

## The importance of a healthy lifestyle after breast cancer surgery

These are guidelines to inform you about the effects and benefits of physical activity and a healthy diet following breast cancer surgery and during breast cancer treatments.

### Benefits of physical activity

Exercise improves physical functioning and quality of life in people of all ages. Getting plenty of varied physical activity can help you

- increase your muscle strength and joint mobility.
- improve the condition of your respiratory and circulatory systems, which may have deteriorated during treatments.
- manage your weight, together with a healthy diet.
- slow down osteoporosis and prevent fractures.

Along with weight management and eating a healthy diet, regular physical activity lowers the risk of cancer recurrence.

Exercising after breast cancer surgery is safe and does not increase the likelihood of conditions such as arm edema (swelling).

*Pace yourself depending on your health and interests*

Select a form of exercise that you enjoy. The UKK Institute's physical activity pie chart presents various forms of exercise and a good description of weekly physical activity levels. Remember that even light exercise is beneficial if practiced regularly.



([http://www.ukkinstituutti.fi/en/products/physical\\_activity\\_pie](http://www.ukkinstituutti.fi/en/products/physical_activity_pie))

Increase the frequency and duration of your physical activities before you increase their intensity. If necessary, you can alternate between exertion and rest during the same exercise session. Also remember to stretch after exercising.

### *Aerobic physical activity*

You can improve your aerobic fitness by exercising on several days of the week for a total of at least 2 hours 30 minutes of moderate activity, or 1 hour 15 minutes of vigorous activity (breathing heavily and sweating). Vigorous aerobic exercise helps you improve specific components of fitness, such as cardiovascular health. Moderate exercise, such as everyday physical activities (e.g. walking to work or to the store), also have a positive impact on your health.

### *Muscle strength and joint mobility*

Muscle-strengthening activities and balance training should be done twice a week. These exercises support the musculoskeletal system. You can use light weights for this purpose.

Arm mobility exercises are recommended daily to maintain and improve shoulder mobility and muscle flexibility. You can use a stick or hand weights for this purpose.

Upper-body exercises such as swimming, rowing and weight training could be part of your fitness program. If you have been diagnosed with arm edema, use compression products during physical activity. You can exercise safely as your symptoms permit. Start exercising and increasing the intensity of activity gradually. If your arm becomes more swollen or painful, you should exercise more gently.

### *Physical activity and preventing osteoporosis*

Osteoporosis is a normal part of aging. In women, menopause is associated with an especially rapid period of osteoporosis lasting three to eight years. Some adjuvant cancer treatments accelerate osteoporosis. For many women of menopausal age, chemotherapy treatments cause premature menopause followed by accelerated osteoporosis and an increased risk of fractures. The anti-estrogen drug tamoxifen protects post-menopausal women against osteoporosis, but somewhat increases the risk of osteoporosis in younger women. Aromatase inhibitors increase susceptibility to osteoporosis as well as the risk of bone fractures.

Lifestyle choices can have an impact on the condition of bone. It is important to control osteoporosis and prevent falls. Exercising slows osteoporosis while also improving muscle strength and balance. Good balance, in turn, helps prevent falls. Weight-bearing activities such as walking, Nordic walking, running, gym training and aerobics are important for slowing osteoporosis and preventing fractures. By contrast, cycling and swimming do not put much stress on the skeletal system but are very effective for improving aerobic fitness and weight management. The variety of exercise, including activities that require coordination and balance (such as aerobics), is also important for fracture prevention.

### *Exercising for the fun of it*

All kinds of regular physical activity have a positive effect on mood and self-esteem, and alleviate symptoms of fatigue or exhaustion. Group exercise also improves social interaction. Regular physical activity will help you to cope. Remember that exercise should be fun!

### *Exercising while you are having chemotherapy and radiotherapy*

Stress tolerance is usually lower after surgery and during the chemotherapy treatment period, and this should be kept in mind when planning an exercise program. You should always exercise according to how strong you feel. It is advisable to rest on treatment days. When acute side effects have subsided, you can start exercising gradually and gently as your strength permits. Exercise should feel good. You should avoid pool activities and group exercise during chemotherapy and/or radiotherapy due to the increased risk of infection.

## **Nutrition and weight management**

Medical treatments for breast cancer are associated with weight gain. Many patients gain some weight during their treatments. Gaining a lot of weight may increase your risk of breast cancer recurrence, so managing your weight is important. A healthy diet and physical activity are key factors in weight management.

A low-fat diet with plenty of vegetables has been found to reduce the risk that breast cancer will recur. Eating fish that are rich in omega-3 fatty acids about twice a week also seems to reduce the risk of breast cancer recurrence.

The plate model is a good meal planning aid. Opt for plenty of vegetables, fruits and berries, preferably at every meal. Choose whole grains over refined grain products. Fish and chicken are preferable to beef and pork and should be eaten more often. Use non-fat or low-fat dairy products. Use oil-based salad dressings, margarine on bread, and oil for cooking, all in moderation. For more information about healthy food choices, see [www.vrn.fi](http://www.vrn.fi)

Ensure adequate intake of calcium and vitamin D. Your diet should provide about 1000 mg of calcium and 400 IU (10 µg) of vitamin D each day since breast cancer treatments can accelerate osteoporosis. Dairy products are rich in calcium. Fish contains quite a lot of calcium as well. Vitamin D is synthesized in the skin when exposed to sunlight. During the winter in Nordic countries there is too little sunlight for the body to synthesize enough vitamin D, making food the most important source for this nutrient. Vitamin D is abundant in fish, but can also be obtained from fortified milk (note that no vitamin D is added to organic products), margarine, and to some extent from eggs.

Examples of calcium and vitamin D content in food:

	<u>Calcium, mg/serving</u>
Milk, buttermilk, curd milk, yogurt	240 mg/2 dL
Cheese	100 mg/generous slice, about 10 g
Ice cream	75 mg/dL
Rainbow trout	130 mg/100 g
Baltic herring	70 mg/100 g

	<u>Vitamin D, IU/serving</u>
Rainbow trout, salmon	400–800 IU/100 g
Baltic herring	150 IU/one piece, 20 g
Perch, pike, zander	20–1000 IU/100 g
Tuna	320 IU/tin (150 g of fish)
Egg	90 IU each
Margarine	20 IU/1 tsp

### Recreational substances

Regular alcohol consumption may increase the risk of breast cancer recurrence. Moderate use is permissible.

Smoking slightly increases the risk of breast cancer recurrence. Smoking is also harmful to the health in many other ways. It increases the risk of cardiovascular disease, osteoporosis and bone fractures. In combination with radiotherapy, in particular, it increases the risk of lung cancer. Quitting smoking has significant health benefits and is always encouraged.

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