

Type 2 Diabetes^o

Your Guide To Getting Started

Information on:

What is Type 2 Diabetes

Healthy Eating

Active Living

Blood Glucose Testing



Saskatchewan
Ministry of
Health

Living Well With Diabetes

The information in this booklet can help you start to take care of your diabetes. You will find information that will give you the tools you need to take charge of your diabetes care. It will also let you know who to call for assistance as you begin your journey of living a long, healthy life with diabetes.

When you first hear you have diabetes, you may feel scared, shocked, overwhelmed or even angry. These feelings are common. Stay positive. Diabetes is manageable. You can do it!

Others living with diabetes are a great support.
Talk to someone today.

As you learn to live healthy with diabetes talk to your friends and family about your diabetes and let them offer support.

Remember there are many people and agencies that can help you. Call today.



General Healthy Living Guidelines

- ✓ Eat in a healthy way; follow Canada's Food Guide
- ✓ Strive for daily physical activity
- ✓ Maintain a healthy weight
- ✓ Keep your blood sugar levels in your target range
- ✓ Have your blood pressure checked every 3-6 months
- ✓ Keep your cholesterol and other blood fats in target range
- ✓ Take your medications as directed
- ✓ Don't smoke or chew tobacco
- ✓ Seek help if you feel anxious, depressed or stressed

Discuss with your health professional what you can do to stay healthy.

KNOW YOUR ABCs of diabetes care

A = A1C (measure of blood sugar levels over previous 2-3 months)

Target 7% or lower

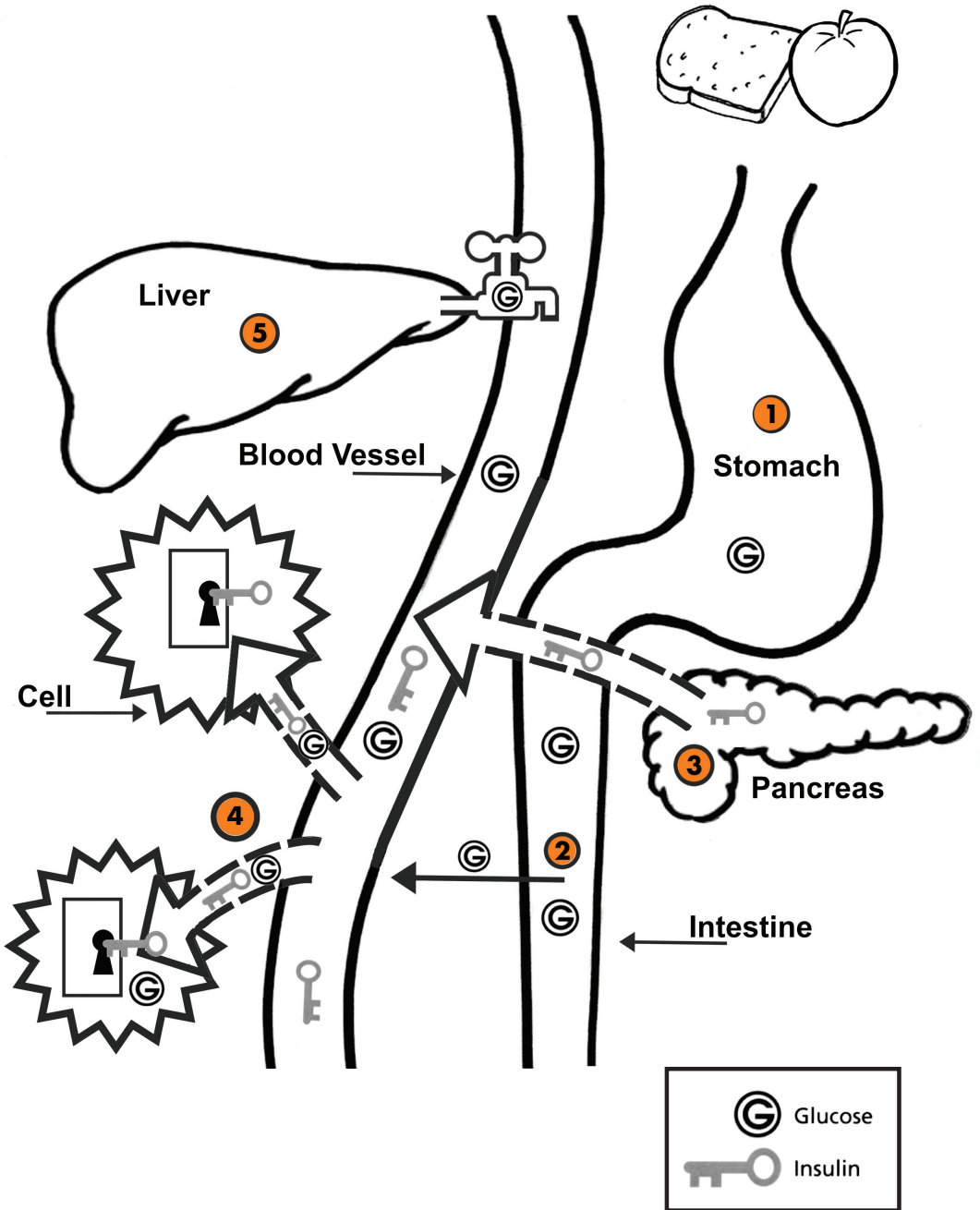
B = Blood Pressure Target 130/80 mm/Hg or lower

C = Cholesterol LDL: 2 mmol/L or lower



Total cholesterol to HDL ratio 4 or lower

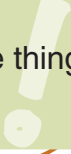
Understanding Type 2 Diabetes

Use this diagram to understand what happens when you eat. The numbers correspond to the statements on the following page.



Let's look at how the body uses sugar:

- 1** When you eat food, it gets broken down in your stomach. Food travels from your stomach to the intestine.
- 2** Much of the food you eat gets broken down into glucose  and goes into your blood. Glucose and sugar mean the same thing.
- 3** As the amount of sugar starts to rise in the blood stream, the pancreas releases insulin. 
- 4** Insulin carries the sugar from the blood and unlocks the door of the cells in your body to let the sugar in. All cells need sugar for energy.
- 5** When there is too much sugar, it gets stored in the liver or changed into fat. The liver will deliver sugar to the blood when you need it, such as when you are sleeping.

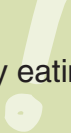
Glucose and sugar mean the same thing. 

What Happens When You Have Type 2 Diabetes?

- Your body cannot use insulin properly
- Your body does not make enough insulin
- Your liver may put glucose back into the blood when not needed

This causes the sugar to stay in the blood and you have high blood sugar.

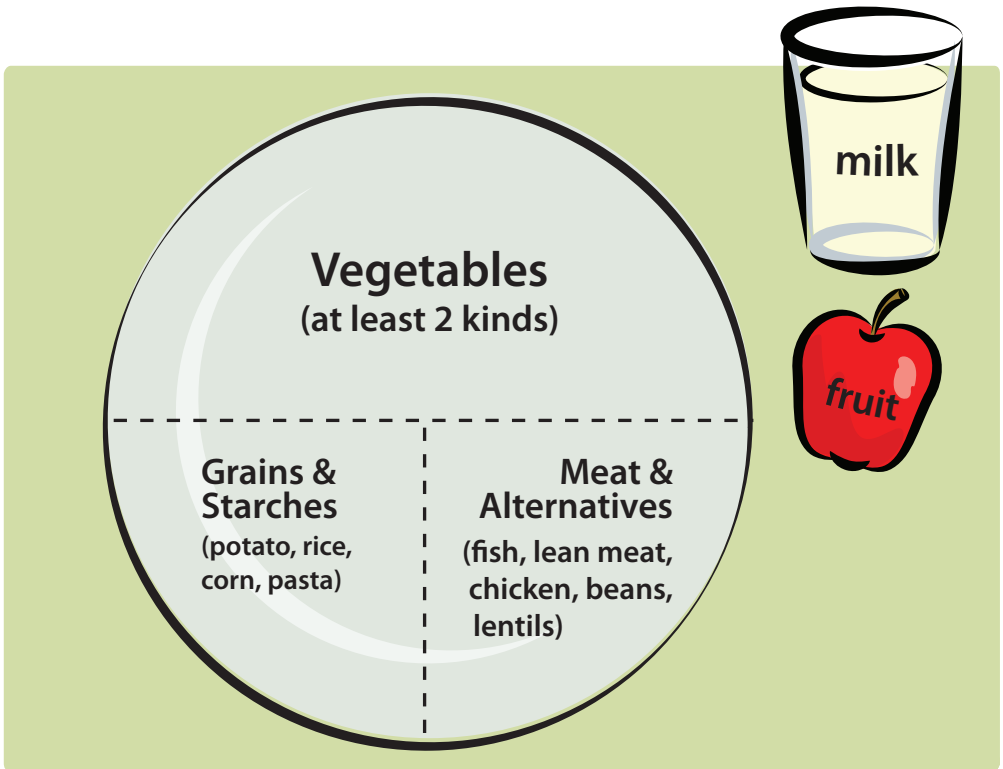
Type 2 Diabetes is too much sugar in the blood.

The Good News Is
Diabetes can be managed by healthy eating,
active living and medications. 

Healthy Eating

Healthy eating helps you feel great, manage your ABCs of diabetes, and maintain a healthy weight.

What a Balanced Meal Looks Like!



Be sure to eat breakfast. It provides a good start to the day.

It is natural to have questions about what food to eat. A dietitian can help you. See contact information on back page.

Healthy Eating Guidelines:

The following information can be used in combination with Canada's Food Guide:

- ✓ Eat 3 balanced meals every day.
- ✓ Space your meals no more than 4 – 6 hours apart.
- ✓ If snacks are a part of your day, include a healthy snack between your meals and/or before bed.
- ✓ Choose whole grain breads, cereals, noodles, brown rice or potatoes with skin at every meal.
- ✓ Eat more vegetables.
- ✓ Use low fat cooking methods (grilling, broiling, baking, poaching or barbecuing) instead of frying.
- ✓ Limit your salt intake. Processed and fast foods tend to have higher levels of salt (e.g. bologna, wieners, TV dinners, canned or dried soups).
- ✓ Limit your intake of alcohol as it may affect your blood sugars.



Drinking fruit juice, regular pop and sweetened drinks will raise your blood sugar. If thirsty, water is the best choice.

Carbohydrate

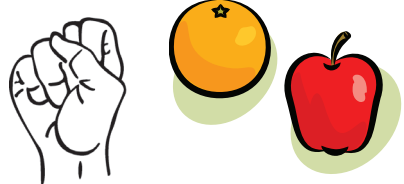
- Carbohydrate includes grains and starches, milk, fruit and sugars
- You need carbohydrate as the main source of energy for your body
- Carbohydrates break down into sugar which goes into your bloodstream
- Include carbohydrate foods with each meal

When planning a meal your hands can be very useful:
Choose an amount the size of your fist.

Grains and Starches



Fruits



Milk & Alternatives

Have an 8 oz (250 ml) glass of 1% or skim milk or $\frac{3}{4}$ cup (175 ml) of yogurt at each meal



Choose MORE often:

- Whole grain breads, crackers, and baked bannock
- Whole grain cereals and noodles
- Brown and wild rice and other grains
- Beans, peas and lentils
- Potato and corn
- Milk and yogurt (less than 2% milk fat)
- Fruit
- Wild berries

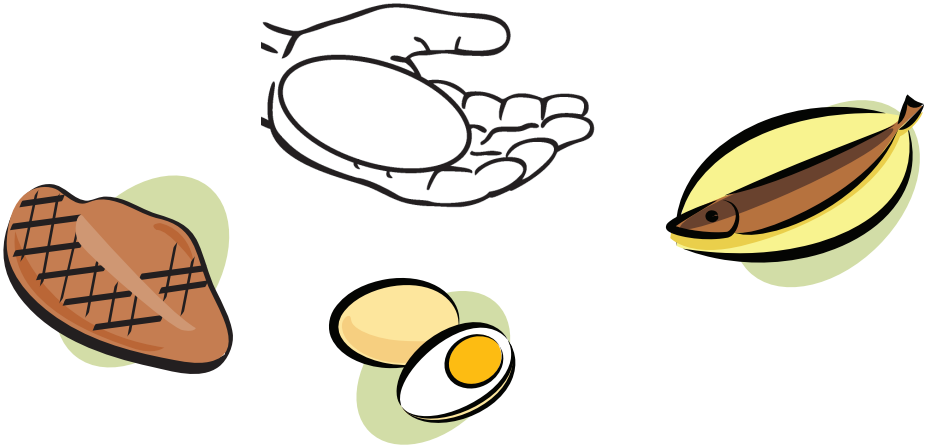
Choose LESS often:

- Fruit juice, regular pop, sweetened drinks, and drinks made from crystals
- Baked goods, muffins, cakes and pies
- Sugar, honey, syrup, jam, jelly and molasses
- French fries and potato chips
- Candy and chocolate
- Ice cream and frozen yogurt

Protein

- Protein includes meat and alternatives (dried beans and lentils)
- Protein is not changed into sugar in your body
- Protein foods help build muscles and maintain all body tissues
- Eating large amounts of protein can cause weight gain and can damage the heart and blood vessels

Choose an amount of protein up to the size of the palm of your hand and the thickness of your little finger at each meal.



Foods that contain Protein:

- Lean meat – beef/pork
- Beans, peas and lentils *
- Poultry (without skin)
- Eggs
- Fish and shellfish
- Soy products, i.e. tofu
- Nuts & seeds (unsalted) (small portions)
- Cheese (less than 20% milk fat [MF])
- Peanut butter
- Wild meat and game

* Also contain carbohydrate

Fat

- Fat does not change into sugar in your body
- Fat is needed for growth and protection of organs
- Eating too much fat can cause weight gain and can damage the heart and blood vessels

Limit fat to an amount the size of the tip of your thumb at each meal.



Choose MORE often:

- Non-hydrogenated margarine
- Vegetable oil (canola, sunflower)
- Nuts and seeds (small portions)
- Low-fat salad dressings
- Avocado

Choose LESS often:

- Butter and hard/block margarine
- Shortening and lard
- Bacon
- Skin of chicken
- Cream, cream cheese, sour cream
- Fried food

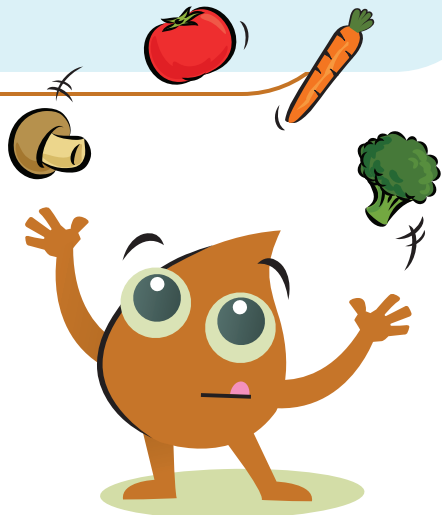
Vegetables

- Vegetables are full of vitamins and minerals and provide fiber
- Most vegetables are low in carbohydrates (except potatoes and corn)
- Enjoy them freely!

Choose as many vegetables as you can hold in both hands at each meal.



- Broccoli
- Cauliflower
- Peas
- Green / yellow beans
- Celery
- Carrots
- Cucumber
- Coloured peppers
- Mushrooms
- Eggplant
- Spinach
- Cabbage
- Brussel sprouts
- Zucchini
- Lettuce and other greens
- Asparagus
- Mixed vegetables
- Squash
- Beets
- Tomatoes
- Turnips
- Radishes
- Onions



Sample Meal plan #1

Breakfast

High-fibre cereal (½ cup/125 ml)
Toast (1 slice)
1 Orange
Low-fat milk (1 cup/250 ml)
Peanut butter (1 tbsp/15 ml)
Tea or coffee and/or water

Suggestions for larger appetites:

- Add 1 slice of toast (or a small bagel) with 1 tbsp (15 ml) peanut butter

Lunch

1 sandwich
- 2 slices whole wheat bread or 6" pita
- lean meat, chicken, fish (2 oz/60 g)
- tomato slices and lettuce
- margarine (1 tsp/5 ml)
Carrot or celery sticks
Low fat fruit yogurt (½ cup/125ml) or 1 fruit
Tea or coffee and/or water

Suggestions for larger appetites:

- Add 1 cup (250 ml) of broth soup
- Add 1 oz (30 g) of lean meat, chicken or fish to the sandwich

Dinner (Supper)

Baked potato (1 medium) or rice (⅔ cup/150 ml) or noodles/pasta (1 cup/250 ml)
Vegetables
Margarine (1 tsp/5 ml)
Lean meat, chicken or fish (2 oz/60 g)
Green salad
Low-fat dressing (1 tbsp/15 ml)
Grapes (15) or 1 pear
Low-fat milk (1 cup/250 ml)
Tea or coffee and/or water

Suggestions for larger appetites:

- Have a large potato or 1 cup (250 ml) rice or 1 ½ cups (375 ml) noodles
- Add 2 oz (60 g) of lean meat, chicken or fish



How do your hands compare to these measured amounts?

Sample Meal plan #2

Breakfast

1 egg (poached)
Ham (1 oz/30 g)
Whole wheat English muffin
or bannock
Low-fat milk (1 cup/250 ml)
Tea or coffee and/or water

Suggestions for larger appetites:

- Add 1 oz (30 g) ham
- Add a fruit

Lunch

Wild meat (2 oz/60 g)
Raw carrots
Sliced cucumber
Low-fat ranch dressing for dip
(1 tbsp/15 ml)
Whole wheat spaghetti (3/4 cup/175 ml)
Tomato sauce (1/4 cup/50 ml)
Unsweetened, canned fruit (1/2 cup/125 ml)
Tea or coffee and/or water

Suggestions for larger appetites:

- Add 1 oz (30 g) wild meat
- Add 1/2 cup (125 ml)
whole wheat spaghetti and
1/4 cup (50 ml) tomato sauce

Dinner (Supper)

Wild meat stew (2 cups/500 ml)
Whole wheat bun (1)
Margarine (1 tsp/5 ml)
Tossed salad
Low-fat dressing (1 tbsp/15 ml)
Low-fat milk (1/2 cup/125 ml)
Tea or coffee and/or water

Suggestions for larger appetites:

- Add 1/2 cup (125 ml)
wild meat stew
- Add 1/2 cup (125 ml)
low-fat milk

Snacks are optional...if snacks are part of your day, try:

- 1 piece of whole wheat toast with 1 tbsp (15 ml) peanut butter
- 1/4 cup (50 ml) roasted, unsalted almonds
- 1 medium apple or banana with 1 oz (30 g) of low-fat cheese
- 3/4 (175 ml) cup low-fat yogurt
- whole grain crackers (8) with 1 oz (30 g) low-fat cheese
- 1/2 cup (125 ml) whole grain cereal with low-fat milk

Active Living

Active living is anything that will get you moving such as walking, dancing, or working in the yard.

The benefits of active living:

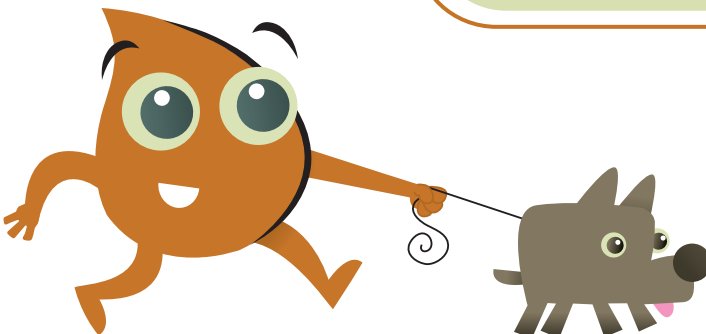
- ✓ Helps you deal with stress
- ✓ Improves your ABCs
- ✓ Uses up extra sugar in your blood and helps your own insulin work better
- ✓ Makes you feel more energetic
- ✓ Makes your heart and bones strong
- ✓ Helps blood flow and tones muscles
- ✓ Keeps your body and your joints flexible
- ✓ Helps control weight

You can be active without going to the gym, playing sports or using fancy equipment.

Active living begins with a single step. It's never too late to improve your level of fitness!

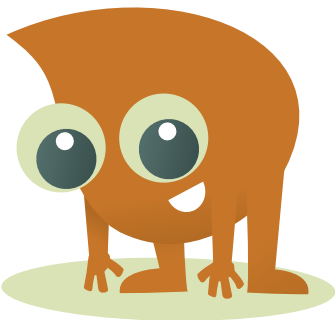
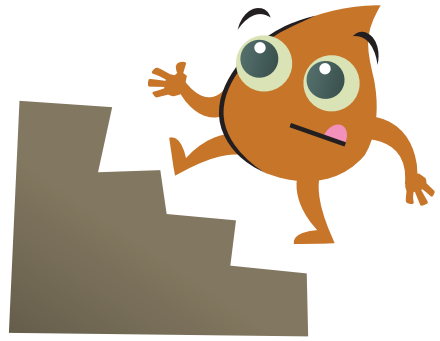
Being active is good for your body and state of mind.

If you have not exercised much in the past, talk to your doctor or nurse practitioner to make sure it is safe for you to start.



Suggestions for Active Living

- ✓ Start slowly, listen to your body
- ✓ Choose activities you enjoy
- ✓ Set realistic goals
- ✓ Walk whenever you can:
 - park the car farther away
 - walk to do your errands
 - take the stairs
 - walk the halls of your building
 - take a nature walk
- ✓ Reduce long periods of sitting, watch TV less or use the computer less
- ✓ Stretch for a few minutes every hour
- ✓ Check out the fitness programs and services in your community and see if anything interests you
- ✓ Try one class to start – you don't have to make a long-term commitment
- ✓ Start with the activities you are doing now, but do them more often
- ✓ Join a friend who is already active



Minutes count!

- Add it up – 10 minutes at a time.
- Aim for 30-60 minutes of activity every day.

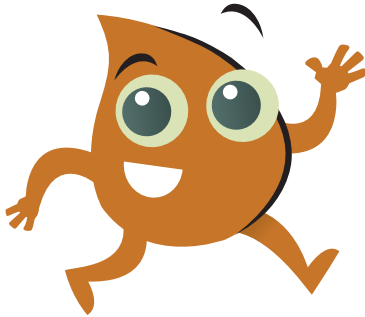
Types of Activities

Endurance, flexibility and strengthening activities keep your body healthy.

Endurance:

Helps your heart and lungs by increasing your heart rate and breathing.

- ✓ Walking
- ✓ Yard work
- ✓ Dancing
- ✓ Skating
- ✓ Swimming



Flexibility:

Helps you move easily, keeping your muscles relaxed and your joints mobile.

- ✓ Gardening
- ✓ Mopping/vacuuming
- ✓ Curling/golfing
- ✓ Bowling
- ✓ Yoga, Pilates, Tai Chi



Strength:

Helps your muscles and bones stay strong and improves your posture.

- ✓ Cutting wood
- ✓ Shovelling snow
- ✓ Raking and carrying leaves
- ✓ Climbing stairs
- ✓ Strength training routines
- ✓ Lifting weights



Try to do some of each type every day.

Taking Medication

Good diabetes management is about **you** taking control of your blood glucose, blood pressure and cholesterol. In addition to choosing healthy foods and increasing your activity level, medications may be needed to get your numbers in target range. Often, more than one medication is required to manage the ABCs of your diabetes care.



ABCs of diabetes
A = A1C (Blood Sugar)
B = Blood Pressure
C = Cholesterol

- Blood glucose may be treated with pills and/or insulin injections
- Over time your medications will change
- Medications may be needed to manage blood pressure and cholesterol. Ask your doctor what is right for you.
- Low dose aspirin (ASA) can reduce the risk of heart attacks for most people with diabetes. Talk to your doctor.
- Medications have to be taken in the **right amount** and at the **right time**
- Talk with your pharmacist or doctor to make sure you understand your medications
- If you feel you are doing all that you can do and your ABCs remain high – talk to your doctor about your medications

There are many financial costs for the person living with diabetes. Talk to your pharmacist about assistance that may be available.

Do not feel that you have failed when you need to change your medications.

Blood Glucose Monitoring

Why Should I Test My Blood Glucose Levels?

- Blood glucose monitoring puts you in control of your diabetes
- It helps you understand how food, activity, and medications affect your blood glucose
- You need to test your blood glucose so you know what it is

How Do I Test My Blood Glucose Levels?

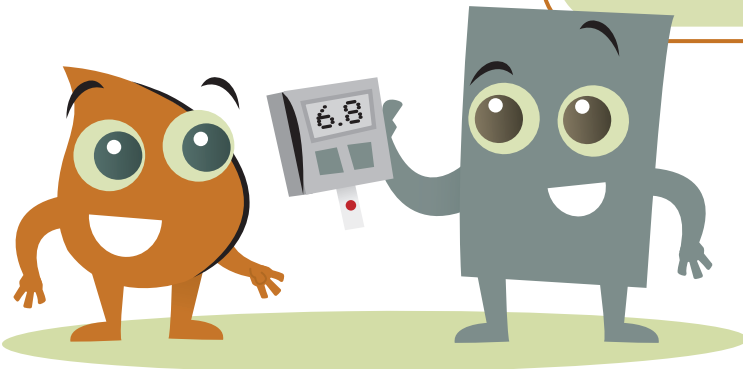
A blood glucose meter is used to test your blood glucose. Meters can be purchased at most pharmacies. A pharmacist or diabetes educator can provide you with the training you need to use your meter.

Ask your diabetes educator or pharmacist about:

- The size of the drop of blood needed
- Where and how to poke your finger
- Does the meter need to be coded
- How to check if the meter is accurate
- What to do with used lancets

Always wash your hands before testing!

Remember, monitoring assists you in managing your diabetes.



When and How Often Do I Test?

It is recommended that you check your blood sugar regularly and record results in your logbook. To start, check your blood sugar one day per week.

Suggested times to test are:

- ✓ Before meals
- ✓ 2 hours after a meal
- ✓ At bedtime

Remember to check your blood sugars at different times of the day.

In your log book:

- ✓ Record in the correct column for the time of day
- ✓ Add comments about your day – activities, stress, food

Increase your blood glucose testing if:

- ✓ Your blood sugar is too high or too low
- ✓ You become ill or are stressed
- ✓ There are changes to your food choices, activity level or medication

What are my Blood Glucose Targets?

- Between 4 – 7 mmol/L before eating
- Between 5 – 10 mmol/L two hours after eating

Individual targets may be recommended by your health professional.



High Blood Sugar

What is high blood sugar?

Blood sugar that is higher than the target range.

When it might happen?

- ✓ You are ill
- ✓ You are under stress
- ✓ Your medications, eating and activity are not in balance

How you may feel?

- ✓ Tired
- ✓ Thirsty
- ✓ Urinate frequently
- ✓ Blurred vision



What to do when your blood sugars are often higher than 11 mmol/L:

- ✓ Talk to your doctor, nurse practitioner or pharmacist as medications may need to be changed
- ✓ See a diabetes educator
- ✓ Be more active – see activity section

What to do when you are sick:

If you use insulin or some diabetes medications, you need to keep a close check on your blood sugars when you are ill. You may need to:

- ✓ Test your blood sugars every 2-4 hours.
- ✓ Continue to take your diabetes medication and/or insulin.
- ✓ Drink plenty of sugar-free fluids.
- ✓ Consume some carbohydrate every hour - try juice or regular pop if you cannot eat.
- ✓ Call your doctor or go to a medical centre if you vomit more than twice in 12 hours or if you feel you need to discuss your illness.

Low Blood Sugar

What is a low blood sugar?

Blood sugar less than 4 mmol/L.

When it might happen?

- You are on insulin or certain diabetes medication
- You didn't eat enough
- You are more active
- Your medication needs adjusting

How you may feel

You may feel shaky, light-headed, nervous, irritable, confused, hungry, sweaty, headachy, weak, numb around lips/mouth.

If you experience low blood sugar, you need to treat it right away!!

What do you do?

1 Eat or drink one fast acting sugar choice:

- ✓ 15 g of glucose in the form of glucose tablets
- ✓ 3 tsp (15 g) sugar, honey or syrup
- ✓ ¾ cup (175 ml) of juice or regular pop



2 Wait 10 to 15 minutes; check your blood sugar again.

If it is still low:

- ✓ Treat again!
- ✓ Continue to treat until blood sugar is greater than 4 mmol/L

3 If your next meal is more than 1 hour away, or you are going to be active, eat a snack, such as one of the following:

- ✓ ½ meat sandwich
- ✓ 6 soda crackers and cheese
- ✓ 1 slice of toast with peanut butter or 1 oz of low fat cheese

Important Tests for Good Basic Care

The following are important tests for diabetes care. You may need some tests more often than indicated below. Know what tests are recommended and talk to your doctor or nurse practitioner about these tests.

When

What Test?

At diagnosis

- Kidney tests: test performed at the lab
- Eye examination through dilated pupils by an eye specialist
- Foot examination to check for nerve damage and other problems
- Questions about your ability to get and maintain an erection and if you experience foot and leg pain when walking
- Cholesterol and other blood fat tests

Approximately every 3 months

- A1C
- Blood pressure

Every 6 to 12 months

- Foot examination at least once a year and sooner for skin wounds or sores that don't heal quickly

Every year

- Kidney tests
- Meter check against a lab fasting blood glucose test
- Eye examination by an eye specialist or optometrist – more often if eye disease is present

Every 1 to 2 years

- Cholesterol and other blood fats tests

Regularly/Periodically

- Questions about depression and/or anxiety
- Self check of feet
- Blood pressure

Developed by the Type 2 Diabetes Provincial Working Group. Information in this resource was provided in part by the Canadian Diabetes Association.

Contact Information and Resources

To find a Diabetes Educator:

- Call your local Health Region.
- Call the HealthLine @ 1-877-800-0002.
- On Reserve call your local Community Health Clinic or Tribal Council.
- Ask your doctor or nurse practitioner.
- To find a Live Well™ with Chronic Conditions Program call the HealthLine @ 1-877-800-0002.

For Diabetes Information Contact:

Canadian Diabetes Association (CDA)
1-800-BANTING (226-8464) www.diabetes.ca

CDA North Saskatchewan Regional Leadership Centre
1-800-996-4446

CDA South Saskatchewan Regional Leadership Centre
1-800-297-7488

Saskatchewan HealthLine
1-877-800-0002 www.healthlineonline.ca

First Nations Inuit Health
(306) 780-5449 www.hc-sc.gc.ca/fnih-spni/index_e.html

National Aboriginal Diabetes Association
1-877-232-6232 www.nada.ca

Websites:

Dietitians of Canada	www.dietitians.ca
Heart and Stroke Foundation	www.heartandstroke.ca
Health Canada-Canada's Food Guide	www.healthcanada.gc.ca/foodguide
In Motion	www.in-motion.ca
International Diabetes Federation	www.idf.org
Kidney Foundation of Canada, Sask Branch	www.kidney.sk.ca
Saskatchewan Ministry of Health	www.health.gov.sk.ca
Saskatchewan Prevention Institute	www.preventioninstitute.sk.ca

**Remember, the more you learn about diabetes
the better able you are to take charge of your diabetes.**