BLOOD GLUCOSE MONITORING

TIPS

1. Blood glucose control significantly influences development of complications in people with diabetes.
2. "Tight control of your blood body may mean testing your blood as often as 4 times a day and adjusting your treatment plan according to the results. Check with your health care professional to see if tight control is right for you.
3. Keep a record of your blood sugar values in a logbook.
4. Be sure to bring your logbook with you when you visit your health care professional. This will show if your blood sugar levels are within your target range and if changes need to be made to your treatment plan.
5. Make sure your monitoring equipment is in good working order. (Follow manufacturers' recommendations.)

Self-monitoring of blood glucose (SMBG) is the best way to see how your body handles food, activity, diabetes medication (medicines), stress and illness. To self-test, you will need a blood glucose monitor, a test strip and a lancing device. Ask your health care professional to show you how to do this simple.

When you test you will get a blood glucose (blood sugar) result. Your health care team will set a target range for your results. Keeping your blood sugar values in this target range will help you feel better and lessen your risk of diabetes-related problems with your eyes, kidneys and circulatory system.

Never try to rely on "feeling" your blood sugar levels. If your blood sugar increases over time, your body may adapt the feeling and you may feel fine, but be at risk for complications.

KETONE TESTING

1. Ketones can give you important information about your body, and your diabetes health status.
2. Testing your urine is the only way to tell if your body is producing dangerous ketones. These ketones are harmful to your body. A large amount of ketones in your urine can be a sign of ketoacidosis.
3. Work with your health team to make the necessary changes in your meal plan, medication and exercise plan to improve your diabetes control.

Why should you test for ketones?

Your body normally uses glucose or sugar for energy. But, when insulin is not available, your body is unable to use sugar for energy and it uses fat instead. Yet, the fat does not get used completely and what are left behind are substances called ketones. These ketones are harmful to your body and may lead to a serious condition called ketoacidosis.

What is ketoacidosis?

Ketoacidosis (key-toe-as-i-DOE-sis) is a serious condition that can lead to diabetic coma (passing out for a long time) and even death. Ketoacidosis may happen to people with insulin-dependent (type I) diabetes.

Ketoacidosis means dangerously high levels of ketones. Ketones are acids that are build up in your blood. They appear in the urine when your body doesn't have enough insulin. Ketones can poison the body. They are a warning sign that your diabetes is out of control or that you are getting sick.

TIPS

1. The Hemoglobin A_{1c} test is a blood test that tells your average blood sugar for the last two to three months.
2. The Hemoglobin A_{1c} test does not replace your day-to-day self-monitoring of blood glucose. You may use this test result along with the daily test results to measure your overall diabetes control.
3. You should have your Hemoglobin A_{1c} levels checked every three to four months. This will help determine if you need to make changes in your diabetes management plan.

What is Hemoglobin A_{1c}?

Your blood sugar levels vary from minute to minute and hour to hour. That is why you must test your blood sugar at home at certain times of the day. You may test before and after meals, before and after exercise, and whenever there are interruptions to your usual daily routine (travel, illness, stress, etc.). However, you cannot test your blood sugar all of the time! So, how can you know what your overall level of control is?

How Does Hemoglobin A_{1c} Work?

The Hemoglobin A_{1c} test measures the amount of sugar that attaches to protein in your red blood cells. Your red blood cells live for about two to three months, so this test shows your average blood sugar levels during that time. The greater the amount of sugar in your blood and the longer it remains high, the more sugar that will attach to those blood cells.

Event	Effect on Blood Sugar	When to Test
Eating/drinking	(increase)	• Before meals • 2 hours after meals • Bedtime
Exercise	(decrease)	• Before and after exercise.
Diabetes medication	(decrease)	• Before meals.
Skipping a meal	(decrease)	• If you feel clammy, cold, sweaty, shaky or confused.
Stress/illness	(increase)	• During or after any stress. • If you are thirsty, have increased urination, hunger, blurred vision, feel tired, or feel sick.

YOUR MEDICAL TEAM MAY REQUEST YOU TEST AT THE FOLLOWING ROUTINE TIMES (this will give an indication of the effect of your medication on your blood sugar)

TIME	DESIRABLE READINGS	
	Ideal	Acceptable
Before breakfast	4.0-6.5	4.0-7.5
Before lunch	4.0-6.0	4.0-7.5
Before supper	4.0-6.0	4.0-7.5
Before bed	6.5-8.0	6.0-10.0

YOU MAY ALSO BE REQUESTED TO TEST THE FOLLOWING TIMES IF YOUR MEDICAL TEAM NEEDS FURTHER INFORMATION ABOUT YOUR BLOOD SUGAR (these times indicate what effect your meals have on your blood glucose levels)

TIME	DESIRABLE READING	
	Ideal	Acceptable
2 hours after breakfast	<6.5	<8.8
2 hours after lunch	<6.5	<8.8
2 hours after supper	<6.5	<8.8
02h00 to 04h00	6.0-8.0	6.0-10.0

Test more frequently if: -
-you change your routine (e.g. diet, -exercise, or medication
-you are ill
-you are stressed

Complete this section with the help of your health care team

Times to Test

Times of Day

☐ When I wake up
☐ Before lunch
☐ hours after lunch
☐ 3 am
☐ before dinner
☐ 2 hours after dinner
☐ bedtime
☐ other time

what is my target range?

Time of the day	My target range
When I wake up	_____
Before meals	_____
2 hours after meals	_____
bedtime	_____

When should you use for ketones?
Review this session with a member of tour health care team
If your blood sugar is over 14mmol/lfor more than 24 hours (Cover 11mmol/lif gestational diabetic)
If you are ill or stressed.
If you are feeling the symptoms of high blood sugar:
Thirst or a very dry mouth
Frequent urination
Constantly feeling tired
Dry or flushed skin
Nausea, vomiting or abdominal pain.
A hard time breathing (short, deep breaths)
Fruity odour on breath
A hard time paying attention or confusion before you exercise
Each morning during pregnancy
Other times for you to test.

I will call my doctor or nurse:
If my blood sugar level is high then…. mmo/l or lower than…. mmo/l for more than…. (how many?) readings in a row or for these other reasons……..

Ketoacidosis is dangerous and serious. If you have any of the above symptoms contact your health care practitioner

Why is this test so important?
The diabetes control and complications trial was a? Study by the government. It demonstrated? The closer to normal your HbA_{lc} level was, the less? Your risk of developing the long-term complications, diabetes. If you reduce your blood sugar levels to near normal as much of the time as possible (an average) you may reduce your risks of disease. Such diseases include / disease, Nerve damage heart and blood vessel disease and kidney problems.

Who should take the haemoglobin A_{lc} Test?
Everyone with diabetes can benefit from taking this test owing to HbA_{lc} helps you and your health care and decide if you need to change your diabetes management plan.

How do I test for ketones?
- Dip a ketodiabur test strip into a sample of urine wait one minute
- Compare the test pad color to the color chart on the side of the kediabur vial
- Record your results
- Follow manufacturers recommendation for care and storage.

I will call my doctor or nurse (complete this session with the help from a member of your health care team)
If my blood sugar is higher than…mmol/l for more than 24hours
If my ketone tests show…. Amount of ketones present in my urine.

Discuss the results of your haemoglobin A_{lc} tests at every visit with your doctor and your health care team. This will help to make changes in your meal plan. Exercise and/or medications. Use the chart at right to keep track of your haemoglobin A_{lc} tests

My HbA_{1c} Test Record

Name:_____.

The normal range for my lab is ____ % to ____.

Test Date	Goal	Results	Next Test Date
_____	____%	_____%	_____
_____	____%	_____%	_____
_____	____%	_____%	_____
_____	____%	_____%	_____
_____	____%	_____%	_____
_____	____%	_____%	_____