LIFESTYLE CHANGES TO REDUCE THE RISK OF BREAST CANCER

A leading researcher has shown how breast cancer incidence could be reduced through modifying specific risk factors. Nerys Hairon reports

New research by Cancer Research UK predicts that lifestyle changes could prevent one in 10 cases of breast cancer by 2024 (CRUK, 2007).

The research, which was undertaken by professor of epidemiology Max Parkin, based at the University of Oxford, was presented at the National Cancer Research Institute’s conference in Birmingham last week. It presents the effect that modification of the following five lifestyle factors might have on future breast cancer incidence:

- Use of post-menopausal hormones;
- Weight loss;
- Reduced alcohol consumption;
- Moderate physical exercise;
- Breastfeeding.

BACKGROUND

To introduce his research findings, Professor Parkin outlines the background to breast cancer epidemiology (Parkin, 2007). Projections of breast cancer incidence in the UK suggest there will be an increase in age-adjusted rates to a maximum in about 2016, followed by a gradual decline. This implies an increase in new cases of breast cancer from 43,700 in 2003 to an estimated 59,300 cases in 2023.

To date, prevention of breast cancer has focused on preventing mortality through screening, but little has been attempted through primary prevention, despite the fact that it is known that many environmental causes of breast cancer are amenable to change. Professor Parkin states: ‘Changes in lifestyle can certainly influence risk, as demonstrated by migrant studies showing changes in incidence following migration.’

The most important influences on risk of breast cancer are reproductive and hormonal factors. Risk is increased by early menarche, late age at first birth, low parity and late menopause. Oral contraceptive use also confers a small increase in risk, but this declines when use stops, and is gone 10 years post-use (Parkin, 2007).

Professor Parkin suggests that the probable reason for inaction in prevention of breast cancer is the realisation that encouraging women to modify the number and timing of pregnancies and use of contraception is hardly a practical public health policy. He acknowledges that for breast cancer prevention, desirable changes (such as avoiding oral contraceptives and early and multiple births) are contrary to trends generally accepted as desirable on social grounds. However, he stresses that some environmental risk factors are open to modification and predicts that the achievement of modest targets for each of these – such as those proposed by the Department of Health – could reduce breast cancer incidence by some 11–12% over the next 15 years.

KEY FINDINGS

According to CRUK (2007) more than 44,000 women in the UK are diagnosed with breast cancer each year, and incidence rates have increased by more than 12% over the last decade. The disease is predominantly diagnosed in older women, and Professor Parkin points out that as the population ages so the incidence of breast cancer is set to increase. However, modifying a number of specific lifestyle risk factors could reduce the number of breast cancer cases diagnosed each year by more than 5,700.
Individual risk factors

Prolonged use of hormone replacement therapy (HRT) in post-menopausal women has been identified as the leading lifestyle risk factor for breast cancer. This research predicts that around 2,100 cases of the disease could be prevented each year if the number of women taking HRT continues to fall (CRUK, 2007).

Evidence demonstrates that the risk of post-menopausal breast cancer in obese women is 25% higher compared with women of normal weight. Professor Parkin calculates that a reduction in obesity rates could prevent around a further 1,800 cases each year.

In addition, increased levels of physical activity among UK women could prevent around 1,400 cases annually. Currently only one in four women meets the government guidelines on exercise (CRUK, 2007). A report from the chief medical officer stated that DH’s advice is that adults should aim to take 30 minutes of at least moderate activity each day (DH, 2004). This 2004 report confirms that the recommendations remain appropriate for general health benefit across a wide range of diseases.

According to CRUK (2007), regular alcohol intake has a significant effect on the risk of developing breast cancer. Several studies have found that the risk increases by 7–11% per unit of regular daily intake. The CRUK research finds that if women kept their alcohol intake within the government’s recommended limit, a further 200 cases of breast cancer could be prevented annually. Breastfeeding for six months also accounts for some risk reduction.

Professor Parkin’s predictions of potential reductions in cases of breast cancer are based on the following:

- That prolonged HRT use will continue to fall at the same rate as currently (by almost 50%) over the next five years;
- That levels of obesity will over the next 10 years return to levels seen in the 1980s, when 8% of women were obese compared with 23% today;
- That exercise levels will increase so that, within three years, all women will exercise for at least 30 minutes five days a week;
- That, within three years, all women will restrict their alcohol intake to stay within the government recommendations of no more than two units a day;
- That (as in Sweden) 72% of women in the UK will breastfeed for six months, which is currently achieved by only 21%.

CRUK also emphasises that it is important to recognise that an individual’s risk of cancer is affected by a combination of genetic factors as well as lifestyle and environmental factors.

CHANGING DIET

CRUK’s CancerHelp UK website (www.cancerhelp.org.uk) contains a wealth of information on breast cancer. It states that the disease is now the most common form of cancer in the UK (excluding non-melanoma skin cancer) and is by far the most common cancer in women (CancerHelp UK, 2007). One in nine women will develop breast cancer during their lifetime. Most of those who have breast cancer are past their menopause but almost 8,000 diagnosed each year are aged under 50 years.

On the link between diet and cancer in general, CancerHelp UK states that it may be possible to prevent as many as 35% of cases by modifying diet, although it is difficult to be exact. Research suggests that 10–70% of cancers may be preventable by changing diet.

The CancerHelp UK website provides information summarising research findings on the association between the main food groups and breast cancer, as well as other dietary factors such as soya and phyto-oestrogens, calories and obesity, food additives, pesticides, alcohol and coffee.

In summary, the website suggests that it may help to prevent breast cancer through the following:

- Consuming less fat from meat and dairy foods;
- Grilling or stewing meat rather than frying;
- Replacing animal fats with polyunsaturated fats (many vegetable oils and margarines) and monounsaturated fats (olive oil);
- Eating more poultry, fish and vegetable protein instead of red meat;
- Consuming less sugary and fatty processed foods such as cakes, biscuits and chocolate;
- Eating more starchy foods (rice, pasta and potatoes) instead of sugary foods;
- Consuming more fibre from wheat bran, cereals, beans, fruit and vegetables;
- Eating more fruit and vegetables including those high in vitamin A.

LIFESTYLE CHANGES TO REDUCE BREAST CANCER RISK

- Reducing the number of women taking prolonged HRT over the next five years could prevent around 2,100 cases of breast cancer each year.
- Reducing obesity levels to 8% of women over the next 10 years could prevent around 1,800 cases each year.
- Reducing alcohol consumption to meet the government’s recommendations within three years could prevent 200 cases of breast cancer each year.
- Increasing the number of women who breastfeed for six months to 72% could also prevent more cases of breast cancer.

REFERENCES


