Highly processed foods dominate U.S. grocery purchases

Study analyzes level of processing and nutritional value of 1.2 million grocery products

Boston (March 28, 2015) — A nation-wide analysis of grocery purchases reveals that highly processed foods make up more than 60 percent of the calories in food we buy, and these items tend to have more fat, sugar and salt than less-processed foods.

“Many Americans have strongly held opinions and beliefs about processed foods,” said Jennifer M. Poti, Ph.D., research assistant professor at the University of North Carolina at Chapel Hill and leader of the research team conducting this study. “Some consider processed foods to be tasty, convenient and affordable choices while others contend that the combination of sugar, fat, salt and flavoring in these foods promotes overeating and contributes to obesity. But until now, we didn’t really have the evidence needed to settle this debate: No prior studies have examined whether highly processed foods collectively have a worse nutritional profile than minimally processed foods, using nutrition information and ingredient lists specific for barcoded food and beverage products.”

From 2000 to 2012, the researchers asked 157,142 households to use UPC barcode scanners to record all foods and beverages they purchased from grocery stores for at least 1 year. Although items without barcodes were not included, Poti points out that packaged produce such bagged lettuce or pints of berries can be scanned. Households participated in the study for an average of four years and collectively purchased 1.2 million items. The research team then linked each item to its nutrition information, product description and ingredient list, allowing them to rank each product’s degree of food processing.

The researchers classified products as highly processed if they contained multi-ingredient, industrially formulated mixtures. They labeled foods such as soda, cookies, chips, white bread, candy and prepared meals as highly processed foods and categorized fresh or frozen fruits and vegetables, milk, eggs, dried beans and fresh meat as unprocessed or minimally processed. The investigators also examined convenience, distinguishing between foods that are ready to eat, ready to heat or require cooking and/or preparation. Candy and chips are examples of ready-to-eat foods, and frozen meals are a ready-to-heat food.

“Overall, we found that not only are highly processed foods a dominant, stable part of U.S. purchasing patterns, but also that the highly-processed foods that households are purchasing are higher in fat, sugar, and salt, on average, compared to the less-processed foods that they buy,” said Poti, who will present these findings at the American Society for Nutrition (ASN) Annual Meeting during Experimental Biology
2015. “The unshifting dominance of ultra-processed and ready-to-eat foods as major calorie contributors to U.S. diet and their poor nutrient profile support the need to incentivize food manufacturers to improve the nutritional quality of their products.”

The analysis revealed that from 2000 to 2012, the proportion of calories in highly processed food and beverage purchases by U.S. households remained stable at 61.0 to 62.5 percent. The researchers noted a significant increase in the proportion of calories purchased in ready-to-heat foods, which reached 15.2 percent in 2012. More than 80 percent of calories were purchased in ready-to-eat or ready-to-heat form in 2012, and these tended to be higher in fat, sugar and salt than food purchases that required preparation.

The researchers continue to track purchases to see how nutrition and level of processing might change over time. They are also using the data to examine whether purchasing habits vary based on race or socio-economic status.

Poti said that she also hopes this study can lead to a more careful use of the term processed food. “It is important that when we discuss processed foods, we acknowledge that many processed foods, such as canned vegetables or whole-grain breakfast cereals, are important contributors to nutrition and food security,” she said. “However, it is the highly processed foods — those with an extensive degree of processing — that might potentially be related to obesity.”

Jennifer M. Poti will present the findings during the Experimental Biology 2015 meeting on Saturday, March 28 from 5:00 – 7:00 p.m. at the Emerging Leaders in Nutrition Science Poster Competition in Grand Ballroom East and on Sunday March 29 from 12:45 – 2:45 p.m. during the Nutritional Epidemiology: Advancing Nutritional Epidemiology with Public Use and Commercial Data Sets poster session in Exhibit Halls A & B, Boston Convention and Exhibition Center.

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Images are available.

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Experimental Biology is an annual meeting comprised of more than 14,000 scientists and exhibitors from six sponsoring societies and multiple guest societies. With a mission to share the newest scientific concepts and research findings shaping clinical advances, the meeting offers an unparalleled opportunity for exchange among scientists from across the United States and the world who represent dozens of scientific areas, from laboratory to translational to clinical research. [www.experimentalbiology.org](http://www.experimentalbiology.org)

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ASN is the preeminent professional organization for nutrition research scientists and clinicians around the world. Founded in 1928, the society brings together the top nutrition researchers, medical practitioners, policy makers and industry leaders to advance our knowledge and application of nutrition. ASN publishes three peer-reviewed journals and provides education and professional development opportunities to advance nutrition research, practice and education. [www.nutrition.org](http://www.nutrition.org)
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**MEDIA CONTACT**
Anne Johnson
571-271-1986
media@faseb.org

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Phone: 617-954-3969

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