

Colon cancer and exercise

What is colon cancer?

Colon cancer or 'bowel cancer' is the second most common cancer in Australia, with nearly 16,000 cases diagnosed each year. One in ten Australians will be diagnosed with colon cancer by the age of 85 years (1). While survival rates following colon cancer vary, almost 90% of people diagnosed early (cancer is confined to the bowel wall) will be disease-free five years after their diagnosis (2). Including all stages of the cancer at diagnosis, the five-year survival rate is over 65% (3). Treatment usually involves a combination of surgery and chemotherapy and, less commonly, radiotherapy. Some survivors of colon cancer require a colostomy (an artificial opening in the abdominal wall to allow removal of waste), either for a few weeks after surgery, or permanently (in less than 5% of cases). Side effects of treatments may depend on the extent of surgery and the dose and type of adjunct therapy. Side effects may include fatigue, diarrhoea, depression, sleep concerns, negative changes in body composition (an increased percentage of fat), nausea, 'chemo brain' (feeling vague) and peripheral neuropathy (pain and tingling in the extremities) (4).

What exercise is best for survivors of colon cancer?

Only a limited number of studies have specifically investigated the value of exercise for survivors of colon cancer. However, on the basis of the data from these studies, data from other cancer populations and anecdotal evidence, the following guidelines are recommended.

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 an increased risk of fractures or infection). If a colostomy has been undertaken, avoiding increased pressure in the abdomen is recommended so that risk of herniation is reduced.

Low to moderate-intensity exercise is recommended. Until the upper and lower limits of beneficial exercise intensity are known, it is best to start an exercise program at low to moderate intensity and to 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, multiple short sessions may be needed to accumulate 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 each week.

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 periods, 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. fatigue, pain, nausea)

Diaring exercise participation and side effects is an effective way to show that exercise, at the very least, does not worsen existing side effects. During cancer treatment, people often become less active, which leads to a harmful cycle of diminished activity, reduced function and worsening fatigue. While exercise may not reduce fatigue, it should not worsen fatigue. Therefore, an appropriate exercise program is important to prevent or reduce muscle loss that would only increase the level of fatigue.



Trouble exercising during treatment periods with intense side effects

Some people 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. Doing some exercise on 'bad days' helps maintain the habit of exercising.

Pain and balance problems caused by peripheral neuropathy

The drugs used to treat colon cancer can sometimes lead to nerve damage (peripheral neuropathy), particularly those in the hands and feet. This damage can cause extreme pain and tingling, or 'pins and needles', which makes walking and wearing shoes difficult. The neuropathy can also impair balance and increase risk of falling. Wearing well-fitting shoes and checking for cuts and calluses is important for preventing damage to feet. Some affected individuals find aquatic (water) exercise less painful, or short bouts of walking or stationary cycling useful. Walking in familiar territory and on even surfaces may be necessary to reduce risk of falling.

Gastrointestinal complaints and colostomies

After bowel surgery, changes in gastrointestinal habits (usually diarrhoea) are common. Exercise can cause further complications (i.e. increased frequency and looseness of stools), so some people avoid leaving their homes due to embarrassment from related odours or fear of suddenly needing a bathroom. Therefore, exercise programs need to be performed in environments with toilet facilities close by. Home-based programs are often ideal, but for those willing to venture away from home, gymnasiums or parks with a toilet block may be appropriate.

If appropriate precautions are taken, exercise can be undertaken safely by people with colostomies. Specifically, these people must be vigilant about preventing infection (as taught to them by their stoma nurse) after exercise sessions. Resistance (weights) training should begin at low intensity and progress more slowly than usual, being particularly careful to avoid herniation at the site of the stoma (the opening where the colostomy bag is attached). Contact sports and swimming are not recommended for these people.

Discouragement from not seeing improvements

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

General barriers to exercise

Survivors of colon cancer still need to overcome all the usual exercise barriers experienced by people without colon cancer (e.g. affordability, time constraints, lack of interest or motivation). As the average age at diagnosis of colon cancer is 69 years, age-related concurrent conditions and exercise barriers are common.

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 Cancer Network Colorectal Cancer Guidelines Revision Committee.(2005). *Guidelines for the prevention, early detection and management of colorectal cancer.* Sydney: The Cancer Council Australia and Australian Cancer Network.
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4. Bowel Cancer Australia www.bowelcanceraustralia.org.au
5. Exercise & Sports Science Australia www.essa.org.au

