



BLACK WOMEN'S HEALTH STUDY



*Working together
to improve the health of
black women*

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THE BWHS AT AGE 15



The BWHS celebrates its 15th birthday this year. About 18 years ago, some of us who had been studying women's health believed that the time had come for a much-needed study focusing on African American women. Black women were developing diabetes and high blood pressure, suffering from uterine fibroids and lupus, and dying from breast cancer and other illnesses more often than other American women, yet there were no

large studies of African American women. Over the course of three years, we worked out methods and convinced the U.S. National Institutes of Health that a major study of health and illness in black women was important and necessary. The study was funded, and 59,000 African American women from Arizona, California, Colorado, Delaware, Georgia, Illinois, Indiana, Kansas, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, New Jersey, New York, Oklahoma, Pennsylvania, South Carolina, Virginia, Wisconsin, and the District of Columbia enrolled in the BWHS in 1995. More states are represented now because many women have moved over the years. In 1995, half of the BWHS participants were 38 years of age or older. Time marches on—now half are 53 years of age or older.

The first health survey in 1995 has been followed by surveys every two years that update health information, and almost 28,000 BWHS participants have provided saliva samples for use in analyses of genetic causes of illness. The BWHS has published over 120 scientific papers and abstracts on topics as varied as breast cancer, colon polyps, diabetes, fibroids, preterm birth, weight gain, high blood pressure, lupus, and asthma; you can find a list of publications with descriptions of the findings at www.bu.edu/bwhs.

We have devoted this newsletter to new research findings from the BWHS, so please read on. As always, we welcome your comments and suggestions about future research directions.

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BREAST CANCER SUBTYPES

NEW THINKING ABOUT BREAST CANCER

The latest scientific thinking is that breast cancer is not a single disease but instead consists of several subtypes that respond differently to treatments. For example, breast cancers can be classified according to whether they have “estrogen receptors.” The subtypes that have estrogen receptors are called “ER positive” and the subtypes that lack estrogen receptors are called “ER negative.” Black women who develop breast cancer are more likely to have ER negative cancers than white women. Tamoxifen, a medication that binds to estrogen receptors, is an effective treatment for estrogen-positive cancers but does not work for estrogen-negative tumors. Existing treatments are not as effective for estrogen-negative breast cancers.

The BWHS weighs in

Besides responding differently to treatments, breast cancer subtypes may also have different causes. BWHS investigators studied the effects of various dietary patterns on the occurrence of breast cancer subtypes. Our analysis covered the period from 1995 to 2007, during which time over 1,000 BWHS participants developed breast cancer. Based on information from the 1995 and 2001 surveys, we identified a pattern of food intake named

the “prudent” pattern by nutrition researchers. Women with high scores on the prudent pattern ate more fruits, vegetables, fish, and whole grains than women with low scores. Also, women with the prudent pattern ate less meat, refined grains (such as white bread), french fries, and sweets than other women. We found that women whose diets were high in fruits, vegetables, whole grains, and fish were less likely to develop ER negative breast cancer than women whose diets were low in those foods. If these results are confirmed in further studies, a lower risk of ER negative breast cancer will be yet another reason to do what our mothers and grandmothers have often told us to do—eat those fruits and vegetables.

(Agurs-Collins T, Rosenberg L, Makambi K, Palmer JR, Adams-Campbell L. Dietary patterns and breast cancer risk in women participating in the Black Women's Health Study. *Am J Clin Nutr*; 2009; 90:1-8.)



HOW MUCH WEIGHT SHOULD WOMEN GAIN DURING

Babies born preterm (before the pregnancy has lasted 37 weeks) are more likely to have serious health problems than full-term babies (37–42 weeks). The amount of weight gained during a pregnancy may affect whether the baby will be born preterm. In 2009 the U.S. Institute of Medicine revised its recommendations for weight gain during pregnancy and gave separate recommendations for women in four categories of body size before the pregnancy: underweight, healthy weight, overweight, and obese. The categories were based on body mass index (BMI), which is a measure based on a person's weight and height. The underweight category was BMI less

than 18.5; healthy weight was BMI 18.5–24; overweight was BMI 25–29; and obese was BMI 30 or more. To find your BMI, look for your weight in pounds and height in feet and inches in the chart below. For example, if your weight is about 120 pounds and your height is about 5 feet, your BMI is 23 and you are in the healthy weight category. If your weight is about 150 pounds and your height is about 5 feet 3 inches, then your BMI is 27 and you are in the overweight category. If your weight is around 200 and you are around 5 feet 7 inches tall, your BMI is about 31 and you are in the obese category. You can also find your BMI by going to www.nhlbisupport.com/bmi.

BMI	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Height (ft & in)	Body Weight (pounds)																
4ft11in	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173
5ft	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	179
5ft1in	100	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	185
5ft2in	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191
5ft3in	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197
5ft4in	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204
5ft5in	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210
5ft6in	118	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	216
5ft7in	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	223
5ft8in	125	131	138	144	151	158	164	171	177	184	190	197	203	210	216	223	230
5ft9in	128	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	236
5ft10in	132	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	243
5ft11in	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250



The Institute of Medicine's 2009 recommendations for weight gain during pregnancy are as follows:

Women who are underweight should gain 1 to 1.3 pounds per week in the 2nd and 3rd trimesters for a total gain of **28 to 40 pounds** during a full-term pregnancy.

Women who are healthy weight should gain 0.8 to 1 pound per week in the 2nd and 3rd trimesters for a total gain of **25 to 35 pounds** during a full-term pregnancy.

Women who are overweight should gain 0.5 to 0.7 pounds per week in the 2nd and 3rd trimesters for a total gain of **15 to 25 pounds** during a full-term pregnancy.

Women who are obese should gain 0.4 to 0.6 pounds per week in the 2nd and 3rd trimesters for a total gain of **11 to 20 pounds** during a full-term pregnancy.

The BWHS weighs in™

BWHS researchers looked at whether the Institute of Medicine's 2009 recommendations hold up for reducing preterm birth in black women. We studied prepregnancy BMI in relation to preterm birth based on 7,840 births reported by BWHS participants, including 1,114 preterm births. In each category of prepregnancy BMI, BWHS participants with weight gains in the ranges recommended by the Institute of Medicine had fewer preterm births than women with gains below or above the recommendations. This was especially true for obese women. Among them, preterm births occurred more than twice as often if the pregnancy weight gain was below or above the recommended amount. The BWHS results support the Institute of Medicine recommendations and suggest that obese women should aim for a weight gain of 11 to 20 pounds during their pregnancies.

(Wise LA, Palmer JR, Heffner LJ, Rosenberg L. Prepregnancy body size, gestational weight gain, and risk of preterm birth in African-American women. *Epidemiology*, in press.)

OTHER BWHS RESEARCH

BWHS RESULTS ON RISK OF BREAST CANCER AMONG WOMEN WITH A FAMILY HISTORY OF BREAST CANCER

It has long been known that women with relatives who have had breast cancer have a higher risk of developing breast cancer themselves than women with no breast cancer in the family. This knowledge was based largely on studies of white women; a BWHS study has now made clear what the risks are in black women. In 1995, and again in 1999, BWHS participants reported information on the occurrence of breast cancer in their mothers, sisters, and daughters. Our analyses of BWHS data found that women who had a mother, sister, or daughter with breast cancer were almost two times as likely to develop breast cancer than women who had no relatives with breast cancer. The risk was higher if a woman had more than one relative with breast cancer. The National Cancer Institute recommends a mammogram every year or two starting at age 40 for women at average risk of breast cancer, but the U.S. Preventive Services Task Force recently recommended that women with average risk start mammogram screening at age 50. Be sure to consult with your doctor about when to start having mammograms, and how often, especially if you have a family history of breast cancer or if you are under age 50.

(Palmer JR, Boggs DA, Adams-Campbell LL, Rosenberg L. Family history of cancer and risk of breast cancer in the Black Women's Health Study. *Cancer Causes Control*. 2009; 20:1733-7.)

A NEW THEORY ABOUT DAIRY CONSUMPTION AND FIBROIDS

Most black women develop fibroids (growths) in the womb at some time in their lives. Because fibroids are major causes of bleeding, pain, and hysterectomy (removal of the womb), they are an important research focus of the BWHS. We theorized that dairy foods could reduce the occurrence of fibroids because calcium, a major component in dairy foods, can reduce cell growth. To test this idea, we analyzed the dairy foods you reported eating on the 1995 and 2001 surveys in relation to the occurrence of fibroids. More than 5,800 BWHS participants were diagnosed with fibroids during 1995-2007; women who ate the most milk, cheese, and other dairy products were less likely to develop fibroids than women who ate the least. It is unclear how dairy foods might lower the risk of fibroids, but calcium, phosphorus, and other substances in dairy foods might be involved. A brand-new result such as this one cannot be accepted as true until it is confirmed, so we await the results of other studies. In the meantime, we are continuing to examine other dietary factors that may be related to fibroid development.

(Wise LA, Radin RG, Palmer JR, Kumanyika SK, Rosenberg L. A prospective study of dairy intake and risk of uterine leiomyomata. *Am J Epidemiol*, in press.)

THANK YOU

THANK YOU to the 33,000 BWHS participants who have already completed the 2009 HEALTH SURVEY. If you have not yet done so, please complete your survey on paper or online at www.bu.edu/bwhs. If you need help with the online option or if you wish to fill out a paper survey and can't locate one, just call us toll-free at 1-800-786-0814.

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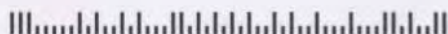
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