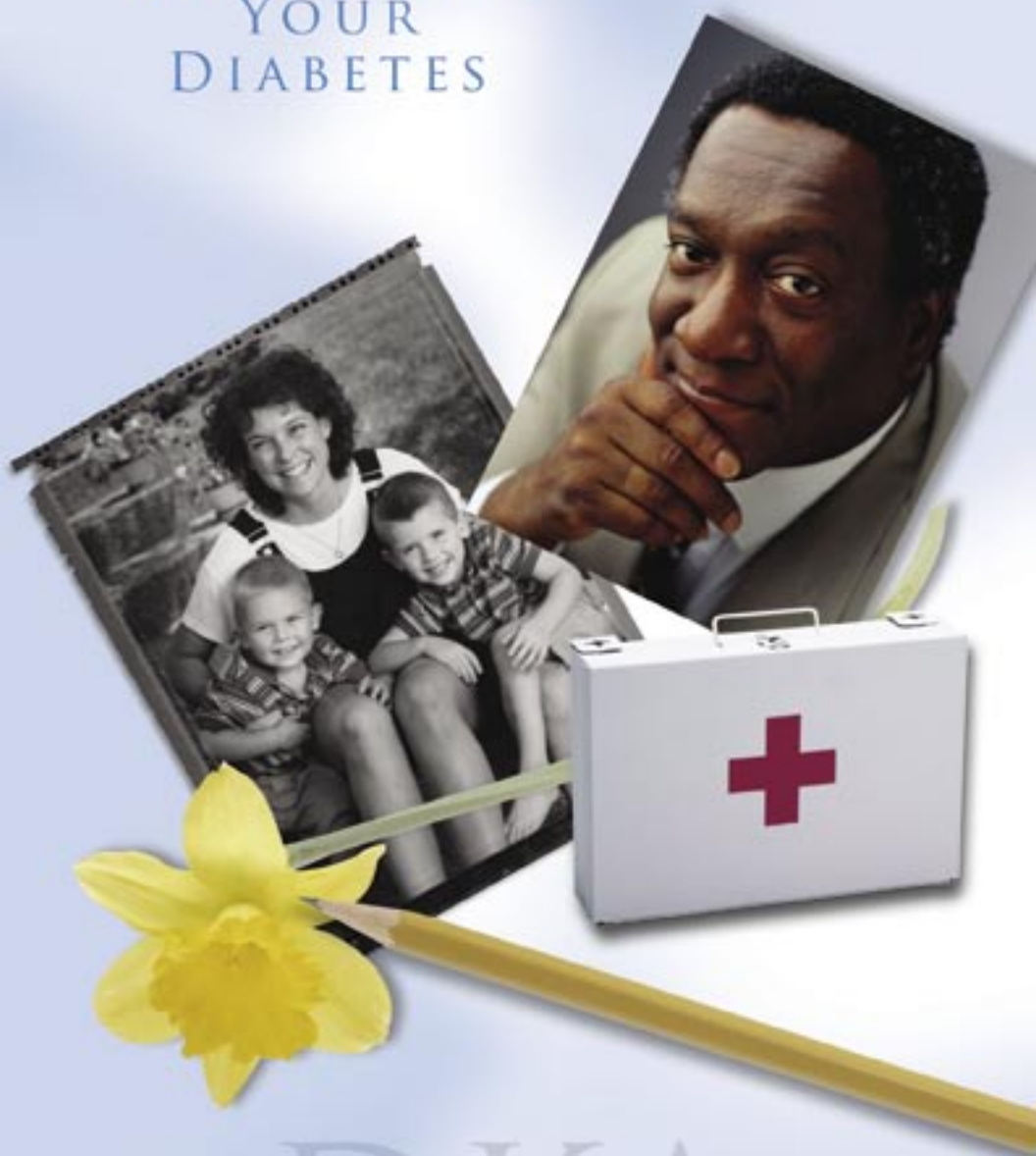

MANAGING
YOUR
DIABETES



KETOSIS AND DIABETIC KETOACIDOSIS (DKA)
SICK DAY LOGBOOK

DKA

Taking good care of your health is important. If you have diabetes any illness can be challenging. This booklet is designed to help you manage an illness, so you can get back to feeling well quickly.

T HIS BOOKLET IS DESIGNED
TO PROVIDE YOU A TOOL TO HELP YOU
MANAGE YOUR DIABETES
DURING A TIME OF ILLNESS.

This booklet contains the following information:

- Overview of Sick Day Guidelines
 - Managing diabetes during an illness
 - What are ketones and why are they important?
 - When are you at risk of developing ketones?
 - What are the signs and symptoms of ketosis and DKA?
 - How should I test for ketones?
 - During any illness it is important to do the following:
 - Eating during an illness
 - Communicating with your health care provider
- Logbook for sick days



MANAGING DIABETES DURING ILLNESS

Management of diabetes during an illness is important. It is important to monitor your blood glucose level as well as ketones. These test results can help you take control of your diabetes.

EARLY INTERVENTION AND PREVENTION OF KETOSIS AND DIABETIC KETOACIDOSIS (DKA) WILL ALLOW YOU TO RETURN TO YOUR NORMAL DAILY ACTIVITIES AS SOON AS POSSIBLE.

WHAT ARE KETONES, AND WHY ARE THEY IMPORTANT?

- Ketones are chemicals that the body makes when insulin is not available and your body cannot use sugar for energy. Instead, your body breaks down fat for fuel, and in the process, produces acid called ketones.
- Ketones can build up in your blood, causing ketoacidosis, a condition that may require immediate medical attention.
- People with type 1 diabetes are particularly vulnerable to developing DKA due to lack of insulin; therefore ketone testing is important if you have type 1 diabetes.

It is less common for people with type 2 diabetes to experience DKA because their bodies still tend to make enough insulin to shut off the production of ketones.

WHEN ARE YOU AT RISK OF DEVELOPING KETONES?

- During illness, infection or vomiting
- When insulin injections are missed
- When too much food is taken relative to insulin injected
- During pregnancy
- When using an insulin pump (blockage of tubing or pump disconnected)
- During emotional stress
- When you are less active than usual
- During a prolonged fast

WHAT ARE THE SIGNS AND SYMPTOMS OF KETOSIS AND DKA?

- Repeated high blood glucose levels (over 250 mg/dL)
- Loss of appetite
- Upset stomach and/or stomach pain
- Vomiting and nausea
- Dry mouth
- Frequent urination
- Increased thirst
- Tiredness or fatigue
- Labored or deep breathing
- Fruity odor to the breath



HOW SHOULD I TEST FOR KETONES?

In the past, only urine ketone testing was available for home use. Now you can test your **blood ketone** level in the same way you test your blood glucose level. Ketones in the blood can be detected before ketones in the urine; therefore the possibility of starting treatment sooner. Prevention of DKA is the goal. This book contains log sheets that allow you to monitor blood glucose and ketone levels during an illness and write down your results. During any illness it is important to share your results with your health care provider.

DURING ANY ILLNESS IT IS IMPORTANT TO DO THE FOLLOWING:

- Do not stop your insulin shots or diabetes pills without consulting your physician.
- Prevent dehydration by drinking plenty of fluids – about 8 ounces of liquid every 1/2 hour to 1 hour. Avoid dehydration.
- Try to eat normally and substitute with easy-to-eat food sources.
- Monitor blood glucose and ketones every 2 to 4 hours.
- Be prepared to take additional insulin to correct high glucose levels or to help clear ketones, if instructed to do so by your doctor.
- Communicate with your health care professional if:
 - You have symptoms of DKA.
 - You have persistent nausea or vomiting that lasts for more than 4 hours.
 - You cannot keep down any food or drink for more than 4 hours.
 - You have a fever greater than 101.5° F.

EATING DURING AN ILLNESS

At times you may not feel like eating if you are not feeling well. However, you should try to drink plenty of liquids to replace any fluid loss. Also, if you cannot eat regular food, try to eat foods and/or drink liquids that contain carbohydrates.

THE FOLLOWING ARE EASY-TO-EAT FOOD CHOICES DURING AN ILLNESS:

Food	Amount
Saltine crackers	6
Chicken noodle soup	1 cup*
Sweetened gelatin	1/2 cup
Fruit juice	1/2 cup
Sherbet or pudding	1/2 cup
Pudding pop	1
Popsicle	1
Cooked cereal	1/2 cup
Regular soft drink	1 cup*



*1 cup is equal to 8 – 12 ounces.

COMMUNICATING WITH YOUR HEALTH CARE PROVIDER

Good communication with your health care provider is the key to treating ketosis early. Early intervention can allow you to feel better quicker.

Be sure to tell your doctor (health care provider) if there are any reasons you can think of why you have developed ketones (e.g., flu, infection, pneumonia, foot ulcer, recent surgery, missed insulin doses or extreme stress).

It is also a good idea to test for ketones when:

- Your blood sugar level is consistently high (e.g., > 250 mg/dL) or if your glucose meter says “check ketones.”
- You feel nauseated, are vomiting, or have abdominal pain.
- You are sick or under stress.
- You are pregnant.

Discuss with your doctor ahead of time what you should do in case of elevated blood glucose levels or ketone levels.

When should you call your health care provider? _____

When should I test for ketones?

- When to check _____
- If you have a glucose meter that also tests ketone – normal is **Below 0.6 mmol/L**, moderately elevated is **0.6 to 1.5 mmol/L**, highly elevated and prone to DKA is **Above 1.5 mmol/L**.
- If ketones are present, what action should I take?

- If your glucose meter can measure ketone in the blood, take action if blood ketone is **> 0.6 mmol/L**.
- If your glucose meter cannot measure ketone, use urine ketones strips and take action if moderate or large ketones are found in your urine.

BLOOD KETONE READINGS INDICATIONS

Above 1.5 mmol/L

Readings above 1.5 mmol/L indicate you may be at risk of developing diabetic ketoacidosis (DKA).

Contact your healthcare provider immediately for advice.

0.6 to 1.5 mmol/L

Readings between 0.6 and 1.5 mmol/L may indicate the development of a problem that may require medical assistance.

Follow your healthcare provider's instructions.

Below 0.6 mmol/L

Readings below 0.6 mmol/L are in the normal range.

SICK DAY LOGBOOK

Date/Time					
Glucose					
Ketone					
Insulin					
Carbs					
Comments					
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- Do not stop your insulin shots or diabetes pills without consulting your physician.
- Drink plenty of fluids – about 8 ounces of liquid every 1/2 hour to hour.
- Try to eat as you normally would; substitute easy-to-eat food as necessary.
- Call your health care provider if your blood sugar is higher than 250 mg/dL for more than 6 hours.
 - If you have persistent ketones.
 - Or if vomiting or diarrhea continues for more than 4 hours.
 - If you feel that you need help, call your health care provider.
- Blood sugars should be checked before each insulin injection.
- Insulin injections should not be omitted, even if you are not eating.

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