

More is Less

Eating plenty of fruits and vegetables could lead to decreased disease risk

BY MIMI KO CRUZ mkocruz@fullerton.edu

The old news: U.S. health officials say a healthy diet includes five servings of vegetables and fruits per day.

The good news: Nearly doubling that to nine servings daily gives you a good chance of preventing heart disease and reducing cancer risk.



Sora Park Tanjasiri

The bad news: Most of us aren't even coming close.

"Americans in general eat only three servings of vegetables and fruits a day," said Archana J. McEligot, associate professor of health science.

"Most don't even reach the minimum," she said, noting that the U.S. Centers for Disease Control and Prevention show that 90 percent of Americans consume far less than health officials recommend.

Undaunted by the sheer scale of the nation's diet deficit, McEligot and her CSUF colleagues have launched several projects to help cut it down to size.



Lenny Wiersma

With the mortality rate from cancer higher for native Hawaiians than it is for other ethnic groups in the U.S., McEligot

and colleague Sora Park Tanjasiri, associate professor of health science and director of Cal State Fullerton's Center for Cancer Disparities, garnered a \$50,000 grant from the National Institutes of Health (NIH) to research social and psychological factors that affect food choices in this population.

"The need to reduce the disparity is critical and urgent," McEligot said. "Research suggests that 30 to 70 percent of cancers are attributable to diet, and modifying dietary intakes may reduce cancer risks."

Teaming with community members, the project includes assessing diet and psychosocial factors related to food choice. The goals are to develop a culturally appropriate dietary intervention plan and educational materials on disease prevention targeted at the native Hawaiian community of Southern California.

Another NIH-funded project focuses on the joint effects of



Archana J. McEligot

genes and diet connected to risk factors for breast cancer. A nutritional epidemiologist, McEligot has been working on the study since 2000, when she was a faculty member at UC Irvine. She continues to collaborate with fellow researchers there.

Breast cancer is the second leading cause of cancer-related deaths in the nation, according to the American Cancer Society. And, the risk increases dramatically after the age of 50.

By tracking 500 female breast cancer patients, McEligot hopes to identify the genetic variations in DNA that are associated with increased breast cancer risk and sensitivity to nutritional adjustment.

"Older adults may face increased risk of chronic disease and cancer as a result of diets lacking in several micronutrients," McEligot said. "As we get older, we can't absorb folate and vitamins B12 and B6, as well as when we are young. Therefore, we don't get enough nutrients to support the body's cellular repair efforts."

Preliminary results of the study indicate that the women who died of breast cancer had diets that were high in fat and low in fruits and vegetables.

"We're now analyzing the survival rates of the women whose genes have a lower capacity to repair DNA and the impact of diet on survivability," McEligot said.

Results are expected in the next two years.

In yet another project begun in September, McEligot, Tanjasiri and Lenny Wiersma, associate professor of kinesiology, are studying obesity and physical activity among Pacific Islander adolescents.

"Little is known about the ways to prevent and control obesity for ethnically diverse populations," McEligot said. "This two-year exploratory study aims to measure the obesity-related influences for Pacific Islander youth in Southern California."

She said 150 adolescents, ages 14 to 18, are participating in the project, which monitors their nutritional and physical activity with the goal of developing a "culturally appropriate intervention plan."

A \$12,000 Mission and Goals grant McEligot and CSUF colleagues received last month from the university will allow them to hold two nutrition-related workshops based on current research.

The first, set for April, "will highlight current research in the nutrition field," McEligot said.

The second workshop, scheduled for May, aims to increase awareness and collaboration between faculty researchers in health science, nursing, biochemistry, psychology and other disciplines.

"Because nutrition is so multidisciplinary, it is both a social and a psychological issue, as well as a health and biological issue," McEligot said, adding that she hopes the workshop will result in future collaborative research efforts.

"Nutrition is fascinating because it touches all of us, affecting every aspect of our lives," she said. "What we eat affects our overall health and can reduce heart disease, diabetes and cancer risk." *inside*

Daily Recommended Allowance

The U.S. Department of Health and Human Services and the Department of Agriculture urge Americans to eat more fruits and vegetables. Growing evidence that fruits and vegetables may prevent heart disease, cancer and other health disparities is the reason behind the campaign to step up produce consumption, government officials report. Visit www.mypyramid.gov for individual recommendations.

