The Fear of Processed Foods: A Review of Health Misinformation and Critical Evidence

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Recently, social conversations around nutrition and health have led to the demonization of processed foods. Platforms like TikTok, Instagram, and Youtube have been the biggest outlets for content creators and wellness influencers to repeatedly declare that processed foods are "toxic" or "poisonous" and that they are the "root cause of modern disease." Multiple posts urge complete avoidance of packaged or manufactured foods while touting "clean eating" as a cure-all for just about every health ailment. While such messages may appeal to all people trying to be healthier, it often takes what is a very complex subject and makes it so black-and-white. There appears to be limitless scientific evidence over this multi-dimensional aspect of health, and that is why fear-based decision making is simply not ideal. Accredited research does show that the frequent consumption of highly processed foods is definitely associated with a heightened risk of negative health impacts. However, public opinion tends to blur the line of distinctions between different types of food processing. Consequently, many people develop unnecessary fear toward food, confusion about nutrition, and a big distrust of public health guidance.

This paper will seek to evaluate the truth behind the claims that such foods and additives are poisonous and cause most of the modern diseases by diving into current scientific evidence and comparing that to how it is portrayed. Additionally, this paper will also propose a targeted health communication strategy that will be designed to improve people's ability to understand health information and minimize misinformation among college students and social media users.

To understand the scientific evidence on the matter of processed foods, a crucial first step is to define what "processing" really means in nutrition research. According to researchers at the Johns Hopkins Bloomberg School of Public Health, food processing is a broad term for

techniques that change foods from their natural state (Coulson, 2025). This involves cooking, canning, freezing, or the combination of ingredients. If anything, the processing of food can make food much safer. For instance, pasteurizing raw milk removes harmful bacteria . According to the NOVA classification system, foods fall along a spectrum ranging from unprocessed or minimally processed items to ultra-processed products that receive extensive industrial techniques (Monteiro et al., 2019). The term "ultra-processed foods," on the other hand, has become highly mislabeled; it describes food products that contain food additives such as preservatives, colorings, flavorings, emulsifiers, and sweeteners. It also undergoes industrial techniques that make these foods different from whole foods-thus earning them the term "artificial" in many public discussions (Coulson, 2025). It's an important distinction, as too often in the public conversation, all forms of processing are treated as equally bad, when already scientific classifications differentiate minimal processing from ultra-processing. While many nutritious foods are technically processed foods, the idea that processed foods are unhealthy is not entirely accurate. The term "healthier" is subjective; however, in scientific nutrition research, it can be referred to as foods that provide essential nutrients to help support disease prevention or improve dietary quality. Under this definition, many processed foods-for instance, frozen fruits, canned beans, plain yogurt, and whole grain bread-are all considered processed yet can be part of a healthy diet (NHS, 2023).

A growing number of studies find the same links between ultra-processed foods and a host of negative health outcomes. Reviews summarized by Harvard Health Publishing and the Johns Hopkins Bloomberg School of Public Health report that high UPF intake is associated with

obesity, type 2 diabetes, heart disease, several cancers, depression, and higher overall mortality (Corliss, 2024; Coulson, 2025). These patterns appear across dozens of large meta-analyses. More recent research has begun to suggest that UPFs may also have an impact on brain health. In the cohort study published in Neurology in 2024, for every 10% increase in intake of UPFs, there was a 16% higher risk of cognitive impairment and an 8% higher risk of stroke, independent of overall diet quality (Bhave et al., 2024). Several mechanisms are put forward for these associations. Typically, UPFs are calorie-dense, low in fibre, rapidly digested, and engineered to be hyperpalatable-all attributes that encourage overeating. These include a review by Coulson (2025) and Corliss (2024). Some additives, such as emulsifiers, may also impact the gut microbiome, though evidence is still emerging.

Although many studies show associations between UPFs and poorer health outcomes, these findings must be interpreted carefully. Most UPF studies are observational, meaning they cannot prove causation and are influenced by factors such as income, food access, and overall diet quality. The NHS also notes that it is unclear whether the risks come from processing itself or from the high levels of added sugar, salt, and fat common in many UPFs (NHS, 2023). At the same time, many processed foods are safe and nutritious, and most food additives such as emulsifiers, preservatives, and sweeteners, are regulated by agencies like the FDA, WHO, and EFSA. While emerging research raises questions about certain additives and the gut microbiome, typical intake levels remain well within established safety limits.

The narrative of processed foods being "poisonous" spreads virally on TikTok, Instagram, YouTube, podcasts, and wellness blogs, as social media influencers post melodramatic videos warning viewers about the "toxic ingredients" in these foods and declare that they cause anxiety, obesity, hormonal problems, and chronic illness. This kind of emotive, urgent messaging-this is

killing you-forces fear and secures attention because platforms reward content that evokes strong reactions with more views and likes (Vosoughi, 2018). News stories further confuse the issue by highlighting observational studies under misleading headlines that suggest causation, thus undermining trust in official nutrition guidance and driving traffic toward influencers perceived as more relatable. Such claims become convincing, as they are wrapped in emotive language, personal experience put up as evidence, the selection of a single study, and conspiracy framing, such as "they don't want you to know this," all serving to make misinformation seem more credible than scientific evidence. These messages are perceived as credible because simple explanations to complex health issues resonate with people, and many are already somewhat distrustful of big food companies. Disinformation spreads easily when levels of distrust are high (Lewandowsky, 2017). Repetition also plays a big role: repeated exposure makes claims seem true (Van der Linden, 2020). Put together, emotional messaging, personal narrative, social influence, and algorithmic reinforcement help explain why the belief that processed foods are "poison" remains so convincing in the face of scientific evidence.

Indeed, a gap has clearly emerged when scientific evidence is compared to the public narrative: High intake of ultra-processed foods is associated with certain health risks in research, but these findings certainly do not suggest that processed foods or food additives are "poisonous." Public discussions often treat all processing as toxic and interpret correlations as proof that UPFs directly cause disease. The reality is that many of those risks have to do with general patterns of diet, such as high sugar, sodium, low fiber, and extra calories. Many processed foods are safe, nutritious, and important for the people who need affordable options

These misunderstandings have significant consequences. When people believe that all processed foods are dangerous, they might avoid foods that actually are safe and healthy, thus increasing the stress and confusion associated with eating. This can also lead to overdependence on diets with restrictions or the avoidance of foods that are inexpensive and easy to get; this particularly affects students and low-income groups. Another critical outcome of misinformation is its effects on trust in public health organizations: if an online audience hears extreme or emotive claims repeated many times, they may increasingly question official nutrition guidance, turning instead to confident-seeming influencers who may not be right. This adds to confusion and makes it harder for people to understand what is actually supported by evidence.

With these challenges in mind, a successful communication strategy needs to overcome both the scientific misunderstandings and the emotional and social drivers of misinformation. Because college students and young adults mostly get their nutrition information from TikTok, Instagram, and YouTube, the focus of the communication plan is on those platforms. The simple core message drives home that foods are not inherently bad because they are processed; many processed foods can be part of a healthful diet; and overall eating patterns are of more importance than whether a food has been processed. This is to be conveyed by clear examples, such as frozen fruit, canned beans, whole-grain bread, and yogurt.

This approach represents key concepts of Social Cognitive Theory in a very accessible and contextual manner. Social Cognitive Theory explains that people learn health behaviors by observing others, developing confidence in their ability to make changes, and being influenced by their social and environmental surroundings. First, observational learning occurs by

showcasing short videos of college students actually making balanced meals using both fresh and processed foods. The self-efficacy is enhanced by offering smaller, realistic steps, such as reading labels or selecting whole-grain options, instead of extreme “clean eating” rules. Additionally, it acknowledges the real environmental factors: time, cost, and access, that shape how students eat.

To make the videos even clearer and more engaging, the content will include simple on-screen pop-ups highlighting quick research facts or correcting common myths right when they appear. For example, if a popular claim says "this additive is toxic," a pop-up could briefly show the FDA safety limit or a one-sentence study finding in plain language. These visual cues help students see the difference between dramatic claims and actual scientific evidence without slowing the video down. TikTok, Instagram Reels, and Youtube Shorts will be the primary channels, as they reach the target audience and allow fast, myth-busting messages. The same ideas can also be underpinned through infographics shared via campus health services or student groups. Generally speaking, students need practical guidance they can actually use right now, while minimizing some of the fear and confusion about processed foods.

The belief that processed foods are inherently “toxic” highlights a disconnect between scientific evidence and the way nutrition is discussed online. While a high intake of ultra processed foods is linked to negative health outcomes, research does not support the claim that food becomes harmful simply because it is processed. Health risks are more closely related to broader dietary patterns, including excess sugar, sodium, and low fiber intake, than to regulated food additives or processing methods themselves. Social media often removes this by presenting

research findings as proof of causation rather than association, which creates trust in misinformation.

These messages carry real consequences. Fear based content can create anxiety around eating, weaken trust in public health organizations, and push young adults away from evidence-based guidance. Health promotion must therefore speak to both how people think and how they feel. The proposed communication strategy uses social media and Social Cognitive Theory to show realistic eating behaviors while acknowledging the limits of time, cost, and access. By focusing on balance rather than restriction, this approach builds confidence and supports informed decision-making. Ultimately, effective public health communication should replace fear with clarity and help students develop habits that are sustainable in an environment that is filled with lots of conflicting nutrition advice.

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Generative AI Statement

AI was used to explain the in class topic social cognitive theory and breakdown instructions to make sure we were able to meet all of the requirements as well as help with grammar and clarify some APA formatting questions. All sources, references, ideas and thoughts were researched and produced by Carlos and Thomas and the work was evenly distributed.

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