

## **SWAN HIGHLIGHTS**

Beginning in 1996, SWAN surveyed over 16,000 women aged 40-55, and then began a study of 3300 of those women who were pre- or perimenopausal. These SWAN participants will be followed as they progress through their menopause transition.

### **What factors influence the age of menopause?**

- About 1% of women have their final menstrual period before age 40, which is called early menopause (this does not include women who stopped menstruating due to hysterectomy or medication). African-American and Hispanic women are 40% more likely to experience an early menopause than Caucasians. On the other hand, Chinese and Japanese women are very unlikely to have an early menopause.
- Hispanic women experience menopause about 6 months earlier than women in the other ethnic groups studied, while Japanese women have a later menopause by approximately 3 months.
- One of the most important factors influencing the age at menopause is smoking, and women who are current smokers have an earlier menopause (by 1-2 years) than other women.

### **Some, but not all, symptoms and changes during the midlife are related to**

**menopause.** The menopause transition means the time from the end of premenopause (when a woman's periods are similar to what they have always been) to perimenopause (when periods are changing in length, bleeding characteristics and/or frequency), to postmenopause (12 months or more with no period, without an explanation like pregnancy or medication use).

- Hot flashes are not limited to women in the menopause transition. Some 20% of premenopausal women experience hot flashes and night sweats. However, the proportion of women who have hot flashes and night sweats increases dramatically, to 57%, in the perimenopause and remains almost 50% in the postmenopause, at least up to age 55.
- In the perimenopause, hot flashes and night sweats are more common in certain ethnic groups: 46% of African American women and over 30% of Hispanics and Caucasians have these symptoms, but only about 20% of Chinese and Japanese women do.
- Women who have more education, don't smoke and who have more physical activity have fewer symptoms than other women.
- Aging, not natural menopause, is responsible for the weight gain at middle age.
- During menopause, one in 3 women has sleep problems. Sleep problems are more common late in the menopause transition (women with 3 or more months without a period). Surprisingly, even women who do not have hot flashes or night sweats report sleep problems.
- About 30% of women report feeling irritable, blue and nervous during the menopause transition compared to 20% of those who are premenopausal. These moods are most likely in women who state that the time between menstrual periods has begun to change (early perimenopause).

- During midlife, Caucasian women are more likely to report being irritable, nervous or blue, or to have sleep problems or stiffness and soreness than women of other race/ethnicities. Women in the other ethnic groups studied had 20% to 50% fewer of these symptoms than Caucasians.
- Although thought to be primarily a problem of the elderly, one out of 4 mid-aged women has some level of urinary incontinence. Women who are heavier, are current smokers, or who are diabetic are more likely to have incontinence. Perimenopausal women are more likely to experience urinary incontinence than premenopausal women.
- Usually, scientists studying physical limitations look only at elderly populations. Surprisingly, 1 of every 10 SWAN women, at the relatively young age of 40-55, has limitations in physical activity (limited in climbing a flight of stairs, walking one block, bathing or dressing). Women who report limitations are more likely to have health conditions like diabetes, arthritis and heart disease. Women who are overweight are 80% more likely to report physical activity limitations than other women.

### **What factors affect bone strength?**

- It has been widely believed that Asian women have lower bone density than Caucasian women, but that is not correct. SWAN has shown that after differences in body size are taken into account, bone density in Asian women is actually higher than in Caucasian women. (African American women are already known to have higher bone density than Caucasians.) Ignoring differences in bone size makes the bones of Asian women appear less strong than those of Caucasians. This discrepancy may explain why Asian women actually suffer fewer fractures than Caucasian women.
- SWAN has shown for the first time that greater physical activity at home (childcare, meal preparation, chores, etc.) is linked to higher bone density. It is crucial to measure all aspects of women's physical activity (not just sports activity) to understand the relationship between physical activity and bone strength.
- Bone density decreases even before a woman's periods stop. Women whose menstrual cycles seem similar may have very different hormone levels because their ovaries are aging differently. Women with higher follicle stimulating hormone (FSH) levels (which indicates more ovarian aging) have lower bone density than other women. Because estrogen levels can vary tremendously during the menopause transition, it is hard to find a relationship between estrogen levels and bone density.
- In Japanese women, diets high in soy foods are linked to stronger bones than diets with less soy. Surprisingly, Chinese women who consume a diet high in soy do not have higher bone density than Chinese women consuming less soy, perhaps because Chinese and Japanese diets contain different kinds of soy foods. This suggests that not all soy foods improve bone strength.

### **What factors increase heart disease risk?**

- African American women who have experienced chronic stress or discrimination in their lives have more risk factors for cardiovascular disease (thicker carotid artery walls and more carotid artery plaque) than their Caucasian counterparts.
- Major depression, even before menopause, predicts cardiovascular risk. Mid-life women (Caucasian and African American – the only two ethnicities studied for this project) who have a history of two or more major depressive episodes are twice as likely to have a risk factor of heart disease (like cardiovascular plaque) before menopause than women who have no history of depression, or only one episode of depression.

### **How do women cope with midlife changes?**

- One in 5 women aged 40-55 had used female hormones, including birth control pills, in the past three months. Hormone use ranged from a high of 24% in Caucasians to a low of 10% in Hispanic women.
- Almost half of women aged 42-52 used some kind of complementary or alternative medical (CAM) treatment in the previous year. Women who use CAM were better educated, had higher incomes, and/or were more likely to have better health practices (not smoke, and have more physical activity) than non-users. CAM seems to be used not to treat menopausal symptoms, but simply because it is believed to promote good health.
- African American women are more positive towards the idea of menopause than women of other ethnicities, and Chinese and Japanese are the least positive.