



The healthy aging Corner

Part of Parke County's Healthy Aging and Cancer Prevention Initiative

The Physics of a Healthier You

David J. Waters

*The way we respond to the question posed by a Nobel Prize-winning physicist
might just set us on a fruitful path to personalizing wellness*

In an after dinner talk, Nobel Prize-winning physicist Steven Weinberg urged trainees aspiring to become the scientists of tomorrow to consider the following question: *What is the clear set of tasks handed to your generation of scientists?* Since Sir Isaac Newton, men and women in the profession of science have been talking about walking on the shoulders of the scientific giants who came before them. This kind of talk is fine and dandy, but what does it mean for public health? Weinberg is telling us, I believe, that we should be looking to harvest the ripest ideas, the lowest hanging fruit that has sprouted from the seeds of previous advances. My wishful answer to Weinberg's challenge is this : *Let's move our advances in the understanding of medicine and disease toward the goals of wellness and prevention, then personalize it.* Each day, our doctors are using their expert skill in diagnosis and treatment to save lives, yet they seem less well-equipped to guide us in the ideas of wellness and prevention. Doctor Achilles, dedicated healer, thy heel is prevention.

So let's get moving. Some of today's scientists are seeing clearly the baton that is being handed to them. Investigators at the Gerald P. Murphy Cancer Foundation are moving forward with the idea of *personalized cancer prevention* with cancer-fighting nutrients. This strategy calls for coordinated, tip-top performance not only in research, but the all-important skill of health communication. Let's face it. When it comes to making recommendations about health, *one size fits none* – each of us needs to tailor our own life choices, and the health-promoting interventions we use. We must learn to think beyond simply "[Fill in the blank] is good for me" to the gritty details – issues that include the *how much, and the when*.

The goal will be challenging to achieve because of the monster scientists call "heterogeneity" – the notion that each of us is biologically a bit different. Heterogeneity means what might be just right for you is likely to be less than ideal for the guy down the block. And more and more research is showing that guys and gals are different when it comes to heart disease, Alzheimer's disease, and cancer. Clearly, making one recommendation for that almost impossible to find "average person" and then fitting it to everyone is not the answer. Average is overrated.

I say: Take heart, be optimistic. Over the last decade, the public embraced the iPod, a device that enables you to personalize the music you listen to. To be healthier in the decade ahead, we must follow the iPod's lead. The clear task for scientists will be to listen more closely to the rhythms of biology, not for something we can dance to, but for the information we will need to pick our own fruitful path to wellness.

Sources: Weinberg, Steven. *Lake Views: The World and Universe*. Harvard University Press, Cambridge, MA., 2009. Waters DJ, Chiang EC, and Bostwick DG. *The Art of Casting Nets: Fishing for the Prize of Personalized Cancer Prevention*. *Nutrition and Cancer* 2008; 60:1-6.

The Healthy Aging Corner is prepared by health professionals and researchers at the Gerald P. Murphy Cancer Foundation in West Lafayette, IN. Look for The Healthy Aging Corner to provide a glimpse at the most recent research exploring ways we can live longer and healthier lives. Supported by the Parke County Cancer Prevention Fund of the Gerald P. Murphy Cancer Foundation.