Food Processing Saves Lives
Protecting the Reputation of Processed Foods

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The Power of Food Science and Technology and Nutrition for Sustainable Planet Health
CONTIENE CAFEÍNA EVITAR EN NIÑOS

CONTIENE EDULCORANTES, NO RECOMENDABLE EN NIÑOS
The Food Supply Prior to the Implementation of the Chilean Law of Food Labeling and Advertising

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Under the final phase limits, **only 17% of foods would have zero warning labels.** By 2019, 10 of the 17 food and beverage categories studied are predicted to have less than half of their products without a high in sodium warning label. While 8 of the 17 categories studied are predicted to have less than half their products without a high in total sugars or a high in total calories warning label, respectively; while even fewer food and beverage categories are predicted to be without a high in saturated fat warning label. Most products will have to be reformulated to avoid at least one front-of-package warning label.

83% of packaged foods have at least one warning label.
PAHO 2015

- Introduces the NOVA classification of foods
- Adopts the name *ultra-processed foods*
- Concludes that the *association* between annual sales per capita of ultra-processed foods and the increase of BMI *predicts obesity*
**Ultra-processed Food and Drink Products in Latin America: Sales, Sources, Nutrient Profiles and Policy Implications.**


**Key findings**

Key findings from this report on seven Latin American countries (Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela), that together make up 80% of the population of the Latin American and the Caribbean region, are consistent with and support findings and recommendations made in previous PAHO documents, as follows:

- *Ultra-processed Food and Drink Products in Latin America: Trends, Impact on Obesity, Policy Implications (1)*, which finds that sales of these products increased from 2000 to 2013 in all countries and are associated with weight gain and obesity.

- *PAHO’s Nutrient Profile Model (2)*, which recommends protection and promotion of unprocessed and minimally processed foods, and freshly prepared dishes and meals made from these foods, and identifies the types of ultra-processed products whose sales should be restricted by regulatory measures.

- *PAHO Plan of Action for the Prevention of Obesity in Children and Adolescents (3)*, which states the unanimous commitments of PAHO Member States to implement a set of effective policies, laws, regulations, and interventions to transform the current obesogenic environment and halt the rise of the rapidly growing obesity epidemic in the Americas.
Food Processing Based Dietary Guidelines
Processed foods
Limit the use of processed foods, consuming them in small amounts as ingredients in culinary preparations or as part of meals based on natural or minimally processed foods.

The ingredients and techniques used in the manufacture of processed foods—such as vegetables in brine, fruits in syrup, cheeses, and breads - unfavorably alter the nutritional composition of the foods from which they are derived.
“Avoid Ultra-Processed Foods”

As a result of their formulation and presentation, they tend to be consumed in excess, and displace natural or minimally processed foods. Their means of production, distribution, marketing, and consumption damage culture, social life, and the environment.”
Dietary Guidelines for the Uruguayan Population

December 6, 2016
“AVOID THE CONSUMPTION OF ULTRA-PROCESSED PRODUCTS”

2. Basá tu alimentación en alimentos naturales y evita el consumo de productos ultrprocesados en el día a día, con excesiva cantidad de grasas, azúcar y sal.

La alimentación de nuestros abuelos, padres y madres se basaba en los alimentos naturales, es decir, aquellos que se obtienen directamente de las plantas o de los animales, como frutas, verduras, legumbres, carnes, huevos, leche, arroz, trigo, entre otros.

En algunos casos, a veces, se les aplican procesos simples como pelado, molida, desecado, fermentado, pasteurizado o congelado, sin el agregado de sal, azúcar o grasas.

La alimentación basada en comidas caseras preparadas con el control de los alimentos con poca cantidad de sal, azúcar y grasas se asocia con un buen nivel de salud y bienestar, y una incidencia más baja de enfermedades.

Esto se debe no solo a su calidad nutricional, sino también a los beneficios emocionales, mentales y sociales que implica cocinar nuestros propios alimentos y compartirlos con otros personajes.

Por eso nuestra recomendación es que bases tu alimentación en los alimentos naturales que hemos empleado tradicionalmente en nuestra cocina.

Fermentación: proceso que permite preservar por más tiempo los alimentos. Por ejemplo, el envejecimiento del pan y la fermentación de la leche para obtener el yogur y el kefir. También los da sabor, aroma y textura transformándolos en una carne y clor.

Pasteurización: proceso térmico realizado en líquidos, por ejemplo en la leche, con el objetivo de reducir la presencia de patógenos.

Calidad nutricional: depende del contenido de nutrientes de los alimentos. Los que son de calidad significativa a varios nutrientes se consideran de alta calidad, mientras que los que aportan solo calorías (por ejemplo, el azúcar) se consideran de bajo calidad.
Evidence: the *number of food additives* defines “ultra-processed” foods

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**LECHE**

<table>
<thead>
<tr>
<th>NATURAL</th>
<th>PROCESADO</th>
<th>ULTRAPROCESADO</th>
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<tbody>
<tr>
<td><img src="image" alt="Natural Milk" /></td>
<td><img src="image" alt="Processed Yogurt" /></td>
<td><img src="image" alt="Ultra-processed Snack" /></td>
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**Ingredientes:**

- **Natural Milk**: Leche pasteurizada
- **Processed Yogurt**: Leche pasteurizada, Azúcar, Fermentos
- **Ultra-processed Snack**:
  - Leche entera pasteurizada
  - Azúcar
  - Cacao en polvo
  - Estabilizante: carragenina
  - Aromatizante: esencia de caramelo
  - Colorante natural

- **Processed Cheesecake**: Leche pasteurizada, Fermentos, Lácteos, Cuajo, Sal
- **Ultra-processed Snack**:
  - Leche pasteurizada
  - Suero lácteo
  - Azúcar
  - Almidón de maíz
  - Fermento láctico
  - Colorante natural
  - Aromatizante y saborizante artificial de durazno o frutilla

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Protect Your Health by Avoiding The Consumption of Ultra-processed Foods

**Guías Alimentarias para la Población Peruana**

**Mensaje 3**

*Protect your health by avoiding the consumption of ultra-processed foods.*

Los alimentos ultra procesados son formulaciones industriales fabricadas íntegra o mayormente con sustancias extridadas de alimentos básicos, que tienden a partir de materias orgánicas, como derivados de petróleo y carbón (colorantes, aromatizantes, resaltadores de sabor y diversos tipos de activos usados para dotar a los productos de propiedades sensoriales atractivas).

Son ejemplos de este tipo de alimentos, las bebidas preparadas envasadas, algunos de los cuales contienen altos contenidos de sal, grasas saturadas y grasas trans.

**Consejos prácticos:**

- Al preparar la lonchera de tus hijos, evita los productos ultra procesados como embutidos, galletas rellenas y bocaditos dulces o salados envasados.
- Es aconsejable no consumir mayonesa y otras cremas o salsas envasadas con tus alimentos, porque contienen altos contenidos de sal, grasas saturadas y grasas trans.
- Es recomendable disminuir el consumo de pasteles y queques ultra procesados, por su alto contenido de grasas y azúcares.
- Evita bebidas azucaradas envasadas y consume agua natural.

*https://repositorio.ins.gob.pe/xmlui/bitstream/handle/INS/1128/guias_alimentarias_poblacion_peruana.pdf?sequence=3&isAllowed=y*
According to NOVA, UPFs are:

- “Very low nutritional quality"
- Hyper-palatable and quasi-addictive
- Imitative of food; falsely seen as healthy
- Conducive to snacking
- Aggressively advertised and marketed
- Socially and environmentally destructive”
Are UPFs of Very Low Nutritional Quality?
These findings demonstrate that calorie- and nutrient-dense foods exist across different levels of processing, suggesting that food choices and dietary recommendations should be based primarily on energy or nutrient density rather than processing classification.
Eliminate or reformulate ultra-processed foods? Biological mechanisms matter

Deirdre K. Tobias, Kevin D. Hall

Increased ultra-processed foods (UPFs) in the food supply have plausibly caused the rise in obesity prevalence and related chronic diseases. To address this public health concern, policies targeting reformulation or elimination of UPF categories will require improved understanding of the biological mechanisms whereby UPFs lead to overconsumption and poor health.
“Uniformly reducing all UPFs—the heterogeneous food category that now represents 67% of total kcal per day for US children—may not ultimately be an appropriate public health goal and may even have unintended harms.

“Drastically reducing or eliminating the availability of all categories of UPFs without simultaneous consideration and efforts to replace them with better, affordable, and practical alternatives should be scrutinized. Eliminating UPFs that deliver on many desirable properties (inexpensive, microbiological safety, nutrient fortification, extended shelf-life, and convenience) may only worsen the existing disparities in food insecurity.”

Deirdre K. Tobias, Kevin D. Hall, Eliminate or reformulate ultra-processed foods? Biological mechanisms matter, Cell Metabolism, 2021,
“The broad NOVA classification system may be too blunt to guide public health responses to pressing epidemics such as obesity.

Industrial food processing is an established and ubiquitous part of our food system, reflected by the fact that UPFs provide more than half of calories consumed in many countries. While some UPF categories (e.g., SSBs) should be targeted for reduction, policies targeting elimination of UPFs as a broad category ignore the substantial time, skill, expense, access, and effort required to safely procure enjoyable meals without UPFs—resources that are already in short supply across large swaths of the population. Alternatively, many common UPF products may be amenable to effective reformulation.”

Deirdre K. Tobias, Kevin D. Hall, Eliminate or reformulate ultra-processed foods? Biological mechanisms matter, Cell Metabolism, 2021,
Are UPFs Hyper-palatable?
Are UPFs the only foods contributing to excess calorie consumption?
Taste of Modern Diets: The Impact of Food Processing on Nutrient Sensing and Dietary Energy Intake

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ABSTRACT

Background: Both fresh and processed foods are available in the modern food environment where taste can signal presence of nutrients. However, whether these taste–nutrient relationships are maintained across different degrees of food processing is not well understood, and less is known about the relative contribution of different taste qualities to population energy intakes.

Objectives: To investigate the association between perceived intensity of 6 taste modalities and a food’s nutrient content in the context of food processing and to further examine the relative contribution of different taste clusters to total energy intakes, stratified by weight status.

Methods: Diet and lifestyle data from the Singapore Multi-Ethnic Cohort Phase 2 (N = 7011; aged 21–75 y) were collected through interviewer-administrated questionnaires. Taste and nutrient profiles for each of the 289 Singaporean
• The findings show that taste-nutrient relationships are maintained across different degrees of food processing.

“Despite the suggestion that processed foods are hyperpalatable, currently there is no evidence to suggest that heightened palatability due to sweet or salty tastes makes a disproportionately larger contribution to daily energy intakes.

The current findings showed no association between hyperpalatability and ultra-processed foods consumption, as has been suggested and critiqued in the past, and to date, there remains no empirical evidence from clinical trials for a disproportionate contribution of specific tastes of ultraprocessed foods in promoting excessive daily energy intakes.”

May 2020
• The proposed definitions have been the source of some scientific dispute as some definitions refer to the type and degree of processing foods undergo while others refer to their formulation and composition.
• In this regard, it is important to remember that one cannot attempt to relate the degree of processing with an effect on health independently of the composition of the food.
• It is also important not to associate the term ultra-processed with foods of poor nutritional quality as this does not depend solely on the intensity or complexity of processing but the final composition of the food itself.
• The ultra-processed characteristic is attributed to the fact that the food contains additives; the use of additives is subject to regulation derived from a risk analysis, and therefore its inclusion alone cannot be linked to nutritional damage.
ANSES concluded:

• Lack of clarity on the concept of Ultra-Processed Foods

• **The impact of ultra-processed foods on health seems to be more linked to their composition than to their degree of processing**

• Ultra-processed foods should not be automatically linked to poor nutritional quality

• Need to launch studies that compare the health consequences of consuming ultra-processed foods made up of ingredients with good nutritional qualities versus ultra-processed foods made up of ingredients with poor nutritional qualities.

• **There is no need to wait to find out whether or not the concept of UPFs is relevant to discourage the consumption of HFSS foods.**
What is Our Task as Food Scientists??

• To emphasize the importance of cultivating public understanding not to apply blanket definitions to foods based on processing.
• To communicate that it is the overall nutritional composition of a food that counts towards making healthier diet choices.
• The UPF concept should not tarnish the reputation of processed foods.
There is a revolution on the way nutrients are produced

• Avoidance of derogatory concepts about processed foods is needed.
• Education is Paramount!
Thank you!

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