

Exercise

The Facts



NECA invites you and encourages you to incorporate exercise into standard cancer care as a counterbalance to the adverse effects of cancer and its treatment and view it as an additional therapy aimed at improving the patient's quality of life, and as an integral part of cancer care.

Exercise: A type of physical activity consisting of planned, structured, and repetitive bodily movement for the purpose of improving and/ or maintaining health and physical fitness.

The goal of exercise is to improve health and fitness by engaging in structured physical activity.

Physical Activity: Any bodily movement produced by the contraction of skeletal muscles that results in a substantial increase in caloric requirements over resting energy expenditure.

Exercise, provided it is sufficiently intense and/or prolonged, is a powerful activator of the neuroendocrine system (i.e., a stressor).

Benefits of exercise while living with Neuroendocrine Tumours

NETs patients may experience numerous benefits from exercise, including improved emotional well-being, fatigue reduction, improved body image, and improved sleep. Additionally, exercise may help reduce the recurrence and progress of cancers in some cases. However, persistent symptoms of neuroendocrine cancer can make it difficult for patients to exercise.

Exercising can counteract many of the physical and emotional side effects of cancer treatment and cancer. Evidence supports the effectiveness of exercise as a safe, effective intervention.

Emerging evidence highlights that regular exercise before, during and/or following cancer treatment decreases the severity of other adverse side effects and is associated with reduced risk of other conditions such as cardiovascular disease, diabetes and osteoporosis.

Clinical Oncological Society of Australia Position Statement on Exercise in Cancer Care



Support



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Speak with your Oncologist

Whether you need to make any changes to your activity level depends on your medication, surgery, or side effects. Discuss this with your doctor before you begin, since certain modifications may be necessary. If you are developing an activity program, you may want to seek advice from a physiotherapist or exercise physiologist. Keep in mind that activity should enhance your recovery, not hinder it.

Ready, Set, Go!

Set small goals and keep track of your progress as you slowly and safely add activity to your day. It can be something as simple as walking to the mailbox and back. In fact, walking the dog around the block is fine too.

A person with cancer may need specific exercise adaptations based on their health status, and adverse effects associated with their disease. Exercise recommendations should be tailored to the individual's abilities.

When having treatment

A gentle exercise session of 5-10 minutes every week or every other day.

After having treatment

- Start with a moderate exercise routine somewhere between 3-5 times a week, gradually working up to 20-30 minutes with time.
- As part of current exercise routine: Aim for 30 minutes of moderate exercise (5 sessions of 10 minutes each) 5 days a week, including strength training at least twice a week.

Role of health professionals

The health care professions' role in promoting these recommendations is critical to the care of patients with cancer. (COSA)

A health professional who specializes in prescription and delivery of exercise should be referred to (for example, a certified exercise physiologist/physiotherapist who specializes in cancer treatment).

- Advise their patients to follow the exercise guidelines
- Discuss the role of exercise in cancer recovery

Exercise environment

Take precautions to protect yourself from COVID-19. See these recommendations for visiting parks and recreational facilities.

If you have a compromised immune system due to several treatments (low white blood cell count) or a catheter/feeding tube, avoid:

- Group classes
- Public gyms
- Public tennis courts, golf courses
- Public pools
- Busy, crowded environments

Safety First

- Don't walk on uneven surfaces
- Having foot numbness can make it difficult to keep your balance (a stationary recumbent bike is a safe option).
- Use sunscreen with a SPF of 30 or higher, wear a hat, and wear clothing to protect your skin from the sun

Do not exercise

- If you are actively experiencing pain/nausea/vomiting
- If you have a bone or joint problem that could be aggravated
- If a doctor has asked you to avoid physical activity
- If you have not been cleared for exercise following a surgery
- If you have chest pain
- If you are anaemic (low red blood cell count)
- If you are dizzy, lightheaded
- If you have reduced potassium or sodium in your blood due to vomiting and diarrhea.



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How can I start

Pick an activity you enjoy: Keep your safety in mind. You should find someone to walk with. Using a cane, walker, or chair will help you to keep your balance. If you are swimming or boating, wear a floatation device. Use a helmet when biking. Make sure you have a water bottle handy. Protect yourself from the sun when you are out in the sun.

Keep up the good work: It's fine if you can't do it every day. Once you are able, just get back to your daily routine. By exercising regularly, you will gain strength, endurance, and improve your health. You have to take it step by step!

Gentle exercise

No change in breathing

- Fishing
- Golf
- Bowling
- Slow walking
- Making the bed
- Slow biking
- Light housework
- Light gardening
- Easy resistance exercise such as resistance bands
- Stretching
- Gentle or chair yoga

Regular Exercise

Slight increase in breathing but able to talk easily

- Jogging
- Walking
- Dancing
- Swimming
- Water aerobics
- Lifting weights
- Bicycle riding stationary or on a path
- Some gardening activities, such as raking and pushing a lawn mower

Intense exercise

Having difficulty holding a conversation and breathing heavily

- Basketball
- Cross-country skiing
- Aerobics
- Gymnastics
- Sports like soccer, hockey, netball, rugby
- Running without stopping
- Race walking
- Walking up the stairs

Source: Neuroendocrine Tumor Research Foundation



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Factors that can influence the neuroendocrine system response to an acute exercise session

- **Mode of activity** – smaller muscle mass activities can induce greater sympathetic nervous system activity during exercise
- **Intensity of the exercise** – the greater the degree of anaerobic metabolism necessary to allow the exercise to be performed, typically, the greater the magnitude of stress encountered by the individual (this is influenced by the level of exercise intensity and the degree of training the individual has experienced)
- **Environmental conditions** – heat and cold exposure beyond normal limits can augment the stress hormone responses to exercise
- **Age** – younger individuals tend to have augmented stress hormone responses to exercise than older, mature individuals
- **Gender** – menstrual cycle fluctuations in sex steroid hormones can interact and affect the stress hormonal response during exercise
- **Nutrition** – the timing of a meal and its macronutrient content can alter the magnitude and degree of stress hormone response to exercise
- **Circadian rhythms** – many of the hypothalamic-pituitary-adrenal axis hormones display such rhythms, and the exercise response can be influenced by the level of rhythmicity
- **Genetics** – many individuals display some degree of interindividual variation in how they respond to exercise, which has been attributed to genetic variation

Source: National Centre for Biotechnology Information

The major signs and symptoms of overtraining and the overtraining syndrome

Physiological function

- Decreased competitive performance
- Decreased muscular strength
- Increased muscular soreness
- Chronic fatigue
- Reduced tolerance to training overload
- Sleep-wake cycle abnormalities
- Gastrointestinal disturbances
- Reduced sexual drive and libido
- Altered heart rate responses
- Suppressed immunological function

Psychological function

- Increased feelings of depression
- Lethargy and apathy
- Emotional abnormalities
- Loss of appetite
- Lack of competitive drive
- Restlessness
- Difficulty in concentrating



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