



Exercise for People Living with Cancer

A guide for people with cancer,
their families and friends

Practical
and support
information

For information & support, call

13 11 20



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First published October 2007. This edition March 2019.

© Cancer Council Australia 2019. ISBN 978 1 925651 46 1

Exercise for People Living with Cancer is reviewed approximately every three years. Check the publication date above to ensure this copy is up to date.

Editor: Jenny Mothoneos. Designer: Paula Marchant and Eleonora Pelosi. Printer: SOS Print + Media Group.

Acknowledgements

This edition has been developed by Cancer Council NSW on behalf of all other state and territory Cancer Councils as part of a National Cancer Information Subcommittee initiative.

We thank the reviewers of this booklet: A/Prof Prue Cormie, Chair, COSA Exercise and Cancer Group, and Principal Research Fellow – Exercise Oncology, Australian Catholic University, NSW; Rebecca Cesnik, Accredited Exercise Physiologist, ACT; Dr Nicolas Hart, Senior Research Fellow, Exercise Medicine Research Institute, Edith Cowan University, and Postdoctoral Research Fellow, Cancer Council WA; Stephanie Lamb, Life Now Project Officer, Cancer Council WA; John Odd, Consumer; Sharni Quinn, Clinical Lead Physiotherapist, Peter MacCallum Cancer Centre, VIC; Chris Sibthorpe, 13 11 20 Consultant, Cancer Council Queensland; Jane Turner, Accredited Exercise Physiologist, Concord Cancer Centre, Concord Repatriation General Hospital, NSW.

We also thank the health professionals, consumers, and editorial and design teams who have worked on previous editions of this title.

This booklet is funded through the generosity of the people of Australia.

Note to reader

Always consult your doctor about matters that affect your health. This booklet is intended as a general introduction to the topic and should not be seen as a substitute for medical, legal or financial advice. You should obtain independent advice relevant to your specific situation from appropriate professionals, and you may wish to discuss issues raised in this book with them.

All care is taken to ensure that the information in this booklet is accurate at the time of publication. Please note that information on cancer, including the diagnosis, treatment and prevention of cancer, is constantly being updated and revised by medical professionals and the research community. Cancer Council Australia and its members exclude all liability for any injury, loss or damage incurred by use of or reliance on the information provided in this booklet.

Cancer Council

Cancer Council is Australia's peak non-government cancer control organisation. Through the eight state and territory Cancer Councils, we provide a broad range of programs and services to help improve the quality of life of people living with cancer, their families and friends. Cancer Councils also invest heavily in research and prevention. To make a donation and help us beat cancer, visit cancer.org.au or call your local Cancer Council.



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About this booklet

This booklet has been prepared to help you understand more about exercise, and to provide information about the benefits of exercise during and after cancer treatment.

We have included tips on preparing for exercise, plus some examples of exercises that you can do at home. We cannot give advice about the best exercise program for you. You will need to discuss this with your doctors and qualified exercise professionals, such as an accredited exercise physiologist or physiotherapist. However, we hope this information helps you think about questions to ask your treatment team or exercise professional (see page 49 for a question checklist).

This booklet does not need to be read from cover to cover – just read the parts that are useful to you. Some terms that may be unfamiliar are explained in the glossary (see page 50). You may also like to pass this booklet to your family and friends for their information.

How this booklet was developed

This information was developed with help from a range of exercise and health professionals and people affected by cancer. It is based on guidelines for exercise programs for people living with cancer.¹⁻²

If you or your family have any questions, call Cancer Council **13 11 20**. We can send you more information and connect you with support services in your area. You can also visit your local Cancer Council website (see back cover).



**Cancer
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13 11 20**

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Why exercise is important

Exercise has many general benefits for our physical and mental wellbeing. It can:

- improve physical function
- strengthen muscles and bones
- improve circulation
- help you maintain or achieve a healthy weight
- boost your energy levels
- improve your mobility and balance
- enhance self-esteem
- help you cope with stress, anxiety and depression
- offer new ways to meet people and socialise
- reduce the risk of, or help manage, high blood pressure, heart disease, stroke, diabetes, osteoporosis and some cancers.

What is exercise?

Physical activity is a broad term that covers any activity that moves your body and speeds up your breathing and heartbeat. This can include exercise, which is structured physical activity that aims to improve health and fitness. It can include both exercise sessions and everyday activities such as housework.

Types of exercise

Exercise can be grouped into three main categories:

Aerobic exercises (page 18) – use large muscle groups and cause your heart rate to rise. Aerobic exercise increases your capacity to use oxygen, which improves heart and lung fitness. With time, strenuous tasks become easier.

Strength training (pages 19–33) – involves making your muscles work harder than usual against some sort of resistance. Strength training is also known as resistance training or weight training.

Flexibility exercises (pages 34–41) – stretch your muscles and help improve your range of motion.

How active should we be?

*Australia's Physical Activity and Sedentary Behaviour Guidelines for Adults*³ outline what types of exercise to do and how often to exercise. They are based on scientific evidence supporting the connection between physical activity, wellbeing, disease prevention and quality of life. The guidelines recommend that you should:

- move more and sit less
- aim to be active on most, preferably all, days of the week
- get a total of 2½ to 5 hours (150 to 300 minutes) of moderate intensity exercise or 1¼ to 2½ hours (75 to 150 minutes) of vigorous intensity physical activity, or an equivalent combination of both moderate and vigorous activities throughout a week
- do 2–3 strength-training (resistance) sessions a week
- break up long periods of sitting as often as you can.

For more information about the guidelines, see health.gov.au and search for “physical activity”.

Along with exercise, eating well has many benefits for health and wellbeing. See a dietitian or read our *Nutrition and Cancer* booklet.





Exercise after a cancer diagnosis

If you are being treated for cancer or recovering, you may have thought it was important to rest, but research shows that exercise benefits most people with cancer during and after treatment.

Being active can help manage some of the common side effects of treatment (see pages 7–8), speed up recovery, and improve your quality of life. For some cancers, exercise may even improve how you respond to treatment. Being physically active, along with eating a healthy diet, can help reduce the risk of the cancer coming back (recurrence) for some cancer types. It also helps reduce the risk of developing other health problems, such as heart disease and diabetes.

According to the Clinical Oncology Society of Australia (COSA) position statement on exercise in cancer care, exercise should be prescribed to all cancer patients as a standard part of their cancer care to help manage the effects of cancer and its treatment. Exercise & Sport Science Australia (ESSA) also encourages people with cancer to exercise.¹⁻²

Exercise for people living with cancer should be tailored to suit the type and stage of cancer and any side effects.

“ I was not as active before cancer as I am now. I walk three or four times a week. It gives me extra energy and helps clear my mind. If I don't do any walking, I really notice the difference in my energy levels and my mood. ” *Rima*

How exercise can ease common side effects

Cancer treatment causes various physical effects that are different for different people. Exercise has been shown to help ease some of these.

Side effect	Benefit
fatigue	Feeling tired, even when rested, is common in people with cancer. Sometimes it lasts for months after treatment ends. Staying active can help ease fatigue. Try adjusting how hard and how often you exercise – some people find shorter, frequent aerobic sessions are more manageable; others prefer strength-based training. Losing fitness and strength can make fatigue worse. Doing some low intensity exercise can help you maintain your fitness and strength (unless you have severe anaemia, see below).
anaemia	Low red blood cell and/or haemoglobin count is another common side effect of cancer treatment. Symptoms of anaemia include unexplained tiredness and fatigue. Combined with good nutrition, exercise has been shown to improve anaemia. For mild or moderate anaemia, try a low-intensity exercise program, with gradual increases in intensity and/or duration. If anaemia is severe, ask your doctor about whether you should avoid exercise until it improves.
quality of life	Studies show that physical activity can help improve quality-of-life issues, such as body image/self-esteem, wellbeing, sexuality, sleep disturbance, social functioning, anxiety, fatigue and pain.

Side effect	Benefit
mood changes	Feeling anxious or depressed during and after treatment is common. Exercise encourages the brain to produce chemicals (endorphins) that can improve your mood.
loss of muscle strength	If your muscles aren't being used as much as usual during and after treatment, they can get weaker. Losing muscle strength is also a side effect of some types of hormone therapy and steroid treatment. Strength training will help make your muscles stronger.
heart problems	Radiation therapy to the chest and some types of chemotherapy and targeted therapy drugs may damage the heart muscle and increase the risk of heart problems (cardiovascular disease) after treatment. Aerobic activities can help reduce the risk of long-term heart problems.
loss of bone strength	Cancer and its treatment, particularly radiation therapy, can have long-term effects on bone strength. Early menopause and some types of hormone therapy may also cause bones to weaken and break more easily (osteoporosis). Exercise that requires you to support your own body weight will help keep your bones strong.
lymphoedema	Starting an exercise program early in treatment may reduce the risk of developing lymphoedema, which causes swelling of part of the body, such as an arm or leg. If you have lymphoedema, a lymphoedema practitioner can help you develop an exercise plan. <ul style="list-style-type: none"> ➤ See our fact sheet on lymphoedema.

Side effects that need extra care

Some side effects need extra care, and you may have to frequently adjust how hard and how long you exercise. Speak to your doctor, physiotherapist or exercise physiologist for help with this.

Cancer affecting the bones – If you have cancer in the bones (called bone metastases or bone mets), you might be more at risk of a break or fracture. Choose activities such as walking and swimming, rather than contact sports and activities such as running and jumping.

Low white cell count (neutropenia) – Some cancers and treatments can weaken your immune system and cause your white blood cell count to drop. This can increase your risk of developing an infection, so it is important to limit physical contact with other people and clean any shared exercise equipment before use. When your immune system is not working well (immunocompromised), avoid public spaces such as gyms, swimming pools and training venues until your white blood cell count returns to a safe level.

Low platelet count (thrombocytopenia) – Platelets stop bleeding in the body by forming clots. When the platelet count drops, you are at increased risk of bruising or bleeding. It is best to avoid contact sports and high-impact activities, as these could cause bruising or bleeding if you get knocked or fall over.

If you have osteoporosis, get advice on exercise from your doctor, nurse, physiotherapist or exercise physiologist.



Skin irritation – Areas of skin affected by radiation therapy can be extremely sensitive and often uncomfortable. Choose activities and clothing to minimise fabric rubbing on affected areas. Chlorine can irritate the skin, so avoid pool-based exercise if you have a rash or your skin is reddened after radiation therapy.

Poor balance and coordination – Surgery or cancer treatment may affect your balance or coordination. Problems with balance may cause you to feel dizzy and lead to a fall. Choose exercises that improve balance and muscle strength, and avoid types of exercise that involve balance and coordination, such as cycling outdoors or using a treadmill. Avoid lifting free weights without a training partner if you have problems with your balance.

Peripheral neuropathy – Some chemotherapy drugs can damage the nerves causing feelings of pins and needles and numbness in the hands and feet. This is called peripheral neuropathy. If you cannot feel your feet, it may be difficult to maintain your balance and you may be more likely to fall. It's safer to walk or run on even surfaces. If you have neuropathy in your hands, ask an exercise professional how you can lift free weights safely.



Getting started

Before taking part in any exercise program, either during or after treatment, it is important to talk to your oncologist or general practitioner (GP) about any precautions you should take. While the exercise recommendations detailed on page 5 may feel overwhelming, aim to be as physically active as your abilities allow and adapt your exercise program to suit your type and stage of cancer. Some days may be harder than others, but even a few minutes of light exercise is better than no exercise at all.

Exercise equipment

You don't need expensive equipment or special clothing to exercise, but suitable shoes are essential. Visit a reputable shoe shop for suggestions. Wear loose, comfortable clothes, such as shorts and a T-shirt, when exercising. Other equipment, such as activity monitors, weights, heart rate monitors and home-gym systems, can be useful but are not necessary.

Seeing an exercise professional

It's natural to have lots of questions when starting an exercise program. The most appropriate health professionals to design an exercise program for people with cancer are accredited exercise physiologists or physiotherapists. They can help develop a program based on what you can do and any physical problems or side effects related to the type of cancer you have.

Personal trainers and exercise scientists are not trained to work with people who have major health issues.

Exercise physiologists

Also called accredited exercise physiologists (AEPs), these allied health professionals have completed at least a four-year university degree. They use exercise as medicine to help with chronic disease management and overall wellbeing.

Physiotherapists

These allied health professionals have completed at least a four-year university degree. They focus on physical rehabilitation and prevention and treatment of injuries using a variety of techniques, including exercise, massage and joint manipulation.

You may be able to see an exercise professional at your cancer treatment centre, or your GP may be able to refer you to an exercise physiologist or physiotherapist as part of a Chronic Disease Management Plan, which means you may be eligible for a Medicare rebate for up to five visits per calendar year. Most private health insurers provide limited cover for visits to an exercise physiologist or a physiotherapist, but this depends on the type and level of cover. The Department of Veteran Affairs may be able to assist some people.

How to find an exercise professional

You can search for an accredited exercise physiologist (AEP) by name, location or speciality at Exercise & Sports Science Australia's website essa.org.au/find-aep, or for a physiotherapist at the Australian Physiotherapy Association's website choose.physio/findaphysio. To find an appropriate group exercise program, ask your GP for a referral or call Cancer Council **13 11 20**.

“ I turned to exercise a lot. I started working with an exercise physiologist, building up my body and also walking an hour every day, seven days a week. ” *Anmaree*

Choosing an exercise program

Find an exercise program that you enjoy, and that matches your current fitness level and what your doctor says is safe for you. Try to include both aerobic exercises and strength-training exercises in your weekly exercise program. This combination will ensure that you cover all aspects of your health and fitness. Adding more incidental activity into your day is also beneficial (e.g. walk to the shops, use the stairs). The important thing is to keep active.

Exercise at home and outdoors

Home-based exercise and outdoor exercise are good ways to add physical activity into your daily routine. You can try some strength-training exercises (see pages 19–33) at home, or try aerobic activities, such as walking, cycling or swimming, outside.

Join a group exercise program

Many gyms and fitness centres run group exercise programs. When joining, let your gym know that you have cancer and ask if they have someone who can help to ensure that the exercise program is right for you. Ideally, an exercise physiologist or physiotherapist will assess your aerobic and muscular fitness and flexibility to tailor the program for your capabilities.

Ways to stay motivated

Keep track

Stay motivated by recording your physical activity and tracking your progress.

- **Exercise diary** – Record each day’s physical activity in a paper diary or calendar. List the type of activity, and how long and hard you’ve exercised.
- **Online** – Use free websites such as **myfitnesspal.com** to record your food intake and exercise sessions.
- **Apps** – Free smartphone apps such as Runkeeper, MyFitnessPal or STRAVA track your movement while you are exercising if you keep your phone on you, or you can record your activity later. You can download them from the App Store (Apple) or Google Play (Android).
- **Gadgets** – Also called wearables, devices such as those from Fitbit and Garmin are worn like a watch. They can track your activity and transfer the data to your smartphone or computer.

Mix it up

Swap exercising at home or outdoors with attending a group program. Or try new activities such as joining a sporting club. The variety will help keep you interested.

Have options for bad weather

A combination of indoor and outdoor exercise options will mean you can keep exercising even if the weather changes or it’s after dark.

Buddy up with someone

- **Family and friends** – Exercise with family and friends to keep each other motivated.
- **Telephone support program** – Your local Cancer Council may provide telephone health coaching for people who have completed cancer treatment – call **13 11 20** to find out more.

Planning an exercise session

There are three general parts to an exercise session.

Warm-up

The aim of a warm-up is to warm your muscles and to raise your heart rate slightly. This prepares your body for further activity.

A warm-up should include 5–10 minutes of low-intensity aerobic work mixed with some light stretching. Walking outside or using indoor equipment are good warm-up activities. Before strength training, use light weights to warm-up.

Training

This is the part of an exercise session when the work is done. It should include activities from the three types of exercises:

- aerobic exercises – see page 18
- strength-training exercises – see pages 19–33
- flexibility exercises – see pages 34–41.

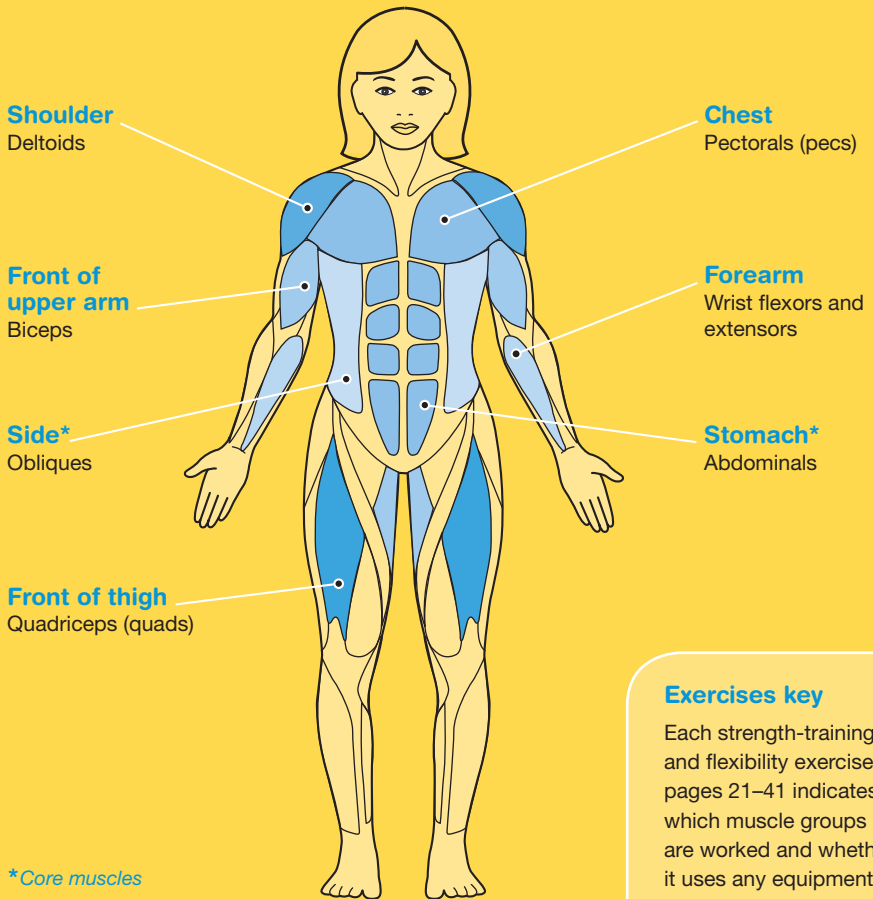
Some people may need to exercise their pelvic floor muscles (see pages 42–44). This is especially important for those with leaking or incontinence issues.

Cool-down

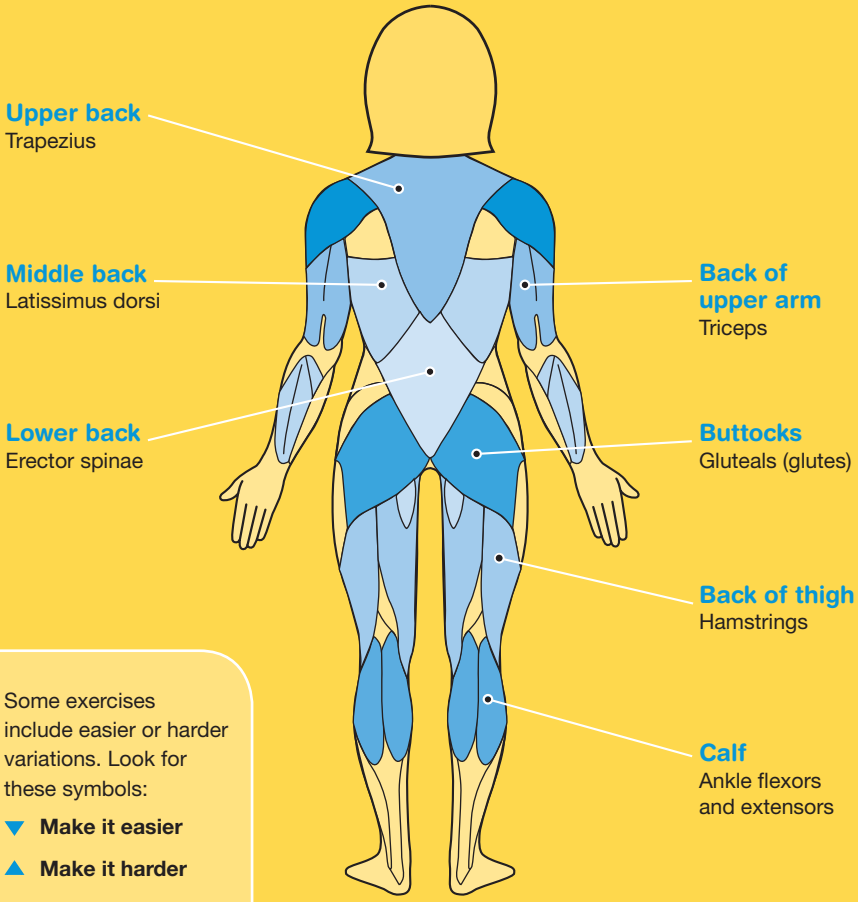
The cool-down allows your heart rate and blood pressure to gently return to normal. It also helps your body and muscles lose the heat gained during the activity. After an aerobic exercise session, cool down with 5–10 minutes of relaxed activity such as slow walking or cycling, and after strength training, cool down with light stretching.

Muscle groups

These diagrams show the major muscle groups of the human body. Aerobic exercise focuses on improving your heart and lung fitness, but also works many of your body's muscles. Strength-training and flexibility exercises both focus on the muscles, with individual exercises usually targeting specific muscle groups.



The exercises in this booklet cover a range of muscle groups. An exercise professional can help you plan a weekly program that covers all the muscle groups and concentrates on any areas that need particular attention.





Aerobic exercises

Aerobic exercise uses large muscle groups and causes your heart rate to rise during the activity. It may delay the onset of side effects and reduce their severity, maintain mood and improve energy levels.

How much?

Exercise at a level you are comfortable with, but try to vary how long (duration) and how hard (intensity) you exercise. See page 5 for more information on current recommendations for aerobic-based exercise.

What is exercise intensity?

How hard your body is working during physical activity, particularly aerobic exercise, is known as exercise intensity. It's usually described as low, moderate or vigorous. A simple way to work out the intensity is the talk test.

Low intensity exercise – Can talk and sing. Examples include gentle walking and light gardening.

Moderate intensity exercise – Heart will beat faster, you'll breathe harder than normal and you'll be sweating. You'll be able to have a slower than normal conversation. Examples include brisk walking, water aerobics, dancing, tennis (doubles), cycling and swimming.

Vigorous intensity exercise – You'll be sweating, puffing and your heart will be beating rapidly. You won't be able to talk without pausing. Examples include aerobics/cardio classes, jogging, tennis (singles), and organised sports such as football, soccer or netball.



Strength-training exercises

Strength training uses weights or resistance to increase the strength and endurance of your muscles, as well as the strength of your bones. It is sometimes called resistance training or weight training.

The weights used in strength-training exercises include:

- **your own body weight** – e.g. push-ups and squats, yoga and pilates
- **free weights** – such as dumbbells and barbells, which you hold, or wrist and ankle weights, which you attach with straps
- **weight machines** – devices that have adjustable seats with handles attached to either weights or hydraulics
- **elastic resistance bands** – sometimes called TheraBands, these are like giant rubber bands that provide resistance when stretched; they are colour-coded according to the level of resistance.

An exercise professional can advise which weights and bands you should use. You can buy free weights and resistance bands at sporting goods stores and some major retailers. Some people make hand weights from everyday objects, such as plastic bottles filled with water or sand. If you try this, use scales to check they are equal weight.

This chapter outlines some simple strength-training exercises, including exercises to develop balance (see page 21), strengthen core muscles (see pages 22–24) and build strength. You can also watch videos of these exercises online at cancercouncil.com.au/exercise.



If you have cancer that has spread to the bones, ask an exercise professional for advice on suitable exercises.

How much?

Try to do 2–3 sessions of strength training each week, with a rest day between sessions. Strength-training exercises include several parts:

- **repetition** – the completion of an exercise from starting position, through the movement, and back to the start
- **set** – a series of repetitions
- **rest** – the time between sets.

During each training session, aim for a series of exercises that target the major muscle groups of the arms, legs and torso (see pages 16–17). An exercise professional can help design the best program for you.

As a guide, you might do:

- 6–10 exercises
- 6–20 repetitions of each exercise per set
- 1–4 sets of each exercise per session
- 60–90 seconds of rest between sets.

A program should challenge your muscles without straining them, so that may also guide how many repetitions you do in a set to begin with. Once you become comfortable with a program, you can make it more demanding, but do this by making small adjustments.



Check with your health care team before starting any new exercise program. Although we have provided strength-training exercises to suit most people, some of them may not be right for you.

One-leg balance

Muscle group: Overall balance

Equipment: Chair (optional)

- 1 Stand on a soft but firm surface, such as an exercise mat or carpet.
- 2 Slowly bend one knee to lift the foot off the ground so that you are balancing on the other leg. Keep your eyes on a fixed point in front of you and breathe slowly and deeply. Hold the pose for several seconds if you can.
- 3 Lower your leg and put your foot back on the ground. Repeat the exercise with the other leg.

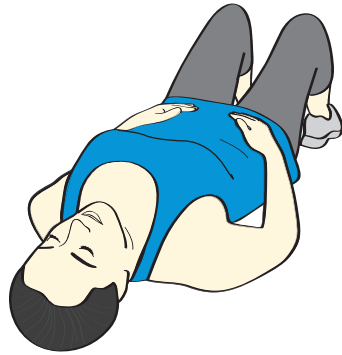


- ▼ You may want to start near a chair or wall so you can steady yourself.
- ▲ For a challenge, put your hands on your head as you balance and/or close your eyes.

Clamshell

Muscle group: Core (torso and pelvis)

1 Lie on your back with knees bent and your feet flat on the floor about hip width apart. Place your hands on your lower abdomen and lift your pelvic floor muscles (see pages 42–43). Keep breathing normally.



2 Slowly lower one knee out to the side, without moving the hips. If your hips tilt to one side, you have lowered your knee too far. Hold for 15–30 seconds.

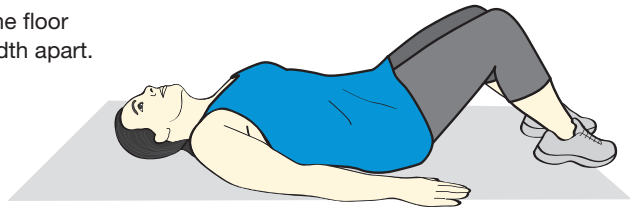


3 Return to starting position. Repeat with the other knee.

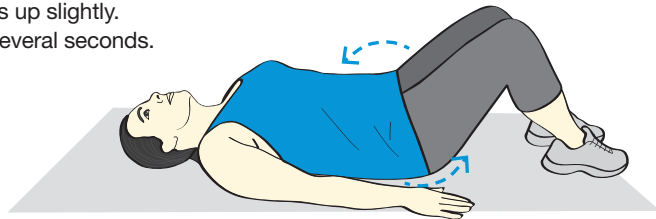
Pelvic tilt

Muscle group: Core (torso and pelvis)

- 1 Lie on your back with your knees bent and feet flat on the floor about hip width apart.



- 2 Flatten your back by tightening the muscles in your abdomen and buttocks. This will tilt your pelvis up slightly. Hold for several seconds.

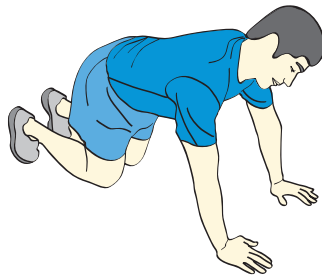


- 3 Relax the muscles and rest for a few seconds, then repeat the pelvic tilt.

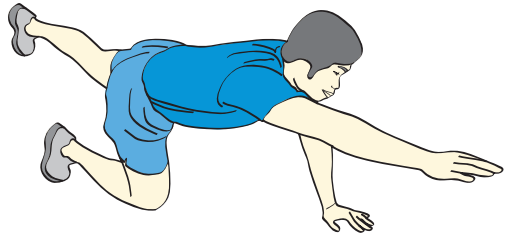
Bird-dog

Muscle group: Core (torso and pelvis)

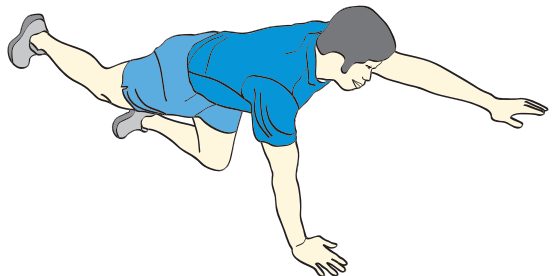
- 1 Start on all fours, with legs hip width apart, knees directly under hips, hands directly under shoulders, and back and head in a straight line. Keep the elbows slightly bent. Gently lift your pelvic floor and lower abdomen to support your lower back.



- 2 Keeping your back flat and steady, extend one leg while supporting the torso with both hands on the floor. Once balanced, slowly extend the opposite arm. Hold for 5–10 seconds.



- 3 Maintain normal breathing. Slowly return to all fours. Repeat with the other side.

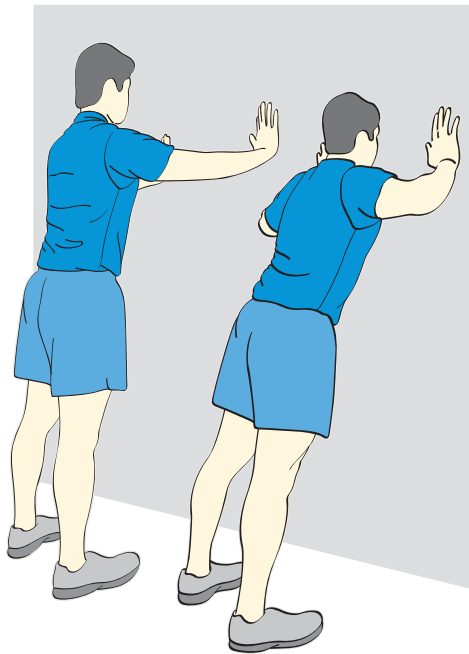


▼ If you find it hard to keep your balance, leave both hands on the floor and just extend one leg at a time. The bird-dog can also be performed lying over a fitball, which can be a good alternative for people with bad knees who find it difficult to kneel.

Standing push-up

Muscle groups: Chest and shoulders

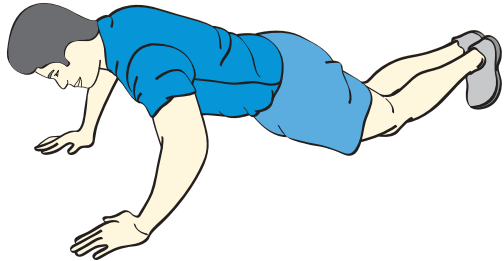
- 1** Stand with your feet shoulder width apart. Lean slightly against the wall with your arms outstretched at shoulder height and your hands on the wall. Do not lock your elbows or knees.
- 2** Slowly move your body towards the wall, bending your arms at the elbow.
- 3** Once your nose is close to the wall, push away, against your body weight. Breathe out as you push back to the starting position. Repeat the standing push-up.



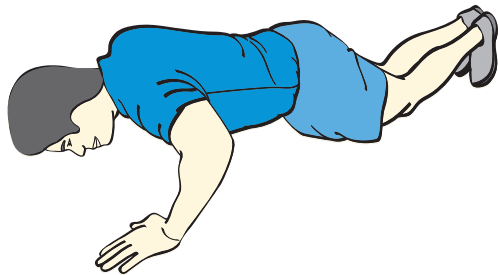
Modified push-up

Muscle groups: Chest, shoulders and arms

- 1 Start with your knees and hands on the floor and your arms extended. Keep your back and bottom as straight as possible, and keep your head in line with your spine.



- 2 Lower your torso slowly, bending your arms at the elbow.



- 3 Push up – try not to lock your elbows at the top. Breathe out as you push back up to the starting position. Repeat the modified push-up.

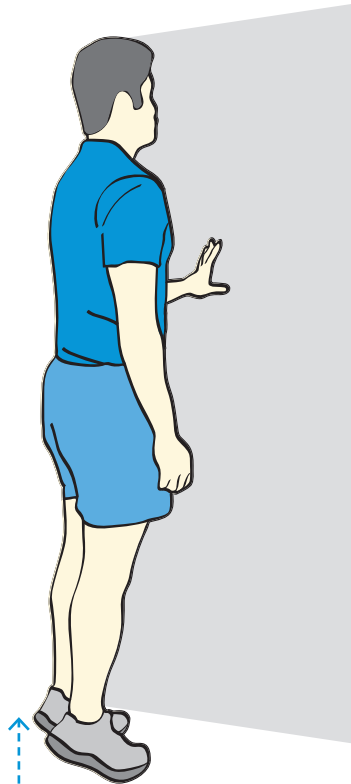
▼ If you feel any pain in your back doing this exercise, bring your hands closer to your body.

Calf raise

Muscle group: Calves (back of lower leg)

Equipment: Step, hand weights (optional)

- 1 Stand upright, with a wall or chair as support if necessary.
- 2 Lift your heels off the ground, keeping your knees and body straight. Breathe out while lifting.
- 3 Hold the position for a moment. Return to the starting position, then repeat the calf raise.

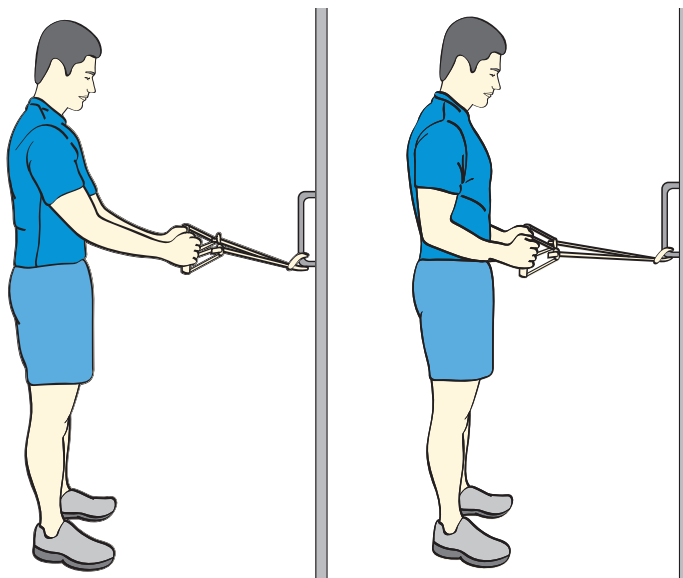


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- ▲ Increase the difficulty slightly by standing with the balls of your feet on a small step (so that your heels hang over the edge) and/or holding weights in your hands. You can also add a challenge by doing the exercise one leg at a time.
-

Standing row

Muscle groups: Shoulders, back and triceps (back of arm)

Equipment: Elastic resistance band



1

Attach the resistance band to a fixed point, ensuring it is well secured. Stand with feet shoulder width apart and arms outstretched at waist height.

2

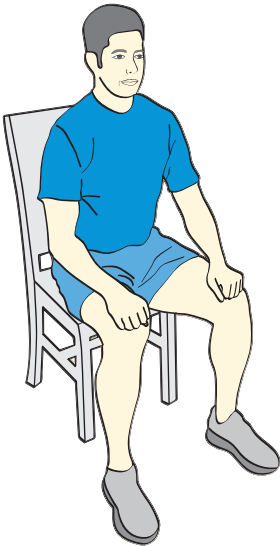
Pull the resistance band towards you, keeping your elbows and hands at waist height. Breathe out while pulling the band. Make sure your spine does not move, and keep your neck and shoulders relaxed. Avoid lifting your shoulders to your ears.

3

Slowly return to the starting position, then repeat the standing row.

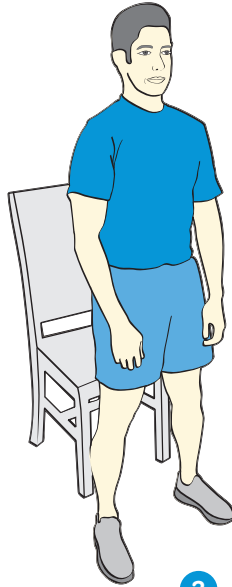
Chair rise

Muscle groups: Quadriceps (front of thigh) and gluteals (buttocks)
Equipment: Chair



1

Sit towards the middle or front of a chair with your hands on your knees.



2

Stand up, using your hands on your knees for assistance if necessary. Keep your back straight as you stand up. Breathe out while standing.

3

Slowly sit back down, then repeat the chair rise.

▲ Add a challenge by standing without using your hands to assist, then try with your arms across your chest. When standing unassisted, stand in one movement without rocking.

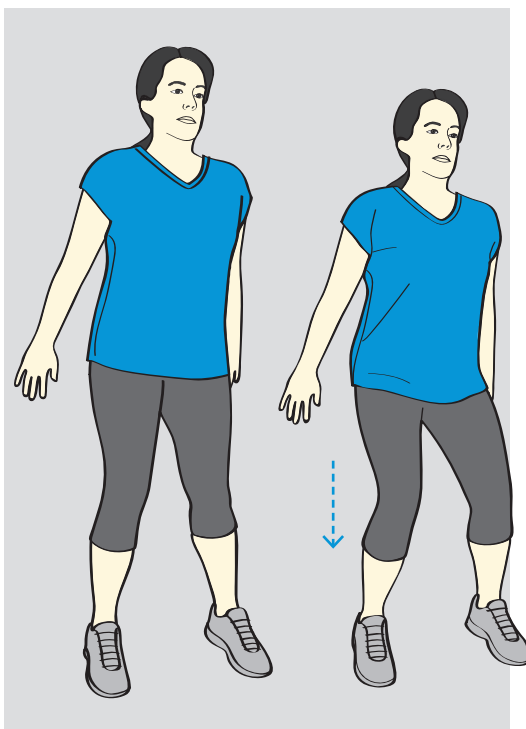
Wall squat

Muscle groups: Quadriceps (front of thigh) and gluteals (buttocks)

1 Stand 30–40 cm from a wall with feet shoulder width apart. Slightly bend your knees and lean back into the wall, placing your arms and palms against the wall. Tilt your pelvis so your back is flat to the wall. Tuck your chin in.

2 Keeping your body in contact with the wall, slide down (as if to sit) until you can feel your legs working – this may not be very far. Hold for 10–30 seconds if you can.

3 Slowly slide up until you are back to the starting position. Repeat the squat.



▲ Add a challenge by sliding further down the wall, but stop before the knees go over and in front of the toes (there should be no more than a 90-degree angle between hip and knee).

Shoulder press

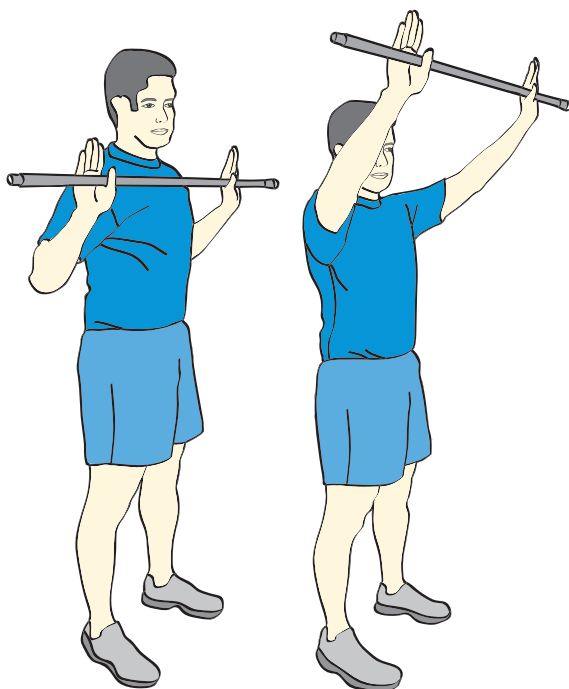
Muscle group: Shoulders

Equipment: Gymstick, barbell, pole, broomstick or hand weights

1 Stand with your feet shoulder width apart. Hold the bar at chest height with your elbows almost completely bent (so they are almost touching your sides).

2 Push the bar up until it is above and slightly in front of your head. Breathe out during the lift and maintain good posture – don't raise your shoulders.

3 Pause, then lower the bar back to the starting position. Repeat the lift.



▲ Increase the difficulty by adding weight or elastic resistance to the bar.

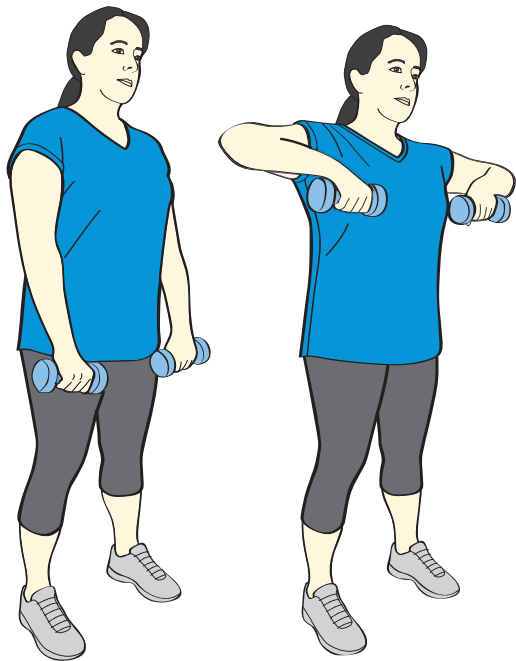
Upright row

Muscle groups: Shoulders and trapezius (upper back)

Equipment: Hand weights

- 1 Stand with your arms by your side and your feet shoulder width apart. Hold the weights with your palms facing your thighs. Tighten the tummy muscles (abdominals).

- 2 Bend your arms and raise both weights slowly up to shoulder height. Avoid jerking the weights when lifting them up. Maintain your head and neck position, looking straight ahead. Avoid lifting your shoulders to your ears. Feel the exercise work the muscles in your shoulders and not in your neck.



- 3 Pause, then lower both weights back to the starting position. Repeat the lift.

Biceps curl

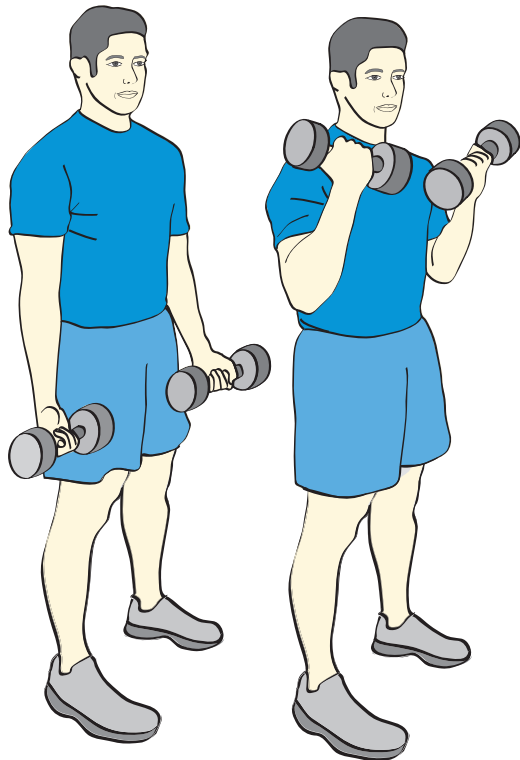
Muscle group: Biceps (upper arm)

Equipment: Hand weights, Gymstick or barbell

1 Stand with your arms by your side and feet hip width apart. Hold the weights with your palms pointing forward.

2 Bend your elbows to lift the weights to shoulder height. Keep your elbows tucked in, avoid moving your shoulders and make sure your body does not sway. Breathe out during the lift.

3 Slowly return almost to the starting position but do not fully straighten your elbows – keep them slightly bent. Repeat the lift.





Flexibility exercises

Flexibility exercises, also known as stretches or range-of-motion (ROM) exercises, lengthen muscles and tendons. They improve or maintain the flexibility of joints and muscles. We naturally lose joint and muscle flexibility as we get older, but cancer treatments can also have an impact. Regular stretching helps to overcome stiffness and can delay any loss of flexibility.

This chapter includes some simple flexibility exercises that can be done at home. You could also join an exercise class that focuses on stretching, such as a yoga class. Remember to check with your health care team before beginning any exercise program. Although we have included flexibility exercises to suit most people, some may not be right for you.

How much?

Try to do flexibility exercises 3–4 times a week. Include stretches for arm, leg and torso (core) flexibility. In each session, you might do 1–3 sets of 4–6 different stretches. Any stretching you do is better than none.



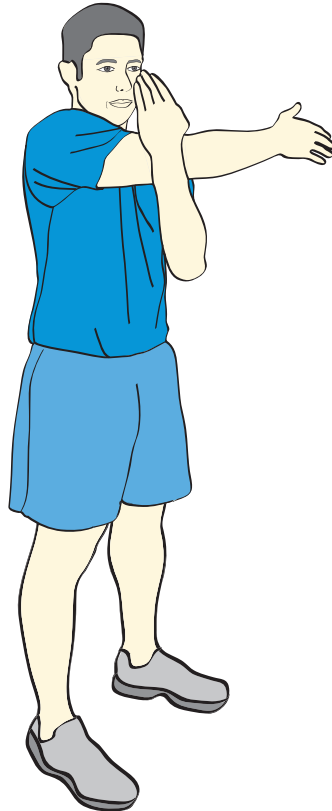
Tips for stretching

- Warm up your muscles first. Aim to stretch during the cool-down phase.
- Keep breathing normally. Do not hold your breath.
- Maintain good posture, and stretch slowly and steadily. Do not bounce.
- Stretch to the point of mild discomfort, but not till it hurts.

Shoulder stretch

Muscle group: Shoulders

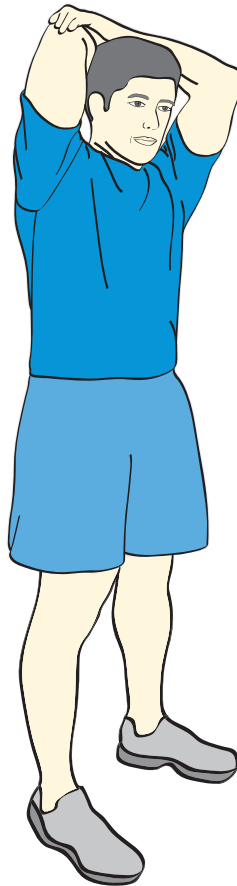
- 1 Stand with your feet about hip width apart.
- 2 Pull one arm across your chest. Keep your elbow just below your shoulder-line. Hold the stretch for 15–30 seconds.
- 3 Return to the starting position. Repeat the stretch on the other side.



Triceps stretch

Muscle group: Triceps (back of arm)

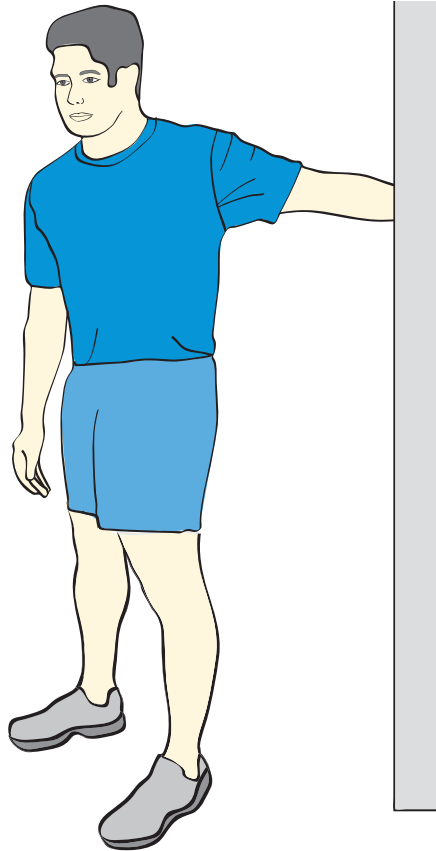
- 1** Lift one arm and bend your elbow with your forearm down your back.
- 2** Using the elbow as a lever, use your other arm to gently push the arm down your back. Hold the stretch for 15–30 seconds.
- 3** Return to the starting position. Repeat the triceps stretch on the other side.



Pectoral and biceps stretch

Muscle groups: Pectoral (chest) and biceps (upper arm)

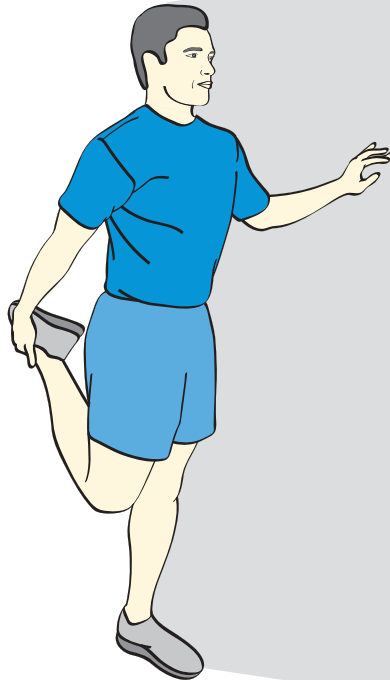
- 1** Stand near a wall or a pole. Raise one arm out to the side so it is parallel to the floor, and hold the wall or pole with your hand.
- 2** Without moving your feet, partially turn your body away from the arm that is holding the wall/ pole. Hold the stretch for 15–30 seconds.
- 3** Return to the starting position. Repeat the stretch on the other side.



Quadriceps stretch

Muscle group: Quadriceps (front of thigh)

- 1 Stand on one leg, with a wall or chair for support if necessary.
- 2 Hold your foot with your hand and pull the leg towards your buttocks by the ankle. Make sure you keep your torso straight. Hold the stretch for 15–30 seconds.
- 3 Return to the starting position. Repeat the stretch on the other side.

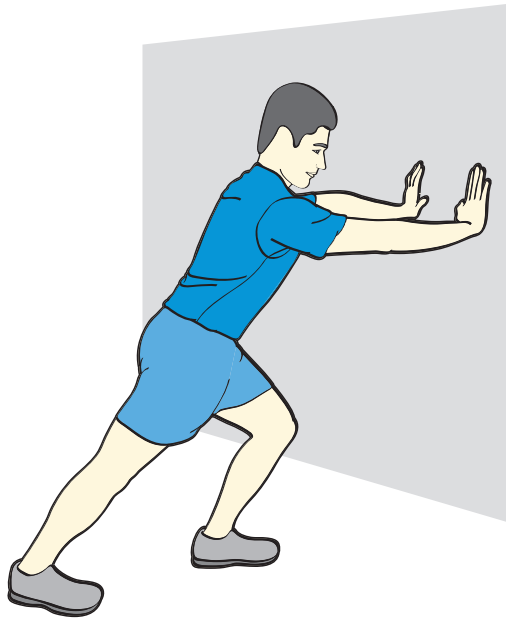


▲ For a challenge, put your hands on your head as you balance and/or close your eyes.

Calf stretch

Muscle group: Calves (back of lower leg)

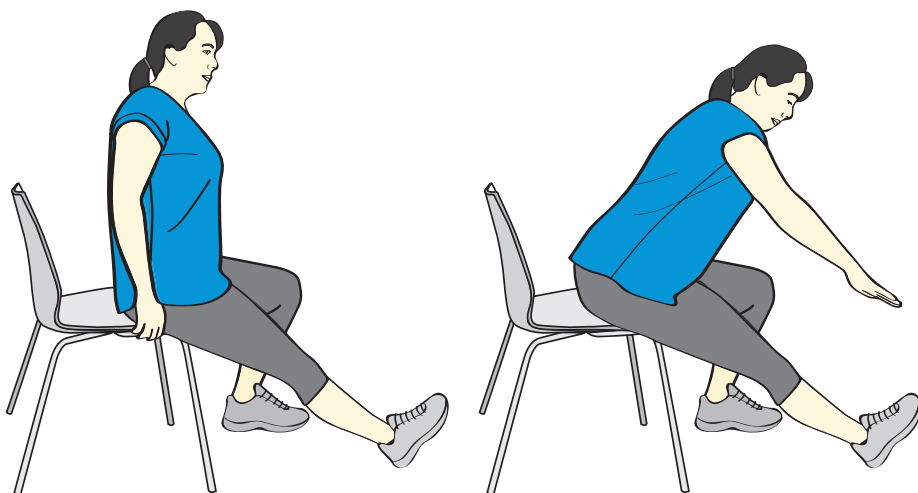
- 1 Stand facing a wall with your arms straight and hands flat against the wall. Step one of your feet straight back, placing the heel flat on the floor.
- 2 Lean forward against the wall and partially bend your front leg. Keep your back leg (stretching leg) completely extended and your foot flat on the floor – move the foot backwards until you feel the stretch. Hold for 15–30 seconds.
- 3 Repeat the stretch on the other side.



Hamstrings stretch

Muscle group: Hamstrings (back of thigh)

Equipment: Chair



1

Sit on a chair with one leg bent at the knee and the other leg stretched, toes pointing upwards.

2

Lean forward from the hips, pushing your chest towards your knee. Keep your back straight. Hold for 15–30 seconds.

3

Repeat the stretch on the other side.

▲ For more of a stretch, stand and place the foot of one leg on a step (about 30 cm high), toes pointing upwards. You may want to do this near a wall in case you need to steady yourself.

Lower back stretch

Muscle group: Lower back

Equipment: Chair or bench



1

Sit on a chair or bench. Keep your feet on the ground and your knees partly bent.

2

Curl your torso forward and hold the stretch for 15–30 seconds.

3

Slowly sit back up and pause, then repeat the stretch.



Pelvic floor exercises

Your pelvic floor muscles stretch from the bottom of your pelvis and support your bowel and bladder, and your uterus if you're a woman. Strong pelvic floor muscles also help control urination and bowel movements, normal sexual function, and stability of the abdomen and spine.

Like other muscles, your pelvic floor can become weak. Factors that can contribute to this include age, childbirth, constipation, obesity, chronic cough, heavy lifting, and abdominal or pelvic surgery.

How to find your pelvic floor muscles

To identify your pelvic floor muscles, try stopping your urine stream for a couple of seconds while emptying your bladder. You use your pelvic floor muscles to do this. Another way is to feel the muscles you use when you imagine stopping the flow of urine and holding in wind. This can be done standing, sitting or lying down.



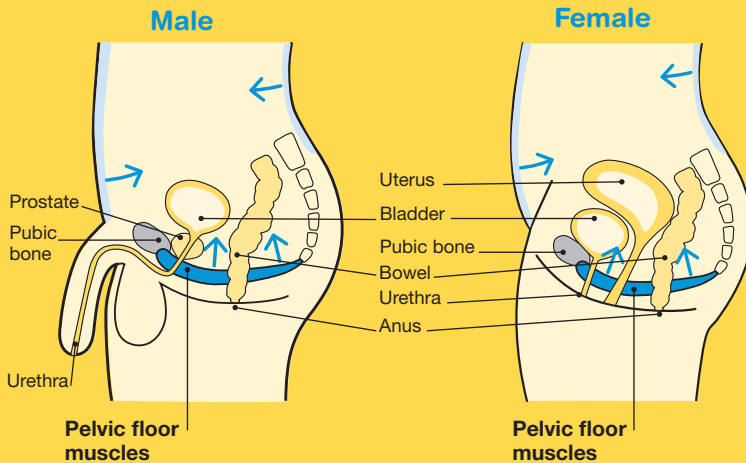
Tips for good technique

Poor technique can make pelvic floor exercises ineffective or even risk injury. Remember these points:

- Do not hold your breath.
- Do not tighten your tummy above the belly button. Focus on pulling up and holding onto urine and wind.
- Do not try too hard. You may end up contracting nearby muscles rather than the pelvic floor muscles themselves. Try changing positions if you can't feel the pelvic floor muscles lifting and squeezing.

How to exercise your pelvic floor muscles

Pelvic floor exercises should be done several times a day. You can be standing, sitting or lying down. You can even do them while watching TV or waiting at traffic lights. The technique is the same for men and women.



1

Start by relaxing all of your pelvic floor and tummy (abdominal) muscles.

2

Gently lift your pelvic floor muscles up and hold while you continue breathing normally. Try to hold the contraction for up to 10 seconds. Relax your muscles slowly after each hold.

3

Repeat the exercise up to 10 times, with a rest of 10–20 seconds between contractions. Relax your pelvic floor muscles completely during the rest periods.

Seeing a pelvic floor expert

Continence nurses and pelvic floor physiotherapists specialise in pelvic floor exercises. They can assess your pelvic floor function and tailor an exercise program to meet your needs. See a continence nurse or physiotherapist before doing pelvic floor exercises if you:

- have had recent pelvic or abdominal surgery
- have problems with urine or faeces leaking when coughing, sneezing, laughing or exercising
- often need to go to the toilet urgently
- have difficulty controlling bowel movements and wind
- feel like you haven't fully emptied your bowel after bowel movements
- have dragging, heaviness or a bulge in the vagina
- experience a lack of sensation during sex.

For a list of continence nurses and pelvic floor physiotherapists, search the directory at continence.org.au/service-providers or call the National Continence Helpline on 1800 33 00 66.

To find out about exercises that place less stress on your pelvic floor, you can download the Pelvic Floor First app from the App Store (Apple) or Google Play (Android). To find out more, see pelvicfloorfirst.org.au.



Seeking support

A cancer diagnosis can affect every aspect of your life. You will probably experience a range of emotions – fear, sadness, anxiety, anger and frustration are all common reactions. Cancer also often creates practical and financial issues.

There are many sources of support and information to help you, your family and carers navigate all stages of the cancer experience, including:

- information about cancer and its treatment
- access to benefits and programs to ease the financial impact of cancer treatment
- home care services, such as Meals on Wheels, visiting nurses and home help
- aids and appliances
- support groups and programs
- counselling services.

The availability of services may vary depending on where you live, and some services will be free but others might have a cost.

To find good sources of support and information, you can talk to the social worker or nurse at your hospital or treatment centre, or get in touch with Cancer Council 13 11 20.

“ My family members don’t really understand what it’s like to have cancer thrown at you, but in my support group, I don’t feel like I have to explain. ” *Sam*

Support from Cancer Council

Cancer Council offers a range of services to support people affected by cancer, their families and friends. Services may vary depending on where you live.

Cancer Council 13 11 20

Trained professionals will answer any questions you have about your situation and link you to services in your area (see inside back cover).



Information resources

Cancer Council produces booklets and fact sheets on over 25 types of cancer, as well as treatments, emotional and practical issues, and recovery. Call **13 11 20** or visit your local Cancer Council website (see back cover).

Practical help

Your local Cancer Council can help you find services or offer guidance to manage the practical impact of a cancer diagnosis. This may include access to transport and accommodation services.



Legal and financial support

If you need advice on legal or financial issues, we can refer you to qualified professionals. These services are free for people who can't afford to pay. Financial assistance may also be available. Call Cancer Council **13 11 20** to ask if you are eligible.

Peer support services

You might find it helpful to share your thoughts and experiences with other people affected by cancer. Cancer Council can link you with individuals or support groups by phone, in person, or online. Call **13 11 20** or visit cancercouncil.com.au/OC.



Useful websites

You can find many useful resources online, but not all websites are reliable. These websites are good sources of support and information.

Australian

Cancer Council Australia	cancer.org.au
Cancer Australia	canceraustralia.gov.au
Cancer Council Online Community	cancercouncil.com.au/OC
<i>The Thing About Cancer</i> podcast	cancercouncil.com.au/podcasts
Optimal Care Pathways	cancerpathways.org.au
Carer Gateway	carergateway.gov.au
Carers Australia	carersaustralia.com.au
Department of Health	health.gov.au
Department of Human Services (including Centrelink and Medicare)	humanservices.gov.au
Healthdirect Australia	healthdirect.gov.au
Exercise & Sports Science Australia	essa.org.au
Australian Physiotherapy Association	choose.physio

International

American Cancer Society	cancer.org
Cancer Research UK	cancerresearchuk.org
Macmillan Cancer Support (UK)	macmillan.org.uk
National Cancer Institute (US)	cancer.gov



Caring for someone with cancer

You may be reading this booklet because you are caring for someone with cancer. What this means for you will vary depending on the situation. Being a carer can bring a sense of satisfaction, but it can also be challenging and stressful.

It is important to look after your own physical and emotional wellbeing. Give yourself some time out and share your concerns with somebody neutral such as a counsellor or your doctor, or try calling Cancer Council 13 11 20. There is a wide range of support available to help you with both the practical and emotional aspects of your caring role.

Support services – Support services such as Meals on Wheels, home help or visiting nurses can help you in your caring role. You can find local services, as well as information and resources, through the Carer Gateway. Call 1800 422 737 or visit carergateway.gov.au.

Support groups and programs – Many cancer support groups and cancer education programs are open to carers as well as to people with cancer. Support groups and programs offer the chance to share experiences and ways of coping.

Carers Associations – Carers Australia works with the Carers Associations in each state and territory to provide information and services to carers. Call 1800 242 636 or visit carersaustralia.com.au.

Cancer Council – You can call Cancer Council 13 11 20 or visit your local Cancer Council website to find out more about carers' services.

➤ See our *Caring for Someone with Cancer* booklet.



Question checklist

You may find this checklist helpful when thinking about the questions you want to ask your doctors and exercise professionals about exercise during or after cancer treatment. If they give you answers that you don't understand, ask for clarification.

Questions for your doctors

- Can I exercise while I'm having this treatment?
- Are there any precautions I should take or types of exercise I should avoid?
- I have a port/PICC line and/or chemo pump and/or stoma. What precautions should I take?
- I haven't exercised much before. Do I need to have any general health checks first?
- Can you recommend an exercise professional who has experience helping people with cancer?

Questions for your exercise professionals

- What are your qualifications? Are you accredited?
By which organisation?
- Have you completed any training focused on exercise for people with cancer?
- Can you talk to my medical team about my exercise program?
- What will you consider when preparing an exercise program for someone with my medical history?
- Can I start slowly?
- How will I know that I am doing the exercises correctly?
- What should I do if I feel pain when exercising?
- What if I feel too unwell to exercise?
- How long might it be before I start to see some benefits from this exercise program?
- How many appointments are we likely to need?



Glossary

abdomen

The part of the body between the chest and hips, which contains the stomach, spleen, pancreas, liver, gallbladder, bowel, bladder and kidneys.

aerobic exercise

A form of exercise that causes heart and breathing rates to rise, and that uses large muscle groups.

anaemia

A reduction in the number and quality of red blood cells in the body.

biceps

The muscles on the top of the arm between the elbow and the shoulder.

chemotherapy

A cancer treatment that uses drugs to kill cancer cells or slow their growth.

continence

Ability to control urination and bowel movements. See also incontinence.

core muscles

The stomach and lower back muscles that stabilise the body as it moves.

exercise physiologist

A university-trained professional who specialises in using exercise to help people with medical conditions improve their overall health, fitness, strength and energy levels. Also known as an accredited exercise physiologist (AEP).

exercise scientist

A university-trained professional who specialises in designing exercise programs for healthy people.

flexibility

The range of movement in a joint (e.g. knee) or series of joints (e.g. leg).

gluteals (glutes)

The muscles that make up the bottom.

hamstrings

The muscles on the back of the leg between the knee and the hip.

incontinence

The accidental or involuntary loss of urine or faeces.

low intensity exercise

Activity that is easy and doesn't cause much exertion.

lymphoedema

Swelling caused by a build-up of lymph fluid. This can happen when lymph vessels or nodes don't drain properly because they have been removed or damaged.

moderate intensity exercise

Activity that isn't too hard, but is hard enough to be of benefit. Breathing and heart rates increase during moderate intensity activity.

neutropenia

A drop in the number of normal, healthy white blood cells called neutrophils. It can make you more prone to infections.

pectorals (pecs)

Muscles on the front of the upper chest, behind the breasts in women.

pelvic floor exercises

Exercises to strengthen the muscles that control the bladder and bowel.

personal trainer

A person who can plan and supervise exercise programs, but has not been trained to prescribe exercise for people with chronic medical conditions.

physical activity

Any activity that moves your body and speeds up your breathing and heartbeat.

physiotherapist

A university-trained professional who uses physical methods, such as massage and exercise, to help restore movement and mobility.

platelets

Blood cells that help the blood to clot and stop bleeding.

quadriceps (quads)

The muscles on the front of the leg between the knee and the hip.

radiation therapy (radiotherapy)

The use of targeted radiation to kill or damage cancer cells so they cannot grow, multiply or spread. The radiation is usually in the form of x-rays.

red blood cells

Blood cells that carry oxygen around the body.

strength training

Using muscles to move weight with the aim of increasing muscle strength. Also called resistance or weight training.

trapezius

The muscles of the upper back.

triceps

The muscles on the back of the arm between the elbow and the shoulder.

vigorous intensity exercise

Hard exercise that can usually only be done for short periods of time.

white blood cells

Blood cells that help fight infection.

Can't find a word here?

For more cancer-related words, visit:

- cancercouncil.com.au/words
- cancervic.org.au/glossary
- cancersa.org.au/glossary

References

1. P Cormie et al., "Clinical Oncology Society of Australia position statement on exercise in cancer care", *Medical Journal of Australia*, vol. 209, no. 4, 2018, pp. 184–87.
2. SC Hayes et al., "Australian Association for Exercise and Sport Science position stand: Optimising cancer outcomes through exercise", *Journal of Science and Medicine in Sport*, vol. 12, no. 4, 2009, pp. 428–34.
3. Australian Government Department of Health, *Australia's Physical Activity and Sedentary Behaviour Guidelines for Adults (18–64 years)*, Commonwealth of Australia, Canberra, 2014.



How you can help

At Cancer Council, we're dedicated to improving cancer control. As well as funding millions of dollars in cancer research every year, we advocate for the highest quality care for cancer patients and their families. We create cancer-smart communities by educating people about cancer, its prevention and early detection. We offer a range of practical and support services for people and families affected by cancer. All these programs would not be possible without community support, great and small.

Join a Cancer Council event: Join one of our community fundraising events such as Daffodil Day, Australia's Biggest Morning Tea, Relay For Life, Girls' Night In and other Pink events, or hold your own fundraiser or become a volunteer.

Make a donation: Any gift, large or small, makes a meaningful contribution to our work in supporting people with cancer and their families now and in the future.

Buy Cancer Council sun protection products: Every purchase helps you prevent cancer and contribute financially to our goals.

Help us speak out for a cancer-smart community: We are a leading advocate for cancer prevention and improved patient services. You can help us speak out on important cancer issues and help us improve cancer awareness by living and promoting a cancer-smart lifestyle.

Join a research study: Cancer Council funds and carries out research investigating the causes, management, outcomes and impacts of different cancers. You may be able to join a study.

To find out more about how you, your family and friends can help, please call your local Cancer Council.



Cancer Council

13 11 20

Being diagnosed with cancer can be overwhelming. At Cancer Council, we understand it isn't just about the treatment or prognosis. Having cancer affects the way you live, work and think. It can also affect our most important relationships.

When disruption and change happen in our lives, talking to someone who understands can make a big difference. Cancer Council has been providing information and support to people affected by cancer for over 50 years.

Calling 13 11 20 gives you access to trustworthy information that is relevant to you. Our cancer nurses are available to answer your questions and link you to services in your area, such as transport, accommodation and home help. We can also help with other matters, such as legal and financial advice.

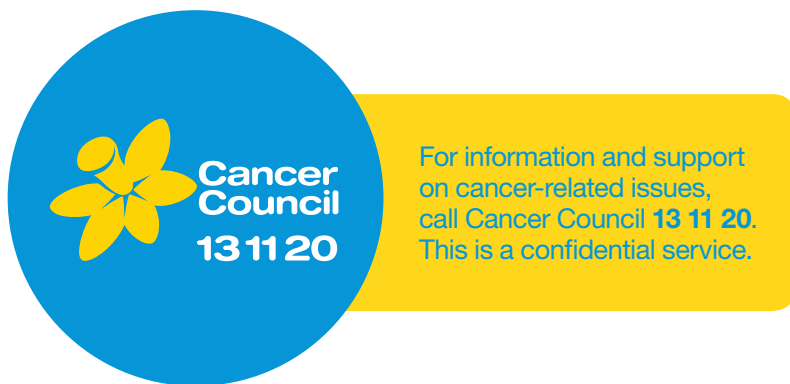
If you are finding it hard to navigate through the health care system, or just need someone to listen to your immediate concerns, call 13 11 20 and find out how we can support you, your family and friends.

Cancer Council services and programs vary in each area.
13 11 20 is charged at a local call rate throughout Australia (except from mobiles).



If you need information in a language other than English, an interpreting service is available. Call 13 14 50.

If you are deaf, or have a hearing or speech impairment, you can contact us through the National Relay Service. www.relayservice.gov.au



Visit your local Cancer Council website

Cancer Council ACT
actcancer.org

Cancer Council NSW
cancercouncil.com.au

Cancer Council NT
nt.cancer.org.au

Cancer Council Queensland
cancerqld.org.au

Cancer Council SA
cancersa.org.au

Cancer Council Tasmania
cancertas.org.au

Cancer Council Victoria
cancervic.org.au

Cancer Council WA
cancerwa.asn.au

Cancer Council Australia
cancer.org.au

*This booklet is funded through the generosity of the people of Australia.
To support Cancer Council, call your local Cancer Council or visit your local website.*