



For IR Public Health column

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Many Factors Influence How Healthy You Are

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What makes some people healthy and others unhealthy? A lot of factors combine to affect the health of individuals and communities. Collectively, these factors are known in the public health profession as “determinants of health.”

Scientists generally recognize five determinants of health. Some of them we can control; some of them we can't.

Four of the determinants are fairly self-explanatory: genes and biology, health behaviors, our physical environment, and access to medical care. The fifth may be less obvious, and yet it's hugely significant. It's the role that social and economic factors play in our ability to be healthy. These are called “social determinants of health.”

Scientists haven't determined exactly which of these factors has the biggest influence on health, but the U.S. Centers for Disease Control and Prevention (CDC) has made estimates.

Genes and Biology

These are factors over which we have little control, like age, gender, and heredity. For example, older adults are biologically more likely to be in poor health than adolescents, simply because of the physical and mental effects of aging.

Men and women may acquire different diseases, or the same diseases but at different ages. And any of us could carry genes that increase our risk for certain diseases, like breast cancer, cystic fibrosis, or hemophilia.

If you cut a pie into slices representing the amount of influence that each determinant has on health, genes and biology would be a sliver representing about 5 percent of the pie, the CDC has estimated.

Healthy Behaviors

Our individual behavior plays a much larger role in how healthy we are. I hope we're all aware of the impacts that diet, physical activity, tobacco use, substance abuse, seat belt use, sleep, and good hygiene (among others) can have on our health. Each of us has the ability to improve our health by adopting healthy behaviors and eliminating risky ones.

Health behaviors are estimated to represent about 20 percent of our "determinants of health" pie.

Medical Care

Access to health-care services and the quality of those services can greatly impact an individual's health. For example, if you don't have health insurance, you're less likely to get preventive care and more likely to delay medical treatment. The same may be true if health-care services aren't readily available (as in some rural communities) or if you don't have transportation to get to those services.

The CDC estimates that these factors represent a generous 20 percent of our pie.

Physical Environment

Humans interact constantly with the environment, and these interactions affect our length and quality of life. The World Health Organization (WHO) defines environment, as it relates to health, as "all the physical, chemical, and biological factors external to a person, and all the related behaviors." WHO estimates that environmental factors are responsible for about 25 percent of all disease.

Our physical environment includes not only the natural environment, which is generally outside our control, but also the environment we build to live in, called the "built environment."

The built environment includes worksites, schools, recreational settings, housing, and transportation. That's why public health staff are actively involved in improving opportunities for walking and bicycling. These both encourage more physical activity and eliminate some pollution-causing vehicle traffic. Ultimately, that reduces chronic disease.

We can influence individual and community health by supporting public policies that affect our built environment.

Examples of natural environmental factors include weather, local plants and animals and the diseases and conditions they cause, and geographic terrain, which can include physical hazards. Clean air and water are vital to health.

Here in Lewis and Clark County, for example, we struggle with poor air quality caused by seasonal wildfires and woodstove use. Smoke gets trapped in the Helena Valley by temperature inversions. Poor air quality can worsen asthma and other breathing problems, especially in children and the elderly.

We may not be able to eliminate the inversions, but we can adopt good wood-burning practices to reduce the amount of smoke.

Another example is radon. It occurs naturally in the Helena area due to the geology. While we can't change the geologic structure of the landscape, we can take steps to reduce the health impacts of radon by testing for it and installing mitigation equipment in our homes.

Social and Economic Factors

Social determinants of health reflect the situation into which each of us is born, lives, learns, plays, and works. Social determinants have become a huge focus of public health in recent years because research has shown that they have a surprisingly significant impact on health, functioning, and quality of life.

Examples of social and economic factors include income, employment and education status, social supports and interaction, and exposure to crime, violence, and other traumatic experiences, especially in childhood.

Obviously, these are difficult factors to influence individually. It takes all of us working together to support public policy and science-based services that narrow the socioeconomic gap between those who are healthy and those who aren't.

Next month in this column, we'll look more closely at the social determinants of health and their impacts in our county.