

## The plant-based diet movement has reached policy-level prominence—with influential health and government groups embracing change.



The call to action for individuals to make shifts toward plant-based eating patterns, both for health and the environment, has reached the highest levels of policy and dietary guidance. A plant-based shift is being embraced by those who make or influence policy, from prominent health groups to national dietary guideline committees. Urgency for change is being amplified by pressure from all levels of society, not just grassroots advocacy. Evidence continues to demonstrate the important contributions of nutrient-dense animal foods, such as milk, cheese and yogurt,<sup>1</sup> within recommended quantities and from responsibly produced sources.

Awareness of the beneficial attributes of plant-based foods has grown among consumers, and change is now being initiated at the institutional level. Coalitions such as the EAT-Lancet Commission on Food, Planet, Health are mobilizing governments and international organizations

to create change across the globe. These efforts are seeing progress, not only in shifting perspectives but also in influencing policies and systems that have the potential to change the way populations eat. As examples, France and Canada have updated their nutrition guidelines and shifted their recommendations from a traditional nutrient focus to a whole-food focus, encouraging plant-based foods as well as moderate amounts of animal-based foods. In the United States, The Society for Nutrition Education and Behavior has called for the inclusion of environmental sustainability in dietary guidance, and although it does not call for excluding entire food groups, it does recommend consumption of a wider variety of plant-based proteins.<sup>2</sup>

**Implications:** Dietary recommendations put forward to improve the health of people and the planet serve as a catalyst for public policy that may determine which foods are available to the most vulnerable populations through nutrition assistance programs. Access to wholesome foods like dairy, vegetables, fruits, whole grains and lean protein is important to ensure children and families have the nutrients needed for optimal health. As plant-based eating patterns become further defined, it is critical to utilize the totality of evidence-based nutrition research, which continues to



continued ...

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Dairy Council of California has a Nutrition Trends Task Force which includes 10 staff members, nine of whom are Registered Dietitian Nutritionists. The Task Force meets three times per year to review the trends in nutrition research, education, policy and marketing and communications.

Staff is responsible for tracking a wide variety of publications, both scholarly journals and news media that report on the above topics. This summary outlines the top nutrition and education trends identified at the year-end meeting in February 2019.

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demonstrate the health-promoting benefits of a balanced eating approach that includes nutrient-dense plant and animal choices and embraces the specific nutrient needs of individuals, diverse cultures and economies. Caution should be exercised to ensure that guidance supportive of plant-based eating patterns does not unnecessarily narrow nutrient-dense food options like milk and dairy foods in recommendations for individuals.

## The global perspective of sustainability in food systems is being formalized into national dietary guidelines across the world.



Sustainability in food systems is a global issue in need of a global solution beyond localized approaches. It is a reality that food systems within a country have a global impact that cannot be ignored. Moving forward, it is likely that nutrition guidelines will provide criteria for food systems based not only on promoting health but also on preserving finite environmental and economic resources.

Several countries around the globe—including Brazil, Germany, Qatar, Sweden and, most recently, Canada—have already incorporated sustainability into their national guidelines. Other countries have taken steps to consider sustainability; however, the extent to which sustainability is addressed in national policies is inconsistent.



The interrelated issues of obesity, undernutrition and climate change have recently been elevated and coined as the term “global syndemic” in a report published in *The Lancet*.<sup>3</sup> Among international scientists, there is no question that these three issues require simultaneous mobilization from multiple sectors across all corners of the world. Yet, too often measures being used to evaluate each dimension of the syndemic can be myopic and thus lead to overly simplified solutions. For example, climate change is largely measured by greenhouse gas emissions while health is predominately measured by body mass index (BMI). While these tools have long been validated

as effective in research, they may be too narrow to approach the interconnected dimensions of the global syndemic.

**Implications:** There is an opportunity for stakeholders at all levels of the food supply chain, health care and public and private sectors to collaborate on effective solutions by sharing data, technologies and innovations to help the global food system become more sustainable and efficient while making nutritious food available for all and supporting optimal health. §

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## New research is expanding on the understanding of dairy as a functional food by characterizing how fermented dairy foods provide health benefits to the microbiome, prevent chronic diseases and more.

Dairy foods have been fermented by populations around the globe for centuries. Over the past few decades, science has uncovered how the process of fermentation transforms milk into derivatives with functional health benefits.



Different dairy foods may be composed of similar nutrients; however, the nutrients are contained in structures, known as a food's nutrient matrix, that present unique biological properties. Modern science is beginning to reveal how the food matrix may play an important mechanistic role in the association between individual dairy foods and chronic disease risk.<sup>14</sup> Consistent with advancing knowledge in personalized nutrition, there may be dairy foods that could benefit individuals at key times across the life span. For example, milk provides nutrients essential to bone and lean muscle development,<sup>15</sup> while appealing to the taste preferences of children. For adults, fermented dairy foods may aid in chronic disease prevention, while older adults could benefit from the high-quality protein and textures found in dairy products that are easier to swallow than other solid foods.



New studies are starting to demonstrate a beneficial effect of whole dairy foods—particularly fermented dairy foods such as yogurt, cheese and kefir—on metabolic health, body weight and chronic disease risk. This may be due to dairy foods' unique package of nutrients that work together to facilitate digestion, absorption and interaction of nutrients and other bioactive compounds within the body. This holistic view of the food matrix can be defined as the interconnectedness of the many nutrients that make up a specific food, which then controls the delivery and bioavailability of the nutrients within the human body.<sup>16</sup> Research suggests that different types of dairy foods may provide distinct health benefits. One such study looked at fermented compared to non-fermented dairy foods and risk

of coronary heart disease. Adults in the study with the highest intake of fermented dairy had 27 percent lower risk of coronary heart disease.<sup>17</sup> Emerging research looking at the association between dietary patterns and cognition in older adults found that the Mediterranean-DASH-diet Intervention for Neurodegenerative Delay (MIND) diet, which includes fermented foods such as yogurt, kefir and miso, may have positive effects of preserving cognition and reducing dementia risk.<sup>18</sup> Additional prospective and experimental research is needed to confirm the findings of observational studies to inform the use of fermented dairy in clinical practice for disease prevention.

**Implications:** With consensus from a growing number of studies, the current evidence base supports the need for health professionals to reaffirm the role of dairy foods in healthy eating patterns. This effort is critical to ensure that future nutrition guidance continues to recognize dairy foods as an important component of healthy eating patterns that promote optimal health and reduce chronic disease risk. Recommendations that do not acknowledge the unique package of nutrients and health-promoting benefits that milk, yogurt and cheese provide as part of healthy eating patterns could result in missed opportunities for optimal nutrition. §

## Nutrition may be losing its importance in the conversation about health and sustainability.

Trends around food and health are increasingly based on values that are no longer centered on nutrition. Healthy eating means more than nutrition to many consumers, who are aligning their food decisions to values like animal welfare, organic practices, weight loss trends and beyond. At an institutional level, nutrition can be overshadowed by these values.

As dietary guidelines and food recommendations strive to incorporate sustainability considerations, food guidance is becoming more universal and simplified; yet current research demonstrates that achieving optimal nutrition is a complex and highly individualized process. The approach for a standardized “universal reference diet” such as that proposed by the EAT-Lancet Commission does not address emerging research of personalized nutrition. Personalized nutrition aims to tailor dietary guidance to an individual's genetics, metabolic profile, microbiome—the collection of bacteria in the gut—and other molecular factors in order to treat and prevent chronic disease.<sup>4</sup> Though there are currently no evidence-based guidelines on the use of nutritional genomics in practice,<sup>5</sup> this emerging area of study is frequently viewed as the new frontier for health care, and new technologies are beginning to make it more accessible.

Multisector strategies to address the issues around chronic disease and climate change need to recognize the complexity of aligning what individuals choose to eat, what they should eat for optimal health and what should be consumed to help protect finite environmental resources. The science around nutrition will continue to evolve, as will understanding of the health of ecosystems. Both are equally important and must be considered together to avoid unintended consequences of overly simplistic solutions to address human health and sustainability.

**Implications:** As the definition of health expands to include both human and planetary health, the alignment to evidence-based nutrition science is more important than ever. Not including scientifically sound nutrition research in proposed sustainability solutions could lead to unintended consequences that negatively impact optimal health. §



## Increasingly, children's nutritional needs for growth and development are overshadowed by other health and environmental concerns.

Due to the rapidly changing global landscape, every sector of society plays a role in sustainability, from transportation and food systems to the individual consumers. With the urgent push to sustain the planet and its resources, there is a lack of consensus on how to define sustainability, collect and analyze data, and present solutions.

Traditional companies are in the vanguard, introducing initiatives that contribute to a more sustainable food system. Danone, Mars From legislative policies to consumer guidance, the push to transform food systems is often driven by issues of the environment. Sustaining the environment is critical; equally important is addressing the inequities of health and food access. If food environment changes are motivated by a narrow view, the nutritional needs of vulnerable groups, particularly children, may not be adequately addressed.



Over the last few years there has been an increase in policies that elevate environment-friendly food choices within institutions. School districts and hospitals are incorporating more plant-based menu options into cafeterias. Restaurants and other foodservice establishments are moving toward more vegan options and joining sustainable eating social campaigns. These changes are being embraced for their benefits to the environment and the health of the population. Consideration for the nutritional needs of children, which differ from the population as a whole, is essential for solutions that support healthy, sustainable eating patterns while also meeting nutrient needs of children during critical growth windows.



When factoring in nutrition-related health concerns for children, obesity is often the priority issue, and growth and development needs can be overlooked. Children need a wide variety of nutrients to support their bone health, muscle development, cognitive function and other aspects of growth. When these critical nutritional needs of children are not prioritized, foods that provide key nutrients can be ignored in solutions. Data show that most American children are not meeting the recommendations for one or more of the following food groups: vegetables, fruits and dairy.<sup>1,6</sup> All provide important nutrients that support optimal health as well as success in school.<sup>7</sup>

Milk and dairy foods, consumed within the recommended amounts in children's diets, contribute essential nutrients that are important during this critical stage of bone mass growth and cognitive development. A prospective survey showed

children with cow's milk allergies are at particularly high risk of poor growth.<sup>8</sup> These findings suggest a risk of sub-optimal growth when dairy is not included as a part of childhood eating patterns.

**Implications:** While there is more than one way to meet dietary needs for individual nutrients such as protein and calcium, the amount and variety of foods that must be consumed to match the nutrition package and affordability provided by dairy milk may be difficult to achieve for many children, especially those who experience food insecurity. The decline in milk consumption in children warrants concern for nutritional inadequacy, which could deepen with a push toward vegan-forward eating patterns. With many children and adolescents being overweight and undernourished, access to nutritious and wholesome foods, as well as nutrition education, is essential to help children reach their full health potential as adults. §

## An increased focus on holistic early childhood education, as well as state leadership support, will help advance efforts to improve the nutrition and health of the youngest children in communities.

Research on early childhood education continues to build the evidence on why the youngest age groups should be the focus for setting up future generations for success. A study published in *The New England Journal of Medicine* identified 2 to 6 years of age as a critical risk window for excessive weight gain among overweight and obese adolescents. Furthermore, greater than half of obese teenagers had become obese by age 5.<sup>9</sup> Reversing the obesity epidemic of this nation will require multilevel strategies, and ones targeting early childhood continue to emerge as effective.

The research around the impact of early childhood education on long-term health continues to build. Economic evidence indicates a positive return on investment in early childhood education; programs targeting low-income or racial and ethnic minority communities reduce achievement gaps, improve the health of student populations and promote health equity.<sup>10</sup> The National Institute for Early Education Research at Rutgers University found that high-quality early childhood education can improve child health in three ways: it introduces healthy foods and promotes activity to prevent chronic disease; it improves parents' mental health, parenting skills and health knowledge; and it improves socio-emotional development, cognitive skills and mental health.<sup>11</sup> A two-year implementation of Coordinated Approach to Child Health Early Childhood Program, a preschool-based healthy nutrition and physical activity program, showed significantly lower child BMI scores among participants.<sup>12</sup>

New leadership in California has elevated the platform to focus on the health and education of young children and plans to continue efforts to increase access to early childhood education and after-school programs in the state. These efforts are already gaining momentum. The California Department of Education awarded more than \$10 million in federal funds in a Preschool Development Birth Through Five Initial Grant to conduct a statewide needs assessment of children ages 0–5. This will serve

to establish a strategic plan that will provide guidance to policy makers to increase access to services for high-need families.<sup>13</sup>

**Implications:** There are 3 million children in California under age 5, half of which come from low-income families. Providing early childhood nutrition education, as well as caregiver and family engagement, is an important way to establish children's lifelong healthy eating patterns, ultimately supporting their health and academic success. §

