

# BREAST CANCER AND EXERCISE

PUBLIC

## WHAT IS BREAST CANCER?

Breast cancer is the most common cancer in women; it is estimated that more than 17,500 cases are diagnosed in Australia each year (150 of these cases will occur in men). While survival rates are influenced by type of disease and stage at diagnosis, 90% diagnosed with breast cancer will be disease-free five years after their diagnosis (1, 2). Common treatments for breast cancer include surgery, chemotherapy, radiotherapy, hormone therapy, and targeted drug therapies. The side effects of treatments depend on the extent of surgery, and on the dose and type of adjunct therapy. Possible side effects include 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 lymphoedema (swelling in the chest, breast or arm).

## HOW DOES EXERCISE HELP SURVIVORS OF BREAST CANCER?

Exercise plays an important role in the treatment of and recovery from breast cancer, through reducing the number and severity of treatment-related side effects and symptoms (such as, pain, fatigue, sleep disturbances, and cognitive impairment), as well as improving or maintaining function during and after treatment. There is also evidence that women who are physically active after a breast cancer diagnosis have reduced risk of recurrence, reduced risk of developing other chronic diseases, and have better overall survival (3).

A large body of evidence derived from studies that have included women with breast cancer suggests:

- **Aerobic- and resistance-based (muscle strengthening) exercise is safe and beneficial.** A whole range of exercise types have been studied including Pilates, water-based exercise, 'boot camp', aerobic-style classes, walking, cycling, and resistance-based exercise using hand-held or machine weights or therabands. Findings suggest that individuals should be encouraged to participate in their preferred exercise unless clearly contraindicated (e.g. if there is risk of fractures or infection).
- **Moderate-intensity exercise (enough to "puff" or the ability to "talk but not sing") is recommended.** The level of exercise required to make someone puff is influenced by fitness and the presence of cancer-related symptoms. When feeling unwell or unfit, slow walking may be enough to make someone puff (that is, be of moderate-intensity). However, as fitness improves or treatment-related side effects are less, a faster walking pace (or different exercise type) may be required to ensure exercise is of moderate-intensity. For those not already regularly exercising, it is recommended that they start at low- to moderate- intensity and progress gradually. For regular exercisers, it is likely safe to exercise at high intensity, but it is important to progress gradually up to this.
- **Current guidelines recommend maintaining or building up to 150 minutes of exercise each week.** Exercise can be done in sessions as short as 10 minutes and should include either or both aerobic- and resistance-based exercises. It is best to spread exercise sessions out across the week (e.g. 30 minutes on 5 days of the week). Depending on the intensity of the resistance-based exercise, it may be necessary to avoid doing resistance-based exercises on consecutive days. Additional benefits may be gained by exercising for up to 300 minutes each week, but it is important to progress towards this amount gradually.
- **The supervision required during exercise depends on exercise history, the timing with respect to diagnosis, and the presence and intensity of treatment-related side effects.** Whilst many can safely exercise during or following treatment for breast cancer without supervision, support from a qualified health professional (e.g. Physiotherapist /Accredited Exercise Physiologist) may help in commencing and maintaining a safe exercise program. Behaviour change strategies, advice regarding modifications to account for exercise preferences, contraindications and barriers may be particularly important during active treatment when the frequency and type of side effects are likely to fluctuate. Those who have a preference for a particular type or intensity of exercise outside of the general guidelines are encouraged to discuss the need for any risk management with a health or exercise professional.



## WHAT ARE THE SOLUTIONS TO COMMON CONCERNS ABOUT EXERCISE? .....

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

Those who exercise regularly are less likely to experience these symptoms and, if they occur, the symptoms are typically less severe. In contrast, inactivity has been associated with the onset and worsening of these side effects. Using a diary to monitor exercise and side effects is an effective way to demonstrate that exercise, at the very least, does not worsen existing side effects.

### ***Lymphoedema***

Lymphoedema is one of the most feared treatment-related side effects and develops in about 20% of breast cancer survivors who have had axillary dissections. Prevention guidelines suggest avoidance of repetitive use of the arm on the treated side of the body, which creates confusion about the safety of exercise. However, several studies have shown that progressive aerobic- or resistance-based 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 and treatment. Clinical guidelines suggest that some women with lymphoedema wear a compression garment while exercising. However, some women with lymphoedema who have participated in exercise studies have chosen to not wear garments while exercising, and have done so safely (4). 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 while preventing typical function declines that are associated with treatment periods in the absence of exercise.

### ***Discomfort from wigs***

Exercising without wearing a wig is best, because wigs can prevent heat loss during exercise and may feel uncomfortable. However, if an individual prefers to wear a wig, increasing fluid intake before, during and after exercising, and exercising in well-ventilated areas, may help.

### ***Skin irritation caused by radiation***

Radiation to the breast area can cause irritation to the skin, which makes wearing a bra uncomfortable. This creates issues when women find exercising without breast support uncomfortable or embarrassing. A cotton singlet with the bra on the outside of the singlet may reduce friction. Alternatively, a modified exercise program that reduces bouncing (e.g. stationary cycling) may be necessary for the few weeks that when skin irritation is an issue.

### ***Discouragement from not seeing improvements***

Progress and success through exercise needs to be appropriately defined. Without a structured exercise program, declines in physical function during treatment are likely. While improvements in function during treatment are possible through exercise, at the very least, exercise during treatment can minimise or prevent typical treatment-related declines. Having realistic expectations regarding changes in function may assist breast cancer survivors 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 those 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. If your symptoms get worse during or after exercise, please seek help from your health professional.

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## **FURTHER INFORMATION**

Exercise is Medicine Australia [www.exerciseismedicine.org.au](http://www.exerciseismedicine.org.au)  
Exercise Right [www.exerciseright.com.au](http://www.exerciseright.com.au)

Find a Physiotherapist [www.choose.physio](http://www.choose.physio)  
Find an Accredited Exercise Physiologist [www.essa.org.au](http://www.essa.org.au)  
Exercise & Sports Science Australia [www.essa.org.au](http://www.essa.org.au)  
National Breast Cancer Foundation [www.nbcf.org.au](http://www.nbcf.org.au)  
Breast Cancer Network Australia [www.bcna.org.au](http://www.bcna.org.au)

## **REFERENCES**

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3. Ballard-Barbash, R., et al., Physical activity, biomarkers, and disease outcomes in cancer survivors: a systematic review. J Natl Cancer Inst, 2012. 104(11): p. 815-40.
4. Schmitz KH. Balancing lymphedema risk: Exercise versus deconditioning for breast cancer survivors. Exerc Sport Sci Rev 2010; 38(1): 17-24.

