STEP BY STEP INTO THE FUTURE

Prevent Breast Cancer is the only UK charity committed solely to predicting and preventing the disease. With the only dedicated prevention centre in the country, we work with patients, researchers and leading scientists to discover how to prevent the UK’s most common cancer. Here we provide a summary of our current research projects.

HIGH RISK GENES

In a small number of women, breast cancer may be caused by a mutation in a gene such as BRCA1 or BRCA2. Our research is improving our understanding of how these genes work, with the longer term aim of developing drugs that can switch off their harmful effects. Gene testing is now more widely available, enabling more people than ever to take preventative action to protect themselves against breast cancer.

SNPS ('SNIPS')

Most women who get breast cancer have no family history of the disease. Research suggests that in the 85% of women with no family history at all, there may nevertheless be an underlying genetic predisposition caused by tiny faults or variations in genetic makeup known as ‘SNPs’. Women who carry several such SNPs have a much higher chance of breast cancer than those who carry none. Now we have the ability to identify those women at risk, we can offer them a range of preventative options.

PREVENTION THROUGH PREDICTION

Testing for high risk genes and SNPs is one way of predicting risk. Another way is to analyse family history and lifestyle factors. Another is the mammogram density of breast tissue at around 50 years of age. In the future we may be able to combine these techniques to predict risk: then offer intensive screening to some, while others can relax knowing that they are unlikely to ever develop breast cancer.

ENVIRONMENTAL FACTORS

Our research confirms that healthy breast tissue can contain many artificial chemicals. None of these have been shown to be a direct cause of breast cancer, and in particular there does not seem to be a link with deodorants. Processed foods seem to be a higher risk. We think this is because of their high calorie content rather than specific chemicals and additives in the foods. More research will be undertaken in this area to identify environmental factors that increase the risk of breast cancer, enabling people to reduce their exposure to these.

BREAST CANCER PREVENTION DIET

Prevent Breast Cancer’s Dr Michelle Harvie is the only UK dietitian working solely in the field of breast cancer research, specialising in strategies to prevent the disease and its recurrence.

Alongside Professor Tony Howell, award winning Dr Harvie is co-author of the best selling 2-Day Diet, which helps people to reach a healthy weight and reduce breast cancer risk. It involves following a low-carbohydrate diet for two days a week and eating normally but sensibly for the rest of the week. Find out more at: www.2daydiet.co.uk

DUCTAL CARCINOMA IN SITU (DCIS)

Breast cancers go through a preliminary early cancer stage known as DCIS. We are conducting research into how to diagnose and treat DCIS at an early stage to prevent it progressing into cancer. It may be possible to switch off the genetic or cell malfunctions, for example by using new preventative drugs or other simple interventions.

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REDUCE YOUR RISK - STEP BY STEP

**STEP 1**
BE BREAST AWARE
Learn how to check your breasts and make sure you’re familiar with how they normally look and feel. Visit our website for the changes to your breasts you need to look out for.
If you’re aged between 47 and 73, take advantage of the breast screening you will be offered in the form of regular mammograms.

**STEP 2**
MAINTAIN A HEALTHY WEIGHT
Our research has found that having a Body Mass Index (BMI) of between 18 and 25 lowers your risk of breast cancer. If you’re already overweight, losing just 5% of your weight (and keeping it off!) can reduce your risk substantially – by between 25 and 40%.
Eat more fruit, vegetables and wholegrains while avoiding processed foods which are often high in sugar and fat. You’ll find more dietary advice on our website, or please ask for our Diet and Lifestyle leaflet.

**STEP 3**
BE PHYSICALLY ACTIVE
Aim for five exercise sessions a week, lasting 35 to 45 minutes each.
Our research has found that as well as reducing the risk of developing breast cancer, exercise can lower the risk of the disease coming back (recurrence) if you’ve already been diagnosed.

**STEP 4**
DRINK ALCOHOL SENSIBLY!
Alcohol increases the risk of breast cancer. If you choose to drink, you can help keep your risk of developing breast cancer from alcohol low by limiting your intake to 14 units a week. The more you cut down on alcohol, the more you reduce your risk. Spread your drinks evenly throughout the week. If you’d like to cut down, try having several drink-free days each week.

**STEP 5**
HORMONES
Research has found a link between the oestrogen hormone and breast cancer. Aim to stop using oral contraceptives when you’re around 30 – speak to your GP about the alternatives available to you. Limit the use of Hormone Replacement Therapy (HRT) to a short time and avoid using this continuously for years. Breast feeding can help lower your risk of breast cancer and we recommend that if possible, you breastfeed your baby for at least six months.

**STEP 6**
GENE TESTING
If several of your family members have had breast or ovarian cancer, or your mother or sister was diagnosed with the disease before the age of 50, you may want to discuss gene testing with your GP. It’s important that you undergo proper counselling before making any decisions about being tested. Should you carry the gene that increases breast cancer risk, it’s likely that you’ll be offered a range of preventative options going forward, including regular screening.