

Breast cancer and exercise

What is breast cancer?

Breast cancer is the most common cancer in women, with more than 13,500 cases diagnosed in Australia each year. One in eight women will be diagnosed with breast cancer by the age of 85. While survival rates after breast cancer vary (depending on the type of cancer, the size of the tumour and lymph node involvement), almost 90% of those diagnosed will be disease-free five years after their diagnosis (1). There are nearly 160,000 breast cancer survivors in Australia today (2). Common treatments for breast cancer are surgery, chemotherapy, radiotherapy, hormone therapy and specific drug therapies. The side effects of treatments depend on the extent of any surgery, and on the dose and type of adjunct therapy. Some possible side effects are fatigue, hair loss, adverse changes in body composition (an increased percentage of fat), weight gain, nausea, sleep concerns, joint and other types of pain, bone loss, 'chemo brain' (feeling vague), and fluid build-up that causes swelling in various body parts (lymphoedema).

How does exercise help?

Most of the studies on exercise and cancer have focused on women with breast cancer. These studies suggest:

- **Moderate-intensity exercise is recommended.** Until the upper and lower limits of beneficial exercise intensity are known, it is best to start a program at low to moderate intensity and progress gradually. If the exercise routine lapses, exercise intensity should be lowered again when restarting.
- **Accumulating at least 30 minutes of daily exercise on at least three days each week can lead to benefits.** Depending on fitness level, many short sessions may be needed to accumulate at least 30 minutes of daily exercise. Build up to, and then maintain, at least 30 minutes of exercise per session, accumulating at least 150 minutes of exercise over one week.
- **Aerobic and supervised resistance (weights) training are safe and beneficial.** Most sports and specific activities, other than walking and gym-based exercise, have not been well evaluated for safety or efficacy. However, participation is encouraged unless clearly contraindicated (e.g. if you have a risk of fractures or infection).

The supervision required depends on exercise history, the timing with respect to diagnosis, and the presence and intensity of treatment-related side effects. Supervision is recommended during active treatment, when the frequency and type of side effects are likely to fluctuate. Also, understanding the basic principles of planning exercise programs and safe techniques for resistance exercises is important, as is recognising and overcoming any barriers to exercise. An exercise physiologist is helpful here.

A diary to record exercise sessions and the frequency and severity of treatment-related side effects is useful. This record can be used to identify and overcome barriers to exercise, plan appropriate exercise for 'good' and 'bad' days, and ensure that any worsening in side effects is not linked to exercise.

What are the solutions to common concerns about exercise?

Fear of worsening symptoms (e.g. lymphoedema, fatigue, pain, nausea)

Women who exercise regularly are less likely to experience these symptoms and, if they occur, the symptoms are typically less severe. Inactivity has been associated with the onset and worsening of these side effects. Diarising your exercise and side effects is an effective way to demonstrate that exercise, at the very least, does not worsen existing side effects.

Lymphoedema requires specific mention. This side effect is one of the most feared in the treatment of breast cancer, and is experienced by about 20% of women. Many prevention guidelines suggest avoidance



of repetitive use of the arm on the treated side of the body, which creates confusion among women about the safety of exercise. However, several studies have shown that progressive aerobic or resistance exercise is safe and beneficial. That is, exercise does not cause or worsen lymphoedema, and some evidence suggests that exercise may play a role in its prevention. Clinical guidelines suggest that women with lymphoedema wear a compression garment while exercising, although no evidence supports this. Some participants of exercise studies with lymphoedema have chosen to not wear garments while exercising, and have done so safely (2). Garment wear during exercise should be discussed with a lymphoedema therapist.

Trouble exercising during treatment periods with intense side effects

Breast cancer survivors may find they cannot perform their usual exercise routine in the days immediately after a cycle of chemotherapy, or when symptoms are particularly intense. Instead of avoiding exercise altogether at these times, preparing a separate exercise program for 'bad days' may be useful. For example, instead of a 30-minute walk on the three days after chemotherapy, 10 'sit-to-stands' from a chair and a walk to the letterbox every hour may be more realistic and appropriate. Encouraging some exercise on 'bad days' helps maintain the habit of exercising.

Discomfort from wigs

Exercising without wearing a wig is best, because wigs can prevent heat loss during exercise and may feel uncomfortable. However, if you prefer to wear a wig, exercising in well-ventilated areas and staying appropriately hydrated may help.

Discomfort caused by radiation 'burns'

Radiation to the breast area can cause 'burns' to the skin, which makes wearing a bra uncomfortable. This creates issues when women find exercising without breast support uncomfortable or embarrassing. A firm-fitting singlet (often with a shelf-bra) may provide sufficient support without the discomfort. Alternatively, a modified exercise program that reduces bouncing (e.g. stationary cycling) may be necessary for the few weeks that 'burning' is an issue.

Discouragement from not seeing improvements

Women need to have progress and success appropriately defined. Without a structured exercise program, women may experience a decline in physical function during periods of active treatment. Actual improvements in function may occur for some women who exercise during treatment. At the very least, exercise can minimise or prevent typical treatment-related declines. Having realistic expectations regarding changes in function may assist women to stay active during and beyond the treatment period.

General barriers to exercise

Survivors of breast cancer still need to overcome all the usual exercise barriers experienced by women without breast cancer (e.g. affordability, time constraints, lack of interest or motivation). Depending on individual circumstances, these barriers may either be increased or decreased as a result of the breast cancer experience.

References and further information

Exercise is Medicine Australia www.exerciseismedicine.org.au
Find an Accredited Exercise Physiologist www.essa.org.au
Exercise Right www.exerciseright.com.au

1. Australian Institute of Health and Welfare (AIHW). (2012). *Cancer in Australia 2012: An overview*. Cancer series no. 74. Cat. no. CAN 70. Canberra: AIHW.
2. Australian Institute of Health and Welfare and Cancer Australia 2012. *Breast cancer in Australia: an overview*. Cancer series no. 71. Cat no. CAN 67. Canberra: AIHW.
3. Schmitz KH. Balancing lymphedema risk: Exercise versus deconditioning for breast cancer survivors. *Exerc Sport Sci Rev* 2010; 38(1): 17-24.
4. Exercise & Sports Science Australia www.essa.org.au
5. National Breast Cancer Foundation www.nbcf.org.au

