

Toxicology: A Critical Assessment of Disparities between Food Consumption and Pyramid Guidelines

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Abstract

Magnitude of the gap between current intakes and the Pyramid recommendations suggests the need for continued increases in agricultural productivity, higher resource use, and greater levels of international trade if the gap is to be closed. If current dietary patterns are maintained in each category of age, sex, and ethnicity, then we project substantial future increases in the gap at the aggregate food supply level for most food groups. However, studies have consistently shown that there is a significant gap between actual food intakes and the recommendations outlined in these guidelines, with far-reaching ramifications for both individuals and the food system as a whole.

Keywords: Dietary patterns; Food intakes; Dietary recommendations; Food guide pyramid; Diet

Introduction

Measuring the gap

Measuring the gap between food intakes and the recommended guidelines involves evaluating the actual consumption patterns of individuals or populations and comparing them to the ideal dietary targets. This assessment is typically done using methods such as food frequency questionnaires, 24-hour dietary recalls, or diet diaries. These tools allow researchers to estimate the intake of various food groups, nutrients, and calories [1]. Numerous studies have highlighted the substantial disparities between actual dietary patterns and the recommendations set forth in food pyramids or dietary guidelines. These discrepancies often involve excessive consumption of unhealthy foods, such as added sugars, saturated fats, and sodium, while insufficient intake of nutrient-dense foods like fruits, vegetables, whole grains, and lean proteins [2].

Food system ramifications

The gap between food intakes and the Pyramid recommendations has far-reaching ramifications for both individuals and the broader food system [3].

Health consequences

Poor dietary habits contribute to the global burden of non-communicable diseases (NCDs) like obesity, diabetes, cardiovascular diseases, and certain cancers. Inadequate intake of essential nutrients can lead to deficiencies and associated health problems. The gap between recommended and actual intakes of certain food groups directly affects individuals' health outcomes, making them more susceptible to NCDs and related complications [4].

Environmental impact

Unsustainable food consumption patterns exacerbate environmental challenges. The overconsumption of resource-intensive foods, such as meat and dairy, contributes to greenhouse gas emissions, deforestation, water pollution, and biodiversity loss. In contrast, under consumption of plant-based foods limits the potential environmental benefits that a shift toward sustainable diets [5].

Food security and equity

The gap between food intakes and recommendations also highlights

issues of food security and equity. In many parts of the world, access to nutritious foods is limited due to factors like affordability, availability, and cultural practices. Addressing these disparities requires systemic changes, including promoting sustainable food production, improving distribution networks, and addressing socio-economic inequalities that hinder access to healthy foods [6].

Closing the gap

Addressing the gap between food intakes and Pyramid recommendations requires a multi-faceted approach involving individuals, policymakers, and the food industry. Here are some strategies that can help bridge this divide

Nutrition education

Public awareness campaigns, nutrition education programs, and initiatives in schools can promote knowledge and awareness about healthy eating habits [7]. Providing accessible and accurate information about the benefits of a balanced diet can empower individuals to make informed food choices [8].

Policy interventions

Governments can play a crucial role by implementing evidence-based policies that incentivize healthy food choices and discourage the consumption of unhealthy options. This can include measures such as taxation on sugary beverages, restrictions on advertising unhealthy foods to children, and the promotion of nutrition labeling on packaged foods [9].

Food system transformation

Transforming the food system to prioritize sustainability and

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health is essential []. This involves supporting local and sustainable agriculture, reducing food waste, improving food distribution systems, and promoting plant-based diets. Collaboration between governments, industry stakeholders, and civil society is crucial to driving systemic changes [10].

Conclusion

Dietary shifts of the magnitude required to meet the Food Guide Pyramid serving recommendations contain significant implications for the agriculture and food marketing industries. For average diets to meet recommendations, substantial increases would need to occur in supplies of fruit-most subgroups of vegetables, including dark-green, deep-yellow vegetables, and dry beans, peas, and lentils. Smaller increases would be needed in supplies of lean meats and dairy products. Large reductions are implied for added fats and oils and caloric sweeteners. These food supply projections suggest the magnitude and direction of change that may be required in the food system, if the Pyramid recommendations are to be met. However, our analysis is limited in that it does not consider all the potentially interesting or important aspects of such a dietary shift. For example, no explicit accounting is made for offsetting changes that could be expected in trade patterns, price levels for commodities and inputs, and the geography of production, among other considerations. The analysis also does not address the important health issue of increasing rates of obesity and the current trend in levels of physical activity. Unless current levels of physical activity increase it is unlikely that the obesity trend can be sufficiently addressed by changes in the type of food consumed. Hopefully, future analyses of the

changes in the food system necessary to meet the Dietary Guidelines will address these additional questions.

References

1. Lovejoy S (2014) Scaling fluctuation analysis and statistical hypothesis testing of anthropogenic warming. *Clim Dyn* 42: 2339-2351.
2. George E Brown (1997) Environmental Science under Siege in the U.S. Congress. *Environ Sci Policy* 39: 12-31.
3. Richard S Lindzen, Ming-Dah Chou, Arthur Y Hou (2001) Does the Earth Have an Adaptive Infrared Iris? *Bull Am Meteorol Soc* 82: 417-432.
4. Oreskes Naomi (2004) Beyond the Ivory Tower: The Scientific Consensus on Climate Change. *Science* 30: 1686.
5. Caminade Cyril, McIntyre Marie K, Jones Anne E (2019) Impact of recent and future climate change on vector-borne diseases: Climate change and vector-borne diseases. *Ann N Y Acad Sci* 1436: 157-173.
6. Mia S, Begum Rawshan A, Er Ah Choy, Abidin Raja DZR Zainal, Pereira Joy J, et al. (2010) Malaria and Climate Change: Discussion on Economic Impacts. *Am J Environ Sci* 7: 65-74.
7. Mia S, Begum Rawshan A, Er Ah Choy, Abidin Raja DZR Zainal, Pereira Joy J, et al. (2010) Malaria and Climate Change: Discussion on Economic Impacts. *Am J Environ Sci* 7: 65-74.
8. Butterworth MK, Morin CW, Comrie AC (2016) An Analysis of the Potential Impact of Climate Change on Dengue Transmission in the Southeastern United States. *Environ Health Perspect* 125: 579-585.
9. Butterworth MK, Morin CW, Comrie AC (2016) An Analysis of the Potential Impact of Climate Change on Dengue Transmission in the Southeastern United States. *Environ Health Perspect* 125: 579-585.
10. Barolo MI, Ruiz Mostacero N, carica L (2014) An ancient source of food and health. *Food Chem* 164: 119-127.