

# WORLD KIDNEY CANCER DAY

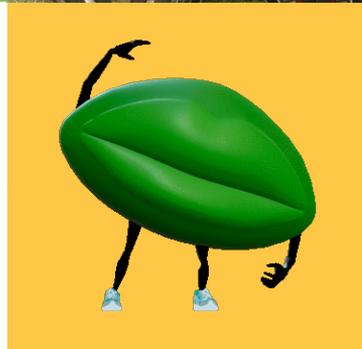
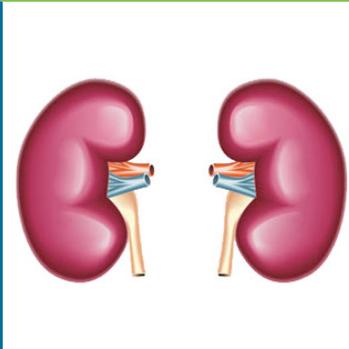
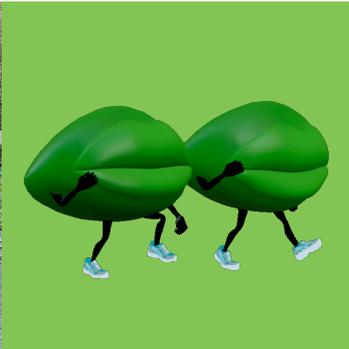


*We need to talk  
about physical activity*

18 June 2020

## Get Active, Sit Less!

Exercise Guidebook for Kidney Cancer Survivors



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“Ten years ago, if you were diagnosed with kidney cancer you’d probably be told to rest and do as little physical activity as possible. Today, you’re more likely to be told exactly the opposite: to do as much as your condition allows and your body can tolerate.

Why? Because studies show being physically active not only helps prevent kidney cancer (and many other common cancers) it can reduce cancer-related fatigue, anxiety, depression, and improve quality of life and treatment outcomes.

That’s why the theme for World Kidney Cancer Day 2020 is ‘We need to talk about physical activity’. Three out of four kidney cancer patients and survivors currently aren’t doing enough physical activity. If you’re one of them (or a caregiver) using this guide to help start and stick to a physical activity plan could transform your life.

On behalf of the Board of the International Kidney Cancer Coalition (IKCC), I would like to thank Dr Linda Trinh, Asst Prof. Exercise and Cancer Survivorship, University of Toronto and co-author of this guide, for her outstanding work in this field and for agreeing to be part of our World Kidney Cancer Day 2020 campaign.”

Yours sincerely,



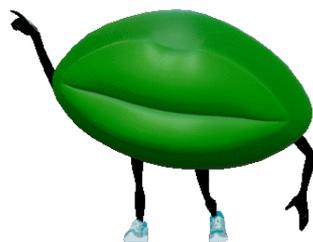
Dr Rachel Giles  
Chair, International Kidney Cancer Coalition



International Kidney Cancer Coalition (IKCC) Board Members

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“I do not think that there is any other quality so essential to success of any kind as the quality of perseverance. It overcomes almost everything, even nature.”

**John D. Rockefeller**



# Getting Started

Congratulations on taking the first step in taking charge of your health! This resource guide will help kidney cancer survivors like you increase your exercise levels and limit your sitting time. Kidney cancer is fairly common and compared to other cancers, it is one of the top 10 most common cancers. About 6,000 Canadians and over 63,000 Americans are diagnosed with kidney cancer every year. Treatment for kidney cancer has major side effects such as fatigue. These side effects can continue post-treatment. The good news is that cancer research is now telling us that exercising regularly after a cancer diagnosis may help lower the risk of your cancer coming back, improve survival, and keep your quality of life.



We know that exercise motivation and sticking to an exercise program is a challenge for many people, but it may be especially challenging for cancer survivors. Cancer survivors often face long and difficult medical treatments that can make exercising seem hard and make the benefits of exercise seem less important. We have created this exercise guide to help you add exercise into your daily life. The exercise guide is created for kidney cancer survivors who have completed treatment and are otherwise healthy as verified by their doctor.

If you are still having treatment, check with your oncologist or doctor before starting an exercise program.

Besides exercising, there is growing scientific evidence that suggests that sitting for long periods of time is linked with risk of cancer progression, body fat, chronic diseases, and poorer mental health. It is important to exercise regularly and limit sitting time for maximum benefits (i.e., get active, sit less!).

Research has shown that people who are physically active live longer, healthier lives. We all know that exercise is beneficial for everyone, but it is especially important for kidney cancer survivors because it is an obesity-linked cancer. In fact, having a healthy body weight and being active can lower your chances of developing other chronic diseases and some cancers.

The purpose of this exercise guidebook is to help you with your exercise program, while limiting your daily sitting time. We will outline the benefits and the barriers to exercise that other kidney cancer survivors have described. We will also give you tips to help you keep exercising when you find it hard to fit it in. We will help you reach your goals and move at a pace that is comfortable for you.

This guidebook is designed to be read over several sessions and not all at once. We understand that the information can be overwhelming at times so we have divided the book into sections so you can pick up where you left off. We will work together throughout the next couple of weeks to create a lifelong change in your exercise habits. There is also a brief summary of the content at the back of the book.

In this guidebook, there are interactive activities that get you to think about your own lifestyle changes and habits so you can get the most out of your program and stay motivated. Finally, we will provide you with some tips to limit sitting time throughout the day that is also beneficial to health.

# How Does Exercise Benefit Me?

In this section, we will discuss the important benefits of exercise from recent scientific studies for cancer survivors and kidney cancer survivors too!

Many factors can change your health. These include personal family history of disease to outside factors such as your social, physical, and economic environment. While some factors are beyond our control, lifestyle choices are within our control and can have a great impact on our health. Knowing the benefits of exercise can motivate you to maintain an active lifestyle which is a powerful way to combat disease.



## Reduces risk of chronic disease

There is strong evidence that regular exercise is related to better health in the general population and for cancer survivors, which includes the following:

- Reduced risk of premature (early) death.
- Reduced risk of diseases such as coronary heart disease, stroke, some cancers, type 2 diabetes, osteoporosis, depression, and cancer including kidney cancer.
- Reduced risk factors for disease such as high blood pressure and high cholesterol.
- Increased physical fitness such as aerobic capacity (ability to use oxygen for energy) and muscular strength and endurance.
- Increased musculoskeletal health such as preserving bone, joint, and muscle health.

- Increased functional capacity such as being able to do activities of daily living.
- Better mental health such as brain health and cognitive functioning.
- Managing weight.

## Improve kidney function

The kidneys filter the body's blood, taking out toxins and chemicals that the body doesn't use. The kidneys then remove these waste products as urine. They also reabsorb substances the body can use, such as water and amino acids (building blocks for protein). The kidneys also help balance the levels of sodium, potassium and other ions in the blood, release hormones that help control blood pressure and calcium levels, and maintain a pH balance in the blood. Because kidney cancer treatment may involve removing your entire kidney or part of it, kidney function is very important for many kidney cancer survivors. A recent study conducted by the National Center for Health Statistics of the Centers for Disease Control found that 20,740 individuals with existing kidney disease who exercised had better kidney function.<sup>1</sup> Exercise can help lower stress and inflammation to the kidneys, lower blood pressure and help with weight loss.

## Improve cardiovascular functioning in patients with chronic kidney disease (CKD)

Kidney cancer patients treated with nephrectomies are at risk for developing chronic kidney disease (CKD). In turn, patients who have CKD are also at an increased risk for cardiovascular disease. Exercise can curb cardiovascular conditions by improving blood circulation and blood pressure, and reducing stress. Exercise can also better protect your kidneys and improve physical functioning. Patients with CKD are encouraged to exercise<sup>2</sup> and the information in this guidebook is relevant to getting started. Consult your doctor or nephrologist before beginning an exercise routine.

## Improve blood pressure

Treatment for advanced kidney cancer include targeted therapies (e.g., Sorafenib, Sunitinib, Bevacizumab). These therapies may cause high blood pressure as a side effect. Exercise can help lower your blood pressure. In fact, you can see for yourself by taking your blood pressure before and after you exercise! The effects are so dramatic that it is a great motivator.

We know there are other side effects associated with treatment for advanced kidney cancer such as fatigue. This might make exercise difficult. The key is to avoid inactivity and try to stay active as your abilities allow.

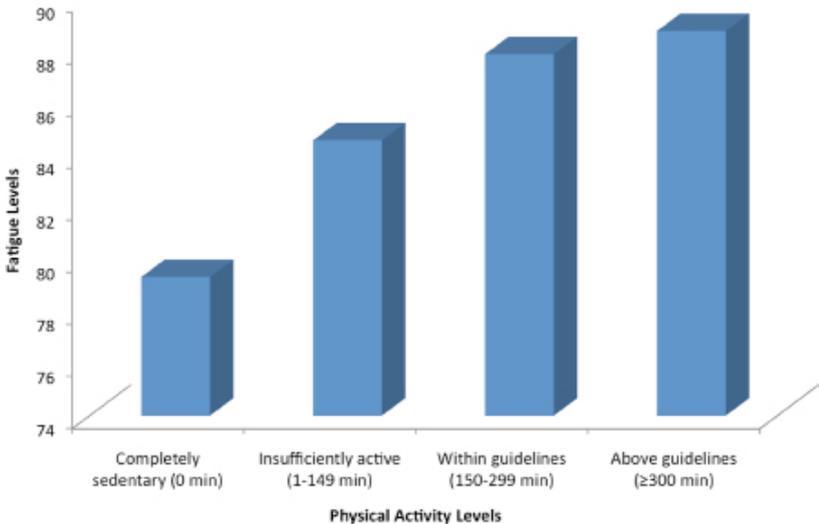
## Help manage weight

Research shows that obesity is an important cause of kidney cancer, but growing evidence shows that it may also be a key factor in cancer progression. Exercising on a regular basis can help you keep a healthier body weight. If you can prevent weight gain or even lose weight, you may lower the chances that your kidney cancer will come back. If you feel that you are overweight, try not to worry. People can still be overweight and fit, while preventing other chronic diseases.

## Improve energy levels

Exercise can decrease symptoms of tiredness from kidney cancer and its treatments and can give you more energy. Exercise raises the levels of certain neurotransmitters responsible for elevating mood and energy levels. Research studies suggest that as little as 30 minutes of brisk walking per day may reduce tiredness. A recent study looked at how exercise affects quality of life in 703 kidney cancer survivors living in Alberta, and survivors who exercised reported less tiredness, even with small amounts of exercise(see figure 1).<sup>3</sup>

**Figure 1. Quality of Life of Kidney Cancer Survivors Across Various Exercise Levels**



*Note: Fatigue levels are measured using a quality of life scale and higher numbers indicate less fatigue*

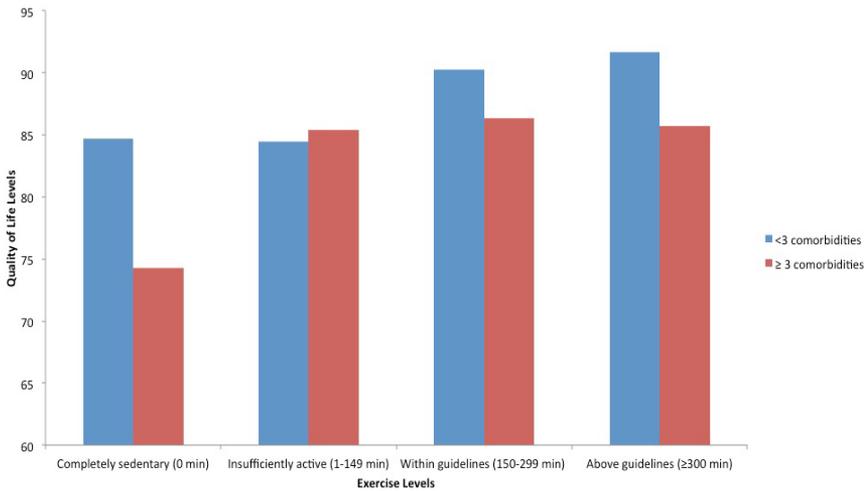
## Help you feel good about yourself

Exercise can help kidney cancer survivors keep their mind off of their cancer. It can also help survivors feel satisfied and happy with their body weight, shape, and appearance, increase self-esteem, and reduce depression and anxiety. Exercise can help you maintain a positive attitude and outlook on life.

## Improve quality of life

A recent study with 703 kidney cancer survivors in Alberta showed a strong link between exercise and quality of life, including potential gains for even small amounts of exercise.<sup>3</sup> For example, kidney cancer often co-exists with other co-morbidities such as high blood pressure, arthritis, and diabetes. In fact, kidney cancer survivors with existing co-morbidities experience improvements in quality of life by exercising regularly. However, kidney cancer survivors who have more than or equal to three existing co-morbidities had greater health benefits compared to those who have less than three co-morbidities, when doing just small amounts of exercise (see figure 2).

**Figure 2. Quality of Life of Kidney Cancer Survivors with Existing Co-morbidities**



*Note: Higher numbers on the quality of life scale indicate better quality of life.*

## Improve strength and fitness

Cancer treatment is intensive and can leave many cancer survivors with increased fatigue, decreased ability to exercise, and lower quality of life. These unwanted effects of treatment can linger and prevent a return to normal lifestyle. However, research has shown that exercise is one way of helping you return to the health status and physical functioning that you had before treatment with increased aerobic fitness and muscular strength.

## Help you feel healthier and improve your health

Exercising regularly provides you with many health benefits. Exercise:

- Improves how well your heart works and reduces your chances of getting heart disease.
- Improves muscle strength which helps with balance and prevents falls.
- Helps control your blood pressure and lower cholesterol.
- Helps lower arthritis pains aches and pains.
- Helps maintain healthy bones and joints which can prevent osteoporosis and arthritis.
- Can make daily activities feel easier and less tiring

## Increase flexibility

Exercising regularly can increase your flexibility by allowing your joints to move through their full range of motion. Increasing flexibility can lower your risk of injury related to various physical activities such as knee injuries with brisk walking or shoulder and back injuries with golfing.

## Improve sleep quality

Difficulty with sleeping is a common problem in cancer survivors. Exercise may help with sleep quality through improvements in body weight, physical fitness, anxiety, depression, pain, circadian rhythms (i.e., body clock), and body temperature regulation. In fact, a recent study with 703 kidney cancer survivors in Alberta, Canada demonstrated that exercise is linked with better sleep quality.<sup>3</sup>

## Exercise helps you get things back to normal

A kidney cancer diagnosis and its treatment may cause long-term changes in your life. You might find yourself reflecting on your cancer experience quite often. This may cause changes in your relationships with your family and friends, and even at work. Exercise can help you maintain a normal lifestyle and regain control over your cancer. By including exercise into your day, you will have more energy to get through your day and do the things you did before your diagnosis.

## Exercise may reduce the risk of some cancers

We know that regular exercise may lower the risk of kidney cancer by 22% based on high-quality studies.<sup>4</sup> This may be because of lower body fat which is a factor in the development of kidney cancer. Nevertheless, convincing epidemiological research over the past two decades has shown that those who engage in moderate-to-vigorous exercise are at lower risk of developing several cancers including breast, colon, endometrial, and prostate cancer. Exercise is a key part of maintaining or reaching a healthy body weight since being overweight or obese is linked with many types of cancer.

In the next chapter, you will be introduced to the exercise guidelines developed specifically for cancer survivors.

### References:

<sup>1</sup>Hawkins, M. S., Sevick, M. A., Richardson, C. R., Fried, L. F., Arena, V. C., & Kriska, A. M. (2011). Association between physical activity and kidney function: National Health and Nutrition Examination Survey. *Medicine and Science in Sports and Exercise*, 43(8), 1457-1464.

<sup>2</sup>Johansen, K. L., & Painter, P. (2012). Exercise in individuals with CKD. *American Journal of Kidney Diseases*, 59(1), 126-134.

<sup>3</sup>Trinh, L., Plotnikoff, R. C., Rhodes, R. E., North, S., & Courneya, K. S. (2011). Associations between physical activity and quality of life in a population-based sample of kidney cancer survivors. *Cancer Epidemiology Biomarkers & Prevention*, 20(5), 859-868.

<sup>4</sup>Behrens, G., & Leitzmann, M. F. (2013). The association between physical activity and renal cancer: systematic review and meta-analysis. *British Journal of Cancer*, 108(4), 798-811.



## Activity:

What benefits of exercise are most important to you?

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

3. \_\_\_\_\_

\_\_\_\_\_

4. \_\_\_\_\_

\_\_\_\_\_

5. \_\_\_\_\_

\_\_\_\_\_

6. \_\_\_\_\_

\_\_\_\_\_

**Exercise** after a kidney cancer diagnosis can help with your quality of life and combat your side effects. There is growing evidence that exercise may increase your chances of survival and lower the risk of your cancer coming back.



“If we could give every individual the right amount of nourishment and exercise, not too little and not too much, we would have found the safest way to health.”

**Hippocrates**



# How Much Exercise Do I Have to Do?

## The recommended goal

The American College of Sports Medicine<sup>1</sup> and the American Cancer Society<sup>2</sup> recommend that cancer survivors engage in:

- 150 minutes of moderate-intensity exercise per week OR
- 75 minutes of vigorous-intensity exercise per week OR
- An equivalent combination of moderate-intensity or vigorous-intensity exercise
- If you are already achieving this recommendation, try exercising on more days of the week, or gradually increase the time you spend exercising. You can also try to reduce the amount of time you sit during the day for added health benefits. Refer to the Special Topics section at the end of the guidebook on sitting time and cancer.

## How do I achieve the recommended minutes?

There are many different ways that you can accumulate the recommended minutes.

### Let's Break it Down!

**50 minutes/day x 3 days a week = 150  
minutes of moderate-intensity exercise/week**

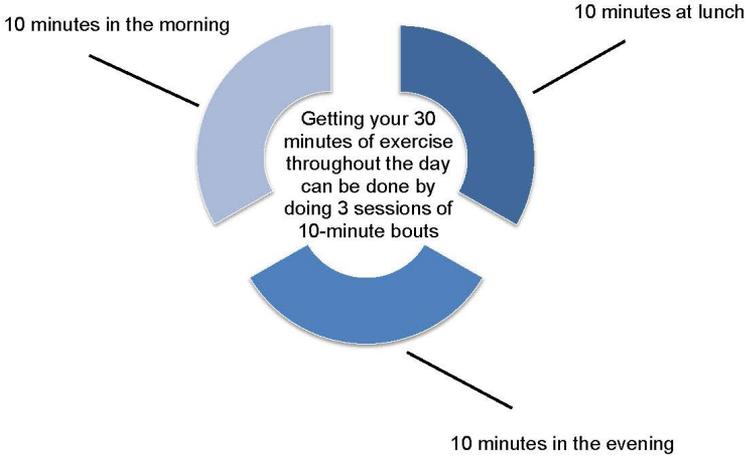
You don't have to do the entire 50 minutes in one session. You can try doing 10-minute bouts of activity throughout the day to add up to 50 minutes.

Exercise should be performed on at least 3 days of the week.



### Let's Split it Up!

If you choose to do exercise 5 days a week, you can engage in brisk walking for 30 minutes each day. You can do some brisk walking for 10 minutes in the morning, take a 10-minute walk during lunch, and a 10-minute walk in the evening. Now you have your 30 minutes of exercise!



## How hard should I exercise?

Try to exercise at a moderate intensity. A moderate intensity is any exercise that makes you breathe harder without feeling out of breath. You should still be able to carry on a conversation, but you can't sing! If you are exercising at a moderate level, you should start to sweat after 10 minutes. For example, walking quickly as if you were late for an appointment is a moderate intensity exercise.

If you are exercising at a vigorous level, your breathing should be rapid and deep, and you should begin sweating after a few minutes. You can't say more than a few words without pausing for a breath. When you are feeling like more of a challenge, you can progress up to more intense exercises such as hard cycling or jogging. Try these exercises for at least 20 minutes each time, on 3 days of the week.

“Start by doing what’s necessary; then do what’s possible; and suddenly you are doing the impossible.”



**Francis of Assisi**

## What type of activities can I do?

There are many exercises that you can do to reach the recommended goal. Here are a few examples of moderate and vigorous intensity exercises that use large muscle groups. You can change up the activities and do different ones each time:

### Moderate intensity exercises:

- brisk walking
- dancing
- tennis
- golf
- easy cycling
- softball
- easy swimming
- canoeing



### **Vigorous intensity exercises:**

- jogging or running
- aerobics classes
- cross country skiing
- vigorous swimming
- vigorous cycling
- skating
- playing sports with lots of running such as soccer, basketball, hockey

The activities that you choose to do are completely up to you! Choose what you enjoy!



## What if I am already exercising at the recommended levels?

If you are already exercising at the recommended levels, this is great news! However, doing more exercise has even greater benefits! Later in this guidebook, we will discuss how you can limit your sitting time which can be added to your routine for maximum benefits.

Here's a helpful table that summarizes the benefits of exercise in four categories. Even if you are not quite ready to achieve the recommended exercise minutes for cancer survivors, you can still experience health benefits by doing some exercise and avoiding an inactive lifestyle.

<b>Exercise Level</b>	<b>Range of Moderate-Intensity Minutes Per Week</b>	<b>Overall Health Benefits</b>
<b>Inactive</b>	No activity	None: Being inactive is unhealthy
<b>Low</b>	Some activity but fewer than 150 minutes a week	Some: Low levels of activity are preferable to an inactive lifestyle
<b>Medium</b>	150 minutes to 300 minutes a week	Substantial: Activity at the high end of this range has additional and more health benefits than at the low end
<b>High</b>	More than 300 minutes a week	Additional: There are even greater health benefits for higher levels of activity

## What About Resistance Training?

Up to this point, we have focused on aerobic activities, but it is also useful to include some strength training. Older kidney cancer survivors should include both aerobic and muscle-strengthening activities. Both of these activities are critical for healthy aging.

The Guidelines also recommend adding strength training activities to your routine at least 2-3 times/week that involve all major muscle groups. If you can, try to perform 8-10 strength training exercises with 8-12 repetitions of each exercise.

Resistance training requires minimal equipment. You may use machine weights, hand weights, resistance bands, and even your own body weight as part of your resistance training routine. Always consult a doctor and fitness professional before beginning a resistance training program.

The focus of this guidebook is getting you started on an aerobic exercise program as a first step. If you are already doing an aerobic exercise and interested in adding resistance training to your routine, the Centers of Disease Control and Prevention has exercise videos on muscle strengthening activities that can be done at home or at the gym. It is applicable to the general adult population regardless of age: <http://www.cdc.gov/physicalactivity/basics/videos/index.htm>

In addition, there is a great booklet with example exercises on strength training for older adults. You may download the “Getting Stronger: Strength Training for Older Adults” for free at: [http://www.cdc.gov/nccdphp/dnpa/physical/growing\\_stronger/growing\\_stronger.pdf](http://www.cdc.gov/nccdphp/dnpa/physical/growing_stronger/growing_stronger.pdf)

In the next chapter, we will discuss the importance of training within the appropriate exercise intensity for health benefits.

### References:

<sup>1</sup>Schmitz, K. H., Courneya, K. S., Matthews, C., Demark-Wahnefried, W., Galvao, D. A., Pinto, B. M., & Schwartz, A. L. (2010). American College of Sports Medicine roundtable on exercise guidelines for cancer survivors. *Medicine and Science in Sports and Exercise*, 42(7), 1409-1426.

<sup>2</sup>Rock, C. L., Doyle, C., Demark-Wahnefried, W., Meyerhardt, J., Courneya, K. S., Schwartz, A. L., ... & Gansler, T. (2012). Nutrition and physical activity guidelines for cancer survivors. *CA: a cancer journal for clinicians*, 62(4), 242-274.



## Activity:

What types of exercise do you prefer doing? Write down your five favourite types of exercises below. Adding any type of exercise will provide you with health benefits, including brisk walking. Some ideas of exercises include golfing, swimming, walking with friends, dancing, or walking on a treadmill. If you don't have a favourite exercise or not sure what type of exercise you prefer, start with walking. One of the perks of walking is that you can walk anywhere at any time such as in your neighbourhood.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

**Experts** recommend that cancer survivors should exercise:

- at least 3-5 days a week
- at least at a moderate level
- for 30-50 minutes or more

**OR**

- you can do vigorous activities like jogging, for a minimum of 20 minutes at least 3 days of the week
- Try to include muscle and bone strengthening activities using major muscle groups, at least 2 days per week for additional benefits.



Remember that you can accumulate your exercise in 10-minute bouts throughout the day!

“The medical literature tells us that the most effective ways to reduce the risk of heart disease, cancer, stroke, diabetes, Alzheimer’s, and many more problems are through healthy diet and exercise. Our bodies have evolved to move, yet we now use the energy in oil instead of muscles to do our work.”

**David Suzuki**



# Exercise Intensity

## What is exercise intensity?

Exercise intensity refers to how hard you are working while doing your activity. The goal of this guidebook is to have you work towards at least a moderate level intensity.

The most common way to measure exercise intensity is heart rate because it increases with workload. We have discussed heart rate monitoring in the previous section. Another way to measure intensity is the rating of perceived exercise (RPE) scale. You should use this together with a heart rate monitor. The scale is very useful when you don't have a heart rate monitor handy.

## Rating of Perceived Exertion (RPE) Scale

	Rate of Perceived Exertion Scale (RPE) (Borg 6-20)	
	6	No Exertion
	7	
	8	Extremely Light
01	9	
	10	
	11	Fairly Light
02	12	
	13	Somewhat Hard
	14	
03	15	Hard
	16	
	17	Very Hard
	18	
	19	Extremely Hard
	20	Maximally Exertion

**01** Intensity for Warm-Up and Cool-down (RPE 9-11)

**02** Intensity for Moderate-level Exercise (RPE 12-14)

**03** Intensity for Vigorous-level Exercise (RPE 15-17)

As your fitness level gets better, it takes more work to increase exercise intensity and to get your heart rate to fall within your target heart rate zone. The following exercises can be used to help you increase your intensity:

Activity	Equipment Used	Ways to Increase Intensity
<b>Walking</b>	Treadmill/Outdoors	<ul style="list-style-type: none"><li>• Swinging arms</li><li>• Increase pace/speed</li><li>• Increase incline/walk up a hill</li></ul>
<b>Running</b>	Treadmill/Outdoors	<ul style="list-style-type: none"><li>• Increase pace/speed</li><li>• Increase incline/walk up a hill</li><li>• Try water running</li><li>• Try intervals where you run at a faster pace than normal followed by a light jog and repeat</li></ul>
<b>Cycling</b>	Recumbent bike /Upright bike/Outdoors	<ul style="list-style-type: none"><li>• Increase tension/use a more challenging gear</li><li>• Increase pedaling speed/watts</li><li>• Climb hills or rough terrain</li></ul>
<b>Swimming</b>	Pool/Open water	<ul style="list-style-type: none"><li>• Increase speed</li><li>• Use hand paddles to increase resistance</li><li>• Try intervals where you sprint for a lap followed by one rest lap (light swim) and repeat</li></ul>
<b>Aerobics</b> (i.e., step class, low/hi impact)	Gym studio	<ul style="list-style-type: none"><li>• Use your arms to make bigger movements</li><li>• Add hopping and jumping during movements</li></ul>

In the next section, we will continue on the topic of exercise intensity. Another way to measure intensity is by training within your heart rate zone.

# Heart Rate Training

## What is Heart Rate Training?

You can exercise at different intensities (percentages of your maximum heart rate reserve). This method is also known as training within your target heart rate zone. By using your maximum heart rate you will be able to calculate your target heart rate zone using the Heart Rate Reserve Calculation on the next page.



## Where and When Do I Use Heart Rate Training?

Every time you exercise, you should exercise within the appropriate heart rate zone. Once you have calculated your target heart rate zone, it will be easy to monitor.

## Why Exercise With Heart Rate Training?

It is important to work out in your target heart rate zone to experience the maximum benefits of exercise. The appropriate exercise intensity will help with your heart and lung function, lower blood pressure and cholesterol level, increase energy and decrease body fat. Along with these benefits, moderate-to-vigorous intensity exercise has been shown to improve quality of life and health outcomes. Heart rate monitors ensures that you are exercising at safe levels and not overexerting yourself by exceeding the heart rate range.

## How Can You Monitor Your Heart Rate?

You can buy a heart rate monitor, which will display your exercise intensity in the form of a heart rate at a quick glance. This is a very useful tool for exercise.



Another way to monitor your heart rate is to take your own pulse with your first two fingers (index and middle finger) in one of these two spots:



- Radial Pulse: with palm up, find your radial pulse on the thumb side of your wrist OR
- Carotic Pulse: at the side of the neck below the ear, next to the wind pipe using the carotid artery

Count the number of times your heart beats in 10 seconds. Multiply this number by 6 to determine your heart rate in beats per minute (bpm) during exercise. For resting levels, count the number of times your heart beats in 15 seconds, and then multiply by 4, to find out your beats per minute.

My resting heart rate is: \_\_\_\_\_ x 4 = \_\_\_\_\_ beats per minute (bpm) (pulse for 15 sec. at rest)

My exercise heart rate is: \_\_\_\_\_ x 6 = \_\_\_\_\_ beats per minute (bpm) (pulse for 10 sec. during exercise)

# Heart Rate Zone Calculations

Ideally, you should try to work towards a heart rate range between 40-60% of your heart rate reserve (HRR). Heart rate reserve considers that each individual has a different resting heart rate allowing it to better predict your targeted heart rate zone. Your resting heart rate will change as you get more fit.

## Here's how to calculate your heart rate zone:

### Step 1: Calculating Age Predicted Maximum Heart Rate (Max HR)

$220 - \text{Age} = \text{maximum heart rate}$

Example for a 55-year old would be:  $220 - 55 \text{ (years)} = 165 \text{ bpm}$  for maximum heart rate

My maximum heart rate is:  $220 - \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ bpm}$   
(age)

### Step 2: Determine Resting Heart Rate

Use a heart rate monitor or take your pulse using the radial or carotid artery as mentioned in the previous section under "How can you monitor your heart rate?"

Example for a 55-year old with a pulse of 18 beats for 15 seconds:  $18 \times 4 = 72 \text{ bpm}$  resting heart rate

My resting heart rate is:  $\underline{\hspace{2cm}} \times 4 = \underline{\hspace{2cm}} \text{ bpm}$   
(pulse for 15 sec. at rest)

**Step 3:** Calculating Heart Rate Reserve

Maximum heart rate – resting heart rate = heart rate reserve

Example for a 55-year old:  $165 - 72 = 93$  bpm for heart rate reserve

My heart rate reserve is: \_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_bpm  
(max. heart rate) (resting heart rate)

**Step 4:** Calculating Target Heart Rate at 40% training intensity

(Heart rate reserve x 0.40) + resting heart rate = heart rate @ 40% intensity

Example for a 55-year old:  $(93 \times 0.40) + 72 = 110$  bpm (rounded down from 110.4; use whole numbers) for 40% intensity

My heart rate reserve is:

(\_\_\_\_\_ x 0.40) + \_\_\_\_\_ = \_\_\_\_\_bpm for 40% intensity  
(heart rate reserve) (resting heart rate)

**Step 5:** Calculating Target Heart Rate at 60% training intensity

(Heart rate reserve x 0.60) + resting heart rate = heart rate @ 60% intensity

Example for a 55-year old:  $(93 \times 0.60) + 72 = 128$  bpm (rounded up from 127.8; use whole numbers) for 60% intensity

My heart rate reserve is:

$$\left( \frac{\text{_____}}{\text{(heart rate reserve)}} \times 0.60 \right) + \frac{\text{_____}}{\text{(resting heart rate)}} = \text{_____ bpm for 60\% intensity}$$

Therefore, the moderate intensity heart rate range for the example with a 55-year old is between 110 to 128 beats per minute.

My moderate intensity heart rate range is between \_\_\_\_\_ to \_\_\_\_\_ bpm

The table below are examples of exercise intensities corresponding to heart rate reserve.

Exercise Intensity	Heart Rate Reserve % (HRR)	Comments
Very light	<20	
Light	20-39	
Moderate	40-59	Aim to exercise at this intensity
Vigorous (hard)	60-84	
Vigorous (very hard)	85-99	
Maximal	100	Avoid exercising at this level

In the next chapter, we will discuss the components of an exercise program so you get a sense for what a typical routine may look like.



“Our greatest happiness does not depend on the condition of life in which chance has placed us, but is always the result of a good conscience, good health, occupation, and freedom in all just pursuits.”

**Thomas Jefferson**



# Components of an Exercise Training Session

A single exercise session should include the following components in this order:

- Warm-up
- Conditioning which can be aerobic, resistance, neuromuscular, and/or sport activities
- Cool-down
- Stretching



## The Warm-Up Phase

A structured warm-up prepares the body for more vigorous activity and may lower the risk of injury and reduce muscle soreness, cramps, or stiffness after your exercise session. The warm-up phase includes a minimum of 5 to 10 minutes of light-intensity aerobic exercise to increase body temperature.

The warm-up should be fairly light but long enough to ensure that you bring your intensity up between 9 to 11 on the Rating of Perceived Exertion (RPE) scale. Your warm up should take no longer than 10 minutes. The time of your warm-up and cool-down are not included in your target duration of your exercise prescription.

## Conditioning Phase

After you have completed your warm-up phase, you can start your exercise activity of choice. The aerobic exercise phase is typically 20 to 60 minutes in length depending on your exercise level. You can also accumulate these minutes by exercising in 10-minute bouts throughout the day. The intensity for moderate-level exercise should fall between 12 to 14 on the RPE scale, and 15 to 17 if you are doing vigorous-level exercise.

## The Cool-Down Phase

The cool-down phase helps the body to gradually return to its resting state. It allows the body to rid itself of some of the by-products of exercise such as lactic acid, which will help lower the risk of developing muscle soreness. It is important to allow the circulatory system to return to resting levels to prevent blood pooling in the legs, which can cause post-exercise dizziness. A cool-down phase should last a minimum of 5 to 10 minutes and involve the same muscle groups used during exercise. The cool-down should be fairly light in intensity and gradually bring your heart rate closer to resting levels.

## Stretching

After the cool-down phase, it is important to go through a stretching routine of all the major muscle groups used during exercise. Stretching is most effective when the muscles are warm. Stretching exercises are important to prevent/ combat the loss in range of motion with aging. The benefits of stretching also include improved posture, reduced muscle tension, and reduced risk of injury.

A basic stretching routine is shown on the next page that you can use. When you stretch, be smooth and fluid in your movements, and prevent any ballistic or bouncing movements. The stretches should be static. Breathe naturally and when you get into position where you feel a good stretch with no pain. Hold it for 30 to 60 seconds. Repeat the stretches two or three times and avoid any exercises that hurt or are uncomfortable.

# Stretching Program

**Upper Body Stretch:** Stand with feet shoulder width apart. Keeping knees slightly bent, slowly raise arm up into the air and lean to the opposite side. Let the arm slowly move over head and to the same side as the abdominals. A stretch should be felt on the side of your torso. Hold stretch for 30-60 seconds. Repeat on the other side.



**Arm & Shoulder Stretch:** Keeping your elbow level to the ground, cross one arm in front of your body. Now, use your other arm to pull it into your body by pulling on the upper part of your arm. A stretch should be felt on your shoulders and triceps. Hold stretch for 30-60 seconds. Repeat using the other arm.



**Triceps Stretch (back of the upper arm):** Bend your right arm at the elbow and then lift your arm straight up against your head and touch your shoulder blade with your fingers. Use your left arm as support to help you maintain the stretch by placing and gently holding your left hand on your right elbow. You should feel the muscles along the back of your arm begin to stretch. Hold this position for 30-60 seconds. Repeat using other arm.



**Calf Stretch:** Stand beside a wall with arms against the wall. Bend one leg in front of you with the other leg straight and placed slightly behind. While keeping your back foot flat and pointing forward, slowly move hips forward until a stretch is felt on the calf. Hold stretch for 30-60 seconds. Repeat using the other leg.



**Quadriceps Stretch (front of thigh):** Standing tall on one leg, use a wall or chair for balance. Use your left hand and grab your left foot at the shoe laces and gently pull your heel towards your buttocks. Try to keep your knee straight pointing to the floor. A stretch should be felt down the front of the thigh. Hold stretch for 30-60 seconds. Repeat using the other leg.



In the next section, we will outline some safety considerations while exercising. This will ensure that every workout will be safe and enjoyable.



“Life is like riding a bicycle. To keep your balance, you must keep moving.”

**Albert Einstein**



# Signs to Watch Out for When Exercising

Although exercise is generally safe, there are certain precautions that need to be taken when starting an exercise program. Stop exercising if you notice any of the following warning signs either during or following exercise:

- An irregular heartbeat (heart seems to skip a beat), palpitations, or chest pain
- Extreme tiredness
- Unusual muscle weakness
- Joint or bone pain (besides the everyday aches and pains)
- Unusual leg pain or cramps
- Sudden onset of nausea (feel like you are going to vomit) during exercise
- Dizziness
- Shortness of breath or difficulty breathing
- Fever or shaking with chills
- Numbness or loss of feeling in hands or feet
- Significant changes in coordination, vision (blurred vision), hearing

**STOP EXERCISING** if you experience chest pain, dizziness and nausea.

Wait for symptoms to pass. Contact your doctor if they do not pass.



If you notice any of the above symptoms, contact your doctor. It might be that you need to take a break from your exercise, or you may need to do exercises at a lighter intensity.

Proper stretching and drinking plenty of fluids can prevent many of these symptoms.

## Hydration

It is important to drink fluids before and after exercise to prevent dehydration and further damage to your kidneys. During exercise, drinking fluids helps the blood move easily through your body to your working muscles. Dehydration causes your heart to work harder, decreases performance, makes you more tired, and may lead to muscle cramping. Hydration is also important to maintain cardiovascular health, proper body temperature, and muscle function. Everyone has different sweat rates so the fluid requirements for every individual can be different. An easy way to check your hydration status is to weigh yourself before and after exercise. Comparing your body weight before and after exercise can be used to estimate your sweat loss and your fluid requirements. Over 1% loss in body weight means you are dehydrated and over 5% indicates serious dehydration. These fluid losses need to be replaced.

Another way to check your hydration status is the urine colour test. A large amount of light-colored urine means you are well hydrated. The darker the colour, the more dehydrated you are.

You should:

- Drink plain water or fluids without sugar, caffeine, or alcohol
- Drink 2-2.5 cups of water at least 4 hours before exercise. Drink 1-1.5 cups of water 10-15 minutes before exercise
- Drink up to 1 cup of water every 15-20 minutes when exercising for less than 60 minutes. For exercises longer than 60 minutes, drink up to one cup of a sports beverage (5-8 % carbohydrate with electrolytes) every 15-20 minutes.
- Do not drink more than 4 cups per hour during exercise.
- Check your body weight and urine to estimate your fluid losses. The goal is to replace your fluid losses within two hours after exercise. Drink 2.5-3

cups of water or sports beverage for every one pound lost.

- Keep fluids cooler than air temperature and close at hand (it is always a good idea to have a water bottle with you)
- Do not wait until you feel thirsty!

## Presence of Bone Metastases

If you have bone metastases, you may need to modify your exercise program in regards to intensity, duration, and type given the higher chance of skeletal fractures. Reduce your chances of falls by exercising on a recumbent bike (bike with a seated back). Exercise as your abilities allow and avoid inactivity. Exercise is generally safe for people with bone metastases, but always check with your doctor or medical oncologist before beginning an exercise program.



In the next chapter, we will discuss the type of clothing you should have when exercising. Afterall, we want you to look and feel at your best!

**While** exercise is generally safe for almost everyone, be aware and understand the warning signs to stop exercising. When in doubt, always call your doctor!



”Each day I look for a kernel of excitement. In the morning, I say: “What is my exciting thing for today?” Then I do the day.”

**Barbara Jordan**



# What to Wear When Doing Exercise

“Give yourself an even greater challenge than the one you are trying to master and you will develop the powers necessary to overcome the original difficulty.”

**William J. Bennett**



Starting an exercise program is important, but what you wear during exercise is also important.

## Shoes

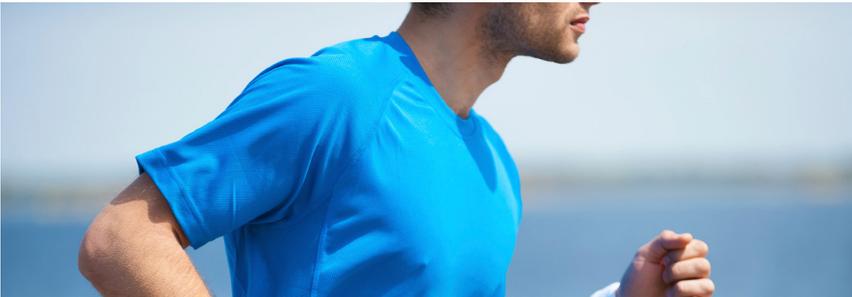
A good pair of shoes can provide support and cushioning and help to prevent injuries. Shoes are the most important piece of equipment for exercise. It is recommended that you buy your shoes from a specialty running or walking store as you need to find a good shoe tailored to your foot. The staff in these shops are knowledgeable about proper fit and will help you choose the appropriate shoe for your type of activity.

It is also useful to bring in an old pair of running shoes for them to assess the wear patterns so they can determine what type of foot you have and the best shoe for it. Since most activities chosen will be walking, running, or cycling, you will want a flexible shoe with proper cushioning and support.



## Shoe Buying Tips:

- Shop late in the day because your feet will swell during the day.
- Try both shoes on with socks you will wear during exercise. If you wear orthotics, bring them and try them with the shoe.
- Buy for your larger foot since feet are rarely the exact same size.
- Allow a thumbnail's width between the shoe and your big toe.
- Price does not necessarily equal quality! Look for a moderately priced shoe, or ask for the previous year's model as they tend to be offered at discounted prices. Shoe models typically do not change drastically from one year to the next.
- Choose a shoe that is comfortable right away. If they are uncomfortable in the store, they will likely be uncomfortable later.
- Shoes should feel good around the ball of your foot, through the arch and fit snugly at the heel.
- Wear shoes around the house before using them to exercise so that they can be returned to the store if there are any issues.
- Some stores have treadmills that you can test the shoes on. Be sure to use it to see how the shoes feel while exercising.



## Clothing

Be Comfortable – Wear proper workout attire such as shorts, t-shirts or workout pants to exercise. You can even wear your regular clothes as long as it is breathable, cool, keeps you dry, and will allow you to move unrestricted. Keep in mind that it should have a comfortable, functional fit without having to be skin-tight.

There are a number of synthetic and natural fibres that will wick moisture away from your body and allow the fabric to dry faster, therefore preventing chafing and irritating you during exercise. Fabrics such as nylon/cotton blend and polyester blends are commonly used fabrics in workout clothing. These fabrics can help with pulling sweat away from your skin during exercise. Clothing made from 100% cotton tend to absorb sweat while you are exercising, and therefore they can often feel heavy and wet as you exercise.

**Dressing For The Seasons** – It is important to remember that the weather can change quickly, especially when exercising outside. Before exercising outdoors, remember to check the weather and be prepared to wear sunglasses and sunscreen. In the winter, layering is important. Cold weather doesn't mean that you won't sweat, and wet skin is likely to lose more heat than dry skin.



Here are the 3 basic layers to keep in mind when exercising outdoors:

- The base layer, which is the layer closest to the skin should be close fitting and made of a moisture wicking material (i.e., pulls sweat away your skin).
- The next layer is an insulating layer, which helps trap warm air such as fleece or wool. It should fit comfortably, while giving you maximum range of motion for your workout.
- The last layer is the protective layer to keep out the wind, rain, and/ or snow from reaching your damp base layer. This layer should still be breathable and allow sweat to evaporate to prevent overheating.

If you are running or power walking, you may not need the second or insulating layer as the body will generate a lot of heat. Dressing too warmly can cause you to be chilled as sweating increases in wetter clothing. Remember to keep your hands warm by wearing mittens instead of gloves because they allow your fingers to warm each other. Don't forget to keep your feet covered. Wool socks have great insulation and odor-resistant properties. Keep your head and ears covered with a hat as 50% of your body heat is lost through your head.

Now you're all set for exercising! In the next chapter, creating a supportive environment can help you reach your exercise goals.

**Choose** the right workout clothing and shoes that are functional for the type of exercise that you do. Look for fabric that is moisture wicking, provides support and coverage, and makes you feel good!



“When you get into a tight place and everything goes against you, till it seems as though you could not hang on a minute longer, never give up then, for that is just the place and time that the tide will turn.”

**Harriet Beecher Stowe**



# Getting Support for Exercise

## What do oncologists think about exercise?

Many oncologists are now strong advocates for regular exercise for cancer survivors. Here are what oncologists in Canada have to say about exercising after kidney cancer.

“Exercise for kidney cancer patients is critical, as it is for the entire population. There has been extensive research done that shows cancer patients who exercise have a better quality of life, get through their treatments easier if they are actively receiving therapy and report feeling better. It is safe and won’t impact negatively on your cancer outcome. Sometimes deciding to start exercising can be daunting because we think we need to go from nothing to a super athlete overnight. I encourage people to start slowly and work up. Go for a walk, ride a bike, or swim but only do it for a short while at the start. As you get stronger and feel better, you can do more. It’s better to start slow and be encouraged by your results rather than trying to do it all at the beginning and hurt yourself and then give up exercising altogether. The key is to try!”



Dr. Scott North  
Medical Oncologist  
Cross Cancer Institute  
Edmonton, Alberta

“Kidney cancer survivors and their family members often ask me “What more can we do? “ I tell them “Exercise“. It doesn’t have to be fancy or expensive. No one expects them to run a marathon. It’s as simple as getting off the couch and walking around the block or inside the mall. Studies show that exercise can help cancer survivors become physically healthier, better tolerate cancer therapies, and enhance their quality of life. It is something that can be shared with family and friends and everyone benefits. “



Christina Canil  
Medical Oncologist  
The Ottawa Hospital Cancer Centre  
Ottawa, Ontario

## What do kidney cancer survivors think about exercise?

Many cancer survivors, including kidney cancer survivors are making exercise a part of their lifestyle. Here are what they are saying about exercising after kidney cancer.

“As a long-time kidney cancer survivor, I have found that exercise has helped me from several perspectives. Firstly, it has helped me recover from kidney cancer surgery and regain my strength and mobility to be able to resume life as before. Secondly, being active and having a commitment to stay active, has helped me deal with the psychological ups and downs of survivorship. Often I find that taking a long walk, or for me, getting exercise at my local gym, has helped me cope with the emotional toll. It’s hard to think about your kidney cancer when you are actively focusing on doing something else! And lastly, I believe that as an equal partner in managing my disease that I have a personal responsibility to be AS WELL AS I CAN BE – come what may. Whether I face surgery again, or drug treatment, or the happy prospect of old age, being more active now will help in every way.”



Deb Maskens  
Stage IV renal cell carcinoma (diagnosed 1996)  
Guelph, Ontario

“For two and half years I was on varying doses of Sutent with extended break periods. Throughout this four-year period, I have worked to maintain a regular exercise routine. I strongly believe that keeping active improves how I function physically and improves my quality of life. That being said, there have certainly been periods when it was very difficult to be active.

Obviously, everyone is different and there are many factors that will affect someone’s ability to be active. The side effects of treatment, other health concerns, age, and level of strength and fitness before treatment are all factors that will impact our level of activity.

I wanted to return to a normal level of activity as soon as possible following a radical nephrectomy. After surgery I slowly increased my exercise time and the intensity until I was able to do all the things I had done before surgery and treatment. However, as I mentioned earlier, there were days when I was very weak and tired and my body had no interest in being active. But even on the bad days, I would try to go for a little walk.

Personally, I find that exercise definitely contributes to a better quality of life. When I exercise regularly I feel better physically, I feel less anxious and worried, I am less dependent on others for help with the chores around my home, and I am more inclined to be socially active.”

Deb Sidor  
Advanced clear cell renal cell carcinoma

“I was training to run my first full marathon – 42 kilometres to celebrate 42 years of my life – when I was diagnosed with kidney cancer. I was in total shock, then I was angry, and from all that, a silent determination began to emerge. Cancer was attacking me? Well, I was going to beat it! So, I went for my operation wearing my jogging outfit and carrying my sports bag. I approached open nephrectomy like a sporting challenge and prepared for it mentally and physically.

A few weeks later, I learned that my kidney cancer had been eradicated and I resumed training with the blessing of my urologist. My goal? A half marathon to start with. Then, over the next few weeks, I decided to up the stakes and go for my dream: the Montreal Marathon, which I ran in 4.59 hours, just five months after my surgery.

Exercise has always been a part of my life, but today, it’s my preferred tool to help me face normal life, medical tests that I’ll have to take in the years to come and the physical and psychological consequences of my brush with cancer.”

Dominic Arpin  
Television and radio host  
Kidney cancer survivor

“In December 2014, I underwent a radical nephrectomy and I now have a follow-up every four months. Since leaving hospital, to honour the promise I made to my urologic oncologist, I took 30-minute walks every day (without exception).

This request from my doctor was probably to prevent a thrombosis or a phlebitis, but knowing that it would make me recover my strength and endurance – at least I hoped it would – I remained motivated in spite of a difficult first month.

At the end of February, I tried increasing it to 60 minutes, but didn’t get very far as I was completely exhausted after three days. So, I went back to 30 minutes. I tried again in April and I was less tired, but it was still a bit too much. Since July, however, I’ve stayed on course and I now walk for 45 minutes every day. My endurance and capacity level isn’t back to what it was, but honestly, I think these walks have definitely helped me stay in shape, relatively speaking.

It’s still too early to tell whether this will have an impact on the progression of my disease, but I hope that it will help me!”

Mireille H.  
Kidney cancer survivor  
Montreal, Quebec

“I had a radical nephrectomy for kidney cancer in November 2008. My pathology indicated a grade 3 clear cell renal cell carcinoma in Stage pT3a. The following week, I resumed my daily walks with my dog Léo and shovelled snow the whole winter, despite constant pain in my right leg. In March 2009, an X-ray of my right femur showed a deep metastatic lesion and I had a metastasectomy accompanied by the insertion of a prosthesis. A pathological fracture followed the operation and I had to spend several months in a wheelchair and in physiotherapy.

Despite the fatigue caused by targeted therapy, I missed my daily walks a lot. So, I asked my family, friends and Local Community Service Centre to help by pushing my wheelchair along the paths near Sandy Beach. With the “driver” behind my wheelchair, me propped up in my seat and Léo in front pulling at his leash as I held it tight, we made a hilarious team! I made use of every opportunity to take a few steps with my cane, but I have to admit that when I tried to do it, my helpers were the ones who had the toughest exercise. Gradually, I started walking again every day, secretly at first because I didn’t want my family to know (they were afraid that I would get hurt), then openly.

Today, I have a normal life and I continue to take pleasure in being close to nature every day. Unfortunately, I have to avoid intense workouts because my leg is still weak. I make up for it by gardening in the summer, transporting wood, and you guessed it, shovelling. I think that fresh air and walking have made a big difference to my current physical and mental well-being.”

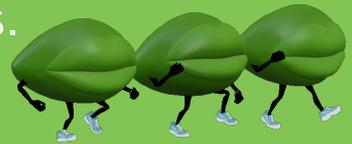
Nicole Giroux  
Stage pT3a clear cell renal cell carcinoma  
Hudson, Quebec

Next, we will discuss how you can create a supportive environment to help you reach your exercise goals.



## Building a Supportive Environment for Exercise

In light of the coronavirus epidemic, if exercising with friends and family, practice social distancing and observe local health regulations.



Having a supportive social environment is essential for achieving your exercise goals. Your spouse or a friend can help motivate you to get out and exercise.



### How your spouse can help?

Getting support from your spouse to do exercise is important in starting and maintaining your exercise program. You and your spouse can plan active outings together such as taking lessons together in a new sport such as tennis or golf, go for a walk or bike ride in the neighbourhood, or go for a hike at a nearby park. Take your dog for a walk after dinner. Your spouse can also provide support by encouraging you to be physically active.



## Activity:

What are some activities that you and your support person enjoy doing together?

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

### How your family members can help?

You can plan active outings or reunions for your entire family such as going to a nearby park and play some games such as softball, soccer, and frisbee. You can also plan weekend trips to hike trails, ski, or golf. This is your chance to become a role model for active living for your spouse, children, and grandchildren!



## How your friends can help?

Your friends can be excellent motivators for exercise. If your friends are currently not exercising, share this guidebook with them. If most of your friends are already active, see if you can join them.

Develop a buddy system with a few friends to make plans for exercise. This is a great way to hold you accountable to someone and helps you stick to your exercise program. Whenever possible, try to exercise in a group of three because if one person backs out, you still have another friend that you can exercise with.

## How group fitness classes and exercise groups help?

Group fitness classes are a great way to get your exercise. You can join a spin class or an aerobics class to meet new people and have fun. You can also sign up for walking or running programs. You can enroll in a class that is geared towards a common goal such as a 5 km or 10 km walk. You can also train and participate in a walk for charity. These programs allow you to meet people of all ages and abilities to exercise together with the guidance of a leader.

In the next chapter, we will show you how to make exercise fun and exciting!



### Activity:

What are 3 activities that you can do with your family or friends over the next month?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**Your** family and social circle can help you to reach your goals. Plan active outings and take advantage of your social support network.



“It is essential to our well-being, and to our lives, that we play and enjoy life. Every single day, do something that makes your heart sing.”

**Marcia Wieder**



# Making Exercise Fun

Exercise doesn't have to be repetitive and boring! Exercising in the gym may not be your idea of fun, but there are many other ways you can make it enjoyable.

Here are what kidney cancer survivors have said about how to make exercise more enjoyable:



- **Music** – Try listening to music or an audio book while exercising.
- **New Locations** – Find new locations in the neighbourhood such as a new park or walking trail to exercise. Try a drop-in pass at a new fitness facility.
- **New Activities** – Include cross training in your exercise routine, which is a technique for adding different types of activities. Having variety in your routine will not only allow you to work different muscle groups, but also make your workouts more exciting.
- **Active Vacations** – Plan active outings with your friends and family to achieve your fitness goals. Some examples include: hiking, canoeing, biking, and walking.
- **Add A Friend** - Pick someone who is full of energy, fun and who you look forward to spending time with.
- **Group Fitness** - Group fitness classes are a great way to keep motivated and to meet new workout buddies. A perk is that you have an instructor to teach you proper technique.
- **Play Something** - A great way to do a lot of exercise and make it fun instead of work. Join a sports league or gather some friends and play a game of baseball.
- **Television** - Adding your favorite shows to your workout routine can motivate you to get through the workout and it saves time.

- Fitness Trackers and Apps** - You can add fun, wearable devices to your exercise routine. There are many wrist-worn devices that you can buy. You can also download some free apps on your mobile phone and/or tablet. Keep track of your steps, distance, calories and even sleep.



We always seem to forget that fun activities are forms of exercise as well. If you have gone ice skating, played golf, played soccer, skied, or swam, they all count as exercise!

Next, we will work with you to create some exercise goals to get you active!



## Activity:

Think of strategies that you can do to make your exercise routine more fun and enjoyable:

Type of exercise	Strategies to make it fun

**Try** to choose an activity that you find enjoyable. If you don't like a particular workout machine or exercise—don't do it! Look forward to your workout by coming up with tips to make it fun.



## Setting “SMART” Goals

“Most “impossible” goals can be met simply by breaking them down into bite size chunks, writing them down, believing them, and then going full speed ahead as if they were routine.”

**Don Lancaster**



Research has shown that setting goals will help you start and keep on top of your new exercise program. It is good to set both short-term and long-term goals that are performance or fitness based to provide a sense of direction, purpose and motivation when working towards change. Reaching these goals can be extremely rewarding.

Short-term goals are based on something that you will achieve in the near future such as within a few weeks or months.



Long-term goals are goals that you will achieve over a longer duration such as within 3 to 6 months, a year, or five years from now. Long-term goals provide focus while short-term goals are the building blocks to get there.

When setting exercise goals, be sure to follow the “SMART” guidelines described below:

### Specific

Find out exactly how much exercise you want to do and how. Have a target date for completion if possible.

**Initial goal:** I want to walk more.

- Although this is a worthwhile goal, it is ambiguous and does not provide a clear focus. It also makes it harder to achieve.

**Better goal:** I want to walk for 30 minutes continuously, three mornings each week by September 30.

- This goal has a clearly-defined activity and a definite time of completion. The goal is more specific rather than vague.

### Measurable

Measure your progress towards your goal in a quantifiable way. This will allow you to see clearly if you are progressing as planned. The easiest way is to include a number with your goal such as recording the number of times exercised.

**Initial goal:** I will measure my progress in a journal.

- Although this might help you meet your goals, it does not tell you how you will measure progress in your journal.

**Better goal:** I will measure my progress in a journal by recording all of my walking sessions by time and distance.

- This goal tells you exactly how you will keep track of your walking in a journal, and lets you see your progress.

### Attainable

Set a goal that is realistic for you to achieve based on your skills, resources, and barriers to activity. Set goals that are challenging to you, but achievable. Set yourself up for success.

**Initial goal:** I will run a 10K race next week.

- This is a poor goal if you have never run a day in your life and is not possible in such a short time frame. This goal will make you feel discouraged if you do not reach it. This goal is a good long-term goal, but not a realistic short-term goal.

**Better goal:** I will join a 'learn to run' program that works toward a 10K race in 4 months.

- This goal is more attainable because you recognize your current skill level and have a target completion date that is realistic. This is a smaller goal that eventually leads you to achieving your long-term goal.

## Realistic

Set a goal that is realistic and relevant by choosing a goal in which you are willing and able to work towards. It should be both challenging and realistic and help you towards the direction you want your exercise program to take.

**Example:** If you want to improve walking, you should set walking-based goals.

## Time Frame

Set a time frame for achieving your goal so that you know when to celebrate your success.

**Initial time frame:** I am going to increase the duration of my walks from 30 minutes to 60 minutes in 3 days.

- Although this goal has a specific time frame, it is not realistic given the current amount of exercise being done.

**Better time frame:** I am going to increase the duration of my walks from 30 minutes to 60 minutes in 2 months.

- This time frame is more realistic and achievable.

## Long-term and Short-term Goals

Goals that are long-term such as training for a 10K walking or running event require smaller goals to be set. When setting long-term goals, it is important to follow the 'SMART' principle in previous examples for short-term goals.

**Example of a long-term goal:** I will walk 2 km every day of the week by September 30.

This is a good long-term goal to have. You also need to set short-term goals to help you reach your long-term goal.

**An example of a short-term goal to work towards your long-term goal is:** I will start by walking a block every week on Mondays, Wednesdays, and Fridays in the mornings.

Continue to set weekly goals until you are meeting the recommended goal of exercise:

- 5 days a week or more
- At least at a moderate level
- For 30 minutes or more

OR

- At least 3 days a week or more
- At a vigorous intensity level
- For at least 20 minutes or more

If you are already meeting this recommended goal, set goals that will help you get even more exercise per week. The more the better!

Plan to reward yourself when you meet your goal and have something to look forward to. The reward should be something that you would not normally do so it can motivate you to reach your goals. Rewards are a reminder that you are one step closer to achieving your goals. For example, treat yourself to something that you enjoy such as a manicure, massage, reading a book, or buying a new pair of running shoes.

In the next chapter, we will introduce you to detailed planning for your exercise routine. In the meantime, let's get started by writing down your goals on the next couple of pages and place it somewhere visible (e.g., fridge) so that your family can see them and help you achieve them.

## GOALS

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_



Here is an example of a walking goal:

*Starting on Monday, I am going to walk for 15 minutes, 3 days this week (Monday, Wednesday, and Friday). I am going to ask my co-worker to see if she will walk with me at lunch time. Eventually, I would like to be able to walk 30 minutes, 5 days a week (Monday to Friday). If I can do this for 2 weeks, I will reward myself by going out to dinner at my favourite restaurant.*

Now it's your turn to set your goal!

### **Step 1:**

Write a goal for this week by filling in the blanks below:

Starting on \_\_\_\_\_  
(day of the week)

I am going to \_\_\_\_\_  
(type of exercise)

for \_\_\_\_\_ minutes.

I am going to do this \_\_\_\_\_ days this week.

### **Step 2:**

Write down some action steps that you will need to take in order to meet this goal. For example, you may need to buy some walking shoes, call a friend to walk with you, or map out a walking route around your neighbourhood. Perhaps you need to call your local fitness centre to inquire about gym memberships.

Action Step #1: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Action Step #2: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Action Step #3: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Step 3:

Think of how you will reward yourself if you meet your goal this week.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_





“He, who every morning plans the transactions of the day, and follows that plan, carries a thread that will guide him through a labyrinth of the most busy life.”

**Victor Hugo**



## Making it Happen: Planning



Great job on setting your goals! Now let's set out a detailed plan of how you are going to achieve your goal. Let's start with the type of activity you will do to meet your goal. Here are some examples:

Fred loves to walk so he is planning on reaching his goal by brisk walking (a moderate intensity activity).

Joe loves to golf as his main activity but he will also play tennis when he gets a chance (moderate intensity activities).

Denise prefers variety in her activities and she also likes vigorous activity. She plans to get her exercise by a combination of swimming, running, and cycling.

**WHAT** activities are you going to do to meet your exercise goal?

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Now that you have a goal and have determined what type of activities you will do, let's make a detailed plan on **WHEN** (time and days of the week) you will do them. Having specific days and times are beneficial!

Here are a few examples:

**Fred** will do his 5 days of brisk walking for 30 minutes each day at noon because he has a 1 hour lunch break at work.

**Joe** will golf on Tuesdays and Thursdays at 8:00am, and then play tennis on Saturday mornings at 10:00am because he is retired.

**Denise** will exercise Monday, Wednesday, and Friday at 7:00am before work because she is a morning person.

**WHEN** are you planning on being physically active?

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Think about **WHERE** you are going to be physically active. Here are a few examples:

**Fred** will walk outside around his office.

**Joe** will golf and play tennis at his local country club where he is a member.

**Denise** will get a membership at her local YMCA because they have facilities and equipment where she can swim, cycle, and run.

**WHERE** are you planning on being physically active?

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Now think about **HOW** you are going to be physically active. Here are a few examples:

**Fred** is going to walk during his lunch break at work because he has an hour break and some nice walking paths.

**Joe** will book his tee times every Saturday morning for the week. His wife will book the tennis court every week.

**Denise** is able to start work late on Monday, Wednesday, and Friday to fit in her exercise and the YMCA is on her way to work.

**HOW** are you going to be physically active?

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---

Having an exercise buddy has been shown to help people reach their goals. Think about whether having an exercise buddy will help you stick to your new exercise program. Here are some examples:

**Fred** is going to invite a co-worker to walk with him who he knows is also trying to get more exercise.

**Joe** is going to golf with his friends and play tennis with his wife.

**Denise** is going to exercise alone although she likes the company at the fitness centre.

**WHO** are you planning to be physically active with?

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Now that you have created a detailed plan, the next chapter will show you how to stick with your exercise routine when faced with barriers.

#### References:

This detailed planning worksheet has been adapted from an exercise intervention designed for prostate cancer survivors.

McGowan, E. L., North, S., & Courneya, K. S. (2013). Randomized controlled trial of a behavior change intervention to increase exercise and quality of life in prostate cancer survivors. *Annals of Behavioral Medicine, 46*(3), 382-393.

“People who believe they have the power to exercise some measure of control over their lives are healthier, more effective and more successful than those who lack faith in their ability to effect changes in their lives.”

**Albert Bandura**



# Overcoming Barriers to Exercise

We all have busy lifestyles that sometimes get in the way of exercise. This next part of the guidebook provides you with tips on how to include exercise as part of your lifestyle. Below are some of the common barriers to exercise that other kidney cancer survivors have described and tips on how to overcome them.



## “I have no time!”

Not surprisingly, time is the #1 reason that prevents people from exercising, even kidney cancer survivors. But if we make exercise our top priority, we can always find room for it. Here are a few time management tips that will help you exercise more.

- Exercise first thing in the morning so that you have less time to talk yourself out of doing it.
- Schedule exercise in your day rather than wait to see where it will fit in.
- Perform the 10-minute solution, especially on busy days. You don't have to do the entire 30 minutes in one session. You can try doing 10-minute bouts of activity throughout the day to add up to 30 minutes. For example, you can do some brisk walking for 10 minutes in the morning, take a 10-minute walk during lunch, and a 10-minute walk in the evening. Now you have your 30 minutes of exercise!

- Add exercise to your daily routine such as walking or riding your bike to work and when you run errands. Use exercise as your way of transportation!
- Combine your exercise with other activities such as walking on the treadmill while watching television or reading.
- Keep your exercise gear in a gym bag that you can carry with you or leave in the car at all times because there may be an opportunity to go for a walk or exercise. Find ways to be physically active.
- Exercise in the neighbourhood or near the area when you have to wait (e.g., at a restaurant, at the doctor's office).
- Exercise for a longer duration during weekends when you typically have more time.
- Wake up 30 minutes earlier; go to bed 30 minutes later to fit in your exercise.

## “I forget to exercise!”

Sometimes we just need a few more things to prompt us to exercise, especially when we haven't set a daily routine yet. Here are a few more tips and tricks that will remind you to get out and exercise:

- Put your running shoes by the side of your bed or lay your workout clothes the night before if you would like to do exercise when you wake up in the morning. Make sure that that these items are in plain sight.
- Prompt yourself with a water bottle or gym bag near the door.
- Write and stick a positive message on your milk jug or something else you always take out asking 'have I done my exercise today?'
- Schedule your workout in your agenda like you would with a business meeting.
- Get a friend to call or text you to prompt you to get active.
- Put your technology to use by using your activity tracker device or apps on your cell phone to help you stay on top of your exercise routine.
- Create a buddy system where you and a friend can exercise at a set day and time every week.

- Exercise at the same time and same location because cues for exercise are stronger when they are repeatedly linked to the target behaviour.

## “But I have to work during the day!”

Some of us have demanding jobs that do not give us a lot of free time in the evenings, so try these work-friendly tips:

- Be physically active during your lunch hour.
- Plan work or social meetings around exercise. For example, meet friends or co-workers for a walk.
- Start walking to work a few days a week if it is an option for you. If you take the bus, get off a few stops early and walk to the rest of the way to work.
- If you need to go to a different floor, take the stairs instead of the elevator to get there.
- Use the photocopier on a different floor.

## “I am too tired!”

Feeling tired is one of the main reasons kidney cancer survivors do not exercise. It is also possible that you may still have side effects after your kidney cancer treatment that stays with you even into survivorship. The good news is that exercising may help you reduce some of these side effects. When you feel tired, you tend to want to rest and lie down, but studies show that this only makes you more tired. Exercise will give you more energy...not less!

**Studies suggest that as little as 30 minutes of brisk walking per day reduces tiredness. Remember that it doesn't have to be done all at once. The 30 minutes can be broken into three, 10-minute sessions.**

Here are a few tips to maintain your exercise when you are tired:

- Notice the days and times you feel most tired. Perform exercise on days and during times when fatigue is lowest.
- You can also reduce the intensity and duration of your exercise on days that you feel tired.

- If you normally do brisk walking, try slowing down the pace and walking for a shorter distance. You may find that your tiredness may go away the more active you get.

## “What if I am still experiencing side effects from treatment?”

You may be experiencing some side effects from kidney cancer treatment if you are still on treatment. Even if you have completed treatment, the side effects can still linger for many years.

Some common side effects include nausea, vomiting, diarrhea, and hand-foot syndrome. These side effects may make exercising uncomfortable and painful. However, the key is to avoid inactivity and do as much as you can tolerate even if it's a small amount of exercise (i.e., 10 minute bouts).

If you have diarrhea, try exercising at home or around the neighbourhood so you are closer to the bathroom.

If you experience hand-foot syndrome, it may be hard to apply pressure on your feet for long periods of time. If this is the case, try following some of the tips on reducing sitting time towards the end of the guidebook. These simple strategies such as standing during commercial breaks while watching television can keep you moving throughout the day.

## “What if I have other medical or health problems?”

People with osteoporosis (brittle bones), diabetes, heart disease, hypertension, arthritis, menopause symptoms, obesity, high blood pressure, and cancer, just to name a few, are all encouraged to start exercising. Exercise can help you prevent and manage many of these conditions.

If you have any other medical or health problems, you should ask your doctor before starting your exercise program. Otherwise, start exercising at a level that you can handle. Begin an exercise program that is light-to-moderate in intensity for a shorter duration and choose activities that are low impact such as swimming and cycling on a recumbent bike.

If you have pain or aches in a particular spot in your body, avoid doing exercises that might make the pain worse. Remember to use the 10-minute rule throughout the day to work towards your daily exercise goal.

## “It’s too cold!”

If you live in certain parts of the world, you are likely no stranger to the cold weather. This doesn’t mean that you have to be a stranger to exercise too!

- Be active in the middle of the day when it is the warmest.
- Dress in the right clothing from head to toe. Wear multiple layers of loose-fitting clothing. The outer layer should be water repellent and windproof. The inner layer should draw moisture away from the body (avoid cotton). Wear a hat, mittens, boots for ice/snow, and a scarf or ski mask that covers your mouth (this will allow you to breathe warmer air).
- Try some fun winter activities such as cross-country skiing, skating, or snow shoeing.

If you find that the weather is too cold for outdoor exercise, take your exercise indoors! Create a set of regular activities that are always available regardless of weather such as stair climbing, mall walking, indoor walking track or indoor swimming. Join a fitness club or sign up for fitness classes. If you have your own exercise equipment, the cold days are the days to use it.



## “It’s too hot!”

Sometimes we get hot weather too! Here are a few tips to keep you cool:

- Wear clothing that is light in colour and loose fitting. Make sure to use sunscreen of 30 SPF or higher on the exposed areas.
- Drink water before, during, and after being active.
- On hot, humid days, be active early or late in the day avoiding the hottest part of the day.
- Don’t overdo it. Go at your own pace.
- Try swimming outdoors to keep yourself cool.
- If the weather is simply too hot, try to exercise in an air-conditioned location (e.g., at home, shopping malls, fitness clubs).

## “I just don’t feel motivated to exercise!”

We all have days where we just have to drag ourselves to do exercise and it becomes a chore. Exercise doesn’t have to feel like that, it can actually feel fun and rewarding! Try these tips to get excited about exercise:

- Go over the benefits of exercise and know your personal reasons for participation. Remind yourself why exercise is important for you!
- Exercise with a friend--when you make plans with someone, you become accountable to someone and more likely to stick with it.
- Train for an event such as a local 5K or 10K walk or run in your area.
- Join a group exercise class such as aerobics or a spin class and meet new workout buddies!
- Reward yourself when you reach your short-term or long-term goals.
- Gather your friends together and play a game such as baseball, golf, or soccer.

## “I don’t have a gym or fitness facility by where I live”

Exercise doesn’t always have to take place in a gym. There are other ways to be active.

- Choose activities that require very little equipment such as walking, jogging, or jumping rope.
- Locate parks and trails in your neighbourhood and go for a walk.
- Design your own walking circuit in your neighbourhood.
- Gather your friends or fellow neighbours and start a walking group.
- Consider buying a treadmill or bike for your home so you always have somewhere to exercise.

Sticking to a regular exercise program is not easy. After all, there are plenty of potential barriers to stand in your way of reaching your goal. What are the main barriers that might interfere with the achievement of your exercise goal? How could you overcome those barriers? Here are a few examples:

### **Fred:**

Barrier— boredom.

Strategy to overcome boredom is to walk with his co-worker John.

### **Joe:**

Barrier— bad weather.

Strategy to overcome bad weather is finding an indoor driving range.

### **Denise:**

Barrier— lack of time in the morning.

Strategy to overcome lack of time is to set her alarm clock 30 minutes earlier so she is not rushed at her morning workout.

In the next chapter, we will introduce you to cross-training where you can begin to add variety to your exercise routine.

Now, list your own personal BARRIERS to being physically active, and STRATEGIES to overcome them:

**BARRIER 1:** \_\_\_\_\_

**Strategy 1:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**BARRIER 2:** \_\_\_\_\_

**Strategy 2:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**BARRIER 3:** \_\_\_\_\_

**Strategy 3:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Up to this point, you already know about the benefits of exercise for kidney cancer survivors, how much exercise to do, how to set 'SMART' goals, how to plan for being physically active, and some of the common barriers to exercise; now let's put it all together! Summarize your detailed plan and then place it somewhere where you will see it often (e.g., your fridge or nightstand).

**My goal is to exercise:**

\_\_\_\_\_ days each week for \_\_\_\_\_ minutes each day at a moderate intensity  
and/or \_\_\_\_\_ days each week for \_\_\_\_\_ minutes each day at a vigorous  
intensity.

**In the next week.....**

The activity or activities I plan to do are:

---

I will do these activities on the following days and times of the week:

---

I will complete my activities at the following location(s):

---

I am planning on being physically active with:

---

I will overcome my most likely barrier by:

---



In the next chapter, we will introduce you to cross training where you can begin to add a variety of exercises to your routine.

**There** are many obstacles that may steer you away from exercise, but the key is to recognize these barriers and think of strategies to overcome them. When you anticipate a barrier and think of ways to work around it, you are more likely to stick to your workout plan.





“You don’t have to be great to start,  
but you have to start to be great.”

**Zig Ziglar**



# Cross Training

Doing the same exercise every day can lead to overuse injuries and boredom. To prevent these situations from happening, cross training is recommended by health and exercise experts. Cross training is a technique used to a variety of exercises to your existing routine. It is a great way to condition different muscle groups and develop a new set of skills. It also keeps things new and exciting after months of the same exercise routine. Cross training also varies the stress on specific muscles or even your cardiovascular system. It allows one muscle group time to rest and repair. Another great benefit of cross training is that it rests your joints alternating between weight bearing and non-weight bearing activities.

Cross training is the practice of using two or more modes of exercise to improve your physical fitness. By adding different types of exercise such as swimming or biking, you can add to your overall strength and cardiovascular fitness.

The following table is a list of common activities, the muscle groups they work, and complimentary activities for cross training:

Common Activities	Muscle Groups Worked	Complimentary Cross Training Activities
<b>Cycling</b>	Entire leg, hip, and buttocks	Walking, racquet sports, stair climbing, rowing
<b>Walking/Running</b>	Entire leg, hip, and buttocks	Water running, aquasize, swimming
<b>Stair Climbing/ Elliptical Trainer</b>	Entire leg, hip, and buttocks All major muscle groups of the body for elliptical trainer	Walking, cycling, swimming, rowing
<b>Swimming</b>	All major muscle groups of the body	Walking, running, cycling, aerobic dance, rowing, jump roping
<b>Aerobics Class</b>	All major muscle groups of the body	Walking, running, cycling, swimming, rowing, jump roping

An example of how you can include cross training over the week would be as follows:

<b>Monday</b>	Walking
<b>Tuesday</b>	Cycling
<b>Wednesday</b>	Swimming or water running
<b>Thursday</b>	Stair climbing
<b>Friday</b>	Aerobics class

In the next chapter, we will discuss how you can cope with lapses in your exercise routine. Many people can experience a delay in their program and that is perfectly normal. We'll show you how to get back on track and stay on track if this happens to you!



## Coping With Lapses

Now that you know how to exercise effectively and safely, maintaining the commitment can sometimes be difficult. Research has shown that many people cycle on and off exercise programs before they are able to be successful long term. Breaks in your exercise program are normal. With a little planning, you can avoid some of the common situations where lapses are likely going to happen.



It is important to understand that exercise needs to be a lifestyle healthy habit, like brushing your teeth. Don't be too hard on yourself if you have an unexpected lapse in your exercise program because sometimes life gets in the way. Illness, travel, and other factors can cause a short-term detour. Relapses and lapses are a normal part of behaviour change, but the key is to not let a lapse linger on and become a total collapse in terms of exercise.

The most common situations where lapses can happen include travel, holidays, illness, stress, poor weather, extra work hours, and competing family obligations. However, if you have strategies to deal with them such as planning ahead for exercise, you are better prepared to face these events. Refer to the section in the guidebook on "Overcoming Barriers" to remind yourself what you can do in face of challenging events.

Sometimes people end up missing a workout or two and start to feel like they have completely failed. This person might decide to wait until the following week or the following month or even the following year to resume their program. If this happens to you, try to remain positive that you will get back on track. Resume your exercise program by starting at a lighter intensity and/or for a shorter duration to build up your confidence again. Remember that you don't have to do all your minutes in one session, you can accumulate 10-minute bouts of exercise throughout the day.

Here are some suggestions to help prevent lapses:

- **Create realistic and achievable goals.** Your motivation levels can be fueled by attaining goals, even if they are small ones. If you set unrealistic goals, you are likely to feel discouraged and less likely to stick with your program. Follow the principles of setting ‘SMART’ goals.
- **Know your own barriers to exercise.** Think about all of the potential factors that could affect your exercise participation. These could be social, personal and environmental. Make a list of all possible barriers or challenges to your exercise program and create an action plan of how you will overcome them. When you anticipate your own barriers to exercise, you can plan ahead and make sure you fit exercise in your schedule, rather than waiting to see if exercise fits. Be proactive with your barriers!
- **Exercise with a buddy.** If someone is counting on you to be there, chances are that you will be there because you are held accountable.
- **Active vacations.** Plan holidays that include exercise such as a hiking, golfing, or skiing trip. When you go on holidays, try to choose accommodations with a fitness facility or within walking distance to places of interest.
- **Do something you enjoy.** Your exercise routine doesn’t have to be the same thing every week. Incorporate cross training into your routine. Take the opportunity to try something new such as dancing, learning a new sport, or exercise classes. Remember to have fun with exercise!
- **Stay flexible.** If you have a set schedule for your workouts and an unexpected obstacle comes your way, try not to be discouraged or view this as a complete failure. Recognize that some things are just out of your control. If you miss your workout, make a plan of how you will make up the missed session.
- **Keep an exercise log.** Keep track of your daily exercise so you can monitor your progress and when you meet your goals.



## Activity:

When you experience a lapse, use this worksheet to help you make a comeback plan. Develop a plan you can use in situations where you are likely to experience a lapse:

I am at a high risk for decreasing my exercise when:

---

---

My plan to handle this situation to prevent lapsing is:

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What are your top 3 personal reasons for exercising:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Identify 3 steps you can take immediately after a lapse to make a comeback and get back on track:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

How will you reward yourself when you get back on track?

*e.g. a new workout shirt that will keep me motivated to exercise*

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In the next section, we will explore opportunities to be active. We will look at ways in which you can turn your home and/or neighbourhood into an active living space!

**Relapses** and lapses are a normal part of an exercise routine, but the key is to not let a lapse linger on and become a total collapse of your program. If this happens to you, resume your exercise program by starting at a lighter intensity and for a shorter duration to build up your confidence again.



“Our greatest glory is not in never falling, but in rising every time we fall.”

**Confucius**



# Creating Opportunities for Exercise

There are many options available to you such as purchasing home equipment and DVDs to joining a fitness facility or walking program.

## Purchasing home equipment

Having exercise equipment at home is a great way to maintain your exercise program as you will always have equipment available to you at your convenience. You should buy equipment from a fitness specialty store rather than a department store since specialty fitness stores have staff that are knowledgeable in exercise equipment and physical fitness. Try to buy equipment that you are familiar with and that you enjoy using. For example, if you like walking, a treadmill is more suitable to your needs than a bike. A great inexpensive purchase for walking is a pedometer. These little devices keep track of the number of steps you take in a day and can be a great motivator. The goal is to do at least 10,000 steps per day to achieve health benefits.



## Joining a Fitness Club

Joining a fitness club can offer you a wide range of exercise equipment to choose from. Some fitness clubs even have instructor-led exercise classes built into the membership fee or access to a swimming pool. When choosing a fitness club, decide if you are interested in women's only, a social environment, family activities, personal training, group fitness, and/or state-of-the-art equipment.

Here are a few tips:

- You also need to consider convenience. If the gym is near your home or work, you will be more likely to use the facility
- Always tour the facility and ask for a day pass to try out the equipment and/or classes offered. Ask friends and acquaintances about facilities they use and their thoughts about it. Many facilities will also provide a free trial for those interested in becoming a member.
- Research the qualifications of the fitness staff. Fitness consultants and personal trainers should be qualified (ideally having a Kinesiology degree) and fitness instructors should be certified through the Canadian Society for Exercise Physiology (CSEP). In the United States, they should be certified through the American College of Sports Medicine and/or the National Strength and Conditioning Association.
- Several community centres and hospitals feature exercise programs designed specifically for cancer survivors. There are 10-12 week exercise programs that are offered for free to cancer patients and survivors, or for a nominal fee. In Canada, these include Wellspring Cancer Support Centre (various locations across Canada), the Survivorship Clinic at Princess Margaret Cancer Centre (Toronto, Ontario), and the CanWell program (Hamilton, Ontario). In the United States, these include LIVESTRONG at the YMCA (various locations across the U.S.), the Duke Health and Fitness Centre (Durham, North Carolina), and the Rocky Mountain Cancer Rehabilitation Institute (Greeley, Colorado).





## Walking or Running Programs

These programs are a great way to meet new people and exercise towards a common goal. There are many running stores that have walking and running programs that cater to people of all exercise abilities including beginner to more advance clinics. You can join in a clinic geared towards a 5 km race where you will exercise with others under the guidance of a leader.

## Personal Trainers

Some fitness facilities offer personal training. You can hire a trainer to develop an individualized exercise program for you based on your goals and ability. A good personal trainer should provide you with the tools to exercise safely and independently. When choosing a trainer, look for their qualifications (Kinesiology degree) and credentials such as CEP (Certified Exercise Physiologist), CET (cancer exercise trainer), CPT (Certified Personal Trainer), or Can-Fit Pro (Canadian Fitness Professionals). Some questions that you may want to ask a potential trainer include:

- What are your qualifications?
- What experience do you have in health and fitness?
- Have you worked with chronic-diseased populations?
- How long have you been a trainer?
- What types of clients do you work with?
- Do you have references and can I contact them?



## Exercise Videos

Exercise DVDs are a convenient way to stay active and motivated within the comfort of your own home. There are plenty of DVDs to choose from including dance, fitness boot camps, and strength and conditioning. Choose one that you think you will enjoy and read reviews about what other customers have said about the workout. For well-rounded results, you may decide to choose a DVD for each component of fitness: flexibility, cardiovascular, as well as muscular strength and endurance.

You are now well-equipped for starting and maintaining your exercise program. In the last chapter, we will introduce you to the health hazards of prolonged sitting. We will show you some tips on how to reduce your sitting time, in addition to your exercise routine for maximum health benefits.





## Activity:

Use this chart below to help you make a decision about the fitness facility you would like to join:

Comments				
Classes Included				
Type of Equipment/ Amenities				
Monthly Fee				
Distance to Facility				
Facility				

“You gain strength, courage, and confidence by every experience in which you really stop to look fear in the face. You must do the thing which you think you cannot do”

**Eleanor Roosevelt**



## Special Topic: Sitting Time and Cancer



There is now evidence that suggests that even if adults meet exercise guidelines, sitting for long periods of time is bad for you. In fact, the health benefits you gain from exercise are reduced when you sit too much.

Research has shown that long periods of sitting is related to a higher risk of diabetes, cardiovascular disease and death, and even cancer risk and progression.<sup>1</sup> These health risks were found even if you are exercising. In fact, a study in Australia with over 160 adults found that more interruptions in sitting time throughout the day were beneficial in lowering metabolic risk factors such as body fat.<sup>2</sup>

Long periods of sitting time or sedentary behaviour is not the same as physical inactivity, which usually means not meeting public health exercise guidelines. Sedentary behaviour is a separate behaviour and includes activities that involve being in a sitting or reclining (lying) position. Even people who are meeting exercise guidelines do not cancel the ill effects of too much sitting throughout the day.

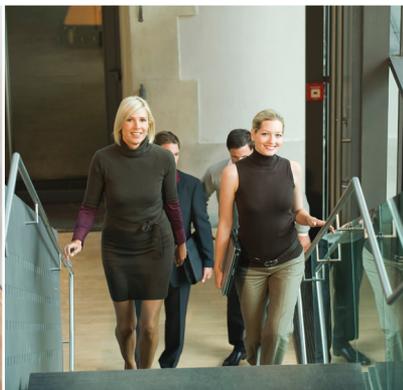
In a study with 540 kidney cancer survivors, the researchers found that kidney cancer survivors spend over 8 hours a day sitting, which is a large amount of their waking hours.<sup>3</sup> The researchers also found that the relationship between sitting time and quality of life was worse for kidney cancer survivors under the

age of 60. For younger kidney cancer survivors, quality of life was lower with the more hours that they spent sitting.

However, this does not mean it isn't important for older kidney cancer survivors to reduce sitting time. It is still important to meet exercise guidelines and to move more often throughout the day. That's equivalent to 30 minutes of moderate-intensity exercise five times a week coupled with small movement changes throughout the day to get active and sit less!

## Why is too much sitting harmful to your health?

Researchers think that too much sitting changes the body's ability to deposit fat from the bloodstream into the body. Higher blood fats are a risk factor for diseases such as cardiovascular disease. Too much sitting throughout the day also restricts the functioning of the body's healthy cholesterol levels (HDL cholesterol), which is needed to clean the plaque sticking to the arteries.



## How often do I have to limit my sitting time?

While there are no specific guidelines for reducing sitting time, research shows that breaking up your sitting time for 2 minutes after every hour of continuous sitting is beneficial to your health.<sup>4</sup> Standing up gets your muscles working again and prompts the body to burn calories. It's also great for improving your concentration. Think of it as a reset button throughout the day. The key is to try to be aware of the amount of time you spend sitting and try to limit it, if possible.

Here are a few strategies to help you reduce your sitting time throughout the day whether you are at home or at work:

- Take a walk break every time you take a coffee break.
- Stand up when talking on the telephone.
- Walk to a colleague's desk or walk to a neighbour's home instead of e-mailing or calling them.
- Take the stairs whenever you can.
- When watching television, stand up during commercial breaks.
- Pace the sidelines at your grandchildren's or child's athletic games.
- After reading six pages of a book, stand up and move a little.
- Stand up to read the morning newspaper.
- Get up to change the channel.
- Stand while you read at work.
- Have 'walk and talk' meetings rather than a sit down meeting.
- Move your wastebasket away from your desk so you have to get up to use it.
- Combine chores with seated tasks at home such as ironing while watching television.
- Set an alarm on your computer or at home to remind you to stand up and move more often after every 30 minutes or an hour of sitting.
- You can purchase activity trackers that have 'idle alerts.' Depending on the activity tracker, this alert can be a sound or gentle vibration. This will tell you that you have been sitting too long and it's time to get up and move.

If you have a standing job or are up on your feet throughout the day, try limiting your sitting time while you are at home or on weekends.

When thinking about your day; get active, sit less!



## Activity:

Come up with a few of your own strategies to limit your sitting at home:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

Come up with a few of your own strategies to limit your sitting in your workplace:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

Come up with a few strategies to reduce your sitting during weekends?

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

**Pair** your exercise with small movement changes (i.e., standing up) throughout the day to get active and sit less!





#### References:

<sup>1</sup>Lynch, B. M., Dunstan, D. W., Vallance, J. K., & Owen, N. (2013). Don't take cancer sitting down. *Cancer*, 119(11), 1928-1935.

<sup>2</sup>Healy, G. N., Dunstan, D. W., Salmon, J., Cerin, E., Shaw, J. E., Zimmet, P. Z., & Owen, N. (2008). Breaks in sedentary time beneficial associations with metabolic risk. *Diabetes Care*, 31(4), 661-666.

<sup>3</sup>Trinh, L., Plotnikoff, R. C., Rhodes, R. E., North, S., & Courneya, K. S. (2013). Associations between sitting time and quality of life in a population-based sample of kidney cancer survivors. *Mental Health and Physical Activity*, 6(1), 16-23.

<sup>4</sup>Neuhaus, M., Healy, G. N., Dunstan, D. W., Owen, N., & Eakin, E. G. (2014). Workplace sitting and height-adjustable workstations: a randomized controlled trial. *American Journal of Preventive Medicine*, 46(1), 30-40.

“I do it as a therapy. I do it as something to keep me alive. We all need a little discipline. Exercise is my discipline.”

**Jack LaLanne**



# Exercise Program

If you are looking for a structured exercise program to get you started, this walking program is for you! This program was adapted from the National Institutes of Health and will help you achieve your exercise recommendation.<sup>1</sup> If you have been inactive, you should “start low and go slow” by gradually increasing how often and how long activities are done.

It’s easy to follow and is an effective way to help you get active. The goal of this program is to get you walking briskly for at least 30 minutes most days of the week.

Warm-up Time Walk Slowly	Brisk-walk Time	Cool-down Time Walk Slowly	Total Time
WEEKS 1–2 (Start with at least 2 walking sessions during each week on different days)			
5 minutes	5 minutes	5 minutes	15 minutes
WEEKS 3–4 (at least 3 walking sessions during each week on different days)			
5 minutes	10 minutes	5 minutes	20 minutes
WEEKS 5–6 (at least 3 walking sessions during each week on different days)			
5 minutes	15 minutes	5 minutes	25 minutes
WEEKS 7–8 (at least 4 walking sessions during each week on different days)			
5 minutes	20 minutes	5 minutes	30 minutes
WEEKS 9–10 (at least 4 walking sessions during each week on different days)			
5 minutes	25 minutes	5 minutes	35 minutes
WEEKS 11–12 (at least 5 walking sessions during each week on different days)			
5 minutes	30 minutes	5 minutes	40 minutes
WEEKS 13+ (at least 5 walking sessions during each week on different days)			
5 minutes	30 minutes	5 minutes	40 minutes

What are you waiting for? Let's get active and sit less! Best of luck with your exercise program!



Reference:

<sup>1</sup>Weight-control Information Network. (2014). Walking...A Step in the Right Direction (NIH Publication No. 07-4155). Bethesda, MD: National Institutes of Health.

# Weekly Exercise Log

Use the following pages to keep track of your daily exercise routine to help you achieve your goals.

Start a new page each week to keep track of your activity!

Day	Activity	Exercise Time	Heart Rate	RPE
	__Walking __Bicycling Other: _____			

Start a new page each week to keep track of your activity!

Day	Activity	Exercise Time	Heart Rate	RPE
	__ Walking __ Bicycling Other: _____			
	__ Walking __ Bicycling Other: _____			
	__ Walking __ Bicycling Other: _____			
	__ Walking __ Bicycling Other: _____			
	__ Walking __ Bicycling Other: _____			
	__ Walking __ Bicycling Other: _____			
	__ Walking __ Bicycling Other: _____			

Comments:

Start a new page each week to keep track of your activity!

Day	Activity	Exercise Time	Heart Rate	RPE
	__ Walking __ Bicycling Other: _____			
	__ Walking __ Bicycling Other: _____			
	__ Walking __ Bicycling Other: _____			
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	__ Walking __ Bicycling Other: _____			

Comments:

Start a new page each week to keep track of your activity!

Day	Activity	Exercise Time	Heart Rate	RPE
	__Walking __Bicycling Other: _____			

Comments:

# Summary

## Benefits of Exercise

- Exercise after a kidney cancer diagnosis can help with your quality of life and combat your side effects. There is growing evidence that exercise may increase your chances of survival and lower the risk of your cancer coming back

## How Much Exercise Do I have to Do?

- The American College of Sports Medicine and the American Cancer Society Exercise Guidelines recommend that cancer survivors engage in:
  - 150 minutes of moderate-intensity exercise per week OR
  - 75 minutes of vigorous-intensity exercise per week OR
  - An equivalent combination of moderate-intensity or vigorous-intensity exercise
  - If you are already achieving this recommendation, try exercising on more days of the week, or gradually increase the time you spend exercising
- Try to include muscle and bone strengthening activities using major muscle groups, at least 2 days per week for additional benefits
- Remember that you can accumulate your exercise in 10-minute bouts throughout the day
- While exercise is generally safe for almost everyone, be aware and understand the warning signs to stop exercising (i.e., chest pain, dizziness, nausea). When in doubt, always call your doctor!

## Getting Support for Exercise

- Many oncologists are now strong advocates for regular exercise for cancer survivors. Many cancer survivors, including kidney cancer survivors are making exercise a part of their lifestyle
- Your family and social circle can help you to reach your goals. Plan active outings and take advantage of your social support network

## Making Exercise Fun

- Exercise does not have to be boring and repetitive. Try to choose an activity that you find enjoyable so you can look forward to your workout

## Setting Goals and an Exercise Plan

- Setting goals will help you start and keep on top of your new exercise program. It is good to set both short term and long term goals that are performance or fitness based to provide a sense of direction, purpose and motivation when working towards change
- Create a detailed plan of how you are going to achieve your exercise goals so you can stick to them

## Barriers to Exercise

- Recognize the most common barriers to exercise (e.g., lack of time, fatigue) and come up with strategies to overcome them. When you anticipate a barrier and think of ways to work around it, you are more likely to stick to your exercise plan
- For example, if you are pressed for time, accumulate exercise in 10-minute sessions throughout the day. If you are feeling fatigued, try exercising on days and times when fatigue is lowest. You may exercise as much as your abilities allow, but the key is to avoid inactivity
- Relapses and lapses are a normal part of an exercise routine. If this happens to you, resume your exercise program by starting at a lighter intensity and for a shorter duration to build up your confidence again

## Reduce Your Sitting Time

- The health benefits you gain from exercise are reduced when you sit too much
- Try to stand up for 2 minutes after every hour of continuous sitting. You can think of it as a reset button throughout the day to get your muscles working again
- Pair your exercise with small movement changes (i.e., standing up) throughout the day to get active and sit less!



“The best preparation for tomorrow is  
doing your best today.”

**H. Jackson Brown, Jr.**



## Trusted Resources



### Need some more information?

Visit these resources below:

#### **American College of Sports Medicine (ACSM)**

<http://www.acsm.org>

For all the latest research in sports and exercise science.

#### **Canadian Cancer Society (CCS)**

<http://www.cancer.ca>

The CCS has some great links and articles about exercise and cancer. It also has resources that address cancer prevention, treatment, and survivorship.

#### **American Cancer Society (ACS)**

<http://www.cancer.org/>

The ACS provides resources to help you stay well and get well for prevention, during treatment and survivorship.

#### **Kidney Cancer Canada (KCC)**

<http://www.kidneycancer canada.ca/>

KCC is a charitable patient-led support organization established to improve the quality of life for patients and their families living with kidney cancer.

### **Kidney Cancer Association (KCA)**

<http://www.kidneycancer.org/>

KCA is a charitable organization made up of patients, family members, physicians, researchers, and other health professionals in the United States and globally. It is the world's first international charity dedicated specifically to the eradication of death and suffering from renal cancers. It is also the largest organization of its kind, with members in more than 100 countries.

### **National Coalition for Cancer Survivorship (NCCS)**

<http://www.canceradvocacy.org/>

NCCS has a wealth of resources for people living with, through, and beyond cancer, including the award-winning Cancer Survival Toolbox.

### **National Cancer Institute of Canada (NCIC)**

<http://www.ncic.cancer.ca>

For all the latest information on cancer research.

### **ELLICSR: Health, Wellness, and Cancer Survivorship Centre**

<http://ellicsr.ca/>

The Centre strives to understand the cancer and survivorship experience in order to improve it by looking at fresh new ideas and approaches to improve health and wellness during and after cancer treatment. Cancer survivors, including family members, friends and caregivers, can:

- Find information on health and wellness
- Participate in a class or program, designed through research with survivor input
- Meet other survivors and share experiences, support each other and learn together

### **Centres for Disease Control and Prevention (CDC)**

<http://www.cdc.gov/HealthyLiving/>

The CDC has resources on improving the health and quality of life of all individuals. It even has a section on healthy living that includes physical activity for everyone.

### **Canadian Fitness and Lifestyle Research Institute (CFLRI)**

<http://www.cflri.ca>

The CFLRI site has information on everything you need to know about exercise.

### **Public Health Agency of Canada**

<http://www.phac-aspc.gc.ca/pau-uap/paguide/index.html>

This website will teach you how to make choices that will help you prevent disease, stay healthy, and enjoy life to its fullest.

### **Wellspring**

<http://www.wellspring.ca>

Wellspring offers a wide variety of free social, emotional, psychological, and informational programs and support for people coping with the everyday realities of cancer.

### **The Office of Disease Prevention and Health Promotion (ODPHP)**

<http://www.health.gov/>

The ODPHP develops and coordinates high impact national disease prevention and health promotion activities. It has information on national health objectives and guidelines for various conditions and processes to promoting effective health communication.

### **Cancer Chat Canada**

<https://www.cancerchatcanada.ca/>

Cancer Chat Canada provides online support to people affected by cancer.





This guidebook was adapted from previous exercise guidebooks in cancer survivors including colon cancer survivors<sup>1</sup>, breast cancer survivors<sup>2</sup>, and young adult cancer survivors<sup>3</sup>.

#### References:

- <sup>1</sup> Vallance, J., Lesniak, S. L., Bélanger, L. J., & Courneya, K. S. (2010). Development and assessment of a physical activity guidebook for the Colon Health and Life-Long Exercise Change (CHALLENGE) trial (NCIC CO. 21). *Journal of Physical Activity and Health*, 7(6), 794-801.
- <sup>2</sup> Vallance, J. K., Courneya, K. S., Taylor, L. M., Plotnikoff, R. C., & Mackey, J. R. (2008). Development and evaluation of a theory-based physical activity guidebook for breast cancer survivors. *Health Education & Behavior*, 35(2), 174-189.
- <sup>3</sup> Bélanger, L. J., Mummery, W. K., Clark, A. M., & Courneya, K. S. (2014). Effects of targeted print materials on physical activity and quality of life in young adult cancer survivors during and after treatment: an exploratory randomized controlled trial. *Journal of Adolescent and Young Adult Oncology*, 3(2), 83-91.

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**KCRNC**

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Cancer  
du rein  
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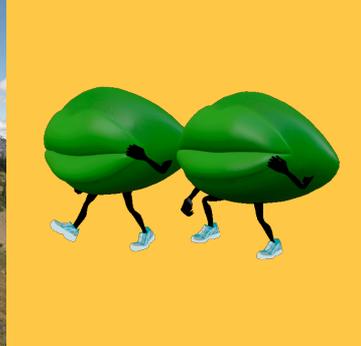
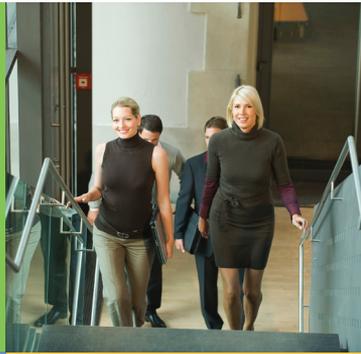
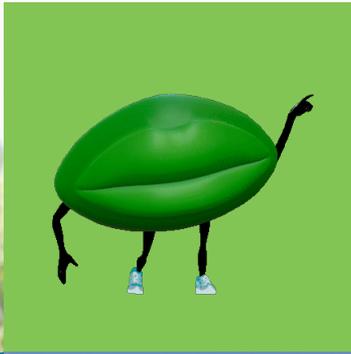
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# WORLD KIDNEY CANCER DAY



18 June 2020

For more information about this guidebook,  
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