Lifestyle Practices Key in Lowering Breast Ca Risk

BY BRUCE JANCIN
Denver Bureau

San Antonio — The three most practical public health–type lifestyle interventions at present for reducing breast cancer risk are to encourage breast-feeding, get young girls started exercising regularly to lay the groundwork for a lifelong habit of physical activity, and tackle the postmenopausal obesity epidemic, Leslie Bernstein, Ph.D., said at a breast cancer symposium sponsored by the Cancer Therapy and Research Center.

Dr. Bernstein has spent most of her career studying the breast cancer–preventive effects of physical exercise. Indeed, she conducted the first epidemiologic study demonstrating the link. Since then, there have been more than 30 studies from around the world, most showing that lifetime physical activity is independently associated in dose-dependent fashion with a reduction in breast cancer risk of up to 20%-30%, compared with that of women who don't exercise.

The association has held true in studies of European, Asian, Asian American, and Hispanic American women. Most recently, Dr. Bernstein and coworkers reported the findings of the Women's Contraceptive and Reproductive Experiences (Women's CARE) study, the first-ever epidemiologic study focusing on the effects of lifetime recreational exercise on breast cancer risk in African Americans.

Women's CARE involved 1,605 black and 2,933 white women aged 35-64 years with breast cancer, and 1,646 black and 3,003 white controls. There were no racial differences in the impact of lifetime physical activity on breast cancer risk. Black or white, a woman's average number of hours of weekly exercise from age 10 onward was inversely associated in graded fashion with her risk of developing breast cancer. The highest level of recreational physical activity—defined in this study as an average of 3 hours or more per week over a woman's lifetime—was independently associated with roughly a 25% reduction in risk, compared with that of sedentary women (J. Natl. Cancer Inst. 2005;97:1671-9).

The risk reduction is greater in women without a first-degree family history of breast cancer. "I wish it were the other way around … But at this point in time, none of my studies have shown a very strong benefit for women with a family history of breast cancer," said Dr. Bernstein, professor of preventive medicine at the University of Southern California, Los Angeles.

The most difficult task is to learn how to motivate sedentary women to become physically active.

DR. BERNSTEIN

She said the field of breast cancer risk reduction through physical activity "still has a long way to go."

Remaining research questions include what the best type of activities would be, how much is needed, at what key ages, and the mechanism of benefit. Although the mechanism is widely assumed to be hormonal, it could, for example, involve anti-inflammatory effects or changes in insulin-like growth factors.

"The most difficult task is to learn how to motivate sedentary women to become physically active," Dr. Bernstein said. "Studies show if you don't start at an early age, it's hard to get you to engage in exercise when you're older."

Lactation has been shown to protect against breast cancer. It's uncertain if the benefit is solely because ovulation is prevented, with resultant reduced lifetime exposure to estrogen and progesterone.

Pregnancy is also protective, but only if the first term pregnancy is before age 30. Having a first child in your 30s is associated with roughly the same breast cancer risk as nulliparity—that is, roughly twice the risk of a woman who completes her first term pregnancy before age 20. There is no doubt that the increasing mean maternal age of first birth in the United States—which climbed from 21.4 years in 1970 to 24.9 in 2000—is a significant contributor to the rising incidence of breast cancer in recent decades, Dr. Bernstein said.

Age at first pregnancy isn't customarily considered a readily modifiable breast cancer risk factor. But efforts are underway to develop chemoprevention regimens that

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Many At-Risk Women Aren't Opting for Tamoxifen

BY BRUCE JANCIN
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SAN ANTONIO — Lifestyle approaches to breast cancer risk reduction have assumed considerable importance for the many women who have turned a cold shoulder to tamoxifen for chemoprevention, according to Leslie Bernstein, Ph.D., professor of preventive medicine at the University of California, Los Angeles.

"In my discussions with colleagues, word of mouth is that women are not flocking to take tamoxifen to reduce their high risk of breast cancer," she observed at a breast cancer symposium sponsored by the Cancer Therapy and Research Center.

This anecdotal impression is borne out by the recent literature. In three of four studies of tamoxifen's acceptance for prevention of breast cancer by high-risk women after counseling about the extent of their risk and the pluses and minuses of tamoxifen, only 3%-15% of candidates opted for therapy, although in another study the rate was 42%.

A recent report by Debora A. Paterniti, Ph.D., and coworkers at the University of California, Davis, Center for Health Services Research in Primary Care provides insight into why so many eligible women are unwilling to take tamoxifen for chemoprevention. In focus groups involving ethnically diverse populations of women at substantially increased risk for breast cancer, the investigators found that participants were actually less inclined to take tamoxifen after receiving a standardized educational intervention. They were leery of taking a drug for 5 years to protect against a disease they might not develop. They were also quite concerned about tamoxifen's potentially serious side effects. And they were uneasy about the reliability of scientific studies (Ethn. Dis. 2005;15:365-72).

"It doesn't make you very heartened about the research we do, since we seem to have great confidence in what we're doing," Dr. Bernstein commented.

The women felt they had nonpharmacologic options to reduce their breast cancer risk. They cited early detection, faith, diet, and complementary and alternative therapies.

"When I see the other options they list, it makes me realize that we have a long way to go to educate women about what other options might actually be available to them," Dr. Bernstein said. ■

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mimic pregnancy hormonally. "It will involve a short-term exposure, not 5 years like tamoxifen. But will women be more likely to accept these means of prevention than they would tamoxifen, raloxifene, or aromatase inhibitors?" she wondered.

Turning to obesity, Dr. Bernstein noted it has been shown to be a major risk factor for breast cancer, but only in obese postmenopausal women—and in her own studies, only in those obese postmenopausal women who have a family history of breast cancer in a first-degree relative. In one recent study, investigators estimated the population-attributable risk of obesity to breast cancer at 7.6% in the United States. In 1999-2000, the prevalence of obesity in women was 33%.

Regarding the potential for dietary interventions for breast cancer risk reduction, Dr. Bernstein said that most hypotheses in this area have not panned out. "It may be that diet [is important] at a young age, and we've been studying the wrong diets in cohort studies 6, 8, and 10 years before the event," she said. "It may also be that the impact of diet is small and not detectable."

However, a study by her USC colleague Anna Wu, Ph.D., points to green tea consumption as a potential risk reduction intervention. Dr. Wu's population-based, case-control study of breast cancer in Asian American women in Los Angeles showed a dose-response effect, with voracious green tea drinkers having roughly a 50% lower risk of developing breast cancer than women who did not drink the beverage regularly (Int. J. Cancer 2003;106:574-9).

The plausibility of such an effect is supported by favorable mechanistic in vitro and animal studies involving epigallocatechin-3-gallate, believed to be one of the major biologically active components present in green but not black tea.

Soy intake was also associated with reduced breast cancer risk in Dr. Wu's study, but mainly in those who consumed it heavily in adolescence. ■