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Ultra-processed foods linked to higher mortality

Debate about the "ultra-processed" concept must not delay food policies that improve health

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As research into ultra-processed food gains momentum,[1] so too does the debate.[2-4] Foods that fall into the ultra-processed category according to the Nova classification are heterogeneous and include carbonated soft drinks, confectionary, extruded snack foods, distilled alcohol (spirits), and mass produced packaged wholegrain bread.[5] Ultra-processed foods are typically high in energy, added sugar, saturated fat, and salt, and a major criticism of previous studies is that they have not disentangled the effects of processing, per se, from the nutrient profile of food products. The linked paper by Fang and colleagues (doi:10.1136/bmj-2023-078476) addresses this concern and others, in their evaluation of the relation between ultra-processed food consumption and mortality in two large US cohort studies.[6]

Fang and colleagues found a modest increase in the risk of total mortality with higher ultra-processed food consumption[6]; however, this association was no longer apparent after overall diet quality was taken into account. They also showed that the association between ultra-processed food consumption and mortality was somewhat stronger when distilled alcohol, which is a well established risk factor for premature mortality,[7] was included in the ultra-processed category and somewhat weaker when packaged wholegrain products were included in the ultra-processed category.[6] Further adjustment for pack years of smoking (rather than current smoking status only) greatly attenuated the association between ultra-processed food consumption and respiratory mortality.[6] Thus, future studies must adjust more fully for lifetime smoking exposure or present results in non-smokers to reduce the impact of residual confounding.

The potential mechanisms put forward to explain observed associations between ultra-processed food and health outcomes are also heterogeneous and include over-consumption due to the energy density; fat, sugar, and salt content; potential deleterious effects of certain additives; and contaminants from packaging.[1] Combining heterogeneous foods into a single exposure variable does not help to progress our understanding of the potential harm, if any, of specific additives, processing, or packaging techniques, beyond any harmful effects of the poor nutrient profile of food products. Note that the Nova food processing categorization system classifies foods on the basis of not only the level of processing and the presence of additives but also on the purpose of those additives.[5] From an aetiological perspective, the purpose of a food additive is irrelevant—either it is harmful for health or it is not.

Expert bodies such as the Joint Food and Agriculture Organization/World Health Organization Expert Committee on Food Additives (JEFCA) exist to evaluate individual food additives for safety and to determine the potential carcinogenicity of foods and their components. The International Agency for Research on Cancer (IARC) and the World Cancer Research Fund (WCRF) both concluded that alcohol and processed meat cause cancer in humans.[8-10] Both alcohol and processed meat, as defined by IARC, span both the "processed" (for example, beer and wine; salted, dried, and cured meat) and "ultra-processed" (for example, distilled alcohol; sausages and hot dogs) Nova categories.[5]

Fang and colleagues sensibly conclude that not all ultra-processed food needs to be universally restricted and that careful deliberation is needed when considering whether to include recommendations about ultra-processed food in dietary guidelines.[6] Most dietary guidelines already implicitly emphasise the consumption of less processed foods.[11] In countries where affordable, mass produced packaged wholegrain products such as breads are a recommended dietary staple and a major source of fibre, adding a sweeping statement in dietary guidelines about avoiding ultra-processed foods is not helpful.

Recommendations to avoid ultra-processed food may also give the impression that foods that are not ultra-processed are healthy and can be freely consumed. This is problematic—for example, the IARC and WCRF have concluded that red meat (categorised by the Nova system as "unprocessed or minimally processed") is probably increases the risk of bowel cancer.[8,9] In addition to effects on health, beef and lamb come from ruminant animals, which produce methane—a greenhouse gas that has a particularly potent warming effect over the short term.[12]

Our global food system is dominated by packaged foods that often have a poor nutritional profile.[13] This system largely serves the goals of multinational food companies, which formulate food products from cheap raw materials into marketable, palatable, and shelf stable food products for profit.[13] We should not let the debate on the usefulness of the ultra-processed food concept delay the implementation of evidence based interventions such as the WHO's "best buys" for health.[14]

Several countries have already implemented and demonstrated the effectiveness of best buys and other interventions to better serve population health. These include the restriction of marketing of unhealthy foods to children and the addition of warning labels on nutritionally poor food products,[15] taxes on sugar sweetened beverages,[16] and bans on partially hydrogenated oils that are a source of industrial trans

fat.[17] Our focus should be on advocating for greater global adoption of these and more ambitious interventions and increasing safeguards to prevent policies from being influenced by multinational food companies with vested interests that do not align with public health or environmental goals.

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