

Let's Clear Up the Confusion About Processed Food and Health

Public health and food safety are two critical pillars of the food supply chain. Nearly a century ago, in the Great Lakes, Appalachian, and Northwestern regions of the United States known as the “goiter belt,” between 30% and 60% of the population presented maladies associated with iodine deficiency (Leung, Braverman, and Pearce 2012). The voluntary fortification of table salt with 100 ppm of iodine significantly reduced the prevalence of goiter. Despite this action within the United States and mandated iodine fortification of salt in at least 60 countries, iodine deficiency disorders remain one of the three major nutrient deficiencies in the world (Burlingame and Derini 2012).

More recently and following considerable debate and discussion, the U.S. Public Health Service recommended that women of childbearing age begin daily supplementation with 400 µg of folic acid to reduce the risk of having an infant affected by a neural tube defect (Crider, Bailey, and Berry 2011). Several other countries mandate folic acid fortification, which ultimately contributed to a 19%–55% decline of neural tube defects and associated morbidity and mortality, which reflect a global burden. Yet the public health benefits and potential adverse effects of folic acid fortification continue to be considered and debated.

Food fortification and

enrichment can be challenging for those in the science of food and the food regulation and safety arenas. Current and evolving food technologies make possible these positive public health contributions. These technologies also improve product safety through agricultural practices and food consumption while providing

2008). Importantly, an array of nonthermal processes improves the nutritional quality and safety of foods, which is particularly critical as consumer attitudes call for decreased food processing and increased plant-based dietary patterns (Knorr, Ade-Omowaye, and Heinz 2002).

On the other hand, many consumers in Europe, North

These results counter an earlier report that points out that some forms of processing improve retention and bioavailability of food components associated with improved health while acknowledging that epidemiological evidence suggests some forms of meat processing and preservation may increase risk of some types

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safe, nutritious, affordable, and accessible food for a growing population (Floros, Newsome, Fisher, et al. 2010).

Within the United States, the Food and Drug Administration and the U.S. Department of Agriculture have approved a variety of foods for irradiation for more than 50 years. Controlled and safe radiation from three sources can contribute to the reduction of foodborne illnesses, preservation of food, control of insects and reduction of pest control practices, modulation of sprouting and fruit ripening, and sterilization of food (FDA 2016). High-pressure processing, another nonthermal process that had its origins more than a century ago, decreases food spoilage and improves food shelf life by inactivating and eliminating pathogenic organisms and thereby reducing food waste (Considine, Kelly, Fitzgerald, Hill, and Sleator

America, and South America are quite skeptical as to the value of these technologies. In fact, many contend that the consumption of processed foods contributes to chronic noncommunicable diseases, even cancer (Raubert, da Costa Louzada, Steele, Millett, Monteiro, and Levy 2018) (Fiolet, Srour, Sellem, et al. 2018). These authors advanced the hypothesis that ultra-processed foods contribute to excess energy, sugar, and sodium consumption as implied by intakes that were above suggested upper limits. Data from a French study, NutriNet-Santé, classified foods based on the degree of processing (NOVA) as advanced by Monteiro, Levy, Claro, de Castro, and Cannon in 2010. This prospective study indicated nutritional quality, namely lipid, sodium, and carbohydrate intake, were associated with at least 10% increased risk for overall and breast cancer.

of cancer (Erdman Jr., Jeffery, Hendrickx, Cross, and Lampe 2014).

In an earlier commentary, Monteiro acknowledged foods are generally processed, yet proposed grouping foods based on the degree or level of processing, namely minimally processed, processed, and ultra-processed (Monteiro 2009). He further commented that ultra-processed foods are not a solution and contribute to unhealthy dietary patterns. Interestingly, even the addition of sugar and salt to foods categorized as minimally processed automatically catapults them to the processed classification even though the actual processing technology is identical. Similarly, with the addition of more than five ingredients and packaging, foods are shifted from processed to ultra-processed. Therefore, all cereals that contain added sugar and salt are considered ultra-

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processed (Jones 2018).

A review of the 2010 Dietary Guidelines for Americans indicated processed foods did not contribute to an increase or decrease of nutrient recommendations (Eicher-Miller, Fulgoni III,

to meet dietary recommendations and that consumers are confused about the nutritional value of processed foods (Dwyer, Fulgoni III, Clemens, Schmidt, and Freedman 2012). However, some countries, such as the

Nations, advocates of NOVA continue to contend that the production and consumption of ultra-processed foods represents a world health crisis and the associated issues with processed foods are inconsistent

discriminate between foods with little value being consumed by nutritionally at risk populations such as children, sick elderly individuals, and those with diagnoses that require specific nutritional interventions and restrictions. Let us be mindful and evidence based about the benefits and the risks of processing and take care not to throw the baby out with the bathwater. **FT**

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and Keast 2015). An earlier report by this group indicated processed foods did not significantly contribute to nutrient distribution within a balanced dietary pattern (Eicher-Miller, Fulgoni III, and Keast 2012). A similar report that evaluated nutrient intake using data from the National Health and Nutrition Examination Survey 2003–2006 indicated processed foods helped Americans

United Kingdom, Australia, and Canada, are considering a food processing classification to assess the nutritional quality of dietary patterns (Adams and White 2015) (O'Halloran, Lacy, Grimes, Woods, Campbell, and Nowson 2017) (Moubarac, Batal, Louzada, Steele, and Monteiro 2017). In addition, during this Decade of Nutrition (2016–2025), as designated by the United

with the United Nations Sustainable Development Goals (Monteiro, Cannon, Moubarac, Levy, Louzada, and Jaime 2017).

There is no ambiguity about the fact that widespread food processing has made our food supply safer, more robust, and of greater nutritional value. Persistent confusion about processing and health seems to derive from a failure to

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