

Research Article,

Consumption of Processed and Packaged foods-the Principal Reason for Hike in Diseases Worldwide

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Abstract:

Processed & packaged foods such as ready meals, baked goods and processed meats can have negative health effects. Processed or packaged food is any food that's altered during preparation to make it more convenient, shelf-stable, and tasty or flavorful. Most food needs some degree of processing and not all processed foods are bad for the body. However, chemically processed foods, also called ultra-processed foods, tend to be high in sugar, salt, artificial ingredients, refined carbohydrates and Trans fats. These ingredients makes the processed food taste better and more palatable but leads to serious health issues like obesity, heart disease, high blood pressure, diabetes & cancer etc. These foods now account for 25–60% of daily energy intake throughout much of the world leading to amplification of diseases.

Introduction:

Nutrition authorities recognize the concept of ultra-processed foods (UPF), as a descriptor of unhealthy diets. UPF involved systematic search findings from diverse study types, populations, health outcomes and dietary assessments; and quality appraisal. Among adults, these included overweight, obesity and cardio-metabolic risks; cancer, type-2 diabetes and cardiovascular diseases; irritable bowel syndrome, depression and frailty conditions; and all-cause mortality [1]. Among children and adolescents, these included cardio-metabolic risks and asthma. In a novel approach to food categorization, NOVA (a name not an acronym) classifies foods and beverages 'according to the extent and purpose of industrial processing', an aspect generally overlooked by public health nutrition science, policy and guidance [2]. Data were extracted on study details (author, publication date, study type, country and period of study) population (subjects, sample size), UPF exposure (food data extraction level, collection method, relative exposure assessment, NOVA reference), health outcomes (definition, data collection) and key findings [3].

The WHO defines overweight and obesity as 'abnormal or excessive fat accumulation that may impair health' and states that weight gain, at whatever the original weight, is a risk for disease [4]. Unhealthy diets are recognized as a major determinant of the occurrence of NCDs. With the increasing trend of NCDs, a steady rise in the share of processing foods has been seen. In the last half century food processing has evolved greatly as a consequence of the industrialization and globalization of food systems [5]. Transnational corporations are major factors that drive the production and sales of UPFs, along with their convenience, branding and aggressive marketing [6]. Considering the synergistic health-related effects of foods, it is of great importance to study dietary patterns instead of single foods or nutrients. The mechanism is multi-faceted. First, UPFs consumption is usually accompanied with high intake of fats, calories, sugars and salt, and low intake of micronutrients and fibre [7].

The ultra-processed foods are sometimes called "cosmetic" foods, as compared with whole

foods. Frozen or ready meals, baked goods, including pizza, cakes, and pastries packaged breads processed cheese products, breakfast cereals, crackers and chips, candy and ice cream instant noodles and soups, reconstituted meats, such as sausages, nuggets, fish fingers, and processed hams sodas and other sweetened drinks are the examples of UPF [8]. Ultra-processed foods tend to taste good and are often inexpensive. However, they usually contain ingredients that could be harmful if consumed in excess, such as saturated fats, added sugar, and salt. These foods also contain less dietary fiber and fewer vitamins than whole foods. One large study involving more than 100,000 adults, found that eating 10% more ultra-processed foods was associated with above a 10% increase in the risks of obesity, cardiovascular disease, coronary heart disease, and cerebrovascular disorders [9]. The researchers reached this conclusion after accounting for saturated fat, sodium, sugar, and fiber intake. It is found that eating more than 4 servings of processed food daily was linked with an increased risk of all-cause mortality/Death. For each additional serving, all-cause mortality risk increased by 18% [10].

Discussion:

The dangerous ingredients of processed & packaged food

A. Added sugar

Processed foods tend to contain added sugar and, often, high fructose corn syrup. Added sugar contains no essential nutrients but is high in calories. Regularly consuming an excess of added sugar can lead to compulsive overeating. It is also linked with health conditions such as obesity, metabolic syndrome, type 2 diabetes, and inflammatory diseases. Processed foods and beverages are among the major sources of added sugar in the diet. Sweetened beverages are a particularly significant source; people tend to consume much more sugar than they realize in soft drinks [11].

B. Artificial ingredients

The ingredients list on the back of processed food packaging is often full of unrecognizable substances. Some are artificial chemicals that the manufacturer has added to make the food more palatable. Highly processed foods often contain the following types of chemicals -preservatives,

which keep the food from going bad quickly, -artificial coloring, -chemical flavoring and -texturing agents. Also, processed foods can contain dozens of additional chemicals that are not listed on their labels. For example, “artificial flavor” is a proprietary blend. Manufacturers do not have to disclose exactly what it means, and it is usually a combination of chemicals. Official organizations have tested most food additives for safety, though the use of these chemicals remains controversial among doctors and researchers [12].

C. Salt-The sodium monster

Although many people are quick to blame the salt shaker, only a small amount of dietary sodium is added during home cooking and at the table. Most of the sodium that people all over the world consume—about 70%—comes from restaurant, prepackaged, and processed foods, including many products that don’t even taste salty. For consumers to make informed decisions about what they eat, it’s helpful to understand the role sodium plays in different foods [13].

Why Is Eating Too Much Sodium a Problem?

Our bodies require only a small amount of sodium each day to function normally. Eating too much sodium can lead to increased blood pressure, which can raise the risk of heart attack, stroke, and other cardiovascular conditions. Most adults all over the world exceed their recommended daily limit of sodium. Reducing your sodium intake can help lower your blood pressure and improve the health of your heart [14].

D. Refined carbohydrates

Carbohydrates are an essential component of any diet. However, carbs from whole foods provide far greater health benefits than refined carbohydrates. The body breaks down refined, or simple, carbohydrates quickly, leading to rapid spikes in blood sugar and insulin levels. When these levels then drop, a person may experience food cravings and low energy. Because refined carbs cause frequent increases and decreases in blood sugar, consuming them is linked with an increased risk of type 2 diabetes. Highly processed foods are often high in refined carbohydrates [15].

E. Low in fiber

Most ultra-processed foods are very low in fiber, as natural fiber is lost during processing. Dietary fiber has a wide range of health benefits. Fiber can slow the absorption of carbohydrates and help people feel more satisfied with fewer calories. It also acts as a prebiotic, feeding the friendly bacteria in the gut, and can help boost-heart-health[16].

F. Trans fats

Ultra-processed foods are often high in unhealthy, cheap fats. For example, they often contain refined seed or vegetable oils, which can be easy to use, inexpensive, and last a long time. Manufacturers create artificial Trans fats by adding hydrogen to liquid vegetable oils, making them more solid. Trans fats increase inflammation in the body. They also raise levels of low-density lipoprotein, or “bad,” cholesterol, and decrease levels of high-density lipoprotein, or “good,” cholesterol. Eating Trans fats is associated with an increased risk of heart disease, stroke, and type 2 diabetes. For example, according to a 2019 study, a 2% increase in energy intake from Trans fats is linked with a 23% increase in cardiovascular risk.

Diseases caused by processes & packaged foods are (i) Obesity (ii) Diabetes (iii) High BP (iv) Heart diseases (v) Auto immune disorder (vi) IBS –irritable bowel syndrome (vii) Metabolic syndrome and (viii) Anxiety & Depression [17]. The high glycemic white flour products with added sweetening agents, flood the bloodstream with glucose without fiber, nutrients, or phytochemicals; and these baked goods are also high in acrylamides and advanced glycation end-products, further increasing the glycoproteins in our tissues.

Conclusion:

In recent decades, ultra-processed foods have become common in diets worldwide leading to a massive hike in the number of diseases all over the world. However, eating large amounts of these foods increases risks to health, to rebalance the diet or make it more healthful, a person can replace ultra-processed foods with whole foods, including grains, nuts, seeds, lean meats, fruits, vegetables, and legumes. The policy makers “should shift their priorities away from food reformulation - which risks positioning ultra-

processed food as a solution to dietary problems - towards a greater emphasis on promoting the availability, affordability, and accessibility of unprocessed or minimally processed fresh foods. Limiting the proportion of ultra-processed foods in the diet and promoting consumption of unprocessed or minimally processed fresh foods are the key to improve global public health and also to nourish families, society, economies and the environment, finally will help the mankind enjoy a healthy & happy life.

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