
Diet and breast cancer

Breast Unit

Patient Information



Diet and breast cancer

Links are often suggested between breast cancer and our diet. However, much of the information available can be confusing or unclear. This booklet provides information about the best diet if you have breast cancer and information about diet and cancer prevention.

It is based on what we know from current research at the time of writing. As new studies are published on a regular basis, we will update this booklet regularly to include new evidence. This booklet answers questions often asked by people undergoing treatment, or those who are thinking about their diet in the future.

Diet and breast cancer prevention

Many studies have indicated that our environment may influence the risk of some cancers, including breast cancer. Diet can be part of this complex picture – the effects of diet probably start during childhood, and then continue into adult life. This may be directly due to the foods eaten, but also through its influence on body weight and growth. You may wish to read more about the dietary associations with the prevention of cancer.

Diet during treatment for breast cancer

If you are undergoing treatment for breast cancer then eating well is important. There may be times when you do not feel like eating or have taste changes. Perhaps you have days when you are feeling nauseous or fatigued. These symptoms are common and some simple dietary changes along with the right medication to control your symptoms can help overcome some of these problems. For more information on diet during treatment, please see the booklet *Eating well when you have cancer*. This is available on the Patient Information library via The Royal Marsden website.

Ideally aim to maintain an ideal body weight and try not to gain weight during treatment. Follow the guidance in this

booklet for a healthy diet and try to keep as active as possible. More information on activity and exercise is available in the Macmillan booklet *Physical activity and cancer treatment* or you can contact the physiotherapy department at The Royal Marsden.

What is the best diet for me when I have completed my treatment?

A healthy diet should provide all the protein, energy, fibre, vitamins and minerals that the body needs to function properly. That means enough nutrients for the body to use well, but not too much that the body has to store excess for use in the future. There are basic principles to a healthy diet, produced by the World Cancer Research Fund which can be summarised as follows:

- Maintain your weight within the normal BMI range
- Be physically active for at least 30 minutes every day
- Reduce your intake of high calorie foods and avoid sugary drinks
- Eat at least 5 portions of fruit/vegetables every day
- Eat a portion of pulses or wholegrain foods with every meal
- Reduce your intake of red meat to no more than 350–500g (12–18oz) a week and eat minimal amounts of processed meats
- Limit or avoid alcohol. If consumed, limit your alcohol intake to no more than 14 units per week (for men and women) spread over at least 3 days
- Limit your intake of processed foods, high fat foods, starch and sugar
- Limit your intake of sugar-sweetened drinks
- Lower your salt intake – this can be helped by reducing the amount of salty and processed foods you may consume
- Do not use dietary supplements for the prevention of cancer.

It may be useful to think about the balance on your plate at mealtimes. Ideally $\frac{3}{4}$ of the plate should be wholegrain cereals, pulses, vegetables and fruit with the remaining $\frac{1}{4}$ containing a source of protein such as fish, chicken, egg or lean meat.

Healthy plate guide:

$\frac{3}{4}$

(or more)
wholegrains,
vegetables,
fruit and
pulses



$\frac{1}{4}$

(or less) meat,
fish and other
protein foods

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More information and recipe ideas are available at:
www.wcrf-uk.org

Information on portion sizes of fruit and vegetables can be obtained from the World Cancer Research Fund
www.wcrf-uk.org/health-advice-and-support/health-advice-booklets/what-is-a-5-a-day-portion/

What weight should I be?

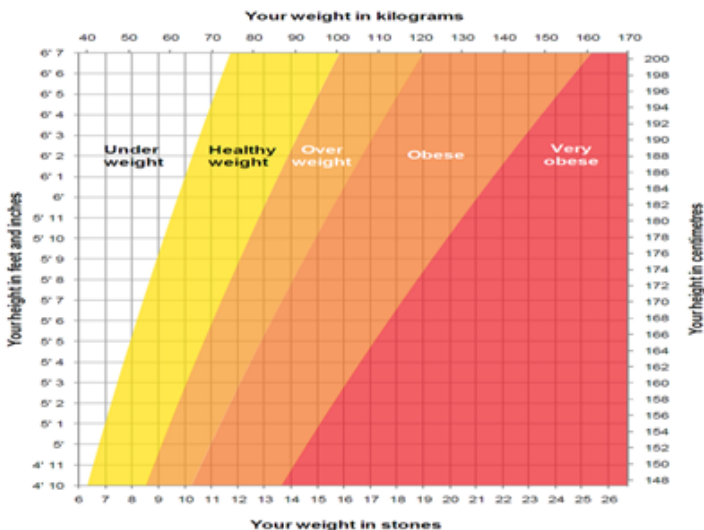
Some people may be overweight before they start having treatment for breast cancer and many patients gain weight during their treatment. Research into this area has shown that there may be several reasons for weight gain. These include:

- Eating more energy (calories) than is required for daily activity levels
- Being less active than usual, due to fatigue

- The lower energy needs associated with certain chemotherapy treatments
- Hormone treatments such as Tamoxifen and aromatase inhibitors may cause body fat to re-distribute and therefore some people may feel they have put inches on around their middle although their weight is the same
- How you are feeling emotionally can affect your eating habits.

It is important that people who have had treatment for breast cancer try and maintain a healthy weight. Studies have shown that people who are overweight have an increased chance of their cancer recurring and of developing lymphoedema. Avoiding weight gain or losing excess weight may be helpful. Achieving a healthy body weight is also likely to be good for general health as it affects the risk of heart disease, diabetes and other cancers.

To check what weight you should be, please look on the table below.



There has been a lot of interest recently in using the waist circumference as a measure of health. This is because body shape can influence our risk of developing certain conditions

such as heart disease and diabetes. More information on this can be found from the British Heart Foundation www.bhf.org.uk/information-support/heart-matters-magazine/medical/measuring-your-waist

If you feel that your weight is not ideal, then you may wish to discuss this with your GP or practice nurse.

If you need to lose weight, then it is important that you find the right way of maintaining a healthy diet that gives you a steady, sustainable weight loss. Some people find that diet support groups help you do this whilst others are happier to do this on their own or with a friend. There is a lot of interest in Intermittent Fasting, which means following a low energy, low carbohydrate diet for two days a week and eating healthily for the rest of the week. Current research in people with breast cancer aims to see if this method of dieting is easier to follow than trying to restrict food intake on a daily basis. For more information on this type of diet, please see page 12.

Low-fat diets and breast cancer

There is debate as to whether dietary fat intake increases breast cancer risk and whether it is helpful to reduce fat intake. There is some evidence to suggest that following a low-fat diet, which contains fruit, vegetables and wholegrains may improve survival in women with breast cancer. It is not clear whether it is dietary fat itself or whether fat is just a source of energy (calories) and therefore encourages weight gain and insulin resistance. Watching how much fat you eat, particularly saturated fat, may be helpful for weight management and other diseases such as heart disease. The following tips will help you with a healthy low-fat diet.

- Reduce the amount of oils, high fat spreads, dressing and sauces
- Choose low-fat dairy products such as skimmed milk, low-fat yoghurts and cheese
- Choose low-fat fish such as white fish, poultry and lean meat

- Eat more fruits, vegetables, legumes and grain products
- Eat low-fat desserts, snacks and beverages instead of high fat items.

Soya foods

Soya foods have often been mentioned in relation to breast cancer because they, along with other foods, contain isoflavones which are also known as phytoestrogens. Phytoestrogens are plant substances which have a similar chemical structure to female oestrogens. They also work in a similar way, by attaching themselves to some of the oestrogen receptor sites on the cells. However, their action is much weaker than the body's own oestrogens. Soya is a type of phytoestrogen, which is a substance found in certain plants which can produce effects like that of the hormone oestrogen, although it has much weaker effects than oestrogen itself. At high oestrogen levels such as pre-menopause, soya may work against the hormone but at low oestrogen levels such as post-menopause, soya may work like it.

A number of studies have examined the safety of eating foods which contain phytoestrogens, such as soya. Soya is thought to be beneficial in terms of the prevention of breast cancer, outcome from treatment, and risk of recurrence, but at present we do not know exactly how much should be eaten. However, it is thought to be safe to include it once or twice daily according to current evidence. Eating soy foods may even be protective in terms of overall health, even if a hormone drug such as Tamoxifen is being taken. However, there is an ongoing need for more clinical studies looking at the amount of soya foods needed in the Western world to provide stronger evidence on the effect these substances have on breast cancer and recurrence.

It is also important to consider whether women who have breast cancer should take phytoestrogens as a supplement such as red clover. The effects of phytoestrogens in breast cancer are not known. Some women choose to take phytoestrogens as they feel they might help with hot flushes but they do not help

the majority of women. High intakes of phytoestrogens in supplements such as red clover may be of particular concern in women with oestrogen receptor positive cancers. This is because they may interfere with hormonal treatments or influence breast cancer and are therefore not recommended.

Alcohol

Healthy eating guidance is to avoid or limit alcoholic drinks. It is not clear whether drinking alcohol increases the risk of breast cancer recurrence and more research is needed.

Specific information on counting units of alcohol is available from the NHS website

www.nhs.uk/live-well/alcohol-support/calculating-alcohol-units

Should I avoid sugar?

No. Cancer cells, like every other cell in the body use glucose for energy. Some people have suggested that reducing sugar intake can minimise cancer cell growth. However, restricting the amount of sugar has not been proved to slow down or control the growth of cancer cells and therefore does not need to be avoided. Reducing sugar in your diet can be a useful way to help you lose weight.

Should I eat dairy foods?

There is insufficient evidence to support women avoiding dairy foods. In fact The World Cancer Research Fund's current findings show there is some evidence that in pre-menopausal women, consuming dairy products might decrease the risk of breast cancer. Concerns about dairy foods have often surrounded the high fat content of dairy products and the presence of hormones, particularly insulin-like growth factors, in milk. However, nowadays the use of hormonal growth promoters in the milk industry is banned within the UK. Any growth factors naturally present in the milk are broken down in the digestive process and are not absorbed well into the body.

Dairy products can also be a very useful source of nutrients including protein, calcium and some vitamins. We recommend that low or reduced fat dairy foods, for example, skimmed milk, low fat cheese and yoghurt are included as part of a healthy diet. The high calcium content makes an important contribution to total calcium intake which is an important factor for helping maintain bone strength.

Diet and bone health

Your bone density may be influenced by breast cancer treatment, especially hormone treatment. Your doctor will discuss whether you need any particular bone density scans (DEXA) to monitor this and if you require any treatment.

Some aspects of your diet may influence bone health including the following:

- Adequate calcium intake of 700 mg (or 1000 mg if you have osteoporosis) or 1200 mg for post-menopausal women and men over 55 years). See the table on page 9 for calcium content of commonly eaten foods.
- Adequate Vitamin D from diet and sunshine. This would mean 15–20 minutes of sun per day during the summer months (April to September). However it is important to remember to be safe in the sun. During the autumn and winter months, everyone will rely on dietary sources of vitamin D such as oily fish, egg yolk, fortified fat spreads and fortified breakfast cereals, to meet the recommended intake of 10 micrograms per day. This can be difficult to achieve and everyone should consider taking a daily supplement containing 10 micrograms of vitamin D in autumn and winter. Those at risk of vitamin D deficiency should consider a daily supplement all year round. You are at risk if:
 - you have minimal sunshine exposure as a result of not spending time outdoors

- you have minimal sunshine exposure as a result of habitually wearing clothing that covers most of your skin while outdoors
- you are from a minority ethnic group with brown or black skin.

Your bone density is also improved with physical activity and is worsened with smoking and alcohol.

Food	Calcium Content
Milk (semi-skimmed) - 250ml	300 mg
Cheese eg. Cheddar - 30g	222 mg
Dried fruit eg. Figs - 25g	62 mg
Nuts eg. Brazil nuts - 25g	42 mg
Wholemeal bread - 30g	32 mg

If you choose to avoid dairy foods, it is important to ensure you include milk alternatives fortified with calcium and other vitamins including vitamin B12.

Vitamins and mineral supplements

If you follow the principles of healthy eating then your diet is likely to provide all the vitamins and minerals you require. However, there may be times when eating is more difficult and you know that your diet is not as good. You may wish to take a one-a-day multivitamin and mineral supplement to make sure that you are receiving enough of the vitamins and minerals you need. Try to return to a healthy diet when you can.

At present, there is no evidence that taking extra vitamins as supplements will reduce the chance of cancer coming back. Very high doses, well above the recommended daily intake, may be harmful and have unpleasant side effects or may interact with medication.

If you are unsure of safe levels for vitamins or minerals then speak to your dietitian or doctor who can check how much you are getting from your diet. Also be careful if you take more

than one vitamin and mineral preparation – you may be taking the same vitamin in different supplements and be taking too much. If you would like more information, then please see the leaflet *Cancer and dietary supplements* available on the Patient Information library via The Royal Marsden website.

Is there any special diet I should follow?

There has been a lot of interest in diets for cancer and in particular ‘complementary’ and ‘alternative’ diets. Some people have claimed to cure or control cancer using a diet and people are often confused as to whether or not they should follow one of these. Some diets, such as complementary diets, are recommended in addition to following conventional cancer treatment. They may include avoiding some foods and increasing the intake of others. Often, additional vitamins, minerals or other supplements are recommended along with the diet. If you are considering any of these diets you may wish to speak to a dietitian.

There have been few clinical trials or research studies on these diets, both in breast cancer and other types of cancer. At the moment there is no scientific evidence to support claims made by these diets that they will influence the chance of the cancer returning.

Some alternative diets claim to cure cancer on their own instead of following conventional treatment. Again, these diets have no evidence to support their claims and we cannot recommend them under any circumstances.

Herbal remedies

In the search for fitness and health, many people consider taking herbal remedies or supplements. It is important before taking anything like this that you discuss it with your doctor, pharmacist or dietitian. Not all herbal remedies or natural products are as safe as you may think, particularly if you are already taking medication prescribed by your doctor. The important questions to ask are:

- Is there any evidence that the product does what it claims to?
- Are there any side effects of taking the product?
- Does it interact with any medications I am already taking?
- Does it interact with my condition? For example some products may have oestrogen-like effects.

Often the pharmacy and drug information service will be able to help give you information to answer these questions. Please ask your pharmacist or dietitian for advice.

You may wish to discuss these supplements further with the drug information service:

The Royal Marsden Pharmacy Medicines Helpline:
Contactable via The Royal Marsden Macmillan Hotline.

Email: *medicines.information@rmh.nhs.uk*

Contact details

If you have any questions or concerns after reading this booklet, you can contact the relevant department:

Nutrition and Dietetic Service

Chelsea Tel: 020 7808 2814

Sutton Tel: 020 8661 3066

Physiotherapy Department

Chelsea Tel: 020 7808 2821

Sutton Tel: 020 8661 3098

The Royal Marsden Macmillan Hotline: 020 8915 6899

You can ring the hotline 24 hours a day, 7 days a week.

Call us straight away if you are feeling unwell or are worried about the side effects of cancer treatments.

This service provides specialist advice and support to all Royal Marsden patients, as well as to their carers, and both hospital

and community-based doctors and nurses caring for Royal Marsden patients.

Sources of information and support

Breast Cancer Now

Information for anyone affected by breast cancer

www.breastcancernow.org

World Cancer Research Fund

Recipes and tools to calculate BMI, with a focus on diet and cancer prevention.

www.wcrf-uk.org

NHS

Information on health, living well, care and support

www.nhs.uk

Macmillan Cancer Support

Information on many aspects of cancer, cancer treatment, diet and exercise

www.macmillan.org.uk

Further reading

The Complete Guide to Breast Cancer

Professor Trisha Greenhalgh and Dr Liz O’Riordan

Published by Vermilion.

ISBN 978-1785041877

The 2 day diet by Dr Michelle Harvie & Prof Tony Howell

Published by Vermillion

ISBN 978-0-09-194805-4

The 2 day diet recipe book is aimed at those who want to lose weight. The plan restricts dietary intake on 2 days and to eat sensibly for the rest of the week.

References

This booklet is evidence based wherever the appropriate evidence is available, and represents an accumulation of expert opinion and professional interpretation.

Details of the references used in writing this booklet are available on request from:

The Royal Marsden Help Centre

Telephone: Chelsea 020 7811 8438 / 020 7808 2083

Sutton 020 8661 3759 / 3951

Email: patientcentre@rmh.nhs.uk

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Should you require information in an alternative format, please contact The Royal Marsden Help Centre.

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