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Health and the Environment

Understanding food as medicine through a system lens

Seema Wadhwa



EXPLORE's "Health and the Environment" column seeks to highlight areas of intersection between environmental issues and integrative health and healing.

"Let food be thy medicine and medicine thy food." – Hippocrates

Food is not only a form of sustenance. At its most fundamental level, it serves as a building block for health and a form of medicine. "Food as medicine" is both an evolving thought concept and an age-old adage. The basic premise is to leverage the healthy elements of foods to help enhance health status and prevent future illness. One ingredient of Food as Medicine that may be particularly overlooked is the connection of healthy food to a healthy food system. It is not feasible to have *sustainable* Food as Medicine model without a supporting food system. A healthy food system includes looking at both the positive inputs and negative outputs at an individual level, along the food supply chain system and the impact on the community at large.

One key challenge of the current food system is the lack of connection between an individual and the food that they eat.¹ Many individuals do not have an understanding of where their food was harvested, the processing it went through, how much was wasted along the way, how it made it to their plate, and not to be forgotten, *who* was involved in the process along the way.² Unfortunately, there are health implications associated with each of these steps. This occurs both at a micro scale for the individual, and at the macro scale for the overall health of the community. This current system has also created a lack of understanding of the health benefits of food itself. Left unsolved, these challenges will propagate into the burgeoning Food as Medicine solutions that focus exclusively on the end ingredient.

Understanding the food system

The food supply chain is a complex web of interdependent processes and players, which can make understanding the system challenging. The food system may be best understood via four key concepts and corresponding health considerations (Table 1).

Understanding the state of healthcare

Looking at the state of health is particularly concerning especially as it relates to the rates of chronic illness in America. Nearly seven in every ten Americans is obese or overweight.⁴ Obesity is often directly related to other illnesses and chronic diseases such as diabetes, with those who are seriously obese sixty times more likely to get diabetes.⁴ The surge of chronic disease can be attributed to a very complex set of factors.⁵ A foundational and universally relevant factor is the relationship between access to healthy food, health outcomes and chronic disease. This is further exacerbated in lower socioeconomic communities where access to healthy food is limited. Socioeconomically disadvantaged individuals have higher rates of chronic disease. As it is often stated, one of the greatest predictors of health status is zip code.⁶ Research highlights that socioeconomic status is a *cause, not result or factor* in the prognosis of chronic disease.⁷

The unique opportunity to leverage food as medicine at a system level

The nation's relationship with food is evolving and becoming even more complex as a result of the Covid-19 global health pandemic.⁸ In the face of food supply chain system disruptions, many Americans

Table 1
Select health element to consider.

	Individual Scale	Community Scale
The Farm	- Residual pesticides and use of non-therapeutic antibiotics in food production	- Use of migrant workers with lack of access to affordable health insurance
Processing	- Chemicals used in preservatives	- Worker/community exposure to refrigerants including ammonia ³
Distribution	- Food safety parameters especially for foods that travel great distances	- Air pollution from food transportation
Consumption	- Food preparation additives such as sugars, sodium and fats	- Excess methane gas produced from unnecessary food waste driving climate change

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became acutely aware of where their food comes from and the fragility of mass production food systems. Food insecurity became a daily reality for millions.⁹ Many home bound individuals also developed a more intimate relationship with preparing food.¹⁰ There was a different perspective and focus on food waste. During this disruption, local food systems became particularly robust, thriving on meeting local food demands. This connection between local demand and supply created an opportunity for individuals to be more connected to the food system and consider where their food was coming from as well as the health of the individuals preparing it.¹¹

A sustainable Food as Medicine solution is one that is thoughtful of the health of all the stakeholders in the system. A healthy food system looks not only at the nutrition content of food but at the overall health impacts, both positive inputs and negative outputs created along its journey. This includes considering the impact that food decisions have on personal health in addition to considering the impact food choices have on food production and the individuals working throughout the food supply chain. Leveraging Food as Medicine has the power to connect individuals with where their food comes from. Food as Medicine can create a link between the farm, the fork and the doctor.

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