JANUARY 2009 NEWSLETTER

BLACK WOMEN'S HEALTH STUDY

Working together to improve the health of black women

INSIDE:

A MESSAGE FROM DR. LUCILE ADAMS-CAMPBELL

I would like to take this opportunity to inform the BWHS community that I have moved from Howard University Cancer Center to Georgetown University. After 18 years at Howard University, 13 as Director of its Cancer Center, I achieved my goals of enhancing scientific research; establishing a national clinical trials program for prevention and treatment; increasing the number of minorities in clinical trials; developing a breast cancer research program; and establishing a bio-behavioral laboratory and a mobile prostate cancer screening program.

I have now assumed the positions of Associate Director for Minority Health and Health Disparities Research and Professor of Oncology at Lombardi Comprehensive Cancer Center at Georgetown University, in Washington, D.C. I will be able to accomplish some new goals at Lombardi, which has ample resources to recruit talented investigators, establish a community outreach office, develop and foster community-based participatory research, train students and faculty in health disparities, and develop translational research areas.

I assure you that my involvement in the BWHS will continue. Several key members of the BWHS team at Howard will join me at Lombardi and I will continue to work with other researchers at Howard who have contributed to BWHS research. I will also establish new ties with investigators at Lombardi to work on BWHS research projects. The freezer containing mouthwash samples provided by BWHS participants has been moved from Howard to Georgetown University so that it will remain under my direct supervision.

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My entire career has focused on addressing minority health and health disparities. I am deeply committed to the BWHS and look forward to your continued support and involvement in this extremely important endeavor.

Sincerely,
Lucile L. Adams-Campbell, Ph.D.

MORE NEWS ABOUT DIABETES

One of the BWHS's major goals is to reduce the epidemic of diabetes among black women. In our last newsletter, we reported that the risk of diabetes is lower in BWHS participants with a **high intake of cereal fiber** than in those whose intake is low. Cereal fiber intake can be increased by eating unprocessed foods like whole wheat bread rather than white bread, brown rice rather than white rice, or oatmeal cereal instead of frosted flakes. (Krishnan et al. *Arch Int Med* 2007;167:2304-09).

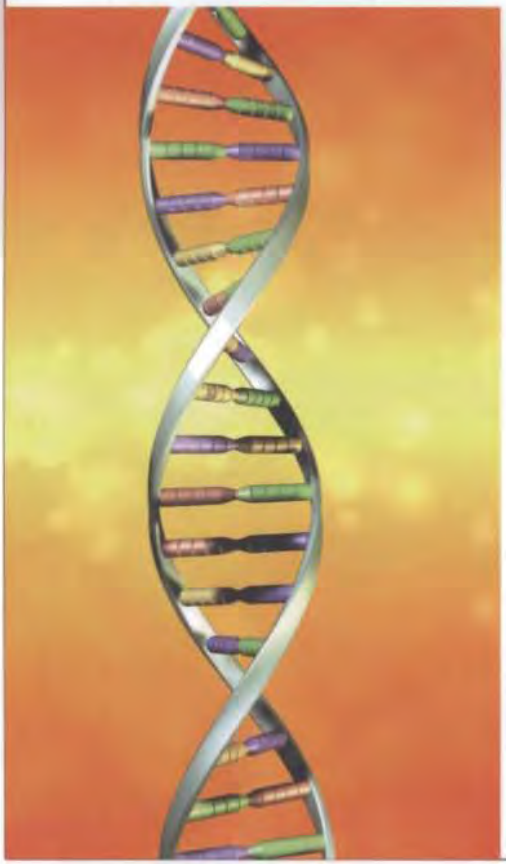
A second way to lower risk is to **cut out sugar-sweetened soft drinks and sugared fruit drinks.** *The Detroit Free Press* recently featured the BWHS's very own Sylvia Johnson in an article regarding this BWHS finding. It's great when our results are publicized so that others can benefit—thank you, Sylvia! (Palmer et al. *Arch Int Med* 2008;168:1487-92).

Another way to reduce diabetes risk is to **exercise more;** we found that **vigorous physical activity** is associated with lower diabetes risk. While many cannot find the time or place for regular vigorous exercise, the good news is that **brisk walking,** which is easier to fit into a busy schedule, reduces diabetes risk too. Exercise may be beneficial because it helps to control weight and reduces the body's resistance to insulin (high insulin resistance can lead to diabetes). We also found that watching television for many hours a day is associated with increased diabetes risk; because TV-viewing doesn't burn many calories, spending too much time doing it (particularly while eating high-calorie snacks) could result in weight gain. If you don't want to give up your favorite programs, **try cutting out the snacks that go along with them.** (Krishnan et al. *Am J Epidemiol* in press).

GENES AND THE BWHS

Background

We inherit characteristics from our parents through genes, which, together with our environment, shape who and how we are. The Human Genome Project—an effort to identify every human gene—was completed in 2003 and sparked a research effort to identify genes that contribute to disease. The idea is that many genes together, each with a small effect, may contribute to causing a disease. Genes can have different forms, or variations; one person may have the "A" variant of a gene while another may have the "B" variant. Scientists have been conducting "genome-wide" association studies in which up to a million genetic variants are compared between people with and without a particular disease. If a certain variant is more common in people with the disease, the next step is to find out exactly what role this variant has in how the body works. For example, is the variant involved in cell growth? Does it delete harmful DNA changes that might otherwise lead to disease? Learning the gene's function will help us understand how and why the disease occurs.



Many important findings have been published since the Human Genome Project. One finding—confirmed now in several studies of different ethnic/racial groups—is that a specific gene is involved with obesity development; while the variant by itself doesn't cause obesity, inactive people who have it tend to gain more weight than inactive people who don't. Another finding concerns prostate cancer, which affects black men more than men of other ethnic groups. A gene has been discovered that is associated with increased risk of prostate cancer; now the search is on to discover that gene's function in the body.

Genetic Studies in the BWHS

The BWHS has received funding from the U.S. National Institutes of Health to explore the genetics of **breast cancer** and **lupus.** These studies will use DNA from mouthwash/saliva samples provided by BWHS participants. Between 2003 and 2007, we mailed kits with small bottles of mouthwash to all participants; 27,800 participants swished with the mouthwash to collect cheek cells from the inside of their mouths and sent their mouthwash/saliva samples to our laboratory.

Genome-wide association studies in white women have identified variants of two genes that are associated with a higher risk of breast cancer: the FGFR2 gene and the TNRC9 gene. No one knows whether the same variants are involved with breast cancer in black women. To answer that question, Dr. Julie Palmer is assessing FGFR2 and TNRC9 in 1,000 BWHS participants who developed breast cancer and 1,000 participants who are free of the disease. DNA from mouthwash samples of these participants is being genotyped, i.e., tested in the laboratory to see which variation of these two genes is in each person's DNA. If we find variants in these genes that are associated with breast cancer risk in the BWHS, the next question is whether other factors combine with these genetic variations to increase risk even more. For example, is there a big difference in risk if a woman with the variant is using female hormone supplements?

The BWHS genetic study of **lupus** involves the mouthwash samples from 400 women who developed lupus and 800 women free of the illness. The study is assessing a specific gene that some small studies found to be associated with the disease to determine if the same association exists in the BWHS. To discover other genes associated with lupus, we are also looking at 1,500 genes across the entire human genome and another 1,500 genes that have been associated with other autoimmune diseases.

We are excited about these genetic studies and the potential to study the genetic causes of a wide range of illnesses. Results on genes from these studies, combined with information participants provided—including medical histories, habits, medication use, and dietary intake—should shed light on what causes illness and lead to better prevention and treatment.

OTHER BWHS NEWS

An 8th-Grade Class Visits BWHS

Last year, BWHS participant Christa Coleman, Director of High School Placement and Alumni Services at the KIPP Adelante Preparatory Academy in San Diego, California, contacted the BWHS to ask if she could bring her 8th-grade class to visit us. We couldn't have been more pleased to host this group! Most years, Christa, teachers, and parents take the kids somewhere in the northeast; this time the destination was Boston (the kids raise money for the trip through various projects). About 60 people—students, teachers, and parents—arrived at our office on the morning of June 6. We explained how scientific research is done and told them all about the BWHS. Before the visit, the children had filled out questionnaires very similar to those that BWHS participants have answered regarding their intake of various foods and the extent of their participation in exercise; the most popular part of the morning was when we presented the results. The class was surprised that so many of them ate so much fast food, and were happy to learn that most of them were exercising several hours a week. They were wonderful kids—curious, confident, intelligent, and polite—and asked some great questions. Christa, the teachers, and their parents should be proud.

Asthma Research in the BWHS

Asthma is a common problem among BWHS participants—since the study's start, over 1,000 women have reported developing this condition as adults and using asthma drugs to treat it. Our first paper on asthma has just been accepted for publication by a leading medical journal in the field of respiratory illness, the *Journal of Allergy and Clinical Immunology*. We found that women who are overweight or obese are more likely to develop asthma than thinner women.

2009 Health Survey

It's hard to believe, but it's almost time to update health information again with the 2009 BWHS health survey. We hope our reports about BWHS studies and findings have showed you how the information you provide sheds light on health issues, and that you'll agree that it is crucial for the BWHS to continue. The 2009 BWHS health survey will be up on our website at the end of March for those who prefer to fill it out online; we'll send you an e-mail with a link to the online questionnaire. In May, we will send out paper surveys. Questions? Phone us toll-free at 1-800-786-0814 or e-mail us at bwhs@slone.bu.edu.

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Many thanks to the 44,500 BWHS participants who have already completed the 2007/2008 health survey.

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