



# BLACK WOMEN'S HEALTH STUDY



*Working together  
to improve the health of  
black women*

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- Dr. Lucile Adams-Campbell

[www.bu.edu/bwhs](http://www.bu.edu/bwhs)

# HAPPY 2014! We wish all of you the best in the new year.

**T**HE BWHS CONTINUES TO BE HIGHLY PRODUCTIVE, with 22 papers published in scientific and medical journals in 2013 (adding to the 113 papers published in previous years). The factors we've studied that might affect health include foods, reproductive factors, physical activity, socioeconomic factors, body size, experiences of racism and violence, smoking, and genetic variants. The health outcomes studied include breast cancer, lung cancer, endometrial cancer, asthma, uterine fibroids, weight gain, sarcoidosis, fertility, and colorectal adenomas. Some of the results are featured in this newsletter. As always, you can find descriptions of the findings on the BWHS website ([www.bu.edu/bwhs](http://www.bu.edu/bwhs)).

To assure that the BWHS continues to conduct important research on health and illness, please join the 33,000 BWHS participants who have updated their health information by completing the 2013/2014 BWHS health survey on paper or on the web. If you have misplaced the survey we mailed to you or never received it at all, please email us at [bwhs@bu.edu](mailto:bwhs@bu.edu) or call us at 800-786-0814 or 617-734-6006.

With funding from the National Institutes of Health, BWHS is inviting participants to contribute blood samples for new BWHS research. Blood samples will be collected over the course of five years and will include different areas of the country at different times. The effort has already begun for the 8,500 participants in Georgia, Alabama, Tennessee, North Carolina, and South Carolina. Other states will follow. See page 3 for details.

The evidence is growing that psychological stressors have adverse effects on physical health—that it's not "all in your head." This newsletter discusses how stress may affect our bodies and a recent finding from the BWHS—that experiences of racism are associated with an increase in adult-onset asthma.

Many of us like to have a cup or two of coffee every day, perhaps because it tastes good or helps keep us awake during boring meetings. Now, results from several studies, including the BWHS, suggest that coffee has some health benefits. Check out these new findings on page 6. Finally, turn to page 7 to find out what one BWHS leader, Dr. Lucile Adams-Campbell, has been up to. ♦

## CONTACT INFORMATION

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# BLOOD SAMPLE COLLECTION IN THE BWHS

**At one time or another,** just about every BWHS participant has probably given a blood sample at a doctor's office or hospital. Substances in the blood can help doctors diagnose illness; high blood sugar, for example, may be a sign of diabetes.

These substances can also predict the risk of a disease long before it develops; for example, if your level of "bad cholesterol" (LDL cholesterol) is very high, your risk of having a heart attack is greater than that of people with low levels (all else being equal). Knowing that a substance predicts a health outcome, and then learning about the mechanism, will lead to better prevention and treatments. There is a great deal yet to be learned about predictors of illnesses in African American women. For that reason, the National Institutes of Health is supporting the collection of blood samples from BWHS participants who are willing to provide one.

Since BWHS participants cannot all go to the same doctor's office or hospital, we have worked out methods with Quest Diagnostics Inc. for BWHS



blood samples to be drawn at any of their thousands of Patient Service Centers (PSCs) located across the country. BWHS participants in Georgia, Alabama, Tennessee, North Carolina, and South Carolina are the first group being invited to provide a blood sample. If you live in one of these states, you will be sent a packet with details regarding the purpose of the study, an informed consent form, and information on how to find a PSC located near your home or work. Anyone with questions can call us toll free at 1-800-786-0814; we can also be reached at 617-734-6006. Those who participate will be reimbursed \$50 for their time and effort. Please consider participating in this phase of our research. As always, your decision does not affect your participation in any other part of the BWHS. ♦

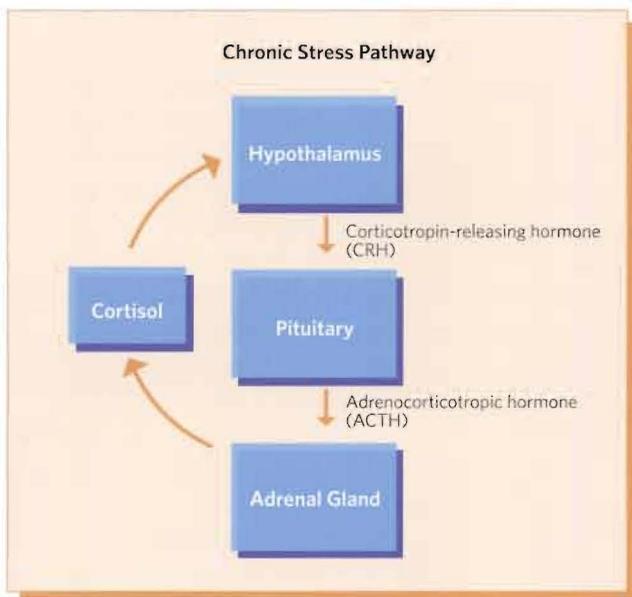
## STRESS AND ILLNESS

**"STRESSFUL"** experiences cause specific responses in the body—the so-called “stress response” that occurs in the neurological (nerves, brain) or endocrine systems (organs such as the ovary or adrenal gland that secrete hormones). Increasing evidence shows that too much stress can contribute to the onset of diseases—not just psychological illnesses, but physical illnesses as well.

Short-term responses to stress involve the adrenal medulla, which secretes adrenaline for the “fight or flight” response. The key system in the body’s response to long-term stress is the HPA (hypothalamic-pituitary-adrenal) axis. In this biological pathway, information is sent from one part of the body to another via hormones. When the brain perceives a stressor, stress hormones travel down the HPA axis and cause the adrenal gland to secrete cortisol, which has widespread effects in the body and keeps it ready to react to stress. In a healthy response, once the stress has passed, the cortisol level returns to normal. However, if the HPA axis is exposed to continuous stress, the system no longer returns to normal. The resulting stress hormones and chemicals produced can then adversely affect the

immune system, the airways, and the autonomic nervous system (which controls heart rate, digestion, breathing, and many other processes). As an example, animal and laboratory studies indicate that stress can result in the release of substances that stimulate inflammation and affect immune response.

Typical events or situations that cause stress include going to the dentist, difficulty sleeping, job loss, and physical or psychological trauma. We all experience some of these at some point in our lives, and our bodies often return to a normal state. Because stressors can affect the body in harmful ways, the BWHS has asked participants about a specific source of





stress among African Americans: perceived experiences of racism. Exposure to racism may be chronic. We recently looked at whether more frequent experiences

of racism are linked to developing asthma among women who had not had this illness before. Asthma involves inflammation of the airways. In an analysis based on more than 1,000 cases of new-onset asthma, its occurrence was highest among women who reported the most experiences of racism. Stress has also been related to the onset of asthma in children.

The link of racism with asthma in the BWHS is consistent with previous results showing that women who had suffered abuse during childhood had an increased occurrence of adult-onset asthma. Like other stressors, experiences of abuse and violence can have unfavorable effects on the immune system, on the airways, and on other parts of the body. The BWHS has also published results on the associations of racism and abuse with high blood pressure, premature birth,

weight gain, breast cancer, mortality, uterine fibroids, and health screening; newsletters have reported on these findings. You can find descriptions of the articles and where the articles were published on our website: [www.bu.edu/bwhs](http://www.bu.edu/bwhs).

Further research is needed to determine whether there are steps that can reduce the adverse effect of stress. Does having a social support network help? Talking about the situation? Having better coping skills? Participating in spiritual/religious practices? An understanding of the biological pathways (which will be made possible through the analysis of substances in blood) will lead to therapies and methods to treat stress-related illnesses. In the meantime, we can all try to reduce stressors in our lives, or at least our reactions to those stressors. There is no downside to doing that. ♦



## GOOD NEWS ABOUT COFFEE



**Coffee is consumed** and enjoyed by millions of people worldwide, including many BWHS participants. In view of such widespread use, it is important to know how coffee consumption affects health. Three large follow-up studies, including the BWHS, have provided results suggesting that caffeinated-coffee drinking is associated with a reduced risk of several conditions.

**Diabetes.** Based on 14 years of BWHS data, the occurrence of diabetes is lower in women who drink caffeinated coffee. The mechanism is not clear, but it may involve constituents of caffeinated coffee that have been found to play a role in regulating glucose levels. Similar results were seen in studies of whites.

**Depression.** The Nurses' Health Study is a follow-up study very similar in methods to the BWHS, except almost all the participants are white women. Based on 10 years of follow-up, depression

was diagnosed less among women who drank caffeine-containing coffee than it was among non-drinkers. It has been proposed that caffeine affects depression through effects on A2a receptors in the brain.

**Parkinson's disease.** Parkinson's disease affects the central nervous system. Rigidity of muscles and slowness of

movement may be followed by adverse effects on thinking as the disease progresses. The Cancer Prevention II Nutrition Cohort Study, a large follow-up of men and women, found over eight years that Parkinson's disease developed less often in men and women who drank caffeine-containing coffee. The reduction among women was greatest among coffee drinkers who did not use female hormone supplements. Just as for depression, the mechanism is thought to involve effects of caffeine on A2a receptors in the brain.

**The bottom line.** Assuming that further studies will confirm these results, it is encouraging that a beverage enjoyed by millions of people may have some health benefits. But let us not forget that there can be adverse effects as well, such as difficulty sleeping or increases in anxiety symptoms. Also, cream and sugar in your coffee add to calories and could result in weight gain. Moderation in all things is probably a good rule to apply to coffee intake. ♦

## SHARING BWHS FINDINGS



Dr. Lucile Adams-Campbell, left, and Sophia A. Nelson

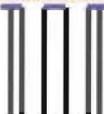
**Dr. Lucile Adams-Campbell, co-Principal Investigator** of the BWHS, is Associate Director for Minority Health and Health Disparities Research at Georgetown University in Washington, DC. Dr. Adams-Campbell attended the 2013 “State of Black Women” tea with Baltimore Mayor Stephanie Rawlings-Blake; the event featured BWHS participant and author of *Black Woman Redefined*, Sophia A. Nelson. Dr. Adams-Campbell was asked to share some of the research findings of the Black Women’s Health Study with the audience. Many thanks to Dr. Adams-Campbell for informing this group of prominent women about the importance of research on the health of black women.

### Extra Newsletters Available

We often have extra newsletters after our mailings, so if you’d like a small number of them for a health fair or meeting, please contact us.

### Are you receiving all of your BWHS emails?

Remember to add **bwhs@bu.edu** to your contact list so that our emails don’t automatically go into your spam or trash folders. We use email to notify you of important happenings in the study and to give you an early bird notification when a new web questionnaire is available so you can reduce your paper mail from us. ♦



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