

## The Myth of Ultra-Processed Foods

**Raul Amaral Rego\***, Airton Vialta and Luis Fernando Ceribelli Madi

*Technological Innovation Platform, Institute of Food Technology – ITAL, Brazil*

**\*Corresponding Author:** Raul Amaral Rego, Technological Innovation Platform, Institute of Food Technology – ITAL, Brazil.

**Received:** December 08, 2017; **Published:** December 30, 2017

The Institute of Food Technology - ITAL, linked to Agribusiness Technology Agency of São Paulo - APTA of the Secretariat of Agriculture and Food Supply of São Paulo state, carries out activities of research, development, technological assistance, innovation and diffusion of knowledge in the areas of packaging, processing, food preservation and food safety. In its researches on food trends [1-6] was detected an increased rejection of various additives and ingredients customarily present in processed foods and beverages. This behavior is due mainly to the lack of scientifically based information and to myths about processed foods.

Recent studies indicate that consumers are confused about what to eat in order to have a nutritious and healthy diet. According to the Label Insight research [7] with over 1,000 American consumers, 83% of respondents demonstrated confusion regarding the types of ingredients reported on product labels (almost always 5%, very often 12%, often 25%, sometimes 41%), and 88% considered it very important (50%) or important (38%) to evaluate the ingredients when choosing what to buy. The IFIC's annual survey [8] points out that 8 out of 10 consumers identify conflicting information about what to eat or not, a situation that undermines their purchasing decisions.

In Brazil, HealthFocus International's research [9] found that 43% of respondents were frequently confused about what to eat to stay healthy, and the main causes of this confusion were identified as "because there is so much information and it is always changing" (51%), "because I never really learned enough about nutrition" (25%), "because there is so much information on food packages. I do not know what is important" (20%). The number of Brazilians who are tired of experts saying what foods are good for them increased from 26% in the year 2000 to 46% in 2014.

Even with the noble objective of contributing to the improvement of the food quality, the dissemination of conflicting information about what to eat or not is more disruptive than helpful to the consumer. There is a communication gap between the technical and scientific community and the society related to providing greater transparency on the technological innovations that have been incorporated in the production of processed foods [10]. That is, there has been great evolution in food science over the last decades, but unfortunately, this evolution has not been understood by consumers. Therefore, it would be advisable for all stakeholders to focus on providing only information based on the state of the art of science, guided by legislation and, above all, free of conflicting interests.

In order to reduce this information gap, ITAL is developing researches that would contribute to consolidate technical and scientific information capable of showing to the public the importance of healthiness, quality, safety and sustainability of the technologies used in food processing.

The project "Brasil Processed Food 2020: The Importance of Processed Foods to the Brazilian Society", under development at ITAL, also covered the objective of studying and clarifying the myths and preconceptions about processed or industrialized foods, which resulted in the creation of a specific module in the information platform about processed foods ([www.alimentosprocessados.com.br](http://www.alimentosprocessados.com.br)), in which several issues are raised and discussed, including the food-classification system based on the degree of processing that guided the elaboration of the Dietary Guidelines for the Brazilian Population, an official document of the Brazilian Ministry of Health [11]. In this

document, there is an explicit recommendation to avoid the consumption of several categories of industrialized foods and beverages. In addition, this food-classification system has been used as a basis for the defense of public policies aimed at taxing products, prohibiting advertising and even restricting its commercialization. Several criteria adopted in this classification system demonstrate their fragility in relation to food science and technology and conflict with traditional and well-established food classification systems [12].

There is no practical sense in trying to classify foods based on the degree of processing, since the same food can be processed in different ways, depending on the final product intended to achieve. For example, potato chips can be fried, roasted or extruded, with very little or no salt or fat, with or without artificial additives. Thus, to state in a general way that “packet snacks”, “chips” and “sweet, salty and fat snacks” are ultra-processed is like trying to establish a concept that is difficult to apply, considering the wide variety of products commercialized in the market.

The processing transforms food from its original state to make it available for consumption, preventing spoilage or contamination, offering convenience to culinary preparations, etc. Depending on the product and purpose of this transformation, different types of processing may be employed, for example, pasteurization, sterilization, freezing, dehydration, fermentation, etc. Many processed foods such as yogurt, cheese, ham, bread, cake, biscuit, chocolate and various types of beverages were created long ago, improved over centuries and incorporated into the habits of various populations. Cheese, for example, refers to a product category that contains many types, uses different raw materials, processes and packaging, therefore has different compositions. That is, for its diversity, a category of food can be classified by taste, texture, quality, nutritional content, concentrations of fat, sodium or sugar. However, it cannot be said that it is unsuitable for a good diet based on the degree of processing. After all, “the most important determinants of diet quality are the specific types of food consumed and not their degree of processing,” as stated by Eicher-Miller, *et al.* [13] in their extensive study on the subject.

In addition to the degree of processing, the food-classification system adopted by the Dietary Guidelines for the Brazilian Population seeks to define other criteria based on the content of these product categories, such as “large number of ingredients”, “presence of additives”, “great amounts of fats, sugars and sodium”, “large amounts of calories per gram”, “low in fiber, vitamins, minerals and other nutrients”. It is not showed, for example, the scientific basis used by this system to establish five as the limiting number of ingredients that determines whether a food is acceptable or not. It is possible that the origin of this limit is the statement of a renowned professor of journalism, Michel Pollan: “Avoid Food Products That Contain More Than Five Ingredients” [14].

In fact, some products feature several additives, all of which added to fulfill a specific function. Otherwise they would not be used considering that they represent an additional cost to the final product. The number of additives employed does not necessarily interfere with their quality or healthiness, since all the additives used in processed food products are evaluated for safety for human consumption, have a recommended daily dose and are displayed in a positive list of food additives (<http://portal.anvisa.gov.br/web/guest/alimentos>) approved by Brazilian Health Regulatory Agency – Anvisa, an institution linked to the Ministry of Health.

Another criterion used by this food-classification system refers to the reduced proportion of fresh foods in ultra-processed foods. However, the analysis of the composition of products of various categories classified as ultra-processed foods makes it difficult to apply this criterion in practice. For example, in the category of meat, fish and by-products, most products use meat and fish in nature in great proportion, or even as the only raw material, as is the case of many hamburgers, hams, bacon, cod, canned, breaded and even ready-to-eat meals, which, in addition to the meat, can be added with seasonings or sauces, as is the case with culinary preparations. Fresh milk is the main ingredient in cheeses and various dairy drinks. Most snacks are made from grains and vegetables, such as potatoes, cassava, wheat, corn and rice. Flours are the main ingredient in processed pasta, breads, cakes and biscuits.

In general, the wide variety of food products within a single category makes it impossible to use this food-classification system to guide the choice of an individual at the time of purchase, in front of a shelf full of options which vary in the number and types of ingredients, presence of additives and also in relation to the contents of calories, fats, sugar, salt and nutrients. As observed by Gibney, *et al.* [12], a

food-classification system based on degree of processing instead of nutritional aspects cannot offer specificity at the individual level of nutrition and becomes very comprehensive and rigid to be compared to the existing classification systems. As a result, it has little practical value and constitutes a linguistic system of classification. Still according to these authors, neither the terms used to define an ultra-processed foods nor the list of typical foods in each category reaches the characteristic patterns of the already established classification systems.

Finally, proponents of this system need to present consistent evidences showing that the consumption of processed foods may actually pose some risk to the consumer health. They also need to sharply counteract researches that bring evidences to the contrary, such as Weaver, *et al.* [15], from which the American Society for Nutrition found that “processed foods are nutritionally important to the American diet,” and that a good diet depends on the selection of foods of nutritional value regardless of whether they are processed or not.

As part of its mission to disseminate technical-scientific knowledge to agribusiness, to the benefit of society and consumers, ITAL begins a new phase of its studies in order to clarify how and why food and beverages are processed in several categories, including meat and by-products, fish, dairy products, cereals, fruits, vegetables, greens and by-products, pasta, breads and cakes, chocolates, candies and confectionery, ice cream, oils and fats, seasonings and condiments, ready-to-eat meals etc. In the first half of 2018 it will be launched a document with this content. With technical and scientific information, without value judgments or conflicts of interest, the knowledge in greater detail about the products and their ingredients and forms of processing can serve as support to the purchasing decisions of the Brazilian consumers, in the exercise of their free will.

### Bibliography

1. Madi L., *et al.* “Brasil Food Trends 2020” (2010): 173.
2. Sarantópoulos CIGL and Rego RA. “Brasil Pack Trends 2020” (2012): 228.
3. Vialta A and Rego RA. “Brasil Ingredients Trends 2020” (2014): 389.
4. Queiroz GC., *et al.* “Brasil Bakery and Confectionery Trends 2020” (2014): 324.
5. Rego RA., *et al.* “Brasil Beverage Trends 2020” (2016): 302.
6. Zacarchenco PB., *et al.* “Brasil Dairy Trends 2020” (2017): 343.
7. The 2017 Label Insight Ingredient Confusion Study. “Confusing Ingredients Cause Shoppers to Consider Switching Brands Even If It Means Paying More”.
8. International Food Information Council Foundation. “Food and Health Survey” (2017).
9. HeathFocus International Trend Report. “Brazil Primary Food Shoppers and Their Quest for Health and Nutrition”. Private Report (2014).
10. Madi L and Rego RA. “Rapid-Communication: Brasil Processed Food 2020: a project to promote confidence in the food industry”. *Brazilian Journal of Food Technology* 18.4 (2015): 337-339.
11. Ministry of Health. Secretariat for Health Care. “Dietary Guidelines for the Brazilian Population” (2014): 156.
12. Gibney Michael J., *et al.* “Ultra-processed foods in human health: a critical appraisal”. *The American Journal of Clinical Nutrition* 106.3 (2017): 717-724.

13. Eicher-Miller, *et al.* "Contributions of processed foods to dietary intake in the US from 2003–2008: a report of the Food and Nutrition Science Solutions Joint Task Force of the Academy of Nutrition and Dietetics, American Society for Nutrition, Institute of Food Technologists, and International Food Information Council". *The Journal of Nutrition* 142.11 (2012): 2065S-2072S.
14. Pollan M. "Food Rules: An Eater's Manual". London: Penguin Books (2010). ISBN: 978-0-141-96297-9.
15. Weaver C., *et al.* "Processed foods: contributions to nutrition". *American Journal of Clinical Nutrition* 99.6 (2014): 1525-1542.

**Volume 12 Issue 3 December 2017**

©All rights reserved by Raul Amaral Rego., *et al.*