

THE HEALTH AND WELLNESS CONNECTION

Over the past 50 years, global meat consumption has grown by more than 30 percent—a trend that coincides with a concurrent 40 percent increase in diet-related mortality (see Figure 1).^{1,2} As a whole, noncommunicable diseases, or chronic illnesses, account for approximately 70 percent of all deaths³. The emergence of this global health crisis, which could cost as much as \$47 trillion in health care spending by 2030, has underscored the need for effective, low-cost interventions that can deliver significant improvements to worldwide chronic illness prevention efforts.^{3,4,5}

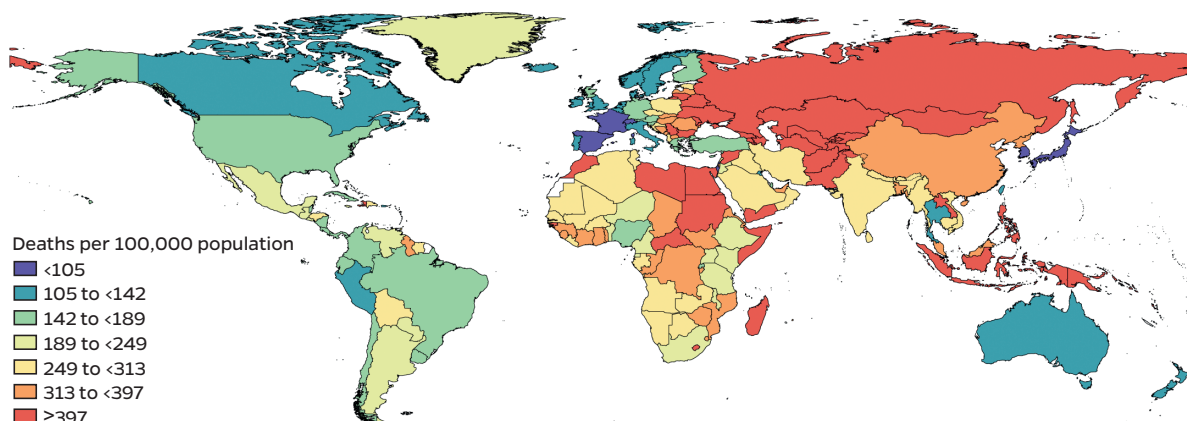
Of the 40 million deaths that result from noncommunicable diseases each year, 80 percent are thought to be preventable through modest changes in lifestyle factors.³ The role of diet in particular has been especially well-documented, with recent surveillance data suggesting that at least a quarter of those deaths can be directly attributable to diets high in sodium and processed meats and deficient in fruits, vegetables and whole grains.¹ Furthermore, populations that consume comparatively less meat have repeatedly been found to have lower rates of heart disease, diabetes and cancer—a

finding that is particularly prominent when meat reduction strategies are paired with other beneficial dietary behaviors.^{1,6,7,8}

Heart Disease

Of the 11 million diet-related deaths that occurred in 2017, 91 percent were attributable to cardiovascular illnesses.^{1,9} Diet-associated heart diseases are now responsible for more deaths globally than all instances of tobacco-related mortality combined.^{1,9,10} Among an assortment of other key contributors, food animal consumption is thought to play a large role in the development of heart disease, possibly due to the high amounts of saturated fatty acids and heme iron present in many meat products.^{6,11,12,13} Furthermore, the sodium- and nitrate-based preservatives that are frequently used in processed meats are also believed to be potential risk factors.¹⁴ In fact, each additional 50-gram daily serving of processed meat—the equivalent of about 2.5 slices of baloney—is estimated to increase the risk of developing coronary heart disease by 42 percent.^{11,12} Conversely, diets that replace meat and animal products with near-equiva-

Figure 1. Globally, the number of diet-attributable deaths in 2017 rose to 11 million, with heart disease, cancer and type 2 diabetes serving as the three leading causes. Improvements in diet are estimated to have the potential to prevent one in every five deaths globally. Adapted from Afshin et al. (2019)



lent amounts of legumes, nuts and seeds are thought to accompany a 20% reduction in the risk of experiencing an adverse cardiometabolic event, such as a heart attack or stroke.¹⁵ Therefore, by substituting animal products with plant-based alternatives, reducing the amount of meat one consumes can be a particularly effective strategy for aiding in the prevention of heart disease.^{13,15}

Diabetes

There are an estimated 380 million cases of non-insulin-dependent type 2 diabetes mellitus worldwide.¹⁶ While type 2 diabetes was previously only seen in elderly populations, emerging medical trends have indicated that people are now developing the disease at earlier ages, with diagnoses among children, adolescents and young adults becoming increasingly commonplace.¹⁷ Importantly, meat consumption has been identified as a principal risk factor for the disease. In fact, each additional daily serving of processed meat is thought to increase the risk of developing type 2 diabetes by 19 percent.^{7,11,12} 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 the disease over the subsequent 4 years.¹⁸ Conversely, diets transitioning from high to low levels of red meat intake over the same 4-year period were significantly less likely to have type 2 diabetes at follow-up.¹⁸ As these findings suggest, reducing the consumption of red meat, even by as little as half a daily serving, can be an impactful method for preventing the development of type 2 diabetes.^{18,19}

Cancer

With over 1.8 million new cases diagnosed in 2018 alone, colorectal cancer is the third most frequently occurring cancer worldwide.^{8,20,21} The current body of evidence surrounding colorectal cancer and its risk factors are highly suggestive of a causal dietary link—so much so that the World Health Organization, based on a recommendation from the International

Agency for Research on Cancer, labeled processed meat a known human carcinogen in 2014, alongside asbestos and tobacco smoking.⁸ According to their analyses, every 50-gram daily serving of processed meat—the equivalent of 4 slices of bacon—was associated with an 18 percent increase in the risk of developing the disease.⁸ By contrast, each 100-gram daily serving of red meat—the equivalent of about 2 beef patties from McDonald's—was associated with a 17 percent increase.⁸ There is also some, albeit more limited, evidence linking high levels of meat consumption with other forms of cancer, like those of the pancreas, prostate, and stomach.^{24,25} Taking steps to progressively reduce the amount of meat one consumes may therefore be valuable in mitigating the risk of developing cancer.^{8,22,23}

Adopting Meatless Monday

Among populations facing issues related to overnutrition, the periodic replacement of meat and animal products with plant-based alternatives has been linked with significant reductions in the morbidity and mortality associated with dietary illness.^{1,13,26,27} Whether these substitutions are espoused for a single day of the week or for longer periods of time, reducing the overall consumption of meat in these settings is an important strategy for managing and preventing the development of several life-threatening diseases.^{1,6,7,8} Furthermore, beyond the benefits already listed above, dietary shifts that promote a higher intake of nuts, seeds and whole grains have also been observed to have significant benefits for weight management and mental health.^{26,27}

Meatless Monday, with its call to cut out meat one day a week, provides participants the platform and the knowledge necessary to make these incremental lifestyle changes for the betterment of health and wellbeing alike.

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