



# BLACK WOMEN'S HEALTH STUDY



*Working together  
to improve the health of  
black women*

- Characteristics of BWHS participants today
- Our 24/7 society
- New Advisory Board members
- Recent research findings

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# WHAT THIS NEWSLETTER IS ABOUT

The BWHS has been in progress for 21 years. When the study began in 1995, the youngest participant was 21 years old, the oldest was 69, and the average age was 38. Now the youngest participant is 42 years old and 30% are "senior citizens," age 65 or older. The valuable health information that BWHS participants have provided over the years has resulted in more than 180 scientific publications. Now the study is proceeding to assess issues that become more relevant as we get older.




Page 3 of this newsletter describes a variety of characteristics of BWHS members today. Pages 4 and 5 discuss our "24/7" society, in which more and more people are affected by sleep problems. In brief, increased artificial light in modern society can lead to sleep problems, sleep problems increase with age, and sleep problems increase the risk of some diseases. Are you finding that you have problems with sleep? Are sleep problems affecting your health? The BWHS has begun research to answer these questions.

Some recent research findings based on BWHS data are described on pages 6 and 7. Among these are how medications taken for menopausal symptoms affect the risk of breast cancer in Black women, success in the collection of biologic samples in the BWHS, and how a person's own birthweight is related to her risk of developing diabetes as an adult. All of these results contribute to the goal of understanding the causes of disease so that we can make better health decisions.

The BWHS Advisory Board of five wonderful accomplished women who have served since the beginning of the study has been joined by two more outstanding members (see page 5, bottom).

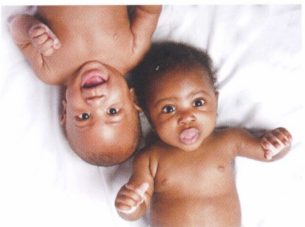
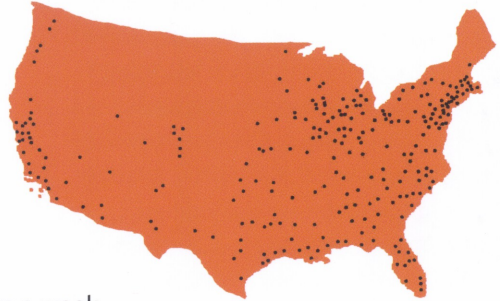
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# THE BWHS AFTER 21 YEARS

When you filled out that first health survey in 1995, you became part of a powerful study of health in Black women. Now 21 years have passed and this important work continues. Here are some facts about BWHS participants now.

- Participants live in every state of the United States; the map shows where most women live
- The age range is 42 to 91 years
- 92% do not smoke
- 22% exercise vigorously at least 3 hours a week
- 35% walk for exercise at least 3 hours a week
- On average, weight gain has been a pound each year for the last 21 years
- 20% have a body mass index less than 25 (not overweight or obese)
- In the past 21 years, 7% have developed cancer, 15% developed diabetes, and 32% developed high blood pressure
- 83% had a mammogram in the past 2 years
- 29% had a colonoscopy in the past 2 years
- 75% had a dental cleaning in the past 2 years
- 27% have one child, 27% have two, and 21% have three or more
- 41% take care of a family member
- 14% participate in social and community activities at least 6 hours a week
- 20% report having more trouble than usual remembering recent events
- 89% rate their mental health as good to excellent
- 81% rate their dental health as good to excellent
- 87% rate their overall health as good to excellent
- 91% rate their quality of life as good to excellent



## OUR “24/7” SOCIETY

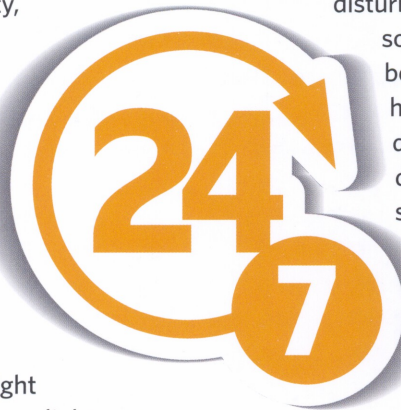
We live in a 24/7 society—many activities nowadays occur **24 hours a day, 7 days a week**, or close to that. Earlier in the lifetime of most BWHS participants, stores closed on Sunday—but no more. In the old days, food shops closed at 6 pm, but nowadays many do not. Even banks, which until recently observed the old rules about opening and closing hours, are expanding their hours. Electricity has helped to make a 24/7 society possible. Before electricity, people went to sleep when it was dark (or when their candles burned down), and arose when it was light. Now, people have all kinds of working hours, including during the night. There is also “light pollution”—we may have light present in our bedrooms even after we have turned out the lights, from the outside or from our computers and cell phones.

What are the health effects of having light at all hours of the day or night? One effect can be disturbances in our *circadian rhythms*. Circadian rhythms are changes—physical, mental or behavioral—that roughly follow a 24-hour cycle and that largely respond to light and darkness. These rhythms

occur in humans, animals, and even in plants. The study of circadian rhythms is called *chronobiology*. Disturbances in circadian rhythms can affect sleep patterns and have been noted especially among shift workers—people who have work schedules that change, involving work sometimes at night and sometimes during the day.

A large body of research indicates that there can be adverse health effects among people with circadian rhythm disturbances. For example, some shift workers have been found to have a higher risk of developing diabetes than those who do not work changing shifts. In the BWHS, participants who reported having worked night shifts for at least 10 years were more likely to develop diabetes than women who had never worked shifts or who had worked shifts for a shorter amount of time. If scientists can figure out the mechanisms that link disturbances in circadian rhythm to health problems, it should be possible to decrease these risks.

Women on average tend to take longer to fall asleep than men, to be more sleep deprived, and to be at higher risk of insomnia. Sleep problems may be increasing in the BWHS,



## OUR 24/7 SOCIETY *(continued)*

because the average age of participants is now close to 60 years and people tend to experience more sleep disturbances as they get older. A growing number of studies indicate that sleep disturbances can contribute to mental and physical health problems. For this reason, the BWHS is turning its attention to the health effects of sleep disturbances and has included questions in the 2015/2016 health survey about factors that are useful for studying circadian rhythm changes. For example, there are questions about when you go to sleep, when you awaken, and whether you have any of a number of sleep problems. Another question is about your “chronotype”, meaning whether you are a “morning” person, a “night” person, or a mixture of both. A morning person has a natural tendency to get up early and go to sleep early, while a night person prefers to get up later and stay up later.

Of the BWHS participants who have filled out the 2015/2016 health survey so far:

- 37% are morning people, 22% are night people, and 41% are a mixture of both
- 66% are satisfied with their sleep pattern
- 9% have difficulty falling asleep
- 11% report that their sleep problems interfere with their daily lives
- 15% reported symptoms that are consistent with the clinical diagnosis of insomnia
- 29% have worked night shifts

The sleep, chronotype, and night shift information will be highly useful for determining how these factors affect the health of Black women. The ultimate goal is to understand the mechanisms so that it will be possible to suggest changes that can help to avoid any adverse effects. Like most research, it will take time to get the answers, but the work has begun.

### **New Advisory Board Members**

*Dr. Leslie Bernstein and Dr. Susan Hankinson have joined the BWHS Advisory Board. Both have had long experience in leading follow-up studies of women. Dr. Bernstein is a founder of the California Teachers Study, a follow-up study of the health of 133,000 teachers in California. Dr. Hankinson has been a leader of the Nurses' Health Study of 120,000 nurses for many years. Both are world-renowned cancer researchers who bring insight into the biology of cancer and other diseases.*

## RECENT RESEARCH FINDINGS

### Menopausal female hormones.

Medications containing estrogen alone (such as Premarin®) or a combination of estrogen with progesterone (such as Prempro®) are used for the relief of menopausal symptoms. Estrogen taken alone increases the risk of cancer of the uterus (endometrial cancer) but a combination of hormones, such as estrogen with progesterone, does

not. For this reason, if a woman



has not had a hysterectomy (she still has her womb) and wants to take female hormones for menopausal symptoms, she must take estrogen with progesterone to protect against developing endometrial cancer. The downside is that use of estrogen with progesterone has been found to increase the risk of breast cancer in White women, and the risk increases with increasing duration of use. Now, an analysis of data from the BWHS and three other studies clearly shows that use of estrogen with progesterone increases the risk of breast cancer in Black women as well. Women who have a uterus and take estrogen with progesterone for menopausal symptoms should use these medications for as short a time as possible. (Rosenberg et al. J Natl Cancer Inst 2016)

### Biologic sample collection.

Biologic samples are critical to understanding the causes of disease and the mechanisms by which they develop. For example, DNA from saliva samples can be used to clarify genetic causes of disease, or hemoglobin A1c levels in blood can be used as predictors of the development of diabetes. Many researchers have had difficulties in obtaining biologic samples from Black Americans. In the BWHS, however, 50% of participants were willing to provide a saliva sample for research purposes. The BWHS repository of 26,700 samples has been used in studies of the genetics of multiple conditions, including lupus, sarcoidosis, diabetes, uterine fibroids, and certain cancers. A recent paper describes the methods used in the BWHS. (Adams-Campbell et al. Cancer Causes and Control, 2016)





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