

**Diabetes
for
Healthcare
Workers**

CPG Canadian Diabetes Association


Today

- Learn about diabetes and how serious it is
- How to help you identify diabetes in people in your care
- How to help people in your care that have diabetes.

Canadian Diabetes Association

About Diabetes

- To use glucose for energy, your body needs insulin
- With diabetes, the body makes little or no insulin, or doesn't use the insulin well
- Blood glucose levels rise when there is too little insulin
- High blood glucose levels can lead to serious problems



Canadian Diabetes Association

About Diabetes

- A lasting disease with no cure
- The person with diabetes must manage it
- More than 3 million Canadians have diabetes
- 1 in 3 people with diabetes don't know they have it
- More than half of Canadians with type 2 diabetes have other health problems



Type 1 Diabetes

- Pancreas produces little or no insulin
- About 10% of people with diabetes have type 1
- Seen most often in children and young adults
- They need insulin shots



Type 2 Diabetes

- About 90% of people with diabetes have type 2
- Seen most often in adults
- Managed with food, exercise, blood glucose testing, pills, and sometimes insulin



Gestational Diabetes

- Affects about 3.7% of all pregnant women
- It means a greater risk of getting diabetes later in life
- All pregnant women should be tested



Prediabetes

- Blood glucose levels are higher than normal but below the level for diabetes
- Greater risk of getting type 2 diabetes and heart disease



The Risk Factors

- There are 2 kinds of risk factors for type 2 diabetes:
 - things you can't change
 - things you can change



Risk Factors You Can't Change

- Age
 - people over 40 are at a greater risk
- Family history
 - risk is highest when a parent, brother, sister, or child has diabetes
- Ethnic background
 - Aboriginal, Hispanic, Asian, South Asian, or African
- Other risk factors



Risk Factors You Can Change

- Too little exercise
- Being overweight, especially around the middle
- High blood pressure
- High cholesterol



Signs and Symptoms

- Very thirsty
- Need to urinate often
- Change in weight
- Very tired
- Blurred vision



Signs and Symptoms

- Feeling sick and vomiting
- Many infections
- Cuts and bruises are slow to heal
- Tingling or loss of feeling in hands or feet



Signs and Symptoms

- With type 1 diabetes, symptoms are quick and dramatic
- With type 2, symptoms are slow or not even there
- Many people who don't know they have type 2 diabetes, have no symptoms at all
- Get tested!



Diabetes is Serious

- Diabetes is serious and can be life-threatening
 - early death
 - heart disease
 - stroke
 - blindness
 - kidney failure
 - erectile dysfunction
 - amputation

Good news! These problems may be prevented or delayed.



What Can You Do?

- A good healthcare team can lower the risk of complications
- You can find people at risk or those who may not know they have diabetes
- Know the risk factors
- Know the signs and symptoms
- Know the complications
- Do something about it!



Taking Action

- Ask your clients about doctor visits
- Are they taking their medications?
- Give suggestions on how to live a healthy, active lifestyle
- Are they keeping their weight in a healthy range?



Taking Action

- Keep blood glucose, blood pressure, and cholesterol levels in the target range
- Check their feet if you bathe them
- Talk to them about stress
- Encourage them to stop smoking



Healthy Food Choices

- Healthy eating is an important part of preventing and managing diabetes
- Canada's Food Guide to Healthy Eating
- Just the Basics: Healthy Eating for Diabetes Management and Prevention
- Beyond the Basics
- Registered Dietitian



Becoming More Active

- Better blood glucose management
- More energy
- Better cholesterol levels
- Healthy weight
- May even need less medication



Becoming More Active

- Try to get 150 minutes of activity each week
- Add some resistance exercise 3 times each week



Medication

- May need more than lifestyle changes to manage diabetes
- Doctor may prescribe drugs
- Every person is different and may need different kinds of medication



Medication

- Some pills take up to 6 weeks to work
- Some pills interact with other drugs or alcohol
- Check with doctor before taking other drugs at the same time as the ones for diabetes
- Have client meet with pharmacist



Diabetes Medications

- Biguanides (Metformin) – help the liver reduce glucose production
- Glitazones (Avandia/Actos) -- body's sensitivity to its own insulin
- Insulin Secretagogues – Sulfonylureas/Meglitinides
 - Stimulate the pancreas to make more insulin
 - Differ with reaction times – long acting vs short acting
 - Glyburide (Diabeta), Glimepiride (Amaryl), Glucosnorm & Starlix



Diabetes Medications

- DPP-4 Inhibitors
 - Sitagliptin (Januvia) is a new medication that works with the body's incretins.
 - Incretins are secreted in response to food
 - Januvia lowers blood glucose 2 -ways:
 - Stimulate pancreas to make more insulin &
 - Reduce the amt of glucose made by liver
- Januvia only approved for use in combination with Metformin



Insulin

- Some people need insulin by itself or with pills
- The most important thing is managing blood glucose levels



Insulin - Types

- a) Rapid-acting analogue – Humalog/NovoRapid
- b) Short-acting – Humulin -R/Novolin ge Toronto
- c) Intermediate-acting – Humulin N/Novolin ge NPH
- d) Extended long-acting – Lantus/Levemir
- e) Premixed – Humalog Mix 25/Humulin 20/80, 30/70 etc.



Blood Glucose Testing

- Check blood glucose levels often (1X/day min.)
- Learn how to use the blood glucose meter
 - how to test
 - when to test
 - the target range
- Testing helps make changes that give the best results



Blood Glucose Meters

- Size of blood drop needed
- Type and cost of the strips
- How to clean the meter
- How to check if the meter is working well
- How to code the meter
- How to get the warranty for the meter



Blood Glucose Targets

- Targets differ from person to person
- For most, target ranges are:
 - 4.0 – 7.0 mmol/L before meals
 - 5.0 – 8.0 mmol/L two hours after meals
- A1C 7% or less



Low Blood Glucose

- Hypoglycemia = blood glucose is less than 4 mmol/L
- Symptoms:
 - shaky
 - hungry
 - sweaty
 - weak
 - headaches
 - Nervous
 - numbness or tingling in tongue or lips
 - look drunk
 - fast heart beat
 - light headed
 - confused
- Some people have no symptoms



Hypoglycemia Treatment

- Check it
- Treat with::
 - 15 grams of glucose
 - 15 mL of sugar stirred in water
 - 175 mL of juice or pop
 - 6 Life Savers® (1 = 2.5 gram carbohydrate)
 - 15 mL (1 tbsp honey)



Hypoglycemia Treatment

- Wait 15 minutes and then check again
- If it is still less than 4.0, eat or drink again
- Should be 6.0 or greater to resume activity



High Blood Glucose

- Caused by imbalance in food, activity and medication, or by illness or stress
- Symptoms:
 - Thirsty
 - Tired
 - frequent need to urinate
- Find the cause and fix the problem
- Have them see their doctor



Know Your ABC's

A1C 7% or less

Blood pressure less than 130/80 mmHg

Cholesterol: LDL less than 2.0 mmol/L



Sick Day Management

- Test blood glucose every 2 to 4 hours
- Take pills or insulin
- If they can't eat, drink something with carbohydrates
- Get medical help if they vomit 2 times in 12 hours
- Check ketones



Ketone Testing

- Diabetic ketoacidosis is:
 - a serious complication of diabetes
 - the result of high blood glucose levels and ketones
 - often due to poor diabetes control or other illnesses

- Often use ketone strips



Foot Care

- High blood glucose can lead to poor blood flow and loss of feeling in feet
- Even a small cut can be a problem
- Prevent it:
 - check feet every day
 - wash and dry feet every day
 - wear shoes that fit well
 - refer to their doctor, if you see problems



Eye Care

- Eye exams are very important
- Type 1 diabetes:
 - an eye exam each year for people over 15 who have had type 1 diabetes for 5 years or more
- Type 2 diabetes:
 - get eyes checked when first diagnosed
 - if little or no retinopathy, test every 1 or 2 years
 - test more often if retinopathy is worse



Dental Care

- Gum disease is prevalent in people with diabetes
- What to do:
 - brush and floss often
 - visit the dentist often
- Tell dentist about any problems right away



Dry Skin

- A very common problem
- What to do:
 - keep the room temperature low
 - keep the room more humid
 - wear gloves for cleaning
 - don't take hot baths and showers
 - use creams



Working Together

- Get a checkup every year
- Look after their:
 - blood glucose
 - blood pressure
 - Cholesterol
 - Feet
 - Kidneys
 - eyes



You Can Help

- You can make a difference!
- Managing diabetes well every day can help people live long, healthy lives
- Finding and treating diabetes right away means fewer problems
- Know about diabetes:
 - what to look for
 - what to do
 - how to help



Diabetes & Mental Health

At the end of this session you will:

- Understand the importance of mental health and diabetes management.
- Be able to identify signs of depression and anxiety.
- Understand the importance of finding help.



Diabetes and Emotions

- Living with diabetes can be difficult at times
- It's about more than just eating right and taking medications
- Managing stress is important for maintaining healthy blood glucose levels



Increased Stress

- A person with diabetes may feel stress:
 - because they blame themselves for having diabetes or not doing enough to manage their diabetes.
 - from having to manage their diabetes on an ongoing/daily basis.
 - from the fear of developing diabetes-related complications such as nerve damage and heart disease.



Denial

- A normal emotion
- Ignoring denial can cause serious health problems
- Tips:
 - Staying informed about their health
 - Sharing thoughts and feelings



Guilt

- No one is to blame for developing diabetes
- Proper nutrition and exercise doesn't always work for everyone



Diabetes and Depression

- Depression is twice as common in people with diabetes as compared to the general population, and major depression affects at least 15% of people with diabetes.
- It often takes a mental health professional to:
 - Ask about the symptoms
 - Diagnose the disorder
 - Suggest treatment



Diabetes and Anxiety

- It's normal to feel anxious or worried at times. Everyone does.
- Anxiety disorders affect approximately 14% of people living with diabetes.
- A little anxiety can be good as it helps a person react to danger, and can help motivate them to excel at work and at home.
- But if the person often feels anxious without reason and their worries impact their quality of life, they may have an anxiety disorder.



Eating Disorders

- Anorexia
- Bulimia
- Binge Eating Disorder



Diabetes and Eating Disorders

- Teen females and young women with type 1 diabetes have about twice the risk of developing an eating disorder as their peers without diabetes.
- In people with diabetes, eating disorders can lead to poor blood glucose control and repeat hospital visits for dangerously high or low blood glucose levels.



Building a Support Network

- Feeling alone makes diabetes harder to handle
- Sometimes support can turn into "nagging"
- It is challenging when others dictate what to do



Asking for Help

- Nothing to be embarrassed about
- Talk to friends, family and their doctor
- Resources are right here in the community



Questions?



For more information

Call 1-800-BANTING
(1-800-226-8464)

Visit www.diabetes.ca or
Hamilton Resource Centre
1685 Main St. W.
905-540-2512



Thank You!