

Ultra Processed Foods: A South Asian culinary perspective

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Abstract

There is a vast multitude of foodstuffs available, and health care professionals find it challenging to distinguish between healthy and unhealthy offerings. Recent evidence suggests that ultra processed foods should be avoided, as they are associated with harmful effects on health. This communication defines and describes ultra-processed foods, using the internationally accepted NOVA classification. It uses South Asian examples to make the concept easy to understand for South Asian readers.

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Introduction

Various foods have been connected with the development of obesity and diabetes. A few national dietary guidelines address how types of processing affect the nature and quality of foods.¹ Recommendations from the National Institute of Nutrition, Hyderabad, specify daily allowances for salt, cooking oils and simple sugars.² The potential impact of cosmetic food additives, such as flavours, colours, emulsifiers, and salt substitutes, is not highlighted, however. Similarly, the role of 'processing' of food, and preparation' of food, has not been studied in detail.

The NOVA System

One of the reasons is that it has been difficult to quantify the degree of processing in a scientifically reproducible manner. While various systems of food classification have been developed, the most widely used one is NOVA, invented at the University of Sao Paulo,

Brazil.³ The NOVA system is used by the Food and Agriculture Organization (FAO) in its document as well.¹ The advantage of NOVA is that it defines and describes ultra-processed foods, differentiating them successfully from non-processed or minimally processed foods. The characteristics of ultra processed foods are listed in Box.

NOVA classifies foods according to "the nature, extent and purposes of the industrial processes they undergo, including physical, biological and chemical techniques. The classification uses examples and descriptors to explain the difference between minimally processed, processed and ultra processed foods Table 1. The FAO list of ultra processed food includes carbonated soft drinks, packaged snacks, sweetmeats, "mass produced packaged breads and buns", biscuits/cookies, cakes/pastries, sweetened cereals, fruit yoghurt energy drinks, pre prepared meats, cheese, pizza and pasta, noodles and 'instant' soups.

Box: Characteristics of Ultra-Processed Foods.

- Snacks, drinks, ready meals, other products
- Formulated mostly/ entirely from substances extracted from foods/ derived from food constituents
- Use additives, including those that imitate/enhances sensory qualities of foods
- Convenient (ready-to-consume, almost imperishable)
- Highly attractive (hyper-palatable)
- highly profitable (low-cost ingredients, long shelf life)
- Nutritionally incomplete/ unbalanced
- Prone to over-consumption, to displace other food groups.

Table-1: NOVA Classification.

Class	Description	Example	Example	Example	Example
1	Unprocessed or minimally processed foods	Eggs, meat	Potato, boiled	Corn, roasted	Wheat grains
2	Culinary ingredients	Salt, spices, cooking oil	Salt, spices, cooking oils	Butter	Salt, sugar, oil
3	Processed foods	Fried egg, roasted meat	Potato curry	Buttered corn	Wheat flour (atta), Suji, Maida
4	Ultra-processed food	Minced meat	Potato chips	Corn flakes	Biscuits, cookies

South Asian Culinary Perspective

We take this opportunity to stratify South Asian cuisine according to the same template. We use a combination of macronutrient-based food groups, and processing-based food stuffs to share the concept of ultra-processing with a South Asian audience (Table 2). We also list ways of explaining this concept to the general public, in a simple, yet scientific, manner (Box). Food related conversation should be linked with the concept of culinary happiness.⁴

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Table-2: NOVA Classification using examples from south Asian cuisine.

NOVA Class/ Food Group		Unprocessed or Minimally Processed Food	Culinary Ingredients	Processed Foods	Ultra-Processed Foods
Cereals	Wheat, rice, corn	Wheat flour, rice grains, corn cob	Salt, spices, sugar, butter	Freshly baked bread, chapatti, sweet corn	Biscuits, cookies, noodles, corn flakes, sweet corn soup, breakfast cereals
Dairy	Milk	Milk	Salt	Yoghurt, cheese	Salted cheese, sweet/ fruit yoghurt
Non-vegetarian food	Meats/ poultry/fish	Boiled/ roasted meat/poultry/ fish	Salt	Meat/poultry/ fish curry	Cured meat, minced meat, canned fish
Farm products	Legumes, Vegetables, Fruits	Fresh fruits, vegetables, Whole gram	Salt	Canned fruits, vegetables, whole gram flour	Tomato puree, vegetable pickles, potato chips, besan

Health care professionals should avoid using person-unfriendly language which suggests culinary cruelty or dietary draconism.⁴

Pregmatic Advance

One way of identifying an ultra-processed food is to check food labels. The presence of additives that are not used in home cooking is a sign that the food is ultra processed. The shape and texture of an ultra-processed food will have no similarity to its original appearance and feel.

In general, home cooked foods are classified as processed, while most of the 'modern convenience' or its packaged foods are ultra-processed. A food preparation which bears no visual similarity to its origin, or which has been decolourized or made devoid of fibre, will be ultra-processed.

Summary

Health care providers should be able to explain scientific concepts to their patients and the public in easily understandable language. This communication contributes to this goal. By using examples from South Asian cuisine, one can share best culinary practices with the public, and contribute to healthier eating. One can also help minimize the consumption of ultra processed foods, and thus help avoid metabolic dysfunction and disorders.

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