflict of interest, they nevertheless noted that "those reviews with conflicts of interest were five times more likely to present a conclusion of no positive association than those without them."

Systematic Review Summarizes Neuropsychological Model for Obesity

A recent systematic review of the current scientific literature "assigning obesity to the spectrum of neuropsychological diseases" has proposed "an integrative model" for understanding obesity not simply as a "deliberately flawed food intake behavior with the consequence of dysbalanced energetic uptake and expenditure," but as a complex condition "linked to neurobio-



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logical and psychological aspects such as mood status, addictive behavior, motivation and reward processing as well as coping with psychosocial stress." Kamila Jauch-Chara and Kerstin Oltmanns, "Obesity – A neuropsychological disease? Systematic review and neuropsychological model," *Progress in Neurobiology*, January 2014. To this end, the reviewers highlight obesity research concluding, among other things, that (i) "chronic stress enhances food intake," with both humans and animals choosing energy dense foods "to blunt their stress responses"; (ii) "food intake activates the reward circuitry" in the brain, increasing dopamine concentrations that correlate "positively with the rating of food pleasantness in humans"; and (iii) "stress *per se* stimulates the reward system." They also suggest that "obesity is a consequence of a vicious circle built on cross-links between chronically enhanced stress axis activity and reward-related mechanisms within the mesolimbic system."

"At minimum, obesity is a brain disease that is mediated by the interaction between energy homeostasis, detrimental hyperactivity of the stress systems, and activation of the dopaminergic reward pathways," note the authors. "Against this background, the growing epidemic of obesity requires a change in thinking to overcome this challenge. A step in the right direction would be to realize that concepts to readjust detrimental neuropsychological dysfunctioning necessarily need to be integrated into the prevention of and therapy for overeating and obesity in the future."

Study Allegedly Identifies Immunological Connection Between Obesity and Asthma

A recent animal study has allegedly identified a new immunological connection between obesity and asthma involving "inflammasome activation and production of cytokine interleukin-17 by innate lymphoid cells in the lung," according to a concurrent editorial published in *Nature Medicine*. Hye Young Kim, et al., "Interluekin-17-producing innate lymphoid cells and the NLRP3 inflammasome facilitate obesity-associated airway hyperreactivity," Nature Medicine, January 2014. After studying mice that were raised on a high-fat diet until they became obese and developed asthma, researchers with Boston Children's Hospital apparently reported that "obesity appeared to alter the innate immune system—the body's first responder to infection—in several ways to cause lung inflammation." In particular, they noted that, compared with non-obese mice, "the lungs of the obese, asthmatic mice had several differences": (i) "High levels of the protein interleukin 17A (IL17A), a cytokine (signaling molecule) associated with several inflammatory conditions"; (ii) "Increased numbers of the immune cells that produce IL17A, known as type3 innate lymphoid cells (ILC3 cells)"; (iii) "Activation of an inflammatory protein known as NLRP3 inside lung cells"; and (iv) "Increased production of the cytokine IL-1β, a stimulator of ILC3 cells." See Boston Children's Hospital Press Release, December 15, 2013.



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"The association between obesity and asthma has been known for several years, but the specific mechanisms by which obesity causes asthma have been undefined until now," concludes the study. "We now suggest that the inflammation in obesity, which has been recently shown to arise from NLRP3 activation and excess production of cytokine IL-1β, also underlies the development of asthma that is associated with obesity."

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