



# Diabetes Care and Management

Your Kaiser Permanente Care Instructions

# WELCOME

Aloha,

Welcome to your Diabetes Management Program. Diabetes can be a complicated, overwhelming disease process for some people. What you need to know is that you are in the driver's seat and that diabetes can be successfully controlled. We're here to help by walking you through the steps needed to achieve life long success. This brochure will help you get started.

Let's start with who belongs to your health care team:

- Your Primary Care Physician (PCP) will provide the information needed so you can make the right decisions for yourself about treatment options and goals.
- Your Registered Nurse and Medical Assistant are your support system to help get you to your goals.
- You will also have the help of Dietitians, Clinical Pharmacists and Nurse Educators.

Your team is here to support you and provide you with the tools you need to successfully manage your diabetes. You and your doctor will decide on the medications that best meet your needs, which may include insulin therapy. Through educational classes, you will learn about:

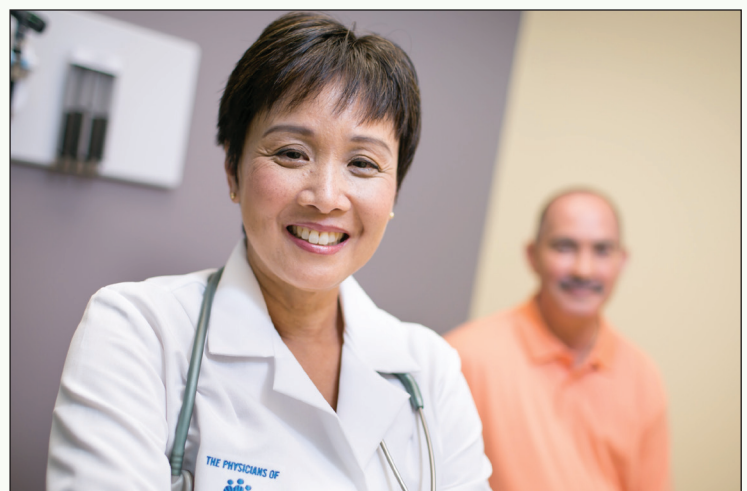
- diabetes and what to expect
- self-monitoring of blood sugars
- health prevention measures

This is the start of a life-long journey. Remember you are not alone, and we will help you every step of the way. Your success really depends on your active participation in your health care.

Now let's get started!

Mahalo,

**Your Primary Care Physician  
The Hawaii Regional Diabetes Team**



# WHAT IS DIABETES AND HYPERGLYCEMIA?

## What is diabetes?

Diabetes touches almost every part of your life. It is a serious lifelong condition. You can take charge of your health – not only for today, but for the rest of your life.

Most of the food we eat is turned into glucose (sugar) for our bodies to use as energy. The pancreas, an organ near the stomach, makes a hormone called insulin, which helps glucose get into our body cells. **When you have diabetes, your body either doesn't make enough insulin or can't use its own insulin very well.** This problem causes glucose to build up in your blood.

**Balance is the key word for living with diabetes.** Strive for balance in all parts of your life. You need to balance your food intake, exercise and medication. With support of your family, friends and Health Care Team, you can take charge of your diabetes.

*(Hawaii State Department of Health, Diabetes Control Program; "Take Charge of Your Diabetes")*

## What is hyperglycemia?

Hyperglycemia means that your blood sugar is high. Diabetes ketoacidosis (DKA) can occur if you have little or no insulin in your body and your blood sugar level gets too high. This can happen when you forget to take your insulin or diabetes medicines, do not take enough insulin or medicine, when you have an infection or another illness (such as the flu), ate too much food (especially sweet foods), or when you are severely dehydrated. DKA occurs mostly in people with type 1 diabetes, but people with type 2 diabetes also can get it. DKA can only be treated with insulin and fluids, which often are given in a vein (IV).

## How can I care for myself?

Learn to recognize the early signs of high blood sugar. Signs include:



**Extreme Thirst**



**Frequent Urination**



**Dry Skin**



**Hunger**



**Weight Loss**



**Blurred Vision**



**Drowsiness**



**Nausea**

# HYPERGLYCEMIA (HIGH BLOOD SUGAR)

## HOW TO CARE FOR YOURSELF

### To avoid spikes in your blood sugar and reduce your chance of ketoacidosis:

- Take your insulin and other diabetes medicines on time and in the right dose.
- If an infection caused your DKA and your doctor prescribed antibiotics, take them as directed. Do not stop taking them just because you feel better. You need to take the full course of antibiotics.
- Drink plenty of sugar-free liquids, especially if your blood sugar level is above 200 milligrams per deciliter (mg/dL).
- Test your blood sugar before meals and at bedtime or as often as your doctor advises. This is the best way to know when your blood sugar is high so you can treat it early. Watching for symptoms is not as helpful because they may not appear or you may not notice them until your blood sugar is very high.
- Teach others at work and at home how to check your blood sugar. Make sure that someone else knows how to check your blood sugar in case you are not able to check it yourself.
- Wear or carry medical identification at all times. This is very important in case you are too sick or injured to speak for yourself.
- Talk to your doctor about when you can start exercising again.
- Eat regular meals that spread your calories and carbohydrate throughout the day. This will help keep your blood sugar steady.

### When you are sick:

- Keep taking your insulin and diabetes medicines, even if you are vomiting and having trouble eating or drinking. Your blood sugar may keep rising because you are sick. But it may be important to change your dose of insulin if you are eating fewer calories than normal. Talk with your doctor about a plan when you are well so you will know what to do when you are sick.
- Drink extra fluids, such as water, broth, and caffeine-free, sugar-free drinks to prevent dehydration.
- Try to eat your normal types and amounts of food.
- Check your blood sugar at least every 3 to 4 hours or more often if it is rising fast. If your blood sugar level rises above 250 mg/dL and your doctor has told you to take an extra insulin dose for high blood sugar levels, take the right amount. If you take insulin and your doctor has not told you how much to take for high blood sugar levels, call him or her for advice.
- Check your temperature and pulse often if your blood sugar is over 300 mg/dL. If your temperature is going up, call your doctor. You may be getting worse.



# HYPOGLYCEMIA (LOW BLOOD SUGAR)

## HOW TO CARE FOR YOURSELF

If you know your blood sugar is high, treat it before it gets worse.

- **If you have missed your usual dose** of insulin or other diabetes medicine, take the missed dose or take the amount your doctor has told you to take if this happens.
- If you and your doctor have decided on a dose of extra-fast-acting insulin based on your blood sugar level, give yourself the right dose. If you take insulin and your doctor has not told you how much fast-acting insulin to take based on your blood sugar level, call him or her for advice.
- Drink extra water or caffeine-free, sugar-free drinks to prevent dehydration.
- Wait 30 minutes after taking extra insulin or your missed medicines. Then check your blood sugar again.
- If symptoms of high blood sugar get worse or your blood sugar level keeps rising, call your doctor. If you start to feel drowsy or confused, call 911.

## What is Hypoglycemia?

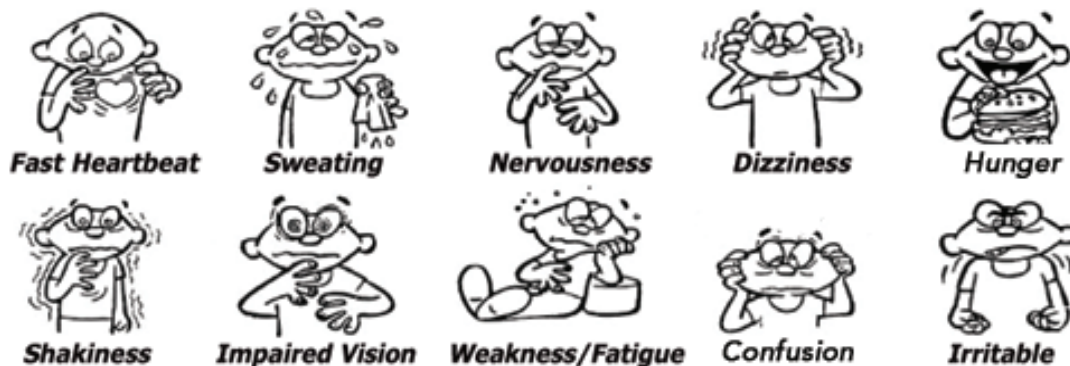
**Hypoglycemia means that your blood sugar is low** and your body is not getting enough fuel. Some people get low blood sugar from taking too much insulin or diabetes medicines, vomiting, diarrhea, eating too little food, skipping a meal, delaying a meal or extra exercise.

People with pancreas problems or who have had surgery on their stomachs or intestines may get hypoglycemia.

Hypoglycemia is defined as a blood sugar level below 70 mg/dl. Appropriate treatment is needed right away or you may pass out.

## How can I care for myself?

Learn to recognize the early signs of low blood sugar. Signs include:



# HYPOGLYCEMIA (LOW BLOOD SUGAR)

## PREVENTION

If you feel an episode of low blood sugar coming on:

1. Test your blood sugar with your meter (if possible).
  2. If your blood sugar is less than 70 mg/dl, drink ½ cup fruit juice or sugared (not diet) soda, 1 cup milk, or eat 4 glucose tablets.
  3. Retest your blood sugar level in 15 minutes and if it is still below 70 mg/dl, then repeat step 2.
  4. Within 30 minutes after symptoms go away, eat a small snack such as a half sandwich and a cup of milk.
- Keep a written record of your low blood sugar episodes, including when you last ate and what you ate, so that you can learn what causes your blood sugar to drop. Call your health care provider to report your reaction.
  - Make sure your family, friends, and coworkers know the symptoms of low blood sugar and know what to do to get your sugar level up.

## How can I prevent Hypoglycemia?

- **Avoid skipping meals.** Eat on time.
- **Balance extra exercise** with adjusting your food intake or medicine.
- **Carry sugar or glucose tablets** at all times in a pocket or purse.
- **Carry a diabetes identification card** or wear a “medic alert” bracelet.
  - Ask your doctor or nurse if you need a “medic alert” bracelet.
- As a precaution, **check your blood sugar levels before driving and exercise**, and eat a snack if your blood sugar is below 100.



# THREE NUTRITION TIPS

Nutrition, exercise, and medicine work together to keep you healthy. Eating the right foods, in the right amounts, and at the right times will help to improve your blood sugar levels. Follow these three simple tips for better diabetes control.

## Eat the right foods.

**Eat at least two fresh fruits each day.**

**Eat more raw and cooked vegetables each day.**

## Choose whole grain foods:

- whole wheat bread
- oatmeal
- brown rice
- bran cereals

## Use these "free" foods:

- water
- sugar-free diet drinks
- vinegar and/or lemon juice
- tea and coffee
- broth
- plain vegetables
- sugar-free jell-o
- sugar substitutes

## Eat less fat:

- use non-stick pans and sprays instead of oil or butter
- use skim milk and other non-fat dairy products
- choose lean meats and trim off the fat; remove skin from chicken
- choose low-fat or fat-free mayonnaise and salad dressings



## Limit sugar/sweets:

- juices, sports drinks, sodas
- regular jell-o
- ice cream, cakes, pastries
- candy
- jam, jelly
- sugar, honey
- syrup, molasses
- fast foods
- pickled vegetables

## Eat the right amounts at each meal.

- Limit meat, chicken, and fish portions to the size of your palm.



- Limit rice, noodles, potatoes, taro, breadfruit, and other starches to the size of your fist.



## Eat at the right times.

- Have three meals each day to help control sugar levels.
- Do not skip meals or eat two big meals.





# WHEN YOU ARE SICK

- **Keep taking your insulin and diabetes medicines**, even if you are vomiting and having trouble eating or drinking. Your blood sugar may keep rising because you are sick. But it may be important to change your dose of insulin if you are eating fewer calories than normal. Talk with your doctor about a plan when you are well so you will know what to do when you are sick.
  - **Drink extra fluids**, such as water, broth, and caffeine-free, sugar-free drinks to prevent dehydration.
  - **Try to eat your normal types and amounts of food.**
  - **Check your blood sugar at least every 3 to 4 hours or more often if it is rising fast.** If your blood sugar level rises above 250 mg/dL and your doctor has told you to take an extra insulin dose for high blood sugar levels, take the right amount. If you take insulin and your doctor has not told you how much to take for high blood sugar levels, call him or her for advice.
  - **Check your temperature and pulse often** if your blood sugar is over 300 mg/dL. If your temperature is going up, call your doctor. You may be getting worse.
- If you know your blood sugar is high, treat it before it gets worse.**
- **If you have missed your usual dose** of insulin or other diabetes medicine, take the missed dose or take the amount your doctor has told you to take if this happens.
  - If you and your doctor have decided on a dose of extra-fast-acting insulin based on your blood sugar level, give yourself the right dose. If you take insulin and your doctor has not told you how much fast-acting insulin to take based on your blood sugar level, call him or her for advice.
  - Drink extra water or caffeine-free, sugar-free drinks to prevent dehydration.
  - Wait 30 minutes after taking extra insulin or your missed medicines. Then check your blood sugar again.
  - If symptoms of high blood sugar get worse or your blood sugar level keeps rising, call your doctor. If you start to feel drowsy or confused, call 911.



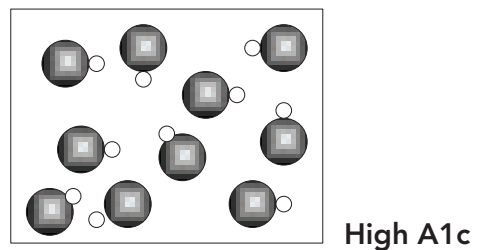
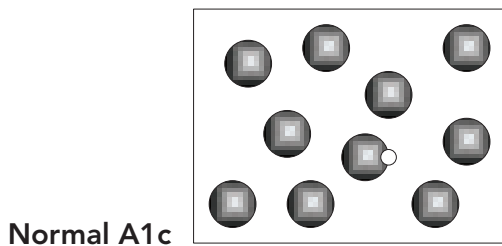


# BLOOD SUGAR TARGETS

Talk with your health care team about your personal targets.

	Fasting and Pre-Meal	2 hours After Start of Meal	Pre-Bedtime	A1c
Normal	70 - 99mg %	80 - 120 mg %	below 120 mg %	Under 5.7%
Target	70 - 130 mg %	Below 180 mg %	110 - 150 mg %	Under 7.0%

The A1c test measures the amount of sugar that attaches to the red blood cell. Because red blood cells live for about three months, A1c tests show your average blood sugar during that time.



Here's a chart you may use as a guide. Kaiser Permanente Hawaii's A1c normal range is from 4.3% to 5.6%.

A1c	Average Blood Sugar
5%	97 (76 - 120)
6%	126 (100 - 152)
7%	154 (123 - 185)
8%	183 (147 - 217)
9%	212 (170 - 249)
10%	240 (193 - 282)
11%	269 (217 - 314)
12%	298 (240 - 347)

# CHECKLIST FOR PEOPLE WITH DIABETES

**Maintain your blood pressure less than 140/90**

Diabetes doubles your risk to develop heart disease. Good blood pressure control is one factor to reduce your risk for heart disease.

**Maintain your HGA1C less than 7**

HgA1c measures your average blood sugar over 3 months. A HgA1c near 7 will greatly reduce the adverse effects that diabetes will cause to your vital organs.

**Talk to your doctor about taking aspirin**

Aspirin keeps your blood “thinner” to allow it to flow easier through your blood vessels. This is important if your blood vessel is starting to get clogged because a blocked blood vessel may cause a heart attack or stroke.

**Have your foot screened yearly by your doctor or nurse**

Diabetes can deaden the nerves in your feet, which poses a risk for undetected foot injuries that can become infected.

**Have your diabetic eye exam every 1-2 years**

Diabetes can weaken and damage blood vessels within your eyes that may cause visual changes and potential blindness.

**If you are between 40-80 years of age, you should be taking a “statin” medicine as prescribed by your doctor.**

Taking a cholesterol-lowering medicine will reduce your risk for clogged arteries that may cause a heart attack and stroke.

**If you have protein in your urine, you should be on an Ace Inhibitor (ARB)**

Lisinopril is a drug called an ace inhibitor. It has been shown to reduce your risk for a heart attack. It also controls blood pressure and helps improve kidney function.

# MY DAILY GLUCOSE DIARY

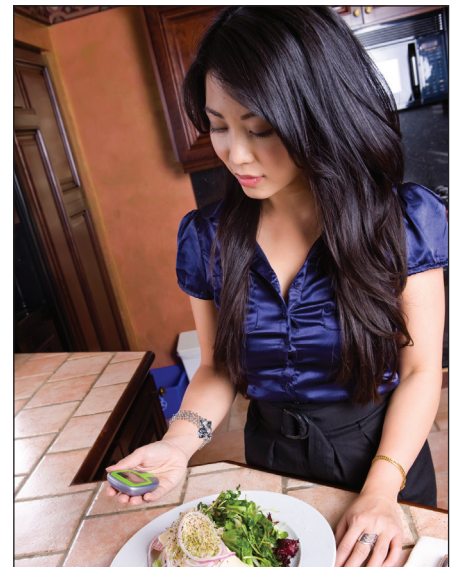
## My Daily Blood Glucose Diary

	Date	Time	Insulin Dose-Type &/or pills	Blood Glucose Tests							Notes & Comments (Meals and snacks; exercise, illness, stress or other significant events)	
				Breakfast		Lunch		Dinner		Bedtime		
				Before	After	Before	After	Before	After	Before		
M O N				Time								
				mg/dL								
T U E				Time								
				mg/dL								
W E D				Time								
				mg/dL								
T H U				Time								
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F R I				Time								
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S A T				Time								
				mg/dL								
S U N				Time								
				mg/dL								

Name: \_\_\_\_\_

MR #: \_\_\_\_\_

PCP: \_\_\_\_\_



Notes:

## IMPORTANT PHONE NUMBERS

After Hours Advice Nurse:

Oahu . . . . . 808-432-7700

Neighbor Islands . . . . 1-800-467-3011

**Follow-up care is a key part of your treatment.** Be sure to make any suggested appointments and go to all scheduled visits. Watch for signs that indicate you are having problems, and call your doctor or other clinician if you have concerns. It is also a good idea to know your test results and keep a list of medicines you take. For more information about diabetes, classes, and on-line resources, please speak to your doctor.

This information is not intended to diagnose health problems or to take the place of medical advice or care you receive from your physician or other health care professional. If you have persistent health problems, or if you have additional questions, please consult your doctor. If you have questions or need more information about your medication, please speak to your pharmacist. Kaiser Permanente does not endorse any brand names; any similar products may be used.

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