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We are researchers and educators at the Johns Hopkins Center for a Livable Future, based at the Bloomberg School of Public Health in the Department of Environmental Health and Engineering. The Center for a Livable Future investigates the interconnections among diet, food production, public health, and the environment. We recognize the important role that the Dietary Guidelines for Americans play in promoting health and informing policies and programs across the United States. We appreciate the opportunity to comment on the topics and questions that the Dietary Guidelines Advisory Committee is exploring in order to inform the 2020-2025 Dietary Guidelines for Americans. We are including below our comments pertaining to questions posed by the subsection addressing dietary patterns. We also provide additional recommendations related to the integrity of the Dietary Guidelines development process.

We recommend that the Dietary Guidelines Advisory Committee consider the relationship between diets high in processed and red meat and chronic disease health outcomes in the United States, particularly in comparison to dietary patterns rich in vegetables, fruits, whole grains, and plant-based proteins, and include recommendations to limit consumption of processed and red meats in the published findings.

Since the last Dietary Guidelines were released in 2015, the 2018 American Institute for Cancer Research report presented evidence regarding the carcinogenic properties of processed meat, especially for colorectal cancer [1]. In addition, the World Health Organization's Agency for Research on Cancer (IARC) has classified processed meat as "carcinogenic to humans (Group I)" [2]. In a 2019 study, the Union of Concerned Scientists estimated that if the average adult decreased their intake of processed meat from one ounce per day to one ounce per week in 2018, nearly 3,900 lives and $1.5 billion in medical costs could have been saved through reductions in colorectal cancer [3].

In addition, dietary patterns high in plant-based foods and lower in red meats, especially processed red meats, have been associated with lower risks of cardiovascular disease burden and type 2 diabetes [4,5]. One US-based study investigating the impact of changes in diet over time found that increases in red meat consumption by just half a daily serving over a 4-year period resulted in a 48 percent increase in the risk of developing type 2 diabetes mellitus over the subsequent 4 years [6]. In addition, a comparative risk assessment model that estimated disease-specific national mortality based on data from the National Center for Health Statistics found that the largest numbers of diet-related cardiometabolic deaths were related to dietary patterns including high processed meat, low vegetable, and low fruit consumption [7].

We recommend that the Dietary Guidelines Advisory Committee study the role of sustainable diets in assuring that all Americans have future access to healthy foods.

The Dietary Guidelines for Americans should incorporate the role of sustainable diets in ensuring future access to healthy foods for all Americans. In 2015, the Dietary Guidelines Advisory Committee found that "a dietary pattern higher in plant-based foods, such as vegetables, fruits, whole grains, legumes, nuts, and seeds, and lower in animal-based foods is more health promoting and is associated with lesser environmental impact than is the current average U.S. diet" [8]. Since the last advisory report was published, more research has been conducted on this topic [9]. Both the EAT-Lancet Commission on Healthy Diets from Sustainable Food Systems [10] and a recent study conducted by our Center [11], have demonstrated that shifts toward plant-forward diets are critical components of aligning human and planetary health in high income countries such as the United States. In addition, several studies have shown that recommended dietary patterns in the 2015 Dietary Guidelines for Americans are not sufficient to meet targets that "help ensure that the UN Sustainable Development Goals (SDGs) and Paris Agreement are achieved".[a] Shifting toward plant-forward diets is an important step in ensuring Americans have future access to healthy foods.

We recommend that the Dietary Guidelines Advisory Committee consider the sources and types of seafood along with seafood consumption levels to ensure future availability of seafood.

The capacity for humans to produce seafood is governed by how we choose to use the Earth's resources. While domestic fisheries are largely well managed, one third of global fisheries are overfished [14]. There are serious concerns that increasing demand for seafood, illegal fishing, and climate change may significantly harm global fisheries [15]. Aquaculture (aquatic animal farming) is growing to meet demand generated by population growth. Some aquaculture production methods carry public health and environmental risks [16,17,18,19], while others are neutral or improve the local environment (such as molluscan shellfish farms that uptake nutrients from the water column). Seafood is a broad category that includes hundreds of species of fish, crustaceans, mollusks and aquatic plants. Current DGAC recommendations do not specify particular species, but the nutritional content of seafood is quite variable [20], and the social and ecological sustainability of fisheries and aquaculture sectors varies widely. In light of the complex relationships that exist in fisheries and aquaculture, the 2020 Dietary Guidelines for Americans should recommend seafood that i) meets nutritional objectives and ii) that does not adversely degrade the environment and the ability for future generations to harvest or farm seafood.

We recommend that the dietary guidelines make recommendations that support healthy food access and address the root causes of diet-related health disparities.

[a] The EAT-Lancet Commission proposed a global greenhouse gas (GHG) emissions target of 5 Gt CO2e/year for sustainable food production by 2050 [10] or 514 kg CO2e/capita/year (uncertainty range: 483–555 kg CO2e/capita/year). Previous studies have estimated that diets aligned with the DGA as currently defined using standard food patterns require 657 [12] to 1314 [13] kg CO2e/capita/year.

In the United States, almost 12 percent of households experienced food insecurity in 2017, and 6.5 million children lived in food-insecure households [21]. Research indicates that many low-income food insecure households face unique challenges in accessing healthy foods including the relative price, quality, and availability of fruits and vegetables [22,23]. As a result, food insecurity is often associated with diet-related chronic disease [24,22]. In communities of color, discrimination and structural racism within the food system, which manifests in many ways, such as low wages for agricultural laborers and predatory junk-food marketing, contribute to limited food security and unhealthy food environments [3,25]. The 2020-2025 Dietary Guidelines for Americans should review the literature that explores the root causes of health disparities in food-insecure households, including racial, socio-environmental and economic factors that result in inadequate healthy food access and nutrition and make recommendations that reflect these studies to remedy these health disparities.

We recommend that the Dietary Guidelines Advisory Committee, United States Department of Health and Human Services, United States Department of Agriculture, and United States Congress work jointly to ensure the integrity of the Dietary Guidelines for Americans.

The Dietary Guidelines for Americans are an important tool in assuring the health of millions of Americans, and the Dietary Guidelines Advisory Committee, United States Department of Health and Human Services, Department of Agriculture, and Congress should ensure the integrity of the Dietary Guidelines development process. The 1990 National Nutrition Monitoring and Related Research Act mandates that the Dietary Guidelines for Americans be developed every five years and requires that the Dietary Guidelines be based on the "preponderance of scientific and medical knowledge" that is current at the time the report is prepared [26]. In order to uphold the legislative intent and the integrity of the Dietary Guidelines, conflicted parties should be prohibited from interfering with the development of health- and science-based recommendations through congressional oversight if necessary.

Sincerely,

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