

# Diabetes, Exercise & You



North Shore, Sea to Sky,  
Sunshine Coast, Powell River,  
Richmond and Vancouver

## Exercise for Diabetics

### What's good about exercise?

- a) Exercise makes your **Insulin** work more **effectively**.
- b) Exercise lowers your **blood sugar & blood pressure**.
- c) Exercise uses up extra calories and stores of fat.  
**This means exercise helps you to maintain a healthy weight.**
- d) Exercise **improves** the **fitness** of your **heart & lungs!**
- e) Exercise **lowers your risk** of developing **heart disease**.
- f) Exercise helps you feel **healthy & energized**.
- g) Exercise **relieves stress**.
- h) Exercise **improves** strength, balance & flexibility.

**Make it part of your daily routine!**

### What kinds of Exercise are best?

Choose activities that make you breathe deeply and make your heart work harder. Do activities that you enjoy.

For example:

Brisk walking, skiing, dancing, cycling, hiking, racquet sports etc.



If you have foot or joint problems try activities that won't put stress on them.

For Example: Swimming, rowing, cycling etc.



**Exercise can be fun!**

## How to start?

- 1) Let your doctor or healthcare professional know that you want to start an exercise program. Have them check your overall health to make sure you can exercise safely.
- 2) Pick an activity that you like, choose a time and develop a daily routine.
- 3) Set a goal that you are confident you can achieve.
- 4) Before you start your exercise, check your blood sugar.
- 5) Warm up your body for 10 – 15 minutes by stretching and moving your arms and legs to get your circulation moving.
- 6) Set a length of time you want to exercise. Start small and gradually build up the time in 5 – 10 minute increments. Health Canada Physical Activity Guidelines recommend exercising 20 – 30 minutes of moderate effort 4 – 7 days a week.
- 7) After you exercise cool down for 10 – 15 minutes by stretching or walking slowly.

## When to check your Blood Glucose.

- 1) **Check your blood glucose before you exercise.**  
If you take diabetes medication you may have low blood glucose levels during and after exercise. Learn how exercise affects your body.
- 2) **Check blood glucose during new exercises.**  
This can help you predict how a new sport will affect your blood glucose levels.
- 3) **Check blood glucose after lengthy or strenuous exercise.**  
Hard workouts of more than one hour can lower blood glucose for up to 24 hours.

# Cardiovascular Exercise

## How hard should I exercise?

Take the “Talk Test”. While exercising, you should feel a little warm, break into a light sweat, and have increased breathing (but not gasping). If you can talk and carry on a conversation during this time then your activity level is just right.

## Use the *Fitt* Principle:

- **F**requency: 3-6 times per week
- **I**ntensity: Moderate intensity (3-5 out of ten), talk but not sing
- **T**ime: 20 or more minutes
- **T**ype: anything you enjoy that gets your heart rate elevated: walking, bicycling, hiking, swimming, etc.

## Am I exercising too hard?

Use this tool to monitor your “Perceived Rate of Exertion” (also called Borg Scale of Exertion). Rate yourself from 0 – 10

| Rating Perceived Exertion |                 |
|---------------------------|-----------------|
| 0                         | Nothing         |
| 0.5                       | Very, very easy |
| 1                         | Very Easy       |
| 2                         | Easy            |
| 3                         | Moderate        |
| 4                         | Somewhat hard   |
| 5                         | Hard            |
| 6                         |                 |
| 7                         | Very hard       |
| 8                         |                 |
| 9                         |                 |
| 10                        | Very, very hard |
| 10+                       | Maximal         |

Reference: Canadian Association of Cardiac Rehabilitation. Borg Scale

| Sample Walking Program<br>For People <i>New</i> to Exercise |    |    |    |    |    |    |    |    |    |    |
|---|----|----|----|----|----|----|----|----|----|----|
| Week  | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 |
| Minutes Walking   | 10 | 10 | 15 | 20 | 20 | 20 | 25 | 30 | 30 | 35 |
| Walks per week  | 2  | 3  | 3  | 3  | 4  | 4  | 4  | 4  | 4  | 4  |

| Sample Walking Program<br>For People Who <i>Exercise Regularly</i> |    |    |    |    |    |    |    |    |    |    |
|--|----|----|----|----|----|----|----|----|----|----|
| Week   | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 |
| Minutes Walking  | 20 | 20 | 25 | 30 | 30 | 35 | 35 | 40 | 40 | 45 |
| Walks per week   | 3  | 4  | 4  | 4  | 4  | 4  | 5  | 5  | 5  | 5  |

## Exercise And Your Blood Sugar

| Type of exercise  | If blood sugar is... | Increase food intake   | Food suggestions  |
|---|----------------------|--|---|
| Exercise short duration and low to moderate intensity. (Walking or leisurely bicycling <30min)      | <5                   | Eat a fast acting carb 15-20 g before starting                                 | 1 cup of any juice  |
|   | >5                   | No extra food is needed  | NOT diet drinks   |
|   |                      |  |   |
| Moderate exercise lasting 1 hour (tennis, swimming, jogging, biking, golfing)                       | <5                   | Eat 25-50 g of carbs before starting, and add 10-15 g per hour of exercise     | Fruit and ½ of a protein sandwich   |
|   | 5-10                 | No extra food needed   |   |
|   | >17 Fasting          | Test for ketones, do not begin exercise until blood sugar is better controlled | Follow-up with more testing that day, if numbers do not go down see your doctor |
|   |                      |  |   |
| Strenuous activity lasting 1-2 hours (football, hockey, basketball, swimming, shoveling heavy snow) | <5                   | Eat 50 g carbs before starting, and monitor BS during the exercise.            | Fruit, whole sandwich with protein and milk                                     |
|   | 5-10                 | 25-50 g carbs depending on intensity of exercise                               | Protein sandwich with milk  |
|   | >17 Fasting          | Follow instructions in moderate exercise                                       | Do not exercise until safe  |

## Tips for Success

- a) **Time your exercise around your meals.** Exercise 30 – 60 minutes after you eat because this is when your blood sugar is highest. (Note: if you have a heart condition wait 2 hours after eating).
- b) **Drink water** before, during & after exercise – recommendation is 120 mL 20 minutes prior to exercise and every 20 – 30 minutes after.
- c) **Always carry 15 grams fast acting carbohydrate** (glucose tablets, 3 packs of sugar dissolved in water, 175 mL (¾ cup) of juice or regular soft drink, 6 lifesavers, 15mL honey,) **ONLY** eat this **IF** you feel the symptoms of **low blood sugar**. These symptoms are dizziness, confusion, sweatiness, shakiness etc.
- d) **Take care of your feet.** Wear smooth fitting cotton socks and supportive shoes. Check for blisters, redness and tender areas before and after exercise.
- e) **Wear your medical alert tag.** Carry personal identification and a list of meds.
- f) Exercise with a friend, or let someone know when and where you will be exercising.
- g) If you are “out of shape”, it may take weeks to reach your goal! **Go at your own pace.**
- h) Use a calendar to track your progress.
- i) A pedometer can help you track your progress. Attach it to your belt and it will count your steps.

- j) The most important thing about exercise is **consistency!**
- k) If you have to miss a day, don't worry - just get back on track as soon as you can.
- l) Check your blood sugar before and after the exercise.
- m) If you are having trouble managing your blood sugar levels before or after exercise be sure to **ask for help from a health professional** such as your diabetes educator.
- n) **Remember to have fun!**

## Resources

- Vancouver Coastal Health Diabetes Education Programs [www.vch.ca](http://www.vch.ca)
  - Vancouver clinic 604-875-5910
  - Richmond Garratt Wellness Centre (English, Cantonese, Mandarin) 604-875-5910
  - Lions Gate Hospital 604-984-5752
  - St Paul's Diabetes Treatment and Teaching Center 604-806-8357
  - Vancouver Chinese Diabetes Education Centre 604-684-1628
  - Powell River 604-485-3202
  - St. Mary's Hospital, Sechelt 604-885-8630
- Goal setting. Healthy Living Action Plan
- Pedometer: a simple gadget that will count your steps. Used to help set goals.

*continued....*

- BODY BASICS for Type 2 Diabetes written by Karen Webb 2004 [www.bodybasicsforlife.com](http://www.bodybasicsforlife.com)
- Local resources
- Parks & Recreation - check your local listings
- Handbook for Physical Activity Guide. Health Canada 1-888-334-9769 [www.paguide.com](http://www.paguide.com)
- Canadian Diabetes website [www.diabetes.ca](http://www.diabetes.ca)
- Living a Healthy Life with Chronic Conditions – [www.vch.ca/diabetes/cdmp.htm](http://www.vch.ca/diabetes/cdmp.htm) - a fun and practical course that can help people with chronic conditions overcome these daily challenges and maintain an active, fulfilling life. Participants learn about healthier ways to live and gain confidence; they are motivated to manage their health and feel more positive about their lives. They are given skills and techniques so they have the tools they need to help themselves.

For more copies, go online at <http://vch.eduhealth.ca> or email [pchem@vch.ca](mailto:pchem@vch.ca) and quote Catalogue No. **FL.870.D541**

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[www.vch.ca](http://www.vch.ca)