

# Lifelines

from the National Cancer Institute



## **Dr. Tanya Agurs-Collins: Identifying Lifestyle and Genetic Risk Factors for Cancer as a Nutrition Researcher**

*By the National Cancer Institute*

*Dr. Tanya Agurs-Collins is a program director with the National Cancer Institute's (NCI) Health Behaviors Research Branch. In addition to carrying out her own research on nutrition and cancer risk, she helps interested investigators apply for funding to examine the link between lifestyle factors and cancer risk.*

### **How did you become interested in science as a career, and in the relationships among diet, lifestyle, and cancer?**

My grandmother had a great influence on me because she stressed the importance of eating healthy foods and the relationship between nutrition and health. During high school, I volunteered in a hospital and became interested in preventive medicine.

After receiving a PhD in nutrition, I was offered a job at the Howard University Cancer Center in Washington, D.C. where my research focused on nutrition and cancer prevention, specifically in African Americans. Several years later, I joined the Health Behaviors Research Branch at NCI to continue my research and to help shape the nation's research agenda in the area of health behaviors and cancer prevention.

### **What questions are you asking in your own research?**

My research focuses on two areas of interest: examining the links between diet and disproportionately high cancer rates among African Americans and understanding how gene–diet interactions relate to obesity risk.

For example, having a genetic predisposition for obesity does not mean you will become obese. However, the interaction of your genes with behaviors that promote obesity—eating an unhealthy diet and being sedentary—can increase your risk of becoming obese.

Obesity is associated with increased risks of several cancers: cancers of the esophagus, endometrium, colon, and rectum, as well as post-menopausal breast cancer and other cancers. So, if we can prevent obesity, then we may be able to decrease the risk for these cancers.

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### **What aspect of cancer disparities among African Americans concerns you the most?**

African-American women experience higher rates of death from breast cancer. We know that this may be related to aggressive tumor biology, to late stage at diagnosis, or to poor access to health care. But we don't fully understand all of the factors that affect survival for this population.

So we need to do more research on cancer prevention and survival in African-American women. We do know that African-American women are more likely to be overweight or obese compared with other racial/ethnic groups in the United States, which may affect not only the risk of cancer but also survival for some types of cancers.

### **What should the public know about the links between obesity and cancer risk?**

That a healthy lifestyle—eating healthy foods, being physically active, and maintaining a healthy body weight—may decrease your risk for several cancers.

And that by leading a healthy lifestyle, you may decrease your risk of not only cancer, but of other chronic diseases as well.

### **Do young African-American trainees face any barriers in the sciences today?**

Funding for graduate education can be a barrier for minority students. Many are not aware of the funding that's available to support dissertation research, pilot studies, and research training. You should check with your university to see what funding support is available.

### **What other advice do you have for young minority scientists?**

I think it's important to find a mentor who will help you navigate your field of study, help you to carve a research niche, and provide guidance on how to develop grant proposals or how to apply for research funding..

And obtaining work experience in your field early on is essential. This can be accomplished through internships, paid or unpaid. For example, the NIH Summer Internship Program in Biomedical Research (<https://www.training.nih.gov/programs/sip>) provides training for students (high school, undergraduate, graduate, or professional) to gain work experience over the summer. This is a great opportunity for students. .

For junior-level faculty, it is important to network at professional conferences, to learn about research funding opportunities, to speak with representatives at the various funding

agencies to understand their research priorities, and to work closely with mentors to receive constructive feedback on your research proposals.

*NCI leads the National Cancer Program and the NIH effort to dramatically reduce the burden of cancer and improve the lives of cancer patients and their families, through research into prevention and cancer biology, the development of new interventions, and the training and mentoring of new researchers. For more information about cancer, please visit the NCI web site at [www.cancer.gov](http://www.cancer.gov) or call NCI's Cancer Information Service at 1-800-4-CANCER (1-800-422-6237). More articles and videos in the culturally relevant Lifelines series are available at [www.cancer.gov/lifelines](http://www.cancer.gov/lifelines).*