Session 2: Safe Exercise

Symptoms During Exercise

Symptoms are warning signs that tell you that you're working too hard during exercise. To make sure that you're exercising safely you need to pay attention to all of the following warning signs: **shortness of breath, dizziness, palpitations, angina, muscle or joint pain**. If you notice any of these symptoms while you're exercising, then **slow down or stop your exercise immediately**.

Look at the following table. If you notice any of the symptoms while you exercise, **slow down or stop your exercise immediately.**

Symptom	How it feels
Shortness of Breath	• Tightening in the chest • Difficulty breathing • Feeling like you can't get enough air
Dizziness	• Feeling confused, weak, or unsteady • Feeling like things around you are moving • Feeling like you might faint
Palpitations	• Your heart is skipping beats or flip flopping • Your heart feels like it's going too fast or too slow
Angina	• Pain, tightness, pressure, or heaviness in the chest, arms, back, neck, or jaw • Shortness of breath • Extreme tiredness • Nausea
Muscle or Joint Pain	• Feeling more pain than what is normal for you

How to Avoid Symptoms

Becoming physically active is an important step in your lifestyle change; you're encouraged to make the most out of each exercise session. You should do your best to avoid any symptoms that could cut your exercise sessions short.

The following table includes a list of ways that can help you to avoid symptoms during your exercise.

How to Avoid Symptoms	Suggestions
Follow your exercise prescription	The exercise prescription that you've been given is personalized for you based on your exercise stress test results. Your prescription is designed to provide you with safe and comfortable parameters for you to work within. • If you feel that you can work harder than what your exercise prescription suggests, first speak with your Kinesiologist before progressing
Warm up	Don't jump right into your aerobic or resistance exercise without a proper warm up. • 5 to 10 minutes of slower activity prepares your heart, lungs, muscles, and blood vessels for more strenuous activity. A warm up with some stretches helps to prevent muscle strain
Cool down	Don't stop right away after completing your aerobic or resistance exercise. This causes pooling of blood in your legs and less blood flow to the heart and head, which can increase your chance of having symptoms. • 5 to 10 minutes of slower activity allows your heart rate, breathing, and blood pressure to return to rest gradually. Complete 5-10 minutes of stretching after your cool down
Stretch	Stretching your muscles helps to improve your flexibility and reduce your chance of getting injured during your exercise. • You should stretch at the end of your exercise session, **after** your cool down, when your muscles are warm • If you want to stretch on a day that you won't be doing either aerobic or resistance training, then warm up for 5-10 minutes before you begin stretching
Take your medications	Continue taking your medications as prescribed by your doctor. If you don't, then you may get symptoms while you exercise. • If you begin to notice new or unusual symptoms as you progress through the program, then advise your Kinesiologist. You should make an appointment to see your doctor. Your Kinesiologist will provide you with a blood pressure and heart rate progress report to take with you. Your doctor may decide to adjust your medications accordingly

Keep hydrated	Make sure to drink enough water unless your doctor has told you otherwise. So bring water with you to your exercise sessions. • You should be drinking 4 – 8 ounces of water (100 – 250ml) for every 10 – 25 minutes of exercise
Eat at the right time	You must give your body enough time after eating to allow yourself to digest. If you eat too soon before exercise then your sessions may feel more difficult and you may experience symptoms such as tiredness, shortness of breath and even angina. • You should give yourself at least 2 hours after eating a large meal before doing exercise
Avoid smoking, caffeine, and alcohol before exercise	Cigarette smoke, caffeine, and alcohol may increase your heart rate and blood pressure and can cause palpitations or angina. Caffeine and alcohol are diuretics, which mean that they cause your body to lose water (dehydration). Exercising soon after consuming caffeine or alcohol can make this dehydration worse because you sweat as your body temperature rises. • Don't smoke or consume caffeine or alcohol right before you exercise
Avoid exercising when you're sick	Don't exercise when you're sick with a cold or flu. Your body needs time to rest and recover. It's harder for your body to fight the illness if you exercise during this time.
Dress comfortably	Wear loose, comfortable clothing such as sweat suits, shorts, T-shirt, and appropriate footwear (i.e., running shoes with proper support) to reduce your chance of getting injured during your exercise.
Track your pulse Refer to page 14 for instructions on how to track your pulse	Your pulse is your heart rate, or the number of times your heart beats in one minute. Your pulse is lower when you're at rest and increases when you exercise • Keep track of your pulse to make sure that you won't experience symptoms during exercise • Keep track of your pulse to show if you're working within your prescribed target heart rate range • You should take your pulse before, during, and after your exercise session
Track your effort Refer to page 15 for instructions on how to track your effort	In order to track your effort, you'll be using the BORG Rate of Perceived Exertion (RPE) Scale and the METs Chart. These charts will help you to determine how hard you're working during exercise.

*Adapted from the Cardiac College of the Toronto Rehabilitation Institute

Monitoring Exercise

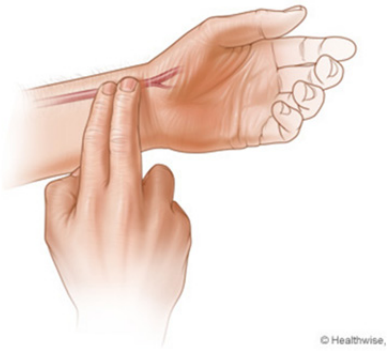
While exercising, it's important that you continue to monitor your exertion and symptoms. The three most common ways to monitor how hard you're working are:

- Pulse/Heart Rate
  - Take your pulse during your exercise to determine if it falls within your prescribed heart rate range.
- RPE (Rating of Perceived Exertion)
  - Use the RPE scale to make sure you're working within your prescribed effort levels.
- METs (Metabolic Equivalents)
  - Review your METS chart to make sure that your activity matches your prescribed METs level.

Instructions for these monitoring techniques are on the following pages.

Continue to watch for any symptoms. You shouldn't notice symptoms if you're following your exercise prescription. If you notice any symptoms while you're exercising then slow down or stop your exercise immediately. See page 10 for more information.

How to Track Your Pulse



1) Place the tips of your index and middle, or middle and ring fingers on the palm side of your other wrist below the base of the thumb. Or, place the tips of two fingers on your lower neck on either side of your windpipe.
2) Press lightly with your fingers until you feel the blood pulsing beneath your fingers. You may need to move your fingers around slightly up or down until you feel the pulsing.
3) Use a watch with a second hand, or look at a clock with a second hand.
4) Count the beats you feel for 10 seconds. Multiply this number by six to get your heart rate (pulse) per minute.

Count your pulse: _____ beats in 10 seconds x 6 = _____ beats/minute

How to Track your Effort

In order to track your effort, you'll be using the BORG Rate of Perceived Exertion (RPE) Scale and the METs Chart. The RPE Scale and METs Chart will help you to determine how hard you're working during exercise.

How to use the RPE Scale

1) The RPE scale is listed from 6 – 20 according to the difficulty of the exercise you're currently completing (6 being the lightest and 20 being the hardest).
2) You'll notice that some of the numbers have descriptions beside them. Find the description that best matches how hard you think that you're working then look at the number that matches the description.

Example

- The RPE range that you'll be asked to work within will vary depending on your personalized exercise prescription. However, during aerobic exercise, you'll normally be asked to work between **11 – 16** (**11** being your warm up & cool down)

- If you've rated yourself higher than **16**, you should slow down your exercise

BORG SCALE
RATE OF PERCEIVED EXERTION

6	
7	Very , very light
8	
9	Very light
10	
11	Fairly light
12	
13	Somewhat hard
14	
15	Hard
16	
17	Very hard
18	
19	Very, very hard
20	

How to use the METs Chart

1) The METs Chart is listed from 1 – 10 or More according to the difficulty of the activity you're currently completing (1 being the lightest and 10 or more being the hardest).
2) You'll notice that there are examples of activities under each of the numbers. Find the activity that best matches what you're currently doing then look at the number that matches the activity.

Example

- The MET Level range that you'll be asked to work within will vary depending on your personalized exercise prescription. However, during aerobic exercise, you'll normally be asked to work between **3 – 7**

- If you've rated yourself higher than **7**, you should slow down your exercise

MET LEVELS

METS measure an activity's workload on the heart and lungs.
One MET is the amount of energy your body expends at rest.
One MET is equivalent to 3.5 milliliters of oxygen used per kilogram of body weight per minute.
MET level increases with use of arms, isometric exercise or psychological stress.
MET level increases with change in terrain, wind resistance, current etc.

1 MET
Bedrest, Sitting, Watching TV, Eating, Reading, Sewing

1 to 2 METS
Dressing, Shaving, Brushing teeth, Making bed, Desk work, Driving car, Playing cards, Knitting
Walking 1 mph (1.6 km/hr)

2 to 3 METS
Tub bathing, Cooking, Waxing Floor, Riding power lawn mover, Playing piano, Walking 2 mph (3.2 km per hour)

3 to 4 METS
General housework, Cleaning windows, Light gardening, Pushing light power Mower, Sexual intercourse
Walking 3 mph (4.8 km per hour)
Bicycling 6 mph (9.7 km per hour)
Sailing, Golfing (pulling hand cart), Pitching horseshoes, Archery , Badminton (doubles), Horseback riding (slow trot), Fly-fishing
Assembly-line work, Driving large truck, Bricklaying, Plastering

5 to 6 METS
Sawing softwood, Digging garden, Shoveling light loads
Walking 4 mph (6.4 km per hour), Bicycling 10 mph (16.1 km per hour)
Skating, Fishing with waders, Hiking, Hunting, Square Dancing
Using heavy tools, Lifting 50 lb

6 to 7 METS
Shoveling Snow, Splitting wood, Mowing the lawn with hand mower
Walking or jogging 5 mph (8 km per hour),
Bicycling 11 mph (17.7 km per hour), Tennis (singles), Water-skiing, Light downhill skiing

7 to 8 METS
Sawing Hardwood
Paddleball, Touch football, Swimming (backstroke), Basketball, Ice Hockey
Digging ditches, Moving heavy furniture, Lifting 80 lb

8 to 9 METS
Running 5.5 mph (8.9 km per hour), Bicycling 13 mph (20.9 km per hour), Fencing, Cross-country skiing

10 or More METS
Running 6 mph (9.7 km per hour), Competitive Handball, Gymnastics, Contact Football

Session 2: What Have I Learned So Far?

1. What is a symptom?

   _____

   _____

2. What are the symptoms that tell you that you're working too hard during exercise?

   _____

   _____

3. What should you do if you notice any of these symptoms while you're exercising?

   _____

   _____

4. Name 6 ways that you can avoid symptoms while you exercise:

   _____

   _____

   _____

   _____