Exercise for People Living with Cancer
A guide for people with cancer, their families and friends

Practical and support information

Cancer Council Helpline
13 11 20
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Exercise for People Living with Cancer is reviewed approximately every three years.
Check the publication date above to ensure this copy of the booklet is up to date.
To obtain a more recent copy, phone Cancer Council Helpline 13 11 20.

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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 your doctor’s or other health professional’s advice. However, you may wish to discuss issues raised in this booklet with them. All care is taken to ensure that the information in this booklet is accurate at the time of publication.

Cancer Council Australia
Cancer Council Australia is the nation’s peak non-government cancer control organisation. Together with the eight state and territory Cancer Councils, it coordinates a network of cancer support groups, services and programs to help improve the quality of life of people living with cancer, their families and carers. This booklet is funded through the generosity of the people of Australia. To make a donation and help us beat cancer, visit Cancer Council’s website at www.cancer.org.au or call your local Cancer Council.

Cancer Council Australia
Level 1, 120 Chalmers St, Surry Hills NSW 2010
Telephone 02 8063 4100 Facsimile 02 8063 4101
Email info@cancer.org.au Website www.cancer.org.au
ABN 91 130 793 725
This booklet has been prepared to help you understand the importance of exercise, and to provide information about the benefits exercise may bring during and after cancer treatment.

We have included tips on exercise preparation, plus some examples of exercise techniques that you can do at home. We have also included information about support services that may assist you.

We cannot give advice about the best exercise program for you. You need to discuss this with your doctors and exercise professionals. However, we hope this information will answer some of your questions and help you think about other questions to ask your doctor or exercise professional.

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. 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.

Cancer Council Helpline 13 11 20 can arrange telephone support in different languages for non-English speakers. You can also call the Translating and Interpreting Service (TIS) direct on 13 14 50.
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Why exercise?

Much of the research to date on exercise and cancer has focused on cancer prevention. Recently however, research has started to examine the effectiveness of exercise for people with cancer.

The current evidence suggests exercise is beneficial for most people during cancer treatment. The evidence also shows that there is little risk of harm if care is taken and professional exercise advice is followed closely.

Australia’s *National Physical Activity Guidelines for Adults* recommend everyone should aim to put together at least 30 minutes of physical activity on most, preferably all, days of the week. People with cancer should be as physically active as their abilities and condition allow.

Cancer treatment causes a range of side effects that are different for different people. Exercise has been shown to help people cope with many of the side effects of cancer treatment, including:

- fatigue
- feeling sick (nausea) and loss of appetite
- anaemia (low red blood cell and/or haemoglobin count)
- depression and anxiety
- body weight and composition (muscle and fat) changes.

Who should exercise?

Most people being treated for cancer are able to participate in an exercise program. Some people may need a modified program and others may have to delay starting a program.
Talk to your doctor before starting if you have any of the following problems, as you may need a modified exercise program:

- lymphoedema
- fatigue
- anaemia
- shortness of breath
- low platelet count
- radiation therapy burns
- compromised immune function
- damage to nerves (peripheral neuropathy)
- primary or metastatic bone cancer.

You will need to delay the start of an exercise program if you have severe anaemia, fever or severe weight loss.

Try to avoid being physically inactive. Some days will be harder than others but even a few minutes of light exercise is better than no exercise at all.

**Overcoming common side effects**

**Lymphoedema** – Starting an exercise program early in treatment may lower the risk or severity of lymphoedema. Stretching programs and range-of-motion (ROM) exercises are recommended for people with lymphoedema. Appropriate aerobic and resistance training should not increase lymphoedema.

**Fatigue** – Carefully monitoring your condition and making adjustments to the exercise intensity and volume can help manage fatigue. It is important to keep doing even a light amount of exercise.
during times of excessive fatigue. By stopping all activity you risk losing fitness and strength, which can make the fatigue worse. Stretching, range-of-motion (ROM), yoga and tai chi style activities may be better tolerated during periods of fatigue.

**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. If anaemia is severe, it is recommended that exercise is delayed. If anaemia is less severe, you should participate in a low intensity exercise program, with gradual increases. Aerobic activity has been shown to improve anaemia. Good nutrition is also important.

**Compromised immunity** – Some cancers and treatments stop the immune system from working properly. When this happens the immune system is compromised and there is an increased risk of infection. A modified exercise program can improve immunity without overloading the immune system.

When white blood cell (neutrophil) count is low it is important to reduce the risk of cross-infection by limiting physical contact with other people and by cleaning any shared equipment before use. When immunity is severely compromised (neutropaenia), gyms, swimming pools and training venues should be avoided.

**Skin irritation** – Areas of skin affected by radiotherapy can be extremely sensitive and often uncomfortable. Choose activities that limit rubbing of clothing around affected parts of the body. If you are having radiotherapy, avoid water-based exercise programs.
Getting started

Before taking part in any exercise program, either during or soon after your treatment, it is important to talk with your oncologist or general practitioner (GP) about any precautions you should take.

If it has been a while since you have been active or your fitness level is low, start slowly and build up gradually.

Who to talk to
Starting an exercise program can be overwhelming. You may have lots of questions. Exercise professionals, such as exercise physiologists and physiotherapists, are specifically trained to give advice on exercise. Medicare or your private health fund may provide some limited cover for visits to an accredited exercise physiologist or physiotherapist. Ask your GP for a referral to an exercise professional or use the Exercise & Sports Science Australia website at www.essa.org.au.

Your exercise physiologist can work with you and your doctor to develop an exercise program tailored for you. Many structured exercise programs offered at places such as gyms will ask you for a medical clearance before starting.

Exercise equipment
You do not need expensive equipment or clothing to exercise or be physically active. Appropriate shoes are vital and help prevent injury later on. A podiatrist or reputable shoe shop can help you select the right shoes.
Wear loose, comfortable clothes, such as shorts and a t-shirt, when you are exercising. Other equipment, such as heart rate monitors and home-gym systems can be useful, but are not necessary. Most exercises can be done without the need for any additional equipment.

**tip**

Wear sunscreen and a hat if exercising outside. Wherever you choose to exercise, it is important to consider your comfort, health and safety.

### Choosing an exercise program

There are many ways that you can be physically active without too much cost or inconvenience. What you choose will depend on your current fitness level, what you want to do and what your doctor says is safe for you to do. It is also important to find a routine that suits you. If you enjoy an activity, you are more likely to stick with it. Many people enjoy the social aspects of exercise, so consider inviting a friend or family member to join you.

### Exercise at home

Home-based and outdoor exercise are excellent ways to include exercise in your daily routine. You can try aerobic activities such as walking, cycling or swimming, or try some resistance exercises (see resistance exercise examples on pages 14–24). If you are unsure about what to include in a home-based program, ask your GP for a referral to an exercise professional for advice.
Group exercise program

Many gyms and fitness centres run group exercise programs. When joining, ask about the level and quality of the supervision provided. Fitness professionals should hold current registration with Exercise & Sports Science Australia, see www.essa.org.au.

Let your gym know that you have cancer, and ask if they can modify programs and equipment if necessary. Check if your program will be designed and run by an accredited exercise physiologist. They have completed a four-year university degree, and are the most appropriate exercise professional to help design and supervise programs for people affected by cancer.

An exercise program usually includes an initial consultation and functional assessment. You will receive an exercise program designed specifically for your abilities and condition, and consisting of aerobic, resistance, and flexibility exercises.

To find a group exercise program you can ask your GP, visit Fitness Australia on www.fitness.org.au or call Helpline 13 11 20.

Mix it up

You might choose a mix of exercising at home and attending a group exercise program. The structure and safety of a supervised program can be a great place to start exercising, and including home-based or outdoor activities on other days during the week can keep things interesting and help you reach your goals.
Exercise tips for people living with cancer

Warm-up
It is important to warm-up at the start of an exercise session. Warming up helps to get you going and reduces your risk of injury. After the warm-up your muscles are warm and loose, and your heart rate is slightly higher than at rest.

A warm-up should include 5–10 minutes of low-intensity aerobic work mixed with some light stretching. Walking outside or using the indoor equipment are good warm-up activities. If you are going to do some weights, it is a good idea to use light weights in your warm-up. A couple of lighter sets prepare the muscles and joints for the exercises to come.

Training
Training is the part of an exercise program when the work is done. Different types of training have specific effects on your body. A well-rounded weekly exercise program should include a variety of activities from the three types of exercise:
- aerobic exercises
- resistance exercises
- flexibility exercises.

Aerobic exercises
Aerobic exercises use large muscle groups and cause your heart rate to rise during the exercise. Aerobic training improves heart and lung fitness and makes strenuous tasks easier. Examples include walking, cycling and swimming. Mowing the lawn or digging in the garden can also be beneficial.
Everyone should aim for 30 minutes of low to moderate aerobic exercise, on most days of the week. This can be continuous or you can combine a few shorter sessions of around 10 minutes each.

Exercise at a level you are comfortable with, but try to vary the duration and intensity. Exercise intensity refers to how hard your body is working during physical activity, and is described as low, moderate or vigorous (see page 39 for more information).

Adults should aim for at least 2½ hours of moderate-intensity aerobic exercise each week, or at least 1 hour of vigorous-intensity aerobic exercise per week. This is a goal to work towards steadily – remember that some exercise is better than none. Choose activities that you enjoy, and try new activities to keep you motivated.

For extra health benefits, people should aim for up to 5 hours a week of moderate-intensity exercise, or 2½ hours a week of vigorous exercise, or do an equal combination of both.

**Resistance exercises**

Resistance exercises use weights to increase muscle strength and endurance. It is also called weight training or strength training. See examples of resistance exercises on pages 14–24.

The benefits of a resistance (or weight) training program include:
- increased muscle function and strength
- improved body composition
- increased muscle mass
- increased bone mass and bone mineral density.
Resistance training can be done using:
- your own body weight – such as push-ups or squats
- free weights – such as dumbbells or barbells
- weight machines – devices that have adjustable seats with handles attached to either weights or hydraulics
- elastic resistance – these are like giant rubber bands that provide resistance when stretched.

**Instructions**

Proper technique is essential as incorrect technique can be harmful. Follow instructions closely, and stop immediately if you experience pain.

- Resistance exercises should be performed 1–3 times (sessions) each week, on alternative days.
- Complete one to four sets of six to nine different exercises each session.
- Choose exercises that target the major functional muscles of the arms, legs and trunk. Each set should include 6–12 repetitions of the movement. Rest for 60–90 seconds between sets.

Once you are comfortable with the program try to (in this order):

- increase the number of repetitions, from 6–12
- increase the number of sets, from 1–3
- each time a set is added reduce the number of
- increase the load or resistance and reduce the number of repetitions and sets.
**Flexibility exercises**

Flexibility exercises (stretches) lengthen muscles and tendons. Stretching improves or maintains the flexibility and strength of joints and muscles. Joint and muscle flexibility is reduced by some cancer treatments and naturally as we get older. Regular stretching helps to delay any reduction in flexibility and overcome stiffness.

Try to stretch three to four times each week. Complete two to four sets of four to six different stretches. Include stretches for arm, leg and trunk flexibility. Hold each stretch for 15–30 seconds (see example exercises on pages 29–36).

**Cool down**

Cooling down is just as important as warming up. The cool down allows your heart rate and blood pressure to gently return to normal. Also, a slow cool down helps your body and muscles lose the heat gained during the activity.

A cool down should involve 5–10 minutes of relaxed activity and/or light stretching.

If you have just finished an aerobic exercise session, slow walking or cycling is the best way to cool down. If you have done resistance training, light stretching is the best way to cool down.
Standing push-up

Muscle groups: Chest and shoulders

Technique: Stand with your feet shoulder-width apart. Lean slightly against the wall with outstretched arms. Do not lock your elbows. Slowly move your body towards the wall, bending your arms at the elbow. Once your nose is close to the wall, push away, against your body weight. Breathe out when pushing away.
**Modified push-up**

**Muscle groups:** Chest and shoulders

**Technique:** Start with your knees and hands on the floor and your arms extended. Keep your back and bottom as straight as possible. Lower your trunk slowly, bending your arms at the elbow. Push up – try not to lock your elbows at the top. Breathe out when pushing up.
Calf raise

**Muscle group:** Calves

**Equipment:** Step (optional)

**Technique:** Stand upright, with a wall as support if necessary. Extend your feet (pointing the toes) and lift your body straight up. Breathe out while lifting. Increase the difficulty slightly by standing on a small step and/or holding weights in your hands.
Standing row

**Muscle groups:** Shoulders, back and triceps  
**Equipment:** Elastic resistance band  
**Technique:** Stand with your arms outstretched at waist height. Pull the resistance band by drawing your elbows backwards and maintaining hands at waist height. Breathe out while pulling the resistance. Make sure your spine does not move.
Chair rise

**Muscle groups:** Quads and gluteals (buttocks)

**Equipment:** Chair

**Technique:** Sit with your hands on your knees. Stand up, using your hands on knees for assistance if necessary. Breathe out while standing. Increase the difficulty by standing without assistance. Then try with your arms across your chest. When standing unassisted, stand in one movement without rocking.
Squat

**Muscle groups:** Quads and gluteals (buttocks)

**Equipment:** Gymstick™, barbell or a pole (a broomstick is okay), chair (optional)

**Technique:** Stand with your feet shoulder-width apart and with the bar just below your shoulders. Squat down by bending your knees and hips. Do not bend your knees beyond the tips of your toes and keep your feet flat on the floor. Return to the starting position by straightening your knees and hips. You may want to start with a chair behind you, touching (but not resting) your bottom on the chair on each repetition. Increase the difficulty by adding resistance (weights or elastic) to the bar.
Shoulder press

Muscle group: Shoulders

Equipment: Gymstick™, barbell, hand-held weights or a pole (a broomstick is okay)

Technique: Stand with your feet shoulder-width apart. Hold the bar at chest height with your elbows almost completely bent (almost touching sides). Push the bar up until it is directly over your head and shoulders. Breathe out during the lift and maintain good posture at all times. Increase the difficulty by adding weight or elastic resistance to the bar.
Lateral arm raise

Muscle group: Shoulders
Equipment: Hand-held weights
Technique: Stand with your arms by your side and your feet shoulder-width apart. Hold the weights with your palms facing your thighs. Lift your arms slowly out to your sides until they are shoulder height. Breathe out when lifting the resistance. Maintain your head and neck position, looking straight ahead.
Standing leg curl

**Muscle group:** Hamstrings  
**Equipment:** Elastic resistance band  
**Technique:** Stand with your feet shoulder-width apart and the elastic wrapped around your ankles. Stand facing a wall or chair, in case you need support. Bend your knee to your buttocks at approximately 90 degrees. Breathe out when lifting the leg. (You can start without the elastic.) Repeat with the other leg.
**Triceps kickback**

**Muscle group:** Triceps (the muscles on the back of your arm)

**Equipment:** Hand-held weights

**Technique:** Lean on a bench or table, lean with one arm on the table. In the other hand, hold the weight by your side, with your elbow pointing upwards and looking straight ahead. Without moving, straighten your arm and move the weight upwards. Breathe out when lifting the weight. Return to the starting position. Repeat with the other arm.
Biceps curl

Muscle group: Biceps

Equipment: Hand-held weights, Gymstick™ or barbell

Technique: Stand with your arms by your side. Hold the weights with your wrists pointing forward. Lift the weights to your chin in a smooth motion by bending both elbows. Make sure that you do not move your shoulders and your body does not sway during the lift. Breathe out during the lift. Slowly return to the starting position.
Exercise program for people with cancer

Your doctor and exercise specialist can provide a personalised program
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**Resistance:**
- push-up (standing or modified)
- calf raise
- standing row
- squat (or chair rise)
- shoulder press
- lateral arm raise
- standing leg curl
- triceps kickback
- biceps curl

**Flexibility:**
- shoulder stretch
- triceps stretch
- pectoral and biceps stretch
- quadriceps stretch
- calf stretch
- hamstrings and lower back stretch
- lower back stretch
- bird-cat

**Flexibility (optional):**
- shoulder stretch
- triceps stretch
- pectoral and biceps stretch
- quadriceps stretch
- calf stretch
- hamstrings and lower back stretch
- lower back stretch
- bird-cat
It's essential to warm up before exercising, and cool down afterwards.

Wear comfortable, loose clothing when you are exercising.

Exercise physiologists and physiotherapists are health professionals specifically trained to give advice on exercise.

You can exercise at home, outdoors or in a supervised clinic or gym, or a combination.

Medicare may provide limited cover for visits to exercise professionals.

Evidence suggests that exercise is beneficial for most people during and after treatment.

Always have a bottle of water within reach when exercising.

Talk to your doctor before starting an exercise program about any precautions you should take.

Most exercises can be done without the need for any additional equipment.

Work with your doctor and exercise professional to develop an exercise program tailored specifically for you.

Call Cancer Council Helpline 13 11 20 for more information.
Shoulder stretch

**Muscle group:** Shoulder  

**Technique:** Stand with your feet about hip-width apart. Pull one arm across your chest. Keep your elbow just below your shoulder-line. Hold the position for 15–30 seconds. Repeat the exercise for the other side.
**Triceps stretch**

**Muscle group:** Triceps

**Technique:** Lift one arm with your elbow bent and your forearm down your back. Using the elbow as a lever, pull the arm down your back. Hold the stretch for 15–30 seconds. Perform the exercise for both sides.
Pectoral and biceps stretch

Muscle groups: Chest and shoulder

Technique: Stand near a wall or a pole. Raise one arm to your side at shoulder height and hold the wall or pole with your hand. Partially turn your body away from the arm holding the wall/pole. Hold the stretch for 15–30 seconds. Perform on both sides.
**Quadriceps stretch**

Muscle group: Quadriceps

Technique: Stand on one leg, with a wall or chair for support if necessary. Hold your foot with your hand and pull the leg toward your buttocks by the ankle. Keep your trunk straight. Hold the stretch for 15–30 seconds. Perform for both sides.
Calf stretch

**Muscle group:** Calf

**Technique:** Stand facing a wall with feet parallel. Step one foot back, stand with one foot in front of the other and feet parallel. Lean forward against a wall and partially bend your front leg. Keep your back leg (stretching leg) completely extended, with your foot flat on the floor – move it backwards until you feel the stretch. Perform for both sides.
Hamstrings and lower back stretch

**Muscle groups:** Hamstrings and lower back

**Equipment:** Elastic resistance band and bench

**Technique:** Sit with one leg extended on a bench. Put the elastic tight around your foot with your back upright and straight. Loosen the elastic band by leaning forward from the hips. Keep your back straight. Alternatively stand on one leg with the other foot on a step (about 30cm high). Lean forward from the hips, pushing your chest towards your knee. Keep your back straight. Hold this position for 15–30 seconds. Perform on both sides.
Lower back stretch

**Muscle group:** Lower back

**Equipment:** Chair

**Technique:** Sit on a chair or bench. Lean forward with your feet on the ground and knees partially bent. Curl your trunk forward and hold for 15–30 seconds.
**Bird-cat**

**Muscle group:** Core stability

**Technique:** Start on all fours. Start by extending one leg while supporting the trunk with both arms on the floor. Pause in the extended position for 5–10 seconds, then slowly return to all fours. Change sides and repeat the same position. Maintain normal breathing. The bird-cat can also be performed lying over a fitball, which can be a useful alternative for people with bad knees who find it difficult to kneel. Increase the difficulty by slowly extending one leg and the opposite arm at the same time.
Your pelvic floor muscles span the bottom of your pelvis and support your bowel and bladder, plus your uterus if you’re a woman. As well as providing support, strong pelvic floor muscles are important for control of urination and faeces, normal sexual function and stability of the abdomen and spine.

Like other muscles, your pelvic floor can become weak. Factors that can contribute to pelvic floor weakness or damage, include: age, childbirth, straining on the toilet (constipation), obesity, chronic cough, heavy lifting and abdominal or pelvic surgery.

See a physiotherapist or continence advisor 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
- need to go to the toilet urgently
- have difficulty controlling bowel movements and wind
- feel like you haven’t emptied your bowel
- have dragging, heaviness or a vaginal bulge
- lack of sexual sensation.

**How to identify your pelvic floor muscles**
You can feel your pelvic floor muscles working when you stop your urine stream midway through emptying your bladder. Try stopping the flow for a couple of seconds to identify the pelvic muscles. Another way is to feel the muscles you use when you imagine that you are stopping the flow of urine and holding in wind (flatus). This can be done standing, sitting or lying.
How to exercise your pelvic floor muscles

Pelvic floor muscles exercises can be done standing, sitting or lying down.

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

Squeeze and hold your pelvic floor muscles while you continue to breathe normally.

Try and hold the contraction for up to 10 seconds.

Repeat the exercise up to 10 times, with a 10–20 seconds rest between contractions.

Do it at different times throughout each day to improve the strength of your pelvic floor muscles.

It is important that you have a good technique when you’re doing pelvic floor muscle exercises. If your technique is poor, the exercise may be ineffective or you may risk injury. Remember these points:

Do not hold your breath.

Do not tighten your tummy above the belly button. If your technique is correct, you may notice some tensing or flattening of the tummy below the belly button.

Do not try too hard. You may end up contracting the muscles around the pelvic floor. Try changing positions if you can not feel your pelvic floor muscles lifting and squeezing.
Measuring exercise levels

It is important to find a balance between not working hard enough and working too hard. If you do not work hard enough, you may not achieve your exercise goals. If you work too hard, you risk injury. How hard your body is working during physical activity (exercise intensity) is often described as low, moderate or vigorous. Australia’s National Physical Activity Guidelines for Adults recommend working at moderate-intensity.

Different ways to measure your exercise intensity include talk test, rating of perceived exertion (RPE) and heart rate.

Talk test
This is a simple way to work out how hard an aerobic activity is.
- If you are able to sing, the activity is probably too light.
- If you are able to carry on a conversation but need to pause for breath from time-to-time, you’re doing a moderate-intensity activity.
- If you start to provide one-word answers, the activity is becoming more vigorous.
- If you find it difficult to speak, this is vigorous activity.

Rating of perceived exertion (RPE)
RPE is often used by exercise professionals to assess the intensity of an activity. It is a tool that you might find useful too. It can be used by all ages during aerobic and resistance training. To use RPE ask yourself ‘How hard am I working?’ Find the number that best describes what you feel on the next page.
Heart rate

Heart rate is another way of working out exercise intensity. Your heart rate will increase in proportion to the intensity of the exercise you are doing. See the next page for a simple way to measure your heart rate during physical activity.
For people on some medications, heart rate may not be a good measure, so it is best to check with your doctor first. If your heart rate becomes too high or drops too low during exercise, you should stop what you’re doing and consult your doctor again.

How to measure your heart rate

Measuring your heart rate is simple.

Put the first three fingers of one hand against the inner part of your wrist or your neck. Count your pulse for 15 seconds. Multiply this number of beats by four. This result gives you your heart rate in number of beats per minute (bpm).

For example:
31 beats x 4 = 124 bpm

Your maximum heart rate (HRmax) depends on your age. Aim to exercise at around 70% of your maximum heart rate.

Using the table on the next page, you can work out how hard you are working by matching your heart rate to your age.

To calculate your maximum heart rate, minus your age from 220.

For example:
If you are 45 years old
220-45 = 175 bpm

This means, to work at 70% of your maximum heart rate, your heart rate will need to be 123. This is moderate to hard exercise.
<table>
<thead>
<tr>
<th>Heart rate maximum</th>
<th>Age</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>35</th>
<th>40</th>
<th>45</th>
<th>50</th>
<th>55</th>
<th>60</th>
<th>65</th>
<th>70</th>
<th>75</th>
</tr>
</thead>
<tbody>
<tr>
<td>maximum effort 100%</td>
<td></td>
<td>200</td>
<td>195</td>
<td>190</td>
<td>185</td>
<td>180</td>
<td>175</td>
<td>170</td>
<td>165</td>
<td>160</td>
<td>155</td>
<td>150</td>
<td>145</td>
</tr>
<tr>
<td>very hard 90%</td>
<td></td>
<td>180</td>
<td>176</td>
<td>171</td>
<td>167</td>
<td>162</td>
<td>158</td>
<td>153</td>
<td>149</td>
<td>144</td>
<td>140</td>
<td>135</td>
<td>131</td>
</tr>
<tr>
<td>hard 80%</td>
<td></td>
<td>160</td>
<td>156</td>
<td>152</td>
<td>148</td>
<td>144</td>
<td>140</td>
<td>136</td>
<td>132</td>
<td>128</td>
<td>124</td>
<td>120</td>
<td>116</td>
</tr>
<tr>
<td>moderate-hard 70%</td>
<td></td>
<td>140</td>
<td>137</td>
<td>133</td>
<td>130</td>
<td>126</td>
<td>123</td>
<td>119</td>
<td>116</td>
<td>112</td>
<td>109</td>
<td>105</td>
<td>102</td>
</tr>
<tr>
<td>fitness/moderate 60%</td>
<td></td>
<td>120</td>
<td>117</td>
<td>114</td>
<td>111</td>
<td>108</td>
<td>105</td>
<td>102</td>
<td>99</td>
<td>96</td>
<td>93</td>
<td>90</td>
<td>87</td>
</tr>
<tr>
<td>warm-up 50%</td>
<td></td>
<td>100</td>
<td>98</td>
<td>95</td>
<td>93</td>
<td>90</td>
<td>88</td>
<td>85</td>
<td>83</td>
<td>81</td>
<td>78</td>
<td>75</td>
<td>73</td>
</tr>
</tbody>
</table>
What should I eat?

Eating well means giving your body the food it needs to keep working properly. Cancer and its treatment place extra demands on your body, so eating well is more important than ever.

There is no special eating plan that can cure cancer and, in most cases, there are no special foods or food groups to eat or avoid if you have cancer.

For most people with cancer, the best way to eat well is to eat a wide variety of foods from each of the food groups every day. It is important that you stay hydrated during and after exercise. Have a water bottle nearby when you are exercising and take regular small sips.

Cancer Council has a publication about nutrition for people affected by cancer. Please call the Helpline on 13 11 20 to order a free copy of this booklet.
When you are first diagnosed with cancer, and during different stages of treatment and recovery, you may experience a range of emotions, such as fear, sadness, anxiety, anger or frustration. If sadness or anxiety is ongoing or severe, talk to your doctor.

It may help to talk about your feelings. Your partner, family members and friends can be a good source of support, or you might prefer to talk to:

• your treatment team
• a counsellor, social worker or psychologist
• your religious or spiritual adviser
• a support group or someone who has had a similar experience
• Cancer Council Helpline.

If you need practical assistance, such as help around the house, it may be hard to tell people what would be useful. You might prefer to ask a family member or friend to coordinate offers of help.

You may find that while some people you know are supportive, others struggle to know what to say to you.

If you have children, the prospect of telling them you have cancer can be unsettling. Cancer Council has a range of free resources to help people talk about cancer and deal with the emotions that cancer may bring up. Publications are available for people with cancer, partners, carers, children, friends and colleagues.

Call 13 11 20 for resources and support. You can also download booklets from your local Cancer Council website.
Talk to someone who’s been there

Coming into contact with other people who have had similar experiences to you can be beneficial. You may feel supported and relieved to know that others understand what you are going through and that you are not alone. There are many ways for you and your family members to connect with others for mutual support and to share information.

In these support settings, people often feel they can speak openly and share tips with others. You may find that you are comfortable talking about your diagnosis and treatment, your relationships with friends and family, and your hopes and fears for the future.

Ask your nurse, social worker or Cancer Council Helpline about suitable support groups and peer support programs in your area.

Types of support services*

**Face-to-face support groups** – often held in community centres or hospitals

**Online discussion forums** – where people can connect with each other at any time – see [www.cancerconnections.com.au](http://www.cancerconnections.com.au)

**Telephone support groups** – for certain situations or types of cancer, which trained counsellors facilitate

**Peer support programs** – match you with a trained volunteer who has had a similar cancer experience, e.g. Cancer Connect.

*Not available in all areas*
Caring for someone with cancer

You may be reading this booklet because you are caring for someone with cancer. Encouraging the person you care for to be active can be a great support, regardless of whether you join them in their exercise activities or not.

Being a carer can be stressful and cause you much anxiety. Try to look after yourself – give yourself some time out and share your worries and concerns with somebody neutral such as a counsellor or your doctor. Participating in physical activity may also help to overcome or relieve some of the stressors of being a carer.

Many cancer support groups and cancer education programs are open to carers, as well as people with cancer. Support groups and some types of programs can offer valuable opportunities to share experiences and ways of coping.

Support services such as Home Help, Meals on Wheels or visiting nurses can help you in your caring role. There are also many groups and organisations that can provide you with information and support, such as Carers Australia, the national body representing carers in Australia. Carers Australia works with the Carers Associations in each of the states and territories. Visit www.carersaustralia.com.au or call 1800 242 636 or for more information and resources.

Call Cancer Council Helpline to find out more about different services and to request free information for carers and families looking after someone with cancer.
The internet has many useful resources, although not all websites are reliable. The websites below are good sources of information.

**Australian**

**International**
- American Cancer Society .................................. [www.cancer.org](http://www.cancer.org)
- Macmillan Cancer Support ............................. [www.macmillan.org.uk](http://www.macmillan.org.uk)
- National Cancer Institute ................................. [www.cancer.gov](http://www.cancer.gov)

**Cancer Council library**
Following a cancer diagnosis many people look for information about new types of treatment, the latest research findings and stories about how other people have coped. Cancer Council has a range of books, CDs, DVDs and medical journals that may be helpful for you. Call the Helpline for more information.

*Not available in Victoria and Queensland*
You may come across new terms when reading this booklet or talking to health professionals. You can check the meaning of other health-related words at www.cancercouncil.com.au/words or www.cancervic.org.au/glossary.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>abdomen</strong></td>
<td>The part of the body between the chest and hips, which contains the stomach, liver, bowel, bladder and kidneys.</td>
</tr>
<tr>
<td><strong>aerobic</strong></td>
<td>Exercises that cause heart and breathing rates to rise.</td>
</tr>
<tr>
<td><strong>anaemia</strong></td>
<td>Deficiency in the number and quality of blood cells in the body.</td>
</tr>
<tr>
<td><strong>anaerobic</strong></td>
<td>Exercises that focus on single muscles or muscle groups.</td>
</tr>
<tr>
<td><strong>biceps</strong></td>
<td>The muscles on the top of the arm between the elbow and the shoulder.</td>
</tr>
<tr>
<td><strong>chemotherapy</strong></td>
<td>The use of cytotoxic drugs to treat cancer by killing cancer cells or slowing their growth.</td>
</tr>
<tr>
<td><strong>continence</strong></td>
<td>The control over bladder and bowel movements. See also incontinence.</td>
</tr>
<tr>
<td><strong>core stability</strong></td>
<td>The muscles in the stomach and lower back that stabilise the body during movement.</td>
</tr>
</tbody>
</table>
| **exercise physiologist** | A health professional that specialises in exercise prescription, particularly for people with medical conditions. |}

| **fatigue** | An extreme feeling of tiredness and lack of energy.                                                                                       |
| **flexibility** | The range of movement in a joint (e.g. knee) or series of joints (e.g. leg).                                                                |
**gluteals**
The muscles that make up the bottom.

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

**heart rate**
This is the number of times the heart beats in a minute. Also called pulse.

**immune system**
A complex network of cells and organs that defends the body against attacks by foreign invaders, such as bacteria and viruses.

**incontinence**
Inability to hold or control the loss of urine or faeces.

**low intensity**
Activity that is easy and doesn’t cause much exertion.

**lymphoedema**
Swelling caused by a build-up of lymph fluid, which happens when lymph vessels or nodes don’t drain properly.

**maximum heart rate**
The fastest a person’s heart can beat.

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

**nausea**
Feeling sick or wanting to be sick.

**neutropaneia**
A drop in the number of types of white blood cells called neutrophils.

**oncologist**
A doctor who specialises in the study and treatment of cancer.

**platelets**
One of three types of cells found in the blood. These help the blood to clot and stop bleeding. Also called thrombocytes.
pectoral
Muscles on the front of the upper chest, behind the breasts in women.

pelvic floor exercises
Exercises to strengthen the muscles controlling the bladder.

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

radiotherapy
The use of radiation, usually x-rays or gamma rays, to kill cancer cells or injure them so they cannot grow and multiply.

rating of perceived exertion
A scientific way of telling how hard exercise is based on how it feels.

red blood cells
One of three types of cells found in the blood. They carry oxygen around the body. Also called erythrocytes.

resistance exercises
Moving weight by muscles with the aim of increasing muscle strength.

triceps
The muscle on the back of the arm between the elbow and the shoulder.

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

white blood cells
One of three types of cells found in the blood. They help fight infection. Types of white blood cells include neutrophils, lymphocytes and monocytes.
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 Pink Ribbon Day, 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 Helpline is a telephone information service provided throughout Australia for people affected by cancer.

For the cost of a local call (except from mobiles), you, your family, carers or friends can talk confidentially with oncology health professionals about any concerns you may have. Helpline consultants can send you information and put you in touch with services in your area. They can also assist with practical and emotional support.

You can call Cancer Council Helpline 13 11 20 from anywhere in Australia, Monday to Friday. If calling outside business hours, you can leave a message and your call will be returned the next business day.

Visit your state or territory Cancer Council website

Cancer Council ACT
www.actcancer.org

Cancer Council Northern Territory
www.cancercouncilnt.com.au

Cancer Council NSW
www.cancercouncil.com.au

Cancer Council Queensland
www.cancerqld.org.au

Cancer Council SA
www.cancersa.org.au

Cancer Council Tasmania
www.cancertas.org.au

Cancer Council Victoria
www.cancervic.org.au

Cancer Council Western Australia
www.cancerwa.asn.au
For support and information on cancer and cancer-related issues, call Cancer Council Helpline. This is a confidential service.