

Take Charge of Your Diabetes



**Hawaii Revised Edition
1999**

Diabetes Awareness Coalition
State of Hawai'i, Department of Health, Diabetes Control Program
Papa Ola Lōkahi
U.S. Department of Health and Human Services
Public Health Service
Centers for Disease Control and Prevention
National Center of Chronic Disease Prevention and Health Promotion
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OLA

HEALTH

LIFE



In ancient Hawai'i, runners were chosen to deliver messages for the ali'i or chiefs. Those chosen for this honor were the fastest and brightest. They had to be in excellent health—in body, mind, and spirit. It is said that the best of these special runners was so quick he could deliver a live fish to the other side of an island; mentally so keen and assured that he could accurately recite long and complex messages after running great distances.

He stands for the health each

of us can achieve. He reminds us to look to our rich heritage of values, skills and knowledge of guidance for healthy living today. Even in our modern world, we can eat the right kinds of foods as the Hawaiians did. We can work hard and play hard. We can maintain honest relationships. We can live a life of respect for the 'āina. Each of us can commit ourselves to learn and use the best from the past and present. We can be as healthy as this runner from the past.

Table of Contents

Mahalo Nui Loa!	vii
1 Introduction	1
2 Controlling Your Diabetes	7
3 Keeping Track of Your Blood Glucose.	31
4 Feelings about Having Diabetes.	47
5 Eye Problems	49
6 Kidney Problems	53
7 Heart and Blood Vessel Problems.	57
8 Nerve Damage	61
9 Foot Problems.	63
10 Dental Disease	67
11 Vaccinations	69
12 Pregnancy, Diabetes, and Women’s Health	71
RECORDS	
Record for Sick Days.	75
Tests and Goals for Each Visit	85
Tests and Goals for Each Year	95
Glucose Log Sheet.	101
Your Health Care Team	105
APPENDIXES	
Glossary	113
Resources	119

Mahalo Nui Loa!

This guide was written by the Centers for Disease Control and Prevention's Division of Diabetes Translation, which is part of the National Center for Chronic Disease Prevention and Health Promotion. William H. Herman, M.D., M.P.H., was the general editor of the first book, **Take Charge of Your Diabetes: A Guide for Care**, printed in 1991. People with diabetes who read the first book were asked to help us make this book even more helpful.

The American Association for Diabetes Educators did a survey among people with diabetes and diabetes educators to learn what people liked and didn't like about the first book. Special thanks for helping conduct this survey go to Betty Brackenridge, Linda Haas, Julie Meye, Jean Betschart, Kris Ernst, and Robert Anderson. Focus groups made up of persons with diabetes were held by Health Promotion Council of SE Pennsylvania and Casals and Associates of Washington, D.C. The groups gave us valuable input to help make this book more useful.

Important support for this book's emphasis on glucose control came from the Diabetes Control and Complications Trial. Conducted by the National Institute of Diabetes and Digestive and Kidney Disease, this important study provided scientific proof that glucose control can help prevent or delay complications of diabetes.

The Hawai'i edition was adapted for Hawai'i residents by the Diabetes Awareness Coalition, Papa Ola Lōkahi and the Hawai'i State Diabetes Control Program of the Hawai'i Department of Health. Significant assistance with the information on nutrition and exercise came from the Hawai'i Department of Health's Nutrition Branch and the Physical Activity Promotion Project, and Maui Ola, Native Hawaiian Community Nutrition Initiative.

Special thanks to the people living with diabetes in Hawai'i who reviewed the material and contributed their thoughts and ideas to help bring the book closer to home. Feedback was given

Take Charge of Your Diabetes

by members of the diabetes support groups at Castle Medical Center, Molokai, and Palolo Valley Homes. These groups provided us with valuable insights, information and suggestions to make the book more appropriate

for use in Hawai'i.

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1 Introduction



Take charge of your health—for today and for the coming years

Diabetes touches almost every part of your life. It's a serious, lifelong condition, but there's so much you can do to protect your health. You can take charge of your health—not only for today, but for the coming years.

Diabetes can cause health problems over time. It can hurt

your eyes, your kidneys and your nerves. It can lead to problems with the blood circulation of your body. Even your teeth and gums can be harmed. And diabetes in pregnancy can cause special problems. Many of these problems don't have to happen. You can do a lot to prevent them, and there are people in your community who can help. This book can help you find how to get the help you need to prevent problems.

Today and every day, you need to balance your food, physical activity, and medicine. Testing your own blood glucose (also called blood sugar) helps you see how this balance is working out. You can then make choices that help you feel well day-to-day and protect your health.

Feeling healthy can allow you to play a big part in the life of your family and community. You may even want to join a community group to help others deal with their diabetes.

Take Charge of Your Diabetes was written to help you take

Take Charge of Your Diabetes



A community group can help make life better for people living with diabetes.

important steps to prevent problems caused by diabetes. You'll learn many useful things:

- What problems diabetes can cause.
- How to work with a health care team to prevent the problems.
- Why it is important to get your blood glucose closer to normal.
- How to find out about resources in your communi-

ty to help you prevent problems.

It's important to work with a primary care provider, as well as other members of a team that care about your health. To find out about resources in your community, telephone one of the groups listed below:

- Your state medical association, listed in the business section of your phone book.
- Your state Department of Health's Diabetes Control

Program, listed in your phone book.

- Local hospitals, listed in the yellow pages.
- Diabetes organizations, listed on page 119 of this book.

Ask your health care team to look over this book with you.



Work with your health care team to take charge of your diabetes.

Stay in touch with them so you will know the latest news about diabetes care.

Balance is the key word in living well with diabetes. Strive for balance in all parts of your life. With the support of your family and friends, your health care

team, and your community, you can take charge of your diabetes.

What Is Diabetes?

Most of the food we eat is turned into glucose (sugar) for our bodies to use for energy. The pancreas, an organ near the stomach, makes a hormone called insulin to help 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.

Signs and Symptoms of Diabetes

You may recall having some signs before you found out you had diabetes:

- Being very thirsty.
- Urinating often especially at night.
- Having blurry vision from time to time.
- Feeling very tired much of the time.

Take Charge of Your Diabetes

- Losing weight without trying.
- Having very dry skin.
- Having sores that are slow to heal.
- Getting more infections than usual.
- Losing feeling or getting a tingling feeling in the feet.
- Vomiting.

makes little or no insulin. Scientists are learning more about what causes the body to attack its own beta cells or the pancreas (an autoimmune process) to stop making insulin in people with certain sets of genes.

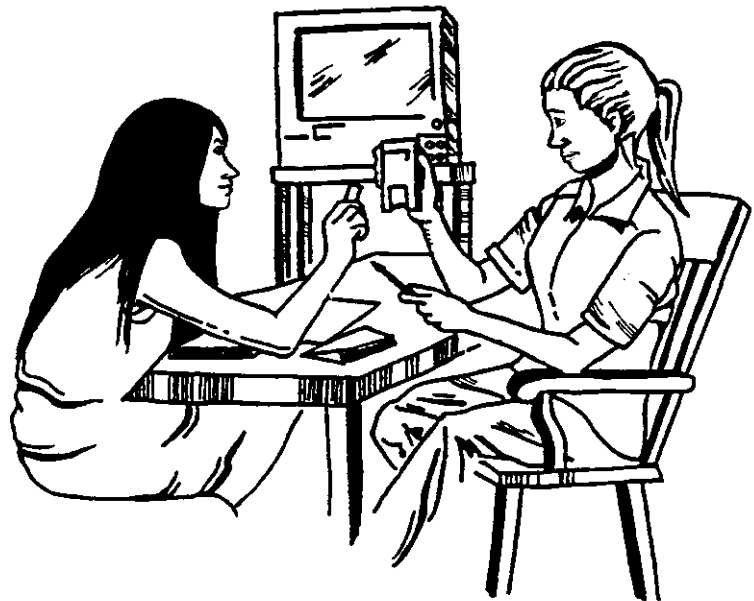
Types of Diabetes

There are two main types of diabetes:

- Type 1.
- Type 2.

Another type of diabetes appears during pregnancy in some women. It's called gestational diabetes.

One out of ten people with diabetes has Type 1 diabetes. These people usually find out they have diabetes when they are children or young adults. People with Type 1 diabetes must inject insulin every day to live. The pancreas of a person with Type 1



Whether you have Type 1 or Type 2 diabetes, work closely with your health care provider.

Most people with diabetes—nine out of ten— have Type 2 diabetes. The pancreas of people with Type 2 diabetes keeps making insulin for some time, but the body can't use it very well. Most people with Type 2 find out about their diabetes after age 30 or 40.

Certain risk factors make people more likely to get Type 2 diabetes. Some of these are:

- A family history of diabetes.
- Lack of exercise.
- Weighing too much.
- Being of Asian/Pacific Islander, Native Hawaiian, American Indian, Hispanic/Latino or African American heritage.

On the next page is a weight chart. If you weigh more than the weight that matches your height on the chart, tell your health care provider. You can help manage your diabetes by controlling your weight, making healthy food choices, and getting regular physical activity. Some people with Type 2 diabetes may also need to take diabetes pills or insulin shots to help control their diabetes.



Whether you have Type 1 or Type 2 diabetes, learn what your community has to offer you.

At-Risk Weight Chart

Women

(shows 20% over ideal weights)

Height **Weight**
(w/out shoes) (w/out clothing)

Feet	Inches	Pounds
4	9	134
4	10	137
4	11	140
5	0	143
5	1	146
5	2	150
5	3	154
5	4	157
5	5	161
5	6	164
5	7	168
5	8	172
5	9	175
5	10	178
5	11	182

Men

(shows 20% over ideal weights)

Height **Weight**
(w/out shoes) (w/out clothing)

Feet	Inches	Pounds
5	1	157
5	2	160
5	3	162
5	4	165
5	5	168
5	6	172
5	7	175
5	8	179
5	9	182
5	10	186
5	11	190
6	0	194
6	1	199
6	2	203
6	3	203

2 Controlling Your Diabetes

There's good news for people with diabetes. Keeping your blood glucose (also called blood sugar) close to normal helps prevent or delay some diabetes problems.

New studies have shown that through such control, at least

half of the expected eye disease, kidney disease, and nerve damage was prevented or slowed.

You can get more information on managing your diabetes through the National Diabetes Information Clearinghouse at 1-800-GET-LEVEL (1-800-438-5383).



You may find that your community supports your efforts to control your diabetes.

Take Charge of Your Diabetes

Diabetes and Your Diet

To keep your blood glucose at a healthy level, you need to keep a balance between these things:

- What you eat and drink
- When you eat and drink
- How much you eat and drink
- How much physical activity you do
- Your diabetes pills or insulin, if you need it

People living with diabetes do not have to follow strange diets or eat only certain foods. But it is important for people living with diabetes to make healthy eating choices! Healthy eating means eating a wide variety of foods. People with diabetes will also need to think about how the food they eat will affect their blood glucose.

Your goals of healthy eating are to:

- maintain healthy blood glucose levels
- maintain or achieve healthy body weight

- eat the right amount of nutrition for good health



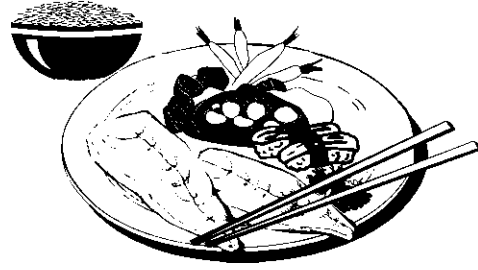
If you weigh too much, losing weight can help you to better control your blood glucose.

One of the risk factors for diabetes is weighing too much. Your body uses something called insulin to change the food you eat into energy. Having too much body fat can make it hard for insulin to do its job. This is called “insulin resistance.” If you weigh too much, losing weight, even as little as 5-10 pounds, can help you to control blood glucose better. Making healthy eating choices can be a challenge. Look for a Registered Dietitian (R.D.) to help you with a meal plan. And keep in mind, there is a lot to learn about healthy eating, so do not try to do it all in one session!

Guidelines for Healthy Eating

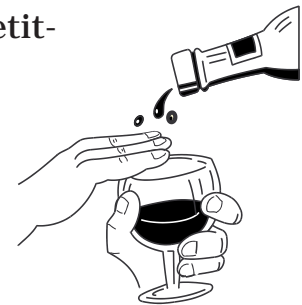
Careful meal planning is one of the most important things you can do to manage your diabetes. People with diabetes can use meal planning and exercise to best manage their diabetes. The goals of meal planning are to eat the right foods in the right amounts at the right times to keep blood glucose level normal. See a Registered Dietitian to help you with the following guidelines:

1. *Eat Three Meals a Day*
Spread your meals throughout the day to keep blood glucose at healthy levels. This means eating three meals a day, with no more than five hours between meals. Do not skip meals! Add snacks if necessary.
2. *Pay Attention to Portion Sizes*
This helps to reach or maintain a reasonable body weight. By controlling portion sizes, you can better control your blood glucose better.
3. *For Meals, Choose Foods From Three or More Food Groups*
By eating foods from three or more food groups, you can keep your blood glucose at



healthy levels. Example: starch, vegetables and protein.

4. *Choose Foods Lower in Fat*
Select foods such as non-or low-fat dairy products, leaner cuts of meat, fish, or poultry and low-fat snack foods. Eat less fried foods and use lower fat cooking methods. Go easy on the butter or margarine and mayonnaise.
5. *Choose Foods High in Fiber*
Choose foods such as whole grain bread and cereals, beans, and fresh vegetables and fruits.
6. *Limit Sweets and Alcohol*
These types of foods upset your blood glucose levels and should be limited. Ask your dietitian how to safely include these in your meal plan.



Take Charge of Your Diabetes

Healthy eating means eating a wide variety of foods. The food guide pyramid shows a healthy and balanced way to eat. The foods closer to the base of this guide are naturally lower in fat and calories. Eat more of these every day. The foods closer to the top of the pyramid are naturally higher in fat and calories. Eat less of these every day.

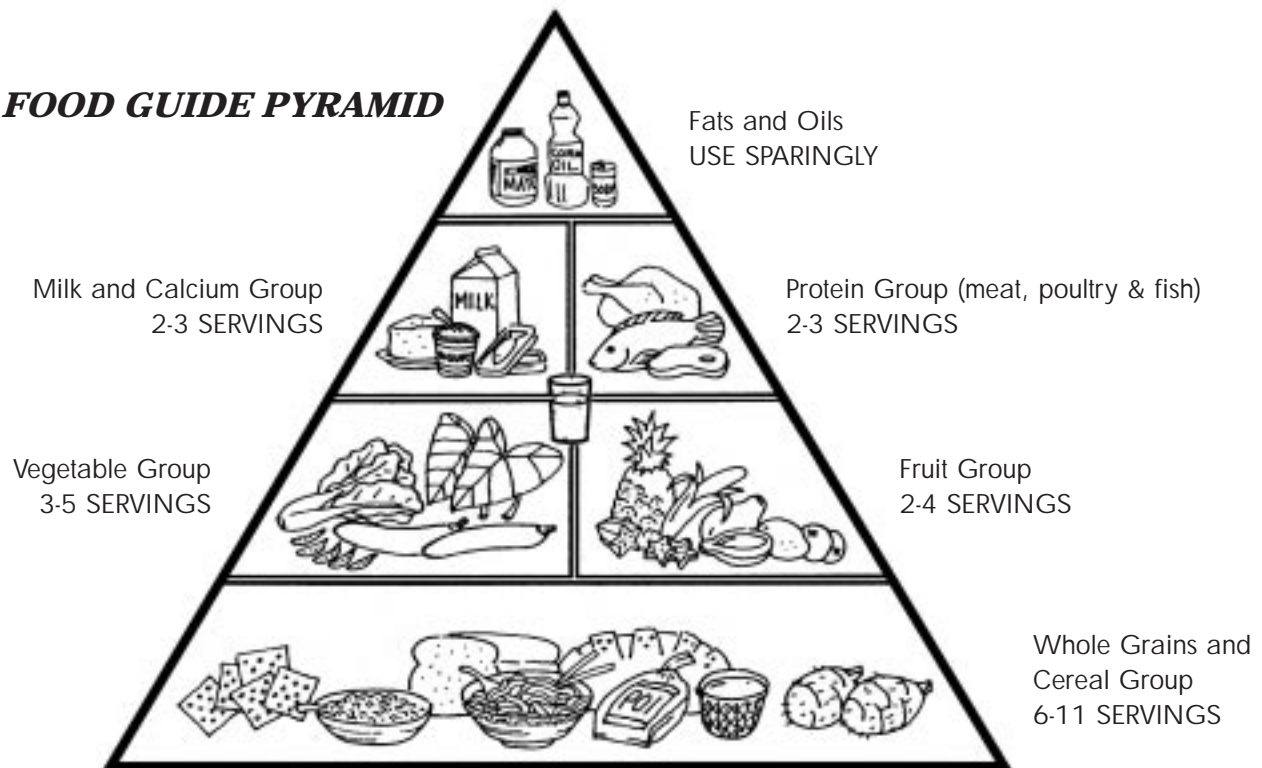
Meal Planning

Keep in mind that a person with diabetes does not need special foods. As long as your blood

glucose is under control, you can still enjoy your favorite foods. To plan your meals, keep in mind when you eat, how much you eat, and what you eat.

- ***What you eat and drink***
The majority of the glucose in your blood after a meal comes from carbohydrates in your food. As carbohydrates are broken down and absorbed, the amount of glucose in your blood goes up. Your dietitian can help you learn the amounts of carbohydrates you should have for meals and snacks.

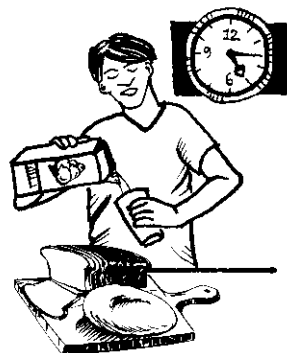
FOOD GUIDE PYRAMID





Ask your market to carry more heart-healthy foods.

- ***When you eat and drink***
If you have diabetes, it is best to eat at the same times each day. For people with Type 2 diabetes, this might make it easier for your body to release insulin. If you are taking



If you are taking insulin shots, eating at the same time each day will help the insulin work better.

insulin shots, eating at the same time each day will help the insulin work better. Some people will also need to have snacks during the day.

- ***How much you eat and drink***
The amount of food you eat or drink at one time has a big effect on your blood glucose. If you eat too much, your blood glucose will go too high. Eating too much can also cause you to gain weight.

Figuring Out Serving Sizes

If you have diabetes, serving size (how much you eat of a food) can have a big effect on your

Take Charge of Your Diabetes



Talk to a dietitian to help you plan your meals.

blood glucose. This makes learning to judge serving size very important. Sometimes a portion that is the right size for you can be measured using your own hand. Here is a guide to help you compare some common amounts of foods. If you have questions about how big or how many servings are right for you, ask your dietitian.

Rice, pasta, breads and cereals

- 1 cup of cooked brown rice or beans is the size of a fist.
- 1/3 cup of cooked brown rice or beans is one serving.
- 1/2 cup of cooked taro, pasta or potatoes is the size of 1/2 of a tennis ball.

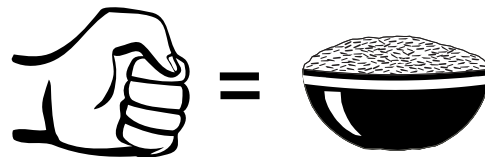
- 1 slice of bread, or 1/2 of a bun.

Fruit

- 1 medium piece of fruit is the size of a tennis ball.
- 4 1/2 inch banana or 1/2 of a papaya or grapefruit is one serving.

Vegetables

- 1/2 cup cooked vegetables, 7-8 baby carrots or carrot sticks, or 1 ear of corn.
- 1 serving fresh or raw vegetables is the size of your fist.
- 1 cup of fresh leafy greens is about 4 lettuce leaves.
- a medium potato



Sometimes a portion that is the right size for you can be measured using your own hand.

Poultry, fish and meat

- 3 ounces of poultry, fish or meat is the size of a deck of cards, or the size of a cassette tape.

Dairy

- 1 ounce of cheese is the size of a tube of lipstick, or a slice of single wrap cheese.

Label Reading

Most foods in the grocery store must have a nutrition label and an ingredient list. You can use this label to learn how to fit foods into your meal plan. Learning to read food labels can also help you to choose foods that are better for your health.

1. **Serving Size:** Is the amount you eat the same as the serving size on the label? For example, the serving size here is 1/2 cup. So, if you eat 1 cup, remember, that is 2 servings! (1/2 cup serving x 2 = 1 cup)
2. **Calories and Calories from Fat** are shown. The total calories include carbohydrate, protein and fat.

3. **Total Fat** represents the grams of fat in a single serving. Avoid products with high saturated fat grams.
4. **Total Carbohydrate** gives the amount of carbohydrates in grams per serving.
5. **% Daily Value** shows how foods fit into a daily diet of 2,000 calories. If you need more calories, your own daily value may be higher than what is listed on the label. If you need less, your own daily value may be lower.

Nutrition Facts	
Serving Size 1/2 cup (114g)	
Servings Per Container 1	
Amount Per Serving	
Calories 100	Calories from Fat 0
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Cholesterol <5mg	2%
Sodium 140mg	6%
Total Carbohydrate 17g	6%
Dietary Fiber 0g	0%
Sugars 13g	
Protein 9g	
Vitamin A 0% • Vitamin C 0%	
Calcium 30% • Iron 4%	
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.	

Take Charge of Your Diabetes

Your doctor may want you to limit other things in your diet, like sodium, cholesterol and saturated fat. These are also listed on the food label. A dietitian can teach you more about reading food labels and choosing appropriate foods.

How to Cut Down the Fat

High-fat foods can add a lot of calories and may cause weight gain or make it hard to lose weight. Weighing too much can make diabetes more difficult to control. Here are some ways to decrease the fat in your diet:

Instead of this...	Try this!
Fatty, fried, or processed meat, fish, or chicken	Lean meats, poultry without skin, tofu, beans, or fish
Butter, margarine, oil when cooking	Nonstick pan, nonfat cooking spray, or a small amount of broth or wine
Cooking meat straight from the package	Trimming off fat you can see, then simmer and drain the meat before adding to a recipe
Frying	Baking, broiling, grilling, or steaming (easy on the sauce)
High fat cheeses like cheddar, Swiss, or American	Low-fat cheeses and cheeses made with skim milk, such as mozzarella and ricotta. Also, hard cheeses such as Parmesan.
Coconut milk	Low fat coconut milk
Salad dressing	Low fat or fat-free salad dressing or flavored vinegar or lemon
In baking: a whole egg Oil or fat Sour cream	2 egg whites Applesauce for 1/2 of oil or fat Plain yogurt or low-fat sour cream

Also control fat intake by limiting very high fat meats like luncheon meat, corned beef, spareribs and turkey tail, and limit portion sizes to 3 ounces.

Dining Out

The fact that you have diabetes does not mean that you cannot eat out. You can maintain your life-style and eat without problems simply by learning how to choose foods carefully. Here are a few guidelines that will help when dining out:

Before You Dine Out

- Know your meal plan and carry it with you.
- Practice weighing and measuring foods at home.
- If on insulin, try to eat your meal on schedule.

Choosing a Restaurant

- Choose a restaurant that allows substitutions and prepares food to order.
- Do not hesitate to explain to the waiter or waitress that you would like to make changes or substitutions to your meal.
- Ethnic restaurants offer low-fat menu selections.

Healthful Food Choices

- Ask questions about how the food is prepared and what the ingredients are.
- Restaurant portions can be large, so plan to share with someone else or request a doggie bag.
- Avoid table sugar, sugared foods and beverages.
- Drink 8-10 glasses of water a day.
- Plain is best. Creamed foods, foods with sauces or gravies, and battered-fried foods are higher in fat and calories.



Do not hesitate to explain that you would like to make changes or substitutions to your meal.

Take Charge of Your Diabetes

Local Foods

Do you know how healthy your favorite local or ethnic foods are? Are they high or low in fat and calories? You can choose the better choice for a healthier diet! Remember to keep in mind portion sizes when making food choices.

Better Choice

Chinese

Clear, broth-type soups *
Steamed rice
Stir fry chicken, seafood, tofu, lean meat, steamed fish, or vegetables

Filipino

Adobo w/lean chicken or pork
Utong
Mungo beans
Gelatin
Pancit
Soups: Kalamungay or okra *

Hawaiian

Low fat laulau, such as skinless chicken or fish laulau
Chicken or squid lū'au w/low-fat coconut milk
Haupia w/low fat coconut milk
Sweet potato, breadfruit, poi and taro
Limu Poke, Lomi salmon

Italian

Pasta primavera, red sauces
Minestrone soup *
Marinara, clam or wine sauces
Thin crust pizza with vegetable toppings and low-fat cheese

Higher Fat and Calorie Choice

Fried noodles
Egg foo young
Peking duck
Egg rolls, spareribs

Adobo, Cascaron
Guisantes, Dinoguan
Lumpia
Most other desserts

Pork laulau
Kālua pig
Chicken lū'au with coconut milk

Haupia

Sausages, meatballs
Veal or chicken parmigiana
Fettucini Alfredo, white or cream sauces
Lasagna, cheese-filled pasta dishes

(* These are foods high in salt.)

Better Choice

Higher Fat and Calorie Choice

Japanese

Miso soup *
 Teriyaki, yakitori dishes *
 Yakimono (broiled) dishes *
 Somen *, soba
 Sushi *, sashimi, Sukiyaki *
 Skinless, trimmed meats, poultry & fish
 Kanten, mochi

Tempura
 Tonkatsu (fried pork)
 Torikatsu (fried chicken)
 Butter mochi

Korean

Skinless BBQ chicken
 Hot or cold Kook-soo
 Kim chee *, other vegetables
 Chop chae *
 Seaweed or tofu soup *

Meat or Fish Jun
 Kalbi *
 Fried Mandu
 Deep fried vegetables

Mexican

Ceviche
 Salsa
 Beans, skinless chicken or seafood
 Burrito or soft shell taco made
 w/beans or lean meat
 Yellow or plain rice

Fried tortilla chips *, Nachos, quesadillas
 Refried beans (if cooked with lard)
 Chimichanga, tostado
 or taco (fried tortillas)
 Sour cream, guacamole, regular cheese

Portuguese

Caldo verde
 Midnight chicken soup
 Sweet bread (in moderation)
 Portuguese pickled vegetables *

Portuguese bean soup *
 Portuguese sausage
 Malasadas

Samoan

Fa'alifu, Faiai Valuvalu,
 Kopai, Suaalaisa, Suamasi,
 and taro or breadfruit pudding
 made with **low fat coconut milk**
or 1% milk
 Steamed fish or lean chicken
 Tuna packed in water
 2% milk or low fat coconut milk
 Steamed or boiled taro, or yam

Fa'alifu, Faiai Valuvalu,
 Kopai, Suaalaisa, Suamasi,
 and taro or breadfruit pudding
 made with **regular coconut cream**
or coconut milk
 Corned beef *, luncheon meat
 Tuna or sardines packed in oil
 Miti, or coconut milk

(* These are foods high in salt.)

Take Charge of Your Diabetes

Better Choice

Thai

Summer rolls
Tom Yom soup *
Thai chicken (no cashews)
Stir fry chicken, seafood, tofu
or lean meat
Vegetables, steamed rice
Green papaya salad

Salad Bar

Steamed or fresh vegetables
and fresh fruit
Beans, peas, corn
Water packed tuna
Tofu, low or non-fat cottage cheese
Reduced fat salad dressing

Fast Foods

Regular hamburger (no mayonnaise)
Grilled chicken or fish
Garden Salad w/low-fat dressing
Diet drink, orange juice
Non-fat or skim milk

Higher Fat and Calorie Choice

Spring rolls
Tom kha soup *
Curries
Satays
Fried rice

Oil and vinegar salads
like pasta salad
Mayonnaise based salads
like macaroni salad
Cheese, nuts, seeds, olives
Salad dressing
Bacon bits, croutons

Specialty burger /cheeseburger
Fried or breaded chicken or fish
Chef salad, Regular salad dressing
French fries
Milkshakes

(These are foods high in salt.)*

Baked Won Ton

From: *Kama'ina Cooking with Hawai'i Association of Diabetes Educators*

1 carrot grated or finely diced
 1 onion grated or finely diced
 1/2 pound imitation crab meat, chopped
 1/8 teaspoon black pepper
 1 container (15 oz.), Ricotta cheese*
 1/4 teaspoon garlic powder
 40 won ton wrappers
 1 tablespoon olive oil

Preheat oven to 350 degrees. Combine vegetables, cheese, crab meat, garlic powder, and pepper. Place 1 tablespoon cheese mixture on center of won ton. Brush edges with water. Fold corners to seal. Arranged on greased baking dish. Lightly brush won ton with oil. Bake 25 minutes until crisp and brown. Makes 20 servings of won tons.

Calories:	114
Carbohydrate:	16 g
Cholesterol:	11 mg
Dietary fiber:	less than 1 g
Sodium:	266 mg
Protein:	2 g
Fat:	3 g

* To lower the fat use Ricotta cheese made with skim milk.

Chicken with Snow Peas

From: *Kama'ina Cooking with Hawai'i Association of Diabetes Educators*

1 pound boneless, skinless chicken thighs or breasts
 2 tablespoons low-sodium soy sauce
 3/4 teaspoon dried ginger powder
 4 teaspoon corn starch
 2 round onion, chopped
 3 tablespoons chicken broth**
 2 tablespoons vegetable oil
 1/2 pound snow peas
 4 cloves garlic, chopped
 1/2 cup water

Cut chicken into cubes. In small bowl combine broth, soy sauce, cornstarch and set aside. Heat oil in wok, add chicken and stir fry. Remove chicken. Add garlic, ginger, snow peas and water. Add in chicken and soy sauce mixture. Stir rapidly. Serves 4.

Calories:	376
Carbohydrate:	15 g
Cholesterol:	116 mg
Sodium:	486 mg
Dietary fiber:	3 g
Protein:	36 g
Fat:	19 g

** To reduce the sodium use reduced sodium chicken broth.

Crispy Cress Tofu Salad

From: *5 A Day the Hawai'i*
Way: *Easy island recipes*
—Bill Smith

2 cups watercress, chopped
16 ounce soft tofu, strained and cubed
2 tablespoons green onions, chopped
1/2 bag bean sprouts
1 clove garlic
1 teaspoon grated ginger
1 tablespoon soy sauce
1/2 tablespoon peanut oil

Arrange watercress on a plate or in a bowl. Place remaining ingredients over watercress. Heat peanut oil and pour on top of salad. Makes 8 side salads.

Calories:	54
Carbohydrate:	3 g
Cholesterol:	0
Sodium:	87 mg
Dietary Fiber:	0
Protein:	5 g
Fat:	3 g

The 5 A Day Sushi

From: *5 A Day the Hawai'i*
Way: *Easy island recipes*
—Naomi Ichimura

Sour rice:
2 cups cooked rice
5 tablespoon rice vinegar
2 tablespoon sugar
1 tablespoon olive oil

In a big bowl, mix all ingredients together. Cool and set aside.

1/2 cup cooked green peas
1 Japanese cucumber, cut in 1/2 inch cubes
1/2 ripe avocado, peeled and cut into 1/2 inch cubes
1 small can cooked mushrooms, cut in half
10 olives, cut in half
1 medium tomato, cut in 1/2 inch cubes
1 orange, peeled and cut into 1/2 inch pieces
1 papaya, peeled and cut into 1/2 inch cubes

Lightly toss all ingredients with sour rice mixture. Serves 4.

Calories:	329
Carbohydrate:	58 g
Cholesterol:	0
Sodium:	226 mg
Dietary Fiber:	8 g
Protein:	6 g
Fat:	9.5 g

Popeye's Favorite Eggplant

From: *5 A Day the Hawai'i Way: Easy island recipes*
—Caryn Stankiewicz

2 long eggplants
2 thumb size ginger
1 tablespoon soy sauce
1 1/2 tablespoon olive oil

Cut the crowns off the eggplant. Cut the pieces in half (lengthwise), then slice into two inch pieces. Microwave the eggplant for four minutes. Meanwhile, peel the outer layer of ginger and grate; mix with shoyu. Fry the eggplant in a small, non-stick pan with olive oil until lightly browned on both sides. Drain eggplant on a paper towel. Serve with ginger-shoyu sauce. Serves 2.

Calories:	173
Carbohydrate:	29 g
Cholesterol:	0
Sodium:	269 mg
Dietary Fiber:	0
Protein:	5 g
Fat:	6 g

Peanut Butter Cups

From: *The Diabetic Dessert Cookbook*—Coleen Howard

4 cups carob
1/8 teaspoon artificial sweetener (Equal®)
2 cups smooth dietetic peanut butter

Melt carob and artificial sweetener in double boiler. Remove from heat. Pour melted carob into chocolate molds. Fill to half full. Then add peanut butter, leaving enough room at the top to add more carob. Add enough carob to completely cover. Refrigerate until set, approximately 20 minutes. Cut into 1" square X 1/2" deep. Makes 80 pieces.

Calories:	91.9
Carbohydrate:	7.25 g
Cholesterol:	.907 mg
Sodium:	1.09 mg
Dietary Fiber:	.422 g
Protein:	3.42 g
Fat:	5.85 g

Turkey Tofu Loaf

From: *5 A Day the Hawai'i*
Way: *Easy island recipes*
—Bill Smith

1 1/2 pound ground turkey
16 ounce soft tofu, drained and
mashed
2 tablespoons green onions,
chopped
2 tablespoons white onions,
chopped
2 tablespoons water chestnuts,
chopped
2 tablespoons celery, chopped
1 cup grated carrots
2 teaspoons soy sauce
1 tablespoon oyster sauce

Mix all ingredients except soy
sauce and oyster sauce, and place
in a loaf pan. Bake 45 minutes at
350 degrees. Top with soy sauce
and oyster sauce. Serves 10.

Calories:	141
Carbohydrate:	3 g
Cholesterol:	54 mg
Sodium:	174 mg
Dietary Fiber:	0
Protein:	15 g
Fat:	7 g

White Omelette

From: *5 A Day the Hawai'i*
Way: *Easy island recipes*
—Derek Traya

3 egg whites
1 tablespoon fresh basil, minced
1/4 cup fresh mushrooms, sliced
1 small tomato, diced
2 cups fresh spinach
salt and pepper to taste

Beat egg whites until stiff
peaks form. Fry the egg whites as
you would prepare a regular
omelette. For the filling, combine
the basil, mushrooms, tomato
and spinach in just a tiny bit of
olive oil. Add salt and pepper to
taste or substitute by using Mrs.
Dash. Garnish with fresh basil.
Serves 2.

Calories:	100
Carbohydrate:	12 g
Cholesterol:	0
Dietary fiber:	5 g
Sodium:	252 mg
Protein:	14 g
Fat:	0.9 g

Diabetes and Exercise



Exercise is an important tool in managing your diabetes. It can help you control your blood sugar and your weight. Exercise can also help prevent heart problems. Many people say they feel better when they get regular exercise. Here are some other benefits of exercise:

- Strengthens heart, lungs, and bones
- Increases muscle tone, strength and endurance
- Controls weight and body fat
- Lowers blood pressure
- Improves your body's ability to prevent a cold

- Increases energy
- May decrease insulin dosage on exercise days
- Better sex
- Improves sleep
- Relieves stress
- Makes you feel good!

How to Get Started!

Starting an exercise program can be easier than you may think. Here are quick and easy steps to start exercising:

1. Talk with your doctor about finding an activity that's right for you.
2. Choose activities that you enjoy.



Take Charge of Your Diabetes

3. Start slowly, and don't over do it.
4. Set realistic goals.
5. Make exercise a daily part of your life.

Your Exercise Program

You've made the important decision to exercise and stay healthy. Before you begin any exercise program, it is important to talk to your doctor and health care team. They will want to make sure you don't have health problems that may keep you from exercising safely. Work together to design an exercise plan that is best for you.

To make sure that you get the most benefit out of your activity, there are a few things you should think about as you plan your exercise program. These things include: how often, how hard, and for how long you should exercise. You should also consider what type of exercise you would like to do.

How often should you exercise?

You should do some physical activity most days of the week. It's better to walk 10 or 20 min-

utes each day than one hour once a week. A good goal is to exercise at least 3 times a week, or every other day. Also, try to fit exercise into your day. Take the stairs instead of using the elevator or take a walk during your lunch break. For those on insulin, doing physical activity everyday can help reduce the amount of insulin needed each day.

How hard should you exercise?

You can decide what you can and cannot do, and how hard you can push yourself. Keep the pace of the exercise comfortable. To measure the intensity of your workout, here are two simple methods:

- **Talk Test:** This test is simply testing if you are exercising at a pace that allows you to carry on a conversation while you workout. If you cannot talk during exercise, you are exercising too hard and you should make changes to your exercise program.
- **Rate of Exercise:** This method helps you rate "How you feel" or your comfort level during the work-out. The recommended range is usually between 5 (hard) and 7 (very hard). You

should never feel like you are exercising at a 10 level.

Rate of Exercise Scale

- 0 Nothing at all - lying down
- 0.5 very, very easy
- 1 very easy
- 2 easy
- 3 moderate
- 4 somewhat hard
- 5 hard
- 6
- 7 very hard
- 8
- 9
- 10 very, very hard
—as hard as you can exercise

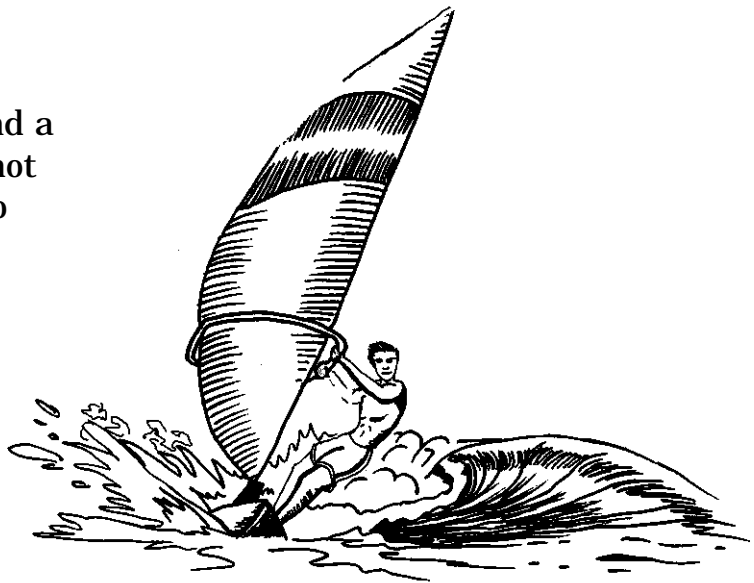
Lucky you live in Hawai'i

Hawai'i's sunny blue skies, beautiful beaches, and warm weather makes it easy to find outdoor activities to do year-round. Here are a few exercise ideas:

- | | |
|----------------|-----------------|
| beach walking | wind-surfing |
| water aerobics | hula |
| hiking | yoga |
| surfing | canoe paddling |
| tai chi | kayaking |
| swimming | walking |
| diving | hunting |
| martial arts | yard work |
| snorkeling | activities with |
| bicycling | your children |

For how long should you exercise?

Start with a 20 minute workout, with a warm up and a cool down phase. If you cannot do 20 minutes of exercise, do what you can and gradually increase the amount of time you are active.



Take Charge of Your Diabetes

What type of exercise should you do?

Choose an activity you really like. The more fun it is, the more likely you will do it each day. It is also a good idea to vary the type of activity you do, so that you do not become bored or tired doing just one type of activity all the time. Make exercise a regular part of your daily life.

Tips to keep motivated:

- Vary your activities
- Go easy at first
- Start with one activity, then gradually add others
- Find a friend to exercise with



Exercise with a partner.

- Make exercise a family affair
- Reward yourself as you reach your exercise goals



Swimming is a good way to get regular exercise.

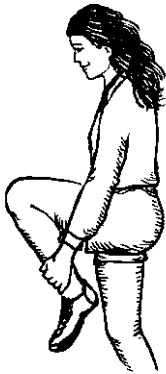
The Exercise Activity

Each exercise activity should include 3 basic parts:

- the warm up phase
- the active phase
- the cool-down phase

1. *The Warm Up phase:*

The warm up phase is important to get your body ready for exercise. Do 5 - 10 minutes of slow, easy movements, such as walking. Stretch out your muscles, but avoid bouncing. Talk to your diabetes educator or physical activity expert to find out what kind of stretches you should do. Continue



warming up and gradually increase the pace until you reach a challenging level. Remember that you should be able to talk.

2. *The Active phase:*

The active phase should include exercises that use large muscle groups continuously for a period of time. This type of exercise gets your heart to beat faster. Listen to your body, and try not to over exert yourself. Work gradually to reach your optimal workout. The goal is to be physically active for at least 20 minutes, 3 or more times a week.



• **Important!** If you think you are having a low blood sugar episode, (if you become dizzy, light-headed, or faint), stop the exercise and test your blood. If this is not possible, treat the symptoms and test as soon as you can.

3. *The Cool Down phase:*

Never abruptly stop exercising. Gradually slow down to a relaxed pace.

This should take 5 - 10 minutes. Stretch out your muscles.



Continue cooling down until your heart and breathing rate has returned to normal.

Special tips for people with diabetes to keep in mind:

- Drink plenty of fluids. Drinking 8 large glasses of water a day is recommended.
- Wear a necklace, tag, or bracelet that identifies you as a person with diabetes.
- Exercise with a partner.
- Wear socks and properly fitted shoes.

Take Charge of Your Diabetes

- Check your feet daily for blisters, redness, cuts, or open sores.

There is a risk of having low blood glucose levels during or after exercise, especially for people with Type 1 diabetes and people with Type 2 diabetes on certain medication. To avoid having low blood glucose levels while exercising:

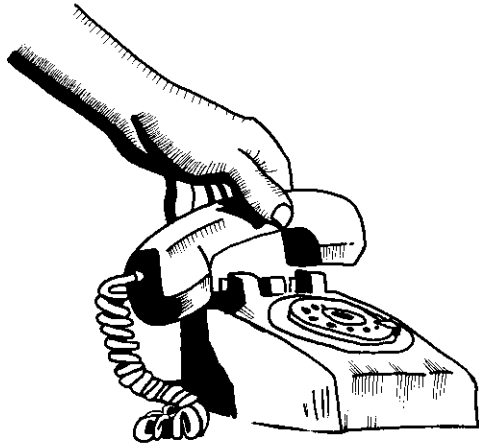
- Know your blood sugar level before and after you exercise.
- Carry a fast acting sugar, such as raisins or glucose tablets.
- Eat 1 - 3 hours before you plan on exercising.
- Talk to your health care team about changes in medication.
- Try not to exercise when insulin is working at it's peak.
- If you are taking insulin, rotate injection site away from the muscle you are going to be using.
- Find out how your blood glucose levels respond to different types of exercise by taking blood glucose readings before, during, and after exercise.

- Try to exercise at the same time each day.
- Never skip meals or snacks before exercising.
- You may need to eat more food after exercise, depending on how long and hard you exercise.



Walking is a good way to get regular exercise

- Listen to your body. If something doesn't feel right, stop the activity and test your blood glucose level.
- If you don't feel well, call your doctor or health care professional.



A Few Things About Diabetes Medicine

If you take diabetes pills or insulin injections to control your diabetes, ask your health care provider to explain how these work. It's important to know how and when to take diabetes medicine. If you take other medicines

that are sold with or without a prescriptions, ask your doctor how these can affect your diabetes control. When you take insulin injections or diabetes pills, your blood glucose levels can get too low.

If you inject insulin, your health care team should be able to tell you

- How to give yourself injections.
- When you need to change your insulin dose.
- How to safely dispose of needles.



Be sure you know how and when to take your diabetes medicine.

3 Keeping Track of Your Blood Glucose

It's important to your health to control your blood glucose (also called blood sugar). Keeping your glucose close to normal helps prevent or delay some diabetes problems, such as eye disease, kidney

- Getting a hemoglobin A1c test from your health care provider about every 3 months if you take insulin and at least every 6 months if you don't take insulin.



Keep a daily record of your blood glucose levels.

These tests can help you and the rest of your diabetes health care team—doctor, diabetes educator, and others—work together to help you control your blood glucose.

disease, and nerve damage. One thing that can help you control your glucose level is to keep track of it. You can do this by:

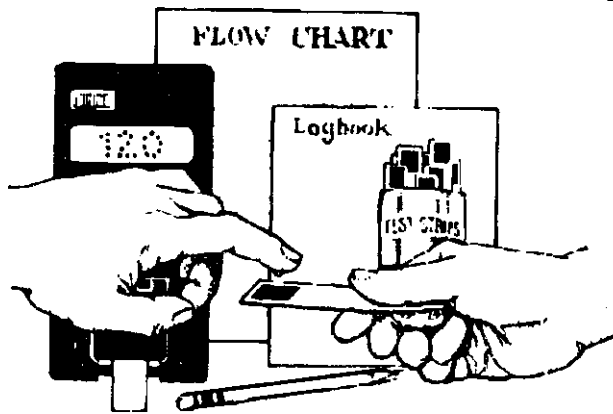
- Testing your own glucose a number of times each day (self-monitoring blood glucose). Many people with diabetes test their glucose two to four times a day.

Testing Your Blood Glucose Each Day

You can do a test to find out what your blood glucose is at any moment. Your health care team can show you how to do the test yourself. Using a finger prick, you place a drop of blood on a special coated strip, which

Take Charge of Your Diabetes

“reads” your blood glucose. Many people use an electronic meter to get this reading.



Testing your own blood glucose level is a key to taking charge of your diabetes.

Blood glucose testing can help you understand how food, physical activity, and diabetes medicine affect your glucose level.

Testing can help you make day-to-day choices about how to balance these things. It can also tell you when your glucose is too low or too high so that you can treat these problems.

Ask your health care team to help you set a goal for your glucose range and show you how to record your glu-

cose readings in a logbook or record sheet. If you need a daily logbook, ask your health care provider for one. Or you can make copies of page 104 if you take insulin or page 102 if you don't take insulin. A sample log sheet is filled out to show you how to use each.

Be sure to write down each glucose reading and the date and time you took it. When you review your records, you can see a pattern of your recent glucose control. Keeping track of your glucose on a day-to-day basis is one of the best ways you can take charge of your diabetes.

Daily Log SAMPLE

Week Starting *January 18, 1999*

	Insulin Type	Breakfast		Lunch		Dinner		Bedtime		Other		Notes
		Dose	Blood Sugar	Dose	Blood Sugar	Dose	Blood Sugar	Dose	Blood Sugar	Dose	Blood Sugar	
Mon	R	8		3	184	6	118					*Worked out longer than usual. Drank orange juice.
	L	20	121					8	105		10:00 a.m. 10:30 11:30 p.m.	
Tues	R	8		2	106	6	115					
	L	25	112					8	130			
Wed	R	8		3	158	6	161					*Dinner out. Also no a.m. exercise. Ketones negative.
	L	20	109					8	242		105 10:00pm	
Thurs	R	8		2	116	6	110					
	L	20	111					8	113			
Fri	R	8		2	112	3	68					*Didn't eat much lunch Busy day!
	L	20	102					8	115			
Sat	R	8		3	161	6	118					
	L	25	124					8	122			
Sun	R	9		2	99	6	110					*Slept late.
	L	20	175					8	109			

R=Regular N=NPH L=Lente or Ultralente (UL)

Think of your daily log sheet as a diary for taking charge of your diabetes.

Getting a Summary Lab Test (Hemoglobin A1c)

A hemoglobin A1c test uses blood drawn from a vein in your arm to sum up your diabetes control for the past few months. Hemoglobin A1c measures how much glucose has been sticking to part of the hemoglobin in your red blood cells. Since each red blood cell is replaced by a new one every four months, this test summarizes how high the glucose levels have been during the life of the cells.

If your most recent blood glucose readings have been near normal (70-140 mg/dL, with the higher readings occurring after meals), the hemoglobin A1c test will be near normal (usually

about 6%-7%). If you've had many readings above normal, the extra glucose sticking to your red blood cells will make your hemoglobin A1c test read higher.

You should get a hemoglobin A1c test at least two times a year. People who take insulin need to get this test about four times a year. Ask your health care provider for the results and record them on page 87. This test will help you and your diabetes care team keep track of your average blood glucose control.

Ask your team to tell you the normal range of values and help you set a goal for yourself. Write your goals down on page 87 of this guide. If your hemoglobin A1c is high, work with your team

to adjust your balance of food, physical activity, and diabetes medicine. When your hemoglobin A1c test result is near your goal, you'll know you've balanced things well.

Tests and Goals	Dates and Results				
	6/1/98	9/11/98	1/5/99	5/3/99	9/1/99
Blood Glucose (mg/dl)	165	118	180	105	110
Hemoglobin A1c Test/Goal (%)	9% 8%	8.9% 8%	8.6% 7.5%	not done	8.2% 7.5%
Weight/Goal (pounds)	180 170	175 165	172 165	170 165	165 160
Blood Pressure (goal: 120/80 mm Hg)	160/90	160/86	158/82	156/82	122/80
Foot Check	x	x	x	x	x

Use your hemoglobin A1c test to track your glucose control.

Take Charge of Your Diabetes

Signs of Low Blood Glucose

Some possible signs of low blood glucose:

- feeling nervous, shaky or sweaty
- feeling tired
- getting confused
- passing out
- having seizures

The signs may be mild at first. But a low glucose level can quickly drop much lower if you don't treat it. If you have any signs that your glucose may be low, test it right away. If it's less than 60 to 70 mg/dL, you need to treat it right away.



If you have signs that your blood glucose is low but you can't test it right then....



...go ahead and treat it!



Treat it every 15 minutes, until your glucose level is normal.

Treating Low Blood Glucose

If you feel like your blood glucose is getting too low but you can't test it right then, play it safe—go ahead and treat it. Eat 10 to 15 grams of carbohydrate right away. The following are examples of foods and liquids with this amount of carbohydrate.

Food and Liquids for Low Blood Glucose

(each item equals about 10 to 15 grams of carbohydrate)

Food Item	Amount
Sugar Packets	2 to 3
Fruit juice	1/2 cup (4 ounces)
Soda (not diet)	1/2 cup (4 ounces)
Hard candy	3 to 5 pieces
Sugar or honey	3 teaspoons
Glucose tablets	2 to 3

Check your blood glucose again in 15 minutes. Eat another 10 to 15 grams of carbohydrate every 15 minutes until your blood glucose is above 70 mg/dL or your signs have gone away.

Eating an item on the list on this page will keep your glucose up for only about 30 minutes. So if your next planned meal or snack is more than 30 minutes away, you should go ahead and eat something like crackers and a tablespoon of peanut butter or a slice of cheese.

In your glucose logbook or record sheet, write down the numbers and the times when low levels happen. Think about what

may be causing them. If you think you know the reason, write it beside the numbers you recorded. You may need to call your health care provider to talk about changing your diet, activity, or diabetes medicine.



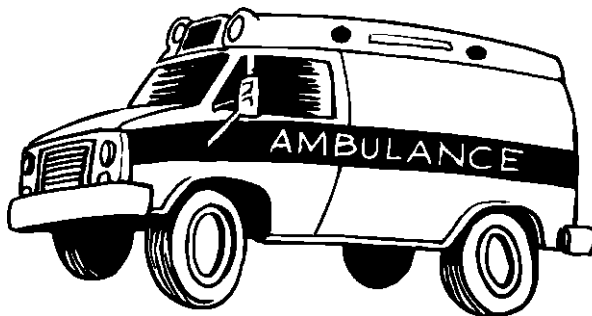
Write in in your logbook why you had a low blood glucose level.

Take Charge of Your Diabetes

Tell family members, close friends, teachers and people at work that you have diabetes. Tell them how to know when your blood glucose is low. Show them what to do if you can't treat yourself. Someone will need to give you fruit juice, soda pop (not diet), or sugar.

If you can't swallow, someone will need to give you a shot of glucagon and call for help. Glucagon is a prescription medicine that raises the blood glucose and is injected like insulin. If you take insulin, you should have a glucagon kit handy. Teach family members, roommates, and friends when and how to use it.

Waiting to treat low blood glucose is not safe. You may be in danger of passing out. If you get confused, pass out, or have a seizure, you need emergency help. Don't try to drive yourself to get help. Be prepared for an emergency.



Preventing Low Blood Glucose

Keep a balance

Try to stay close to your usual schedule of eating, activity, and medicine. If you're late getting a meal or if you're more active than usual, you may need an extra snack.

Test your blood glucose

Keeping track of your blood glucose is a way to know when it tends to run low. Show your log-book or record sheet to your health care providers. Be sure to let them know if you're having a number of low glucose readings a week.

To be safe, always check your glucose before doing any of these things:

- Driving a vehicle.
- Using heavy equipment.
- Being very physically active.
- Being active for a long time.

In a low blood glucose emergency, you may need to go to the hospital.

Ask your health care team whether you should test your glucose before (or during) any other activities. Write these in the space below.

Be prepared

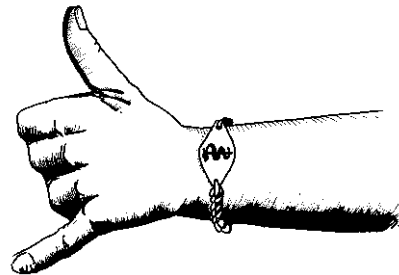
Always carry some type of carbohydrate with you so you'll be ready at any time to treat a low glucose level. See the box on page



Always carry along some food with carbohydrates in it.

35 for snacks that have 10-15 grams of carbohydrate.

Always wear something (like an identification bracelet) that says you have diabetes. Carry a card in your wallet that says you have diabetes and tells if you use medicine to treat it.



Wear something that lets others know you have diabetes, in case of an emergency.

Having Problems With High Blood Glucose

For most people, blood glucose levels that stay higher than 140 mg/dL (before meals) are too high. Talk with your health care team about the glucose range that is best for you.

Eating too much food, being less active than usual, or taking too little diabetes medicine are some common reasons for high

Take Charge of Your Diabetes

blood glucose (or hyperglycemia). Your blood glucose can also go up when you're sick or under stress.

Over time, high blood glucose can damage body organs. For this reason, many people with diabetes try to keep their blood glucose in control as much as they can.

Some people with diabetes are in danger of diabetic ketoacidosis when their glucose level stays high. You can tell if you're in diabetic ketoacidosis by checking your urine for ketones. If you have ketones in your urine, call your doctor or go to the hospital right away. The most common reason for diabetic ketoacidosis is not taking your insulin. If you have Type 1 diabetes, ask your health care team about diabetic ketoacidosis.

Your blood glucose is more likely to go up when you're sick, for example, when you have the flu or an infection. You'll need to take special care of yourself during these times.

Signs of High Blood Glucose

Some common signs of high

blood glucose are:

- dry mouth
- thirst
- urinating often
- feeling tired
- blurred vision
- losing weight without trying
- stomach pain, feeling sick to your stomach, or even throwing up



Frequent urination can be a sign of high blood sugar.

If you have any signs that your glucose is high, test your blood. In your logbook or on your record sheet, write down your glucose reading and the time you did the test. If your glucose is high, think about what could have caused it to go up. If you think you know of something, write this down beside your glucose reading.

Preventing High Blood Glucose

Keep a balance

Try to stay with your food and activity plan as much as you can. Take your diabetes medicine

about the same time each day.



Balance is the key to taking charge of your diabetes.

Work with your health care team to set goals for weight, glucose level and activity.

Test your blood glucose

Keep track of your glucose and go over your records often. You'll learn how certain foods or activi-

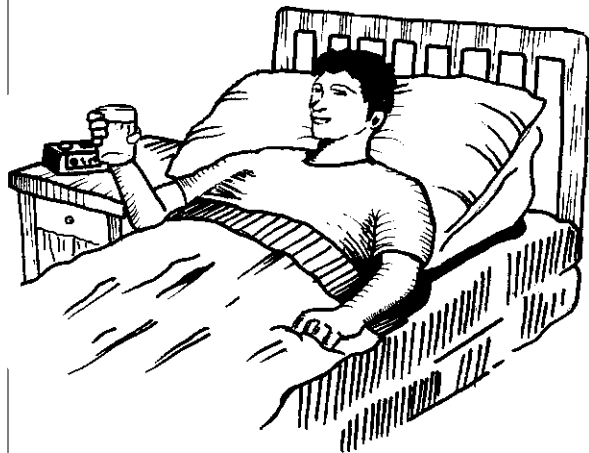
ties affect your glucose.

Show your records to your health care team. Ask how you can change your food, activity, and medicine to avoid or treat high blood glucose. Ask when you should call for help.

Taking Care of Yourself When You're Sick

Keep Taking Medicine

Be sure to keep taking your diabetes pills or insulin. Don't stop taking them even if you can't eat. Your health care provider may even advise you to take more insulin during sickness.



You'll need to take special care of yourself when you're sick.

What to Eat or Drink When You're Sick
(each item equals one bread or fruit exchange*)

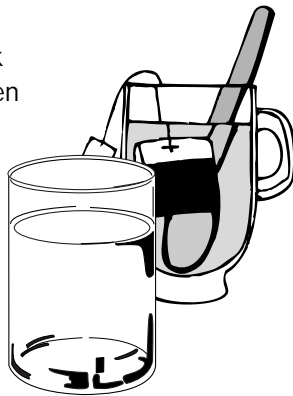
Food Item	Amount
Fruit juice	1/3 to 1/2 cup
Fruit-flavored drink	1/2 cup
Soda (regular, not diet)	1/2
*Jell-O™ (regular, not sugar free)	1/2 cup
*Popsicle™ (regular, not sugar free)	1/2 twin
Sherbet	1/4 cup
Saltine crackers	6 squares
Milk	1 cup
Thin soup (ex: vegetable, chicken noodle)	1 cup
Thick soup (ex: cream of mushroom, tomato)	1/2 cup
Ice cream (vanilla)	1/2 cup
Pudding (sugar-free)	1/2 cup
Pudding (regular)	1/4 cup
Macaroni, noodles, rice, mashed potatoes	1/2 cup (cooked)

* Use of trade names is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services.

Keep Eating

Try to eat the same amount of fruits and breads as usual. If you can, eat your regular diet. If you're having trouble doing this, use food exchanges: eat enough soft foods or drink enough liquids to take the place of the fruits and breads you usually eat. A food exchange is a measured portion of one type of food that can be eaten instead of another type of food. A food exchange will give you similar nutrients. Use the list on the previous page to make food exchanges for bread or fruit.

Be sure to drink extra fluids when you're sick.



Drink Liquids

Drink extra liquids. Try to drink at least 1/2 cup (4 ounces) to 3/4 cup (6 ounces) every half-hour to hour, even if you have to do this in small sips. These liq-

uids should not have calories. Water, diet soda pop, or tea without sugar are good choices.

Check for Changes

- Test your blood glucose at least every 4 hours. If your glucose is 240 mg/dL or higher, test your urine for ketones. Ketones are chemicals the liver makes when there's not enough insulin in your blood. It's easy to test for ketones. Buy urine ketone strips at the drug store. Urinate on the pad part of the strip. Compare the color that the strip becomes to the color example on the package. If the pad turns a purple color, call your health care provider right away.
- Weigh yourself every day. Losing weight without trying is a sign of high blood glucose.
- Check your temperature every morning and evening. A fever may be a sign of infection.
- Every 4 to 6 hours, check how you're breathing and decide how alert you feel. Having trouble breathing, feeling more sleepy than usual, or not thinking clearly can be danger signs.

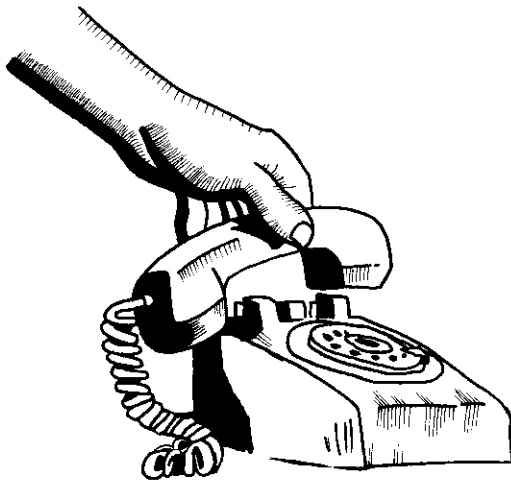
Take Charge of Your Diabetes

Keep Records

Use the “Records for Sick Days,” starting on page 75. Ask a family member or friend to help if you need it.

Call for Help

Ask your health care provider when you should call. During your sick times, you may need to call every day for advice.



You may need to call your doctor daily when you're sick.

You should call your health care provider or go to an emergency room if any of the following happens:

- You feel too sick to eat normally and for more than 6 hours

can't keep food or liquids down.

- You have severe diarrhea.
- You lose 5 pounds or more without trying to.
- Your temperature is over 101°F.
- Your blood glucose level is lower than 60 mg/dL or stays over 300 mg/dL.
- You have moderate or large amounts of ketones in your urine.
- You're having trouble breathing.
- You feel sleepy or can't think clearly.

Managing Your Diabetes at Work, School, and in Travel

Staying in charge of your diabetes no matter what your day holds—work, school, travel, or special events—takes planning ahead. Many days will go smoothly, but some days will hold surprises, such as extra activity or delays that throw your schedule off. Plan ahead for these



Stay in charge of your diabetes no matter what your day holds—by planning ahead.

times by always keeping a treatment for low blood glucose with you (see page 35 some choices). If you have any signs that your glucose may be low (see page 34), go ahead and treat it right away. Stay as close to your eating, activity, and medicine schedule as you can. Keep track of your glucose so you can pick up changes early. Always wear identification that says you have diabetes.

Talk with your health care team about your planned schedule and activities. Ask for help in planning ahead for work, travel

and special events. When you read the rest of this section, you may think of more questions to ask.

At Work and School

Talk with your health care team about the type of activity you do at work or at school. From time to time, you and your health care team may need to make changes in your activity, medicine, or eating.

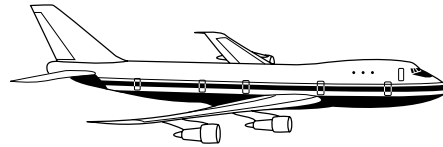
Many people take supplies for testing their glucose to work and to school so they can test at regu-

Take Charge of Your Diabetes

lar break times. Some people choose to show their fellow workers, their teacher, or their classmates how to help if they should ever have a problem. They teach them how to tell when their glucose is low and how to treat it (see pages 34-36). Some people like to have written steps on file at their place of work or with their teacher.



Talk with your health care provider about balancing your daily activities and your glucose needs.



In Travel

When you plan a trip, think about your day-to-day schedule and try to stay as close to it as you can. For example, if you usually test your blood glucose at noon and then eat lunch, plan to do this on your trip, as well.

Trips can hold surprises—in delays and change. Even the types of food and supplies you can buy on your trip may not be the same as those you get at home.

Before you travel, work with your health care provider to plan your timing for medicine, food and activity. Talk about what to do if you find changes in your glucose readings.

Plan ahead for trips:

- Keep snacks with you that could be used to prevent—or treat—low blood glucose.

- Carry extra food and drink supplies with you, such as cracker packs and small cans of juices or bottled water.
- Carry plenty of glucose testing supplies with you.
- Take along all the diabetes medicine you'll need.

When you travel, be sure to:

- Test your glucose often and keep track of it.
- Wear identification that says you have diabetes.
- Let others know how they can help you.

If you're traveling in a different time zone, you may need to change your timing of food, medicine, and activity. Ask your health care provider to help you with this. Talk about the food and drink choices that would be healthy for you. If you'll be in another country, ask your doctor to write a letter explaining that you have diabetes. It's also a good idea to get your doctor to write a prescription for you to get insulin or supplies if needed.



No matter where you travel, you can take charge of your diabetes.

4 Feelings About Having Diabetes

Living with diabetes isn't easy. It's normal to feel troubled with it. Tell your health care team how you feel. Point out any problems you have with your diabetes care plan. Your diabetes educator or other health care provider may be able to help you think of ways to deal with these problems.

Talk about the stresses you feel at home, school, and work. How do you cope with these pressures? If your feelings are getting in the way of taking care of yourself, you need to ask for help.

Support Groups

It helps to talk with other people who have problems like your own. You may want to think about joining a diabetes support group. In support groups, people who have just found out they have diabetes can learn from people who have lived with it for a long time. People can talk about and share how they deal with their diabetes. They can also talk about how they take care of their health, how they prepare food, and how they get physical activi-



Ask your family to help you manage your diabetes.

Take Charge of Your Diabetes

ty. Family members who do not have diabetes may want to join a support group, too. Ask your health care team about support groups for people with diabetes and their families and friends. If there is not a support group in your area, you may want to call a diabetes organization (see the list on page 119) about starting a group.

Counseling

One-on-one and family counseling sessions may also help. Be sure to see a counselor who knows about diabetes and its care. Ask your health care provider to help you find a counselor.



It can help to talk with other people who have problems like your own.

5 Eye Problems

Diabetic eye disease (also called diabetic retinopathy) is a serious problem that can lead to loss of sight. There's a lot you can do to take charge and prevent such problems. A recent study shows that keeping your blood glucose closer to normal can prevent or delay the onset of diabetic eye disease. Keeping your blood pressure under control is also important. Finding and treating eye problems early can help save sight.

Signs of Diabetic Eye Disease

Since diabetic eye disease may be developing even when your sight is good, regular eye exams are important for finding problems early. Some people may notice signs of vision changes. If you're having trouble reading, if your vision is blurred, or if you're seeing rings around lights, dark spots, or flashing lights, you may have eye problems. Be sure to tell your health care team or eye doctor about any eye problems you may have.



If you're having trouble with your vision, talk with your health care team or eye doctor.

Protecting Your Sight

Keep Your Blood Glucose Under Control

High Blood Glucose can damage your eyes as time goes by. Work with your health care team to keep your glucose levels as close to normal as you can.

Take Charge of Your Diabetes

Keep Your Blood Pressure Under Control

High blood pressure can damage your eyes. Have your health care provider check your blood pressure at least four times a year. If your blood pressure is higher than 140/90, you may want to buy a blood pressure cuff and check your blood pressure at home. Ask your health care provider where you can buy a cuff.



You may want to check your blood pressure at home.

Get Regular Eye Exams

Even if you're seeing fine, you need regular, complete eye exams to protect your sight. Ask your health care provider to help you find an eye doctor who cares for people. Before the exam, a doctor or nurse will put eye drops in your eyes to dilate the pupils.

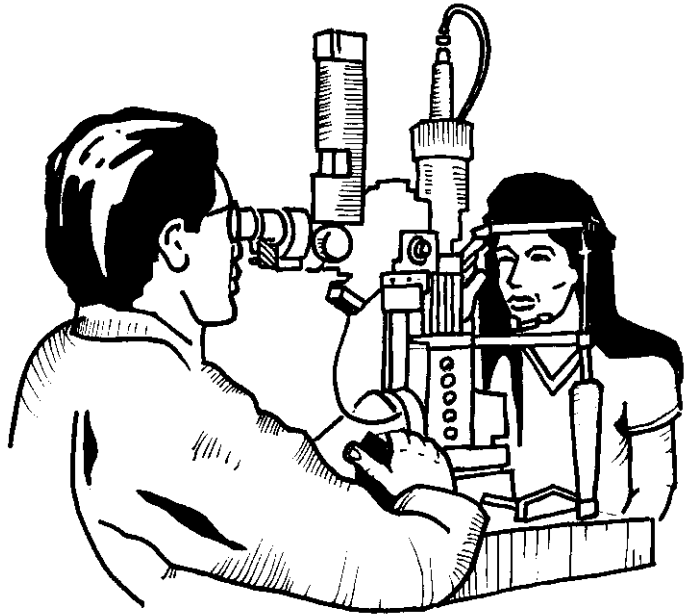
You should have your eyes dilated and examined once a year. Keep track of these exams on page 97. Even if you've lost your sight from diabetic eye disease, you still need to have regular eye care. If you haven't already had a complete eye exam, you should have one now if any of these conditions apply to you:

- You've had Type 1 diabetes for 5 or more years.
- You have Type 2 diabetes.
- You're going through puberty and you have diabetes.
- You're pregnant and you have diabetes.
- You're planning to become pregnant and you have diabetes.

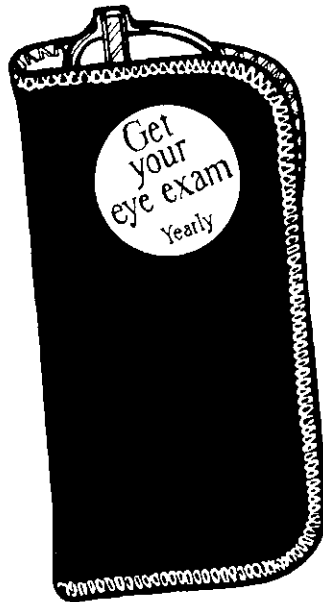
If you can't afford an eye exam, ask about a payment plan or a free exam. If you're 65 or older, Medicare may pay for diabetic eye exams (but not glasses). Ask your eye doctor to accept the Medicare fee as full payment.

Discuss Your Physical Activity Plan

If you have diabetic eye disease, talk with your health care provider about the kind of physical activity that is best for you.



Get a complete eye exam each year.



Think of a way to remind yourself to get an eye exam each year.

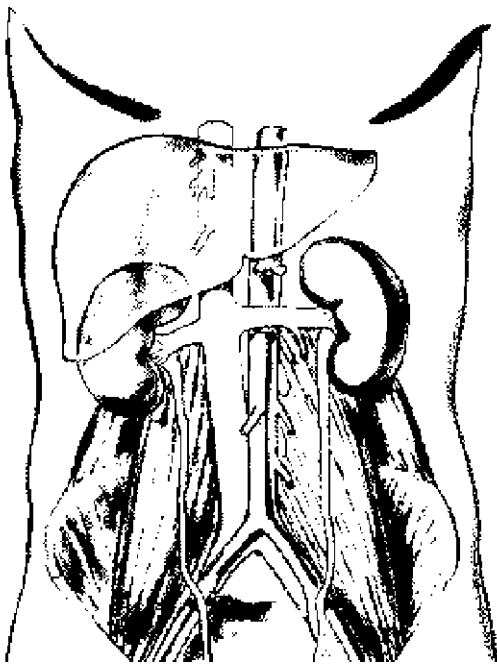
Treating Diabetic Eye Disease

Treating eye problems early can help save sight. Laser surgery may help people who have advanced diabetic eye disease. An operation called vitrectomy may help those who have lost their sight from bleeding in the back of the eye.

If your sight is poor, an eye doctor who is an expert in low vision may be able to give you glasses or other devices that can help you use your limited vision more fully. You may want to ask your health care provider about support groups and job training for people with low vision.

6 Kidney Problems

Diabetes can cause diabetic kidney disease (also called diabetic nephropathy), which can lead to kidney failure. There's a lot you can do to take charge and prevent kidney problems. A recent study shows that controlling your blood glucose can prevent or delay the onset of kidney disease. Keeping your blood pressure under control is also important.



Take care of your kidneys by controlling your blood glucose and blood pressure.

The kidneys keep the right amount of water in the body and help filter out harmful wastes. These wastes then pass from the body in the urine. Diabetes can cause kidney disease by damaging the parts of the kidneys that filter out wastes. When the kidneys fail, a person has to have his or her blood filtered through a machine (a treatment called dialysis) several times a week or has to get a kidney transplant.

Testing Your Kidneys

Your health care provider can learn how well your kidneys are working by testing for albumin (a protein) in the urine. Albumin in the urine is an early sign of diabetic kidney disease. You should have your urine checked for albumin every year.

Your health care provider can also do a yearly blood test to measure your kidney function. If the tests show albumin in the urine or if your kidney function isn't normal, you'll need to be checked more often.

Take Charge of Your Diabetes



Work with your health care provider to prevent kidney problems.

On page 97, write down the dates and results of these tests. Ask your health care provider to explain what the results mean.

Protecting Your Kidneys

Keep Your Blood Glucose Under Control

High blood glucose can damage your kidneys as time goes by. Work with your health care team to keep your glucose levels as close to normal as you can.

Keep Your Blood Pressure Under Control

High blood pressure can damage your kidneys. You may want to check your blood pressure at home to be sure it stays lower than 140/90. Have your health care provider check your blood pressure at least four times a year. Your doctor may have you take a blood pressure pill, called an ACE inhibitor, to help protect your kidneys.

Choose Healthy Foods

You may want to talk to your health care team about cutting



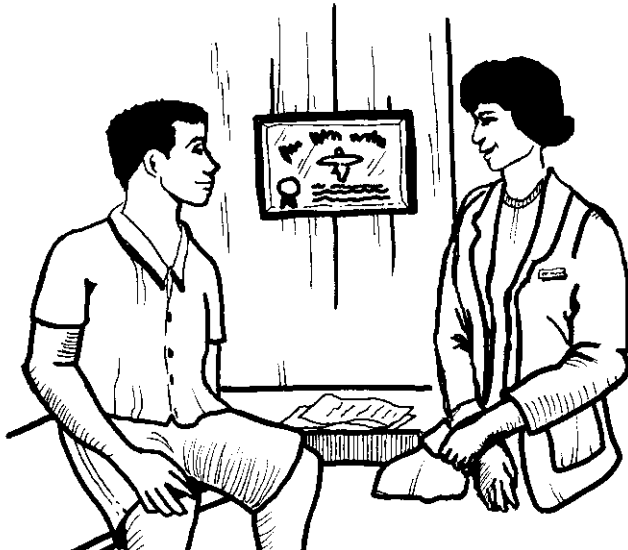
Controlling your blood glucose levels and your blood pressure may help to prevent or delay kidney failure.

back on foods that are high in proteins (such as meat, milk and cheese). A diet high in proteins can cause more damage to your kidneys over time. Eating less salt is also a good idea.

Preventing and Treating Infections

Bladder and kidney infections can damage your kidneys. Call your health care provider right away if you have any of these signs of bladder infection:

- Cloudy or bloody urine.



Tell your health care provider if you have any signs of kidney or bladder infection.

- Pain or burning when you urinate.
- An urgent need to urinate often.

Call your health care provider right away if you have any of these signs of kidney infections:

- Back pain.
- Chills.
- Fever.
- Ketones in the urine.

Your health care provider will test your urine. If you have a bladder or kidney infection, you'll be given medicine to stop the infection. After you take all the medicine, have your urine checked again to be sure the infection is gone.

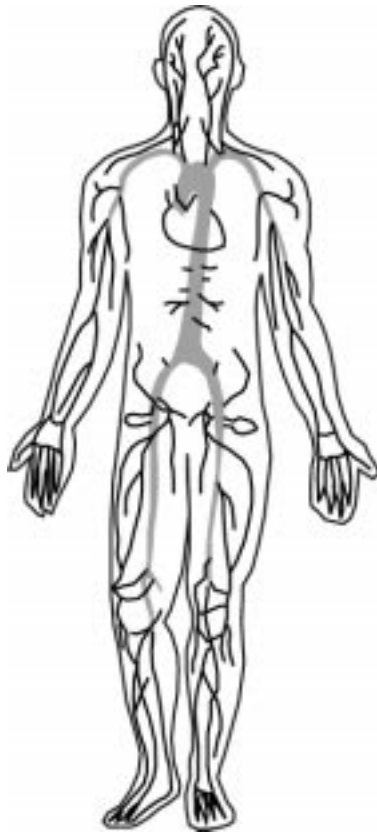
Know the Effects of Some Medicines and X-Ray Dyes

If you have kidney disease, ask your health care provider about the possible effects that some medicines and X-ray dyes can have on your kidneys.

7 Heart and Blood Vessel Problems

Heart and blood vessel problems are the main causes of sickness and death among people with diabetes. These problems can lead to high blood pressure, heart attacks, and stroke. Heart and blood vessel problems can also cause poor blood flow (circulation) in the legs and feet.

You're more likely to have heart and blood vessel problems if you smoke cigarettes, have high blood pressure, or have too much cholesterol or other fats in your blood. Talk with your health care team about what you can do to lower your risk for heart and blood vessel problems.



You can do a lot to keep your heart and blood vessels healthy.

Signs of Heart and Blood Vessel Problems

If you feel dizzy, have sudden loss of sight, slur your speech, or feel numb or weak in one arm or leg, you may be having serious heart and blood vessel problems. Your blood may not be getting to your brain as well as it should.

Danger signs of circulation problems to the heart include chest pain or pressure, shortness of breath, swollen ankles, or irregular heartbeats. If you have any of these signs, go to an emergency room or call your health care provider right away.

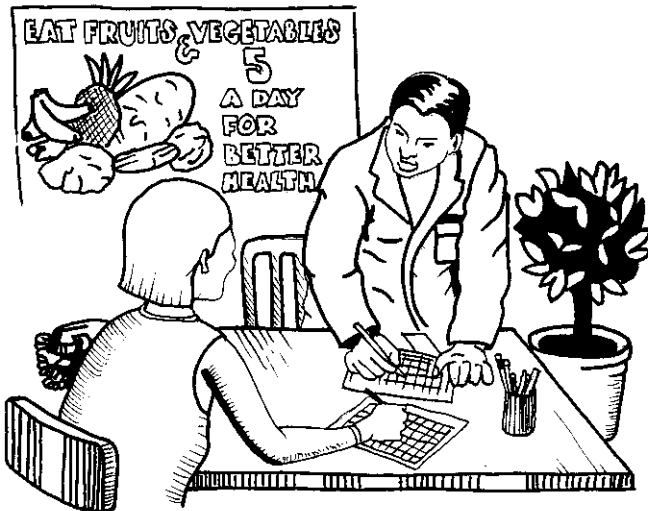
Take Charge of Your Diabetes

Signs of circulation problems to your legs are pain or cramping in your buttocks, thighs, or calves during physical activity. Even if this pain goes away with rest, report it to your health care provider.

Preventing and Controlling Heart and Blood Vessel Problems

Eat Right and Get Physical Activity

Choose a healthy diet, low in salt, fat and cholesterol. Work with a dietitian to plan healthy meals. If you're overweight, talk



If you're overweight, talk with your dietitian about how to safely lose weight.

about how to safely lose weight. Ask about a physical activity or exercise program for you. See pages 9-28 to read more about healthy choices for food and physical activity.



Not smoking is the healthiest choice you'll make for your heart.

Don't Use Tobacco

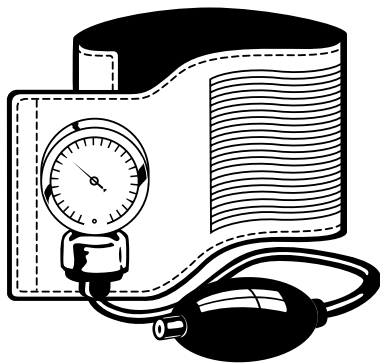
Smoking cigarettes causes hundreds of thousands of deaths each year. When you have diabetes and also use tobacco, the risk of heart and blood vessel problems is even greater. One of the best choices you can make for your health is to never start smoking—or if you smoke, to quit.

At least once a year, your health care provider will ask you about tobacco use. If you smoke, ask your provider about things you can do to help you stop, such as joining a stop-smoking program.

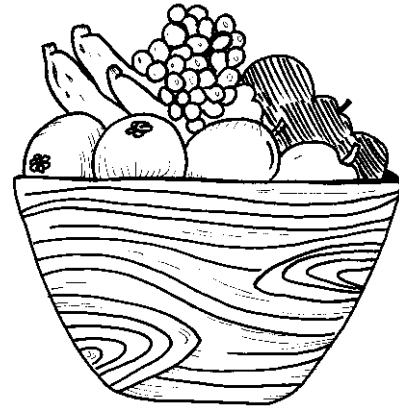
Check Your Blood Pressure

Get your blood pressure checked at each visit. Record these numbers on page 87. If your blood pressure is higher than 140/90, you may want to buy a blood pressure cuff and check your blood pressure at home. Ask your health care provider where you can buy a cuff.

If your blood pressure is still high after 3 months, you may need medicine to help control it. Many medicines are available to treat high blood pressure. If you have side effects from the medicine, ask your health care provider to change it.



Get your blood pressure checked regularly.



Choose heart-healthy foods for your meal plan.

Check Your Cholesterol

Get your cholesterol checked once a year. Record the results on page 97. Your total cholesterol should be lower than 200 mg/dL. Ask your health care team to explain what your HDL and LDL levels are.

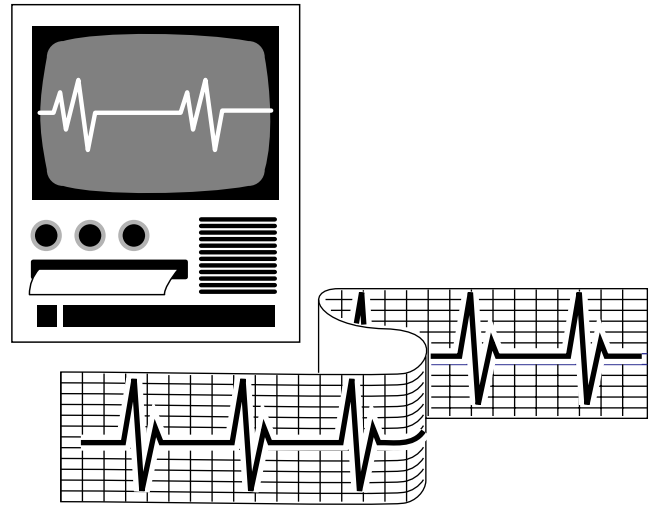
If your cholesterol is higher than 200 mg/dL on two or more checks, you can do several things to lower it. You can work with your health care team to improve your blood glucose control, you can lose weight (if you're overweight), and you can cut down on foods that are high in fat and cholesterol. Ask your health care team about foods that are low in fats. Also ask about a physical activity program.

Take Charge of Your Diabetes

If your cholesterol is still high after 6 months, you may need medicine to help control it. Your health care provider will advise you about what medicine to take.

Ask if You Need an Electrocardiogram (EKG)

If you're having heart and blood circulation problems, an EKG may help you and your health care provider know if you need to change your treatment.



8 Nerve Damage

Diabetic nerve damage (also called diabetic neuropathy) is a problem for many people with diabetes. Over time, high blood glucose levels damage the delicate coatings of nerves. This damage can cause a number of problems, such as pain in your feet. There's a lot you can do to take charge and prevent nerve damage. A recent study shows that controlling your blood glucose can help prevent or delay these problems. Controlling your blood glucose may also help reduce the pain from some types of nerve damage.

Some Signs of Diabetic Nerve Damage

Some signs of diabetic nerve damage are pain, burning, tingling, or loss of feeling in the feet and hands. It can cause you to sweat abnormally, make it hard for you to tell when your blood glucose is low, and make you feel light-headed when you stand up.

Nerve damage can lead to other problems. Some people



Having trouble telling your glucose is low may be signs of nerve damage.

develop problems swallowing and keeping food down. Nerve damage can also cause bowel problems, make it hard to urinate, cause dribbling with urination, and lead to bladder and kidney infections. Many people with nerve damage have trouble having sex. For example, men can have trouble keeping their penis erect, a problem called impotence. If you have any of these problems, tell your health care provider. There are ways to help in many cases.



Tell your health care provider if you have trouble with sexual function.

Protecting Your Nerves From Damage

Keep Your Blood Glucose in Control

High blood glucose can damage your nerves as time goes by. Work with your health care team to keep your glucose levels as close to normal as you can.

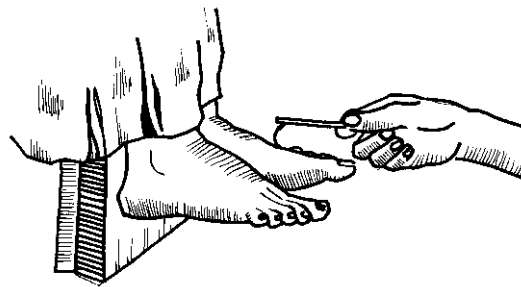
Have a Physical Activity Plan

Physical activity or exercise may help keep some nerves healthy, such as those in your feet. Ask your health care team about an activity that is healthy for you.

Get Tests for Nerve Damage

Nerve damage can happen

slowly. You may not even be aware you're losing feeling in your feet. Ask your health care provider to check your feet at each visit. At least once a year, your provider should test how well you can sense temperature, pinprick, vibration, and position of your feet.



At least once a year, your health care provider should do a complete check of your feet and nerves.

If you have signs of nerve damage, your provider may want to do more tests. Testing can help your provider know what is wrong and how to treat it. Keep track of your foot exams on page 97.

Check Your Feet for Changes

If you've lost feeling in your feet, you'll need to take special care of them. Check your feet each day. Wear shoes that fit well. You'll read more about foot care in the next chapter.

9 Foot Problems

Nerve damage, circulation problems, and infections can cause serious foot problems for people with diabetes. There's a lot you can do to prevent problems with your feet. Controlling your blood glucose and not smoking or using tobacco can help protect your feet. You can also take some simple safeguards each day to care for and protect your feet. Measures like these have prevented many amputations.

Take extra care of your feet to prevent injuries.



It's helpful to understand why foot problems happen. Nerve damage can cause you to lose feeling in your feet. Sometimes nerve damage can deform or misshape your feet, causing pressure points that can turn into blisters, sores, or ulcers. Poor circulation can make these injuries slow to heal.

Signs of Foot Problems

Your feet may tingle, burn, or hurt. You may not be able to feel touch, heat, or cold very well. The shape of your feet can change over time. There may even be changes in the color and temperature of your feet. Some people lose hair on their toes, feet, and lower legs. The skin on your feet may be dry and cracked. Toenails may turn thick and yellow. Fungus infections can grow between your toes. Blisters, sores, ulcers, infected corns, and ingrown toenails need to be seen by your health care provider or foot doctor (podiatrist) right away.

Protecting Your Feet

Get Your Health Care Provider to Check Your Feet at Least Four Times a Year

Ask your health care provider to look at your feet at least four times a year. As a reminder, take off your shoes and socks when you're in the exam room. Have

Take Charge of Your Diabetes



Ask your health care provider to check your feet at least four times a year.

your sense of feeling and your pulses checked at least once a year. If you have nerve damage, deformed or misshaped feet, or a circulation problem, your feet need special care. Ask your health care provider to show you how to care for your feet. Also ask if special shoes would help you.

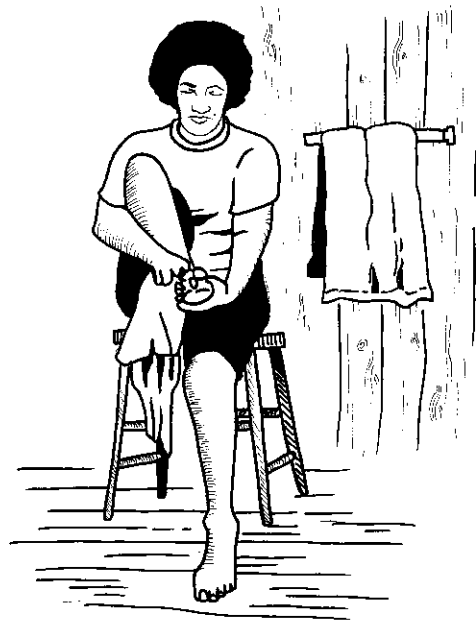
Check Your Feet Each Day

You may have serious foot problems yet feel no pain. Look at your feet every day to see if you have scratches, cracks, cuts, or blisters. Always check between your toes and on the bottoms of your feet. If you can't bend over to see the bottoms of your feet, use a mirror that won't break. If you can't see well, ask a family member or friend to help you. Call your health care provider at

once if you have a sore on your foot. Sores can get worse quickly.

Wash Your Feet Daily

Wash your feet every day. Dry them with care, especially between the toes. Don't soak your feet—it can dry out your skin, and dry skin can lead to infections. If you have dry skin, rub a thin coat of oil, lotion, or cream on the tops and bottoms of your feet—but not between your toes. Moisture between the toes will let germs grow that could cause an infection. Ask your health care provider for the name of a good lotion or cream.



Be sure to dry between your toes.

Trim Your Toenails Carefully

Trim your toenails after you've washed and dried your feet—the nails will be softer and safer to cut. Trim the nails to follow the natural curve of your toes. Don't cut into the corners. Use an emery board to smooth off the edges.

If you can't see well, or if your nails are thick or yellowed, get them trimmed by a foot doctor or another health care provider. If you see redness around the nails, see your health care provider at once.

Treat Corns and Calluses Gently

Don't cut corns and calluses. Ask your health care provider how to gently use a pumice stone to rub them. Don't use razor blades, corn plasters, or liquid corn or callus removers—they can damage your skin.

Protect Your Feet From Heat and Cold

Hot water or hot surfaces are a danger to your feet. Before bathing, test the water with a bath thermometer (90° to 95°F is safe) or with your elbow. Wear

shoes and socks when you walk on hot surfaces, such as beaches or the pavement around swimming pools. Be sure to use a sunscreen on the tops of your feet. You also need to protect your feet from the cold. If your feet are cold at night, wear socks. Don't use hot water bottles, heating pads, or electric blankets—they can burn your feet. Don't use strong antiseptic solutions or adhesive tape on your feet.

Wear Proper Footwear Always

Wear proper footwear at all times. When indoors, wear indoor slippers. When at the beach, wear foot gear that will protect your feet.



Protect your feet from hot surfaces.

Take Charge of Your Diabetes

Wear shoes that fit well and protect your feet. Don't wear plastic shoes or sandals with thongs between the toes. Ask your health care provider what types of shoes are good choices for you.



Wear shoes that fit well and protect your feet.

New shoes should be comfortable at the time you buy them—don't expect them to stretch out. Slowly break in new shoes by wearing them only one or two hours a day.

Choose socks made of cotton or wool—they help keep your feet dry.

Before you put on your shoes each time, look and feel inside them. Check for any loose objects, nail points, torn linings, and rough areas—these can cause injuries. If your shoe isn't smooth inside, wear other shoes.

Be Physically Active

Physical activity can help increase circulation in your feet. There are many ways you can exercise your feet, even during times you're not able to walk. Ask your health care team about things you can do to exercise your feet and legs.



Walking may be a healthy activity for you.

10 Dental Disease

Because of high blood glucose, people with diabetes are more likely to have problems with their teeth and gums. There's a lot you can do to take charge and prevent these problems. Caring for your teeth and gums every day can help keep them healthy.



Healthy teeth and gums depend on regular care and controlling your blood glucose.

Keeping your blood glucose under control is also important. Regular, complete dental care helps prevent dental disease.

Signs of Dental Disease

Sore, swollen, and red gums that bleed when you brush your teeth are a sign of a dental problem called gingivitis. Another

problem, called periodontitis, happens when your gums shrink or pull away from your teeth. Like all infections, dental infections can make your blood glucose go up.

Preventing Dental Problems

Keep Your Blood Glucose in Control

High blood glucose can cause problems with your teeth and gums. Work with your health care team to keep your glucose levels as close to normal as you can.

Brush Your Teeth Often

Brush your teeth at least twice a day to prevent gum disease and tooth loss. Be sure to brush before you go to sleep. Use a soft toothbrush and toothpaste with fluoride. To help keep bacteria from growing on your toothbrush, rinse it after each brushing and store it upright with the bristles at the top. Get a new toothbrush at least every 3 months.

Take Charge of Your Diabetes

Floss Your Teeth Daily

Besides brushing, you need to floss between your teeth each day to help remove plaque, a film that forms on teeth and can cause tooth problems. Flossing also helps keep your gums



Protect your teeth by brushing twice or more a day and flossing each day.

healthy. Your dentist or dental hygienist will help you choose a good method to remove plaque, such as dental floss, bridge cleaners, or water spray. If you're not sure of the right way to brush or floss, ask your dentist or dental hygienist for help.

Get Regular Dental Care

Get your teeth cleaned and checked at your dentist's office at least every 6 months. If you don't have a dentist, find one or ask your health care provider for the name of a dentist in your community.

See your dentist right away if you have any signs of dental disease, including bad breath, a bad taste in your mouth, bleeding or sore gums, red or swollen gums, sore or loose teeth, or trouble chewing.

Give your dentist the name and telephone number of your diabetes health care provider. Each time you make a visit, remind your dentist that you have diabetes.

Plan dental visits so they don't change the times you take your insulin and meals. Don't skip a meal or diabetes medicine before you visit. Right after breakfast may be a good time for your visit.



See your dentist at least every 6 months.

11 Vaccinations

If you have diabetes, take extra care to keep up-to-date on your vaccinations (also called immunizations). Vaccines can prevent illnesses that can be very serious for people with diabetes. This sections talks about some vaccines you need to know about.

Influenza Vaccine

Influenza (often called the flu) is not just a bad cold. It's a serious illness that can lead to pneumonia and even death. The flu spreads when influenza viruses

pass from one person to the nose and throat of others. Signs of the flu may include sudden high fever, chills, body aches, sore throat, runny nose, dry cough, and headache.

People with diabetes who come down with the flu may become very sick and may even have to go to the hospital. If you get the flu, you'll need to take special care of yourself (see pages 39-42).

You can help keep yourself from getting the flu by getting a flu shot every year. Everyone with diabetes—even pregnant women—should get a yearly flu shot. The best time to get one is between October and mid-November, before the flu season begins. This vaccine is fully covered under Medicare Part B.



The flu is a serious illness that can put you in the hospital. A yearly flu shot can help prevent this.

Tetanus / Diphtheria (Td) Toxoid

Tetanus (or lockjaw) and diphtheria are serious diseases. Tetanus is caused by a germ that enters the body through a cut or wound. Diphtheria spreads when germs pass from one person to the nose or throat of others.

You can help prevent tetanus and diphtheria with a combined shot called Td toxoid. Most people get Td toxoid as part of their routine childhood vaccinations, but all adults need a Td booster shot every 10 years. Other vaccines may be given at the same time as Td toxoid.

Other Vaccines

You may need vaccines to protect you against other illnesses. Ask your health care provider if you need any of these:

- Measles/Mumps/Rubella vaccine
- Hepatitis A and B vaccines
- Varicella (chickenpox) vaccine
- Polio vaccine

- Vaccines for travel to other countries

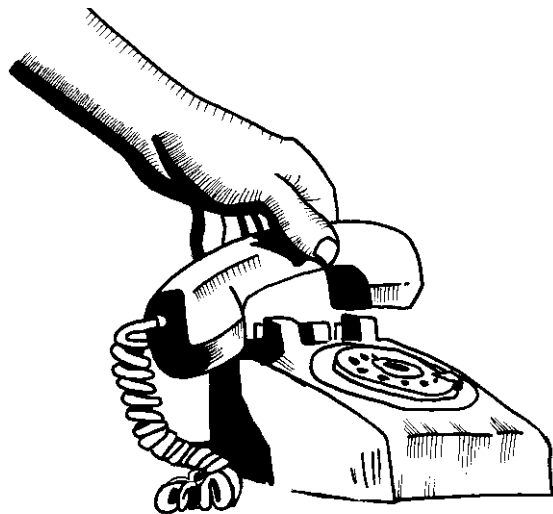
How to Get More Information

Call the immunization program in your state health department to find out where you can get vaccinations in your area. Keep your vaccination records up-to-date so you and your health care provider will know what vaccines you may need. You can record this information on page 97 of this book.

For more information on vaccinations, call the National Immunization Information Hotline at:

1-800-232-2533 (English) or
1-800-232-0233 (Spanish).

These are toll-free calls.



12 Pregnancy, Diabetes, and Women's Health



You can protect you and your baby by controlling your blood glucose before and during pregnancy.

Becoming Pregnant When You Have Diabetes

Women with diabetes can have healthy babies, but it takes planning ahead and effort. Pregnancy can make both high and low blood glucose levels happen more often. It can make diabetic eye disease and diabetic kidney disease worse. High glucose levels during pregnancy are dangerous for the baby, too.

Talk to your health care provider about birth control if

you would like information about family planning.

Protecting Your Baby and Yourself

Keeping your glucose levels near normal before and during pregnancy can help protect you and your baby. That's why it's so important to plan your pregnancies ahead of time.

If you want to have a baby, discuss it with your health care

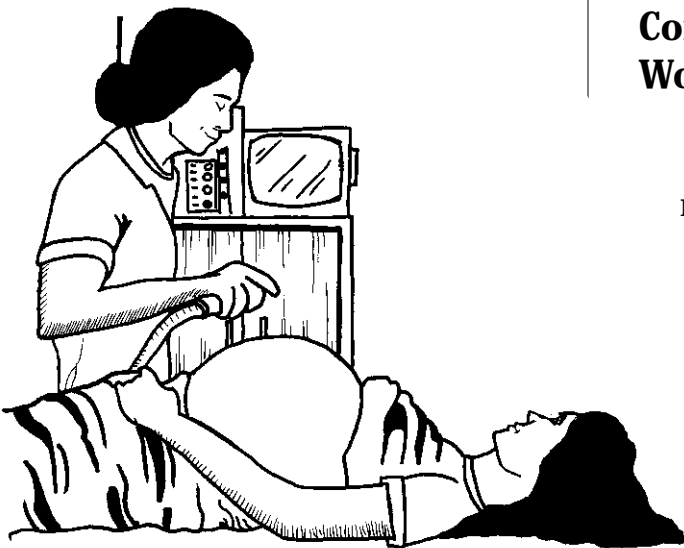


Your blood glucose and hemoglobin A1c records will help you and your health care team know when your glucose range is safe for pregnancy.

Take Charge of Your Diabetes

provider. Work with your diabetes care team to get and keep your blood glucose in the normal or near-normal range before you become pregnant. Your glucose records and your hemoglobin A1c test results will show when you have maintained a safe range for a period of time.

You may need to change your meal plan and your usual physical activity, and you may need to take more frequent insulin shots. Testing your glucose several times a day will help you see how well you're balancing things. Record the test results in your logbook or on a log sheet (see sample pages on 101 and 103).



If you learn you have diabetes when you're pregnant, work closely with your health care team.

Get a complete check of your eyes and kidneys before you try to become pregnant. Don't smoke, drink alcohol, or use drugs—doing these things can harm you and your baby.

Having Diabetes During Pregnancy

Some women have diabetes only when they're pregnant. This condition, which is called gestational diabetes, can be controlled just like other kinds of diabetes. Glucose control is the key. Your health care team can help you take charge of gestational diabetes.

Controlling Diabetes for Women's Health

Some women with diabetes may have special problems, such as bladder infections. See page 55 to find out about the signs of bladder and kidney infections. If you have an infection, it needs to be treated right away. Call your doctor.

Some women get yeast infections in their vagina,

especially when their blood glucose is high. A sign of yeast infection may be itching in the vagina. If you notice vaginal itching, tell your health care provider. You may learn about medicines you can buy at the drugstore and about how to prevent yeast infections.

Some women with diabetes may have trouble with sexual function. Discomfort caused by vaginal itching or dryness can be treated.

Ask your doctor how often you should get a Pap smear and a mammogram (breast X-ray).

Regular Pap smears and mammograms help detect cervical and breast cancer early. All women-whether or not they have diabetes- need to keep up with these tests.



Getting Pap smears and mammograms is important to every woman's health.

Records for Sick Days

How often	Question	Answer	
Every day	How much do you weigh today?	_____pounds	
Every evening	How much liquid did you drink today?	_____glasses	
Every morning and evening	What is your temperature?	_____a.m. _____p.m.	
Every 4 hours or before every meal	How much diabetes medicine did you take?	Time	Dose
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____
Every 4 hours or each time you pass urine	What is your blood glucose level?	Time	Glucose
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____
Every 4 hours or each time you pass urine	What are your urine ketones?	Time	Ketones
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____

Every 4 to 6 hours	How are you breathing?	Time	Condition
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____

Reminders for Sick Days

Call your health care provider if any of these happen to you:

- You feel too sick to eat normally and are unable to keep down food for more than 6 hours.
- You're having severe diarrhea.
- You lose 5 pounds or more.
- Your temperature is over 101°F.
- Your blood glucose is lower than 60 mg/dL or remains over 300 mg/dL.
- You have moderate or large ketones in your urine.
- You're having trouble breathing.
- You feel sleepy or can't think clearly.

If you feel sleepy or can't think clearly, have someone call your health care provider or take you to an emergency room.

Records for Sick Days

How often	Question	Answer	
Every day	How much do you weigh today?	_____pounds	
Every evening	How much liquid did you drink today?	_____glasses	
Every morning and evening	What is your temperature?	_____a.m. _____p.m.	
Every 4 hours or before every meal	How much diabetes medicine did you take?	Time	Dose
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____
Every 4 hours or each time you pass urine	What is your blood glucose level?	Time	Glucose
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____
Every 4 hours or each time you pass urine	What are your urine ketones?	Time	Ketones
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____

Every 4 to 6 hours	How are you breathing?	Time	Condition
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____

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		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____
Every 4 hours or each time you pass urine	What is your blood glucose level?	Time	Glucose
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____
Every 4 hours or each time you pass urine	What are your urine ketones?	Time	Ketones
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____

Every 4 to 6 hours	How are you breathing?	Time	Condition
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____

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Every morning and evening	What is your temperature?	_____a.m.	_____p.m.
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		_____	_____
		_____	_____
		_____	_____
		_____	_____
Every 4 hours or each time you pass urine	What is your blood glucose level?	Time	Glucose
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____
Every 4 hours or each time you pass urine	What are your urine ketones?	Time	Ketones
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____

Every 4 to 6 hours	How are you breathing?	Time	Condition
		_____	_____
		_____	_____
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		_____	_____
		_____	_____
		_____	_____

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Every 4 hours or before every meal	How much diabetes medicine did you take?	Time	Dose
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		_____	_____
		_____	_____
		_____	_____
		_____	_____
Every 4 hours or each time you pass urine	What is your blood glucose level?	Time	Glucose
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____
Every 4 hours or each time you pass urine	What are your urine ketones?	Time	Ketones
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____

Every 4 to 6 hours	How are you breathing?	Time	Condition
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____

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- You feel sleepy or can't think clearly.

If you feel sleepy or can't think clearly, have someone call your health care provider or take you to an emergency room.

Things to Do at Each Visit With Your Health Care Provider

- Bring your blood glucose logbook and go over the readings with your provider.
- Get a hemoglobin A1c test (about every 6 months if you don't take insulin, about every 3 months if you take insulin). Write down the result (see page 87) and set a target goal for your next test.
- Get your weight checked and write it down (see page 87). You may want to set a goal for your next visit.
- Get your blood pressure checked and write it down. You may want to set a goal for your next visit.
- Get your feet checked at least four times a year.
- Bring a list of questions or other things you want to talk about.
- Bring your reminder sheet about "Things to Do at Least Once a Year" (see page 95) to help keep track of these.

Each Visit

Have your health care provider do these tests and set goals with you.
(Record dates and results in the boxes below.)

Tests and Goals	Dates and Results					
Blood Glucose (mg/dl)	6/1/98 145	9/11/98 118	1/5/99 180	5/3/99 105	9/1/99 110	
Hemoglobin A1c Test/Goal (%)	9% 8%	8.9% 8%	8.4% 7.5%	not done	8.2% 7.5%	
Weight/Goal (pounds)	180 170	175 165	172 165	170 165	165 160	
Blood Pressure (goal: <u>120</u> / <u>80</u> mm Hg)	140/90	140/86	138/84	136/82	124/80	
Foot Check	x	x	x	x	x	

Each Visit

Have your health care provider do these tests and set goals with you.
(Record dates and results in the boxes below.)

Tests and Goals	Dates and Results					
Blood Glucose (mg/dl)						
Hemoglobin A1c Test/Goal (%)	/	/	/	/	/	/
Weight/Goal (pounds)	/	/	/	/	/	/
Blood Pressure (goal: ___/___ mm Hg)						
Foot Check						

Each Visit

Have your health care provider do these tests and set goals with you.
(Record dates and results in the boxes below.)

Tests and Goals	Dates and Results					
Blood Glucose (mg/dl)						
Hemoglobin A1c Test/Goal (%)	/	/	/	/	/	/
Weight/Goal (pounds)	/	/	/	/	/	/
Blood Pressure (goal: ___/___ mm Hg)						
Foot Check						

Each Visit

Have your health care provider do these tests and set goals with you.
(Record dates and results in the boxes below.)

Tests and Goals	Dates and Results					
Blood Glucose (mg/dl)						
Hemoglobin A1c Test/Goal (%)	/	/	/	/	/	/
Weight/Goal (pounds)	/	/	/	/	/	/
Blood Pressure (goal: ___/___ mm Hg)						
Foot Check						

Each Visit

Have your health care provider do these tests and set goals with you.
(Record dates and results in the boxes below.)

Tests and Goals	Dates and Results					
Blood Glucose (mg/dl)						
Hemoglobin A1c Test/Goal (%)	/	/	/	/	/	/
Weight/Goal (pounds)	/	/	/	/	/	/
Blood Pressure (goal: ___/___ mm Hg)						
Foot Check						

Each Visit

Have your health care provider do these tests and set goals with you.
(Record dates and results in the boxes below.)

Tests and Goals	Dates and Results					
Blood Glucose (mg/dl)						
Hemoglobin A1c Test/Goal (%)	/	/	/	/	/	/
Weight/Goal (pounds)	/	/	/	/	/	/
Blood Pressure (goal: ___/___ mm Hg)						
Foot Check						

Each Visit

Have your health care provider do these tests and set goals with you.
(Record dates and results in the boxes below.)

Tests and Goals	Dates and Results					
Blood Glucose (mg/dl)						
Hemoglobin A1c Test/Goal (%)	/	/	/	/	/	/
Weight/Goal (pounds)	/	/	/	/	/	/
Blood Pressure (goal: ___/___ mm Hg)						
Foot Check						

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Have your health care provider do these tests and set goals with you.
(Record dates and results in the boxes below.)

Tests and Goals	Dates and Results					
Blood Glucose (mg/dl)						
Hemoglobin A1c Test/Goal (%)	/	/	/	/	/	/
Weight/Goal (pounds)	/	/	/	/	/	/
Blood Pressure (goal: ___/___ mm Hg)						
Foot Check						

Each Visit

Have your health care provider do these tests and set goals with you.
(Record dates and results in the boxes below.)

Tests and Goals	Dates and Results					
Blood Glucose (mg/dl)						
Hemoglobin A1c Test/Goal (%)	/	/	/	/	/	/
Weight/Goal (pounds)	/	/	/	/	/	/
Blood Pressure (goal: ___/___ mm Hg)						
Foot Check						

Things to Do at Least Once a Year

- Get a flu shot (October to mid-November)
- Get a pneumonia shot (if you've never had one).
- Get a dilated eye exam.
- Get a foot exam (including check of circulation and nerves).
- Get a kidney test:
 - ___ Have your urine tested for albumin.
 - ___ Have your blood creatinine measured.
 - ___ Get a 24-hour urine test (if your doctor advises).
- Get your blood fats checked for:
 - ___ Total cholesterol.
 - ___ High-density lipoprotein (HDL).
 - ___ Low-density lipoprotein (LDL).
 - ___ Triglycerides.
- Get a dental exam (at least twice a year).
- Talk with your health care team about:
 - ___ How well you can tell when you have low blood glucose.
 - ___ How you are treating high blood glucose.
 - ___ Tobacco use (cigarettes, cigars, pipes, smokeless tobacco).
 - ___ Your feelings about having diabetes.
 - ___ Your plans for pregnancy (if a woman).
 - ___ Other _____

At Least Once a Year

Have your health care provider do these tests and other services for you.

You may want to set some goals for these.

(Record dates and results in the boxes below.)

Tests and Other Services	Dates and Results						
Flu Shot	2/9/97	2/2/98	1/28/99				
Urine Protein or Albumin (mg)	2/9/97 40	2/2/98 50	1/28/99 55				
Blood Creatinine (mg/dl)	1.0	1.2	1.1				
Total Cholesterol (mg/dl)	190	180	175				
HDL Cholesterol (mg/dl)	30	35	40				
LDL Cholesterol (mg/dl)	150	140	135				
Triglycerides (mg/dl)	338	300	250				
Tobacco Use	5 cigars/day	2 cigars	0				
Eye Exam (dilated)	8/11/97	10/1/98	11/8/99				
Foot Exam	11/9/97	8/6/98	9/5/99				

At Least Once a Year

Have your health care provider do these tests and other services for you.

You may want to set some goals for these.

(Record dates and results in the boxes below.)

Tests and Other Services	Dates and Results							
Flu Shot								
Urine Protein or Albumin (mg)								
Blood Creatinine (mg/dl)								
Total Cholesterol (mg/dl)								
HDL Cholesterol (mg/dl)								
LDL Cholesterol (mg/dl)								
Triglycerides (mg/dl)								
Tobacco Use								
Eye Exam (dilated)								
Foot Exam								

At Least Once a Year

Have your health care provider do these tests and other services for you.

You may want to set some goals for these.

(Record dates and results in the boxes below.)

Tests and Other Services	Dates and Results							
Flu Shot								
Urine Protein or Albumin (mg)								
Blood Creatinine (mg/dl)								
Total Cholesterol (mg/dl)								
HDL Cholesterol (mg/dl)								
LDL Cholesterol (mg/dl)								
Triglycerides (mg/dl)								
Tobacco Use								
Eye Exam (dilated)								
Foot Exam								

At Least Once a Year

Have your health care provider do these tests and other services for you.

You may want to set some goals for these.

(Record dates and results in the boxes below.)

Tests and Other Services	Dates and Results							
Flu Shot								
Urine Protein or Albumin (mg)								
Blood Creatinine (mg/dl)								
Total Cholesterol (mg/dl)								
HDL Cholesterol (mg/dl)								
LDL Cholesterol (mg/dl)								
Triglycerides (mg/dl)								
Tobacco Use								
Eye Exam (dilated)								
Foot Exam								

At Least Once a Year

Have your health care provider do these tests and other services for you.

You may want to set some goals for these.

(Record dates and results in the boxes below.)

100

Tests and Other Services	Dates and Results							
Flu Shot								
Urine Protein or Albumin (mg)								
Blood Creatinine (mg/dl)								
Total Cholesterol (mg/dl)								
HDL Cholesterol (mg/dl)								
LDL Cholesterol (mg/dl)								
Triglycerides (mg/dl)								
Tobacco Use								
Eye Exam (dilated)								
Foot Exam								

Glucose Log Sheet

Use this log sheet—or one like it that your health care provider may give you—to keep a record of your daily blood glucose levels.

Daily Log *SAMPLE*

Week Starting January 18, 1999

	Breakfast		Lunch		Dinner		Bedtime		Other		Notes
	Dose	Blood Sugar	Dose	Blood Sugar	Dose	Blood Sugar	Dose	Blood Sugar	Dose	Blood Sugar	
Mon		108		118		121		112			
Tues		112		109				*151			*Missed evening walk. start back tomorrow!
Wed		125		122		130		*121			
Thurs		114		129		185		*242			*Sick with flu? Drinking diet soda. Ketones negative.
Fri		156		148		135		130			Feeling better today
Sat		128				125		*151		129 11pm	*Extra juice made sugar go up.
Sun		120		119		*168		133			*Lunch at church.

R=Regular N=NPH L=Lente or Ultralente (UL)

Glucose Log Sheet

Use this log sheet—or one like it that your health care provider may give you—
to keep a record of your daily blood glucose levels.

Daily Log

Week Starting _____

	Breakfast		Lunch		Dinner		Bedtime		Other		Notes
	Dose	Blood Sugar	Dose	Blood Sugar	Dose	Blood Sugar	Dose	Blood Sugar	Dose	Blood Sugar	
Mon											
Tues											
Wed											
Thurs											
Fri											
Sat											
Sun											

R=Regular N=NPH L=Lente or Ultralente (UL)

Glucose Log Sheet

Use this log sheet—or one like it that your health care provider may give you—
to keep a record of your daily blood glucose levels.

Daily Log *SAMPLE*

Week Starting *January 18, 1999*

	Insulin type	Breakfast		Lunch		Dinner		Bedtime		Other		Notes
		Dose	Blood Sugar	Dose	Blood Sugar	Dose	Blood Sugar	Dose	Blood Sugar	Dose	Blood Sugar	
Mon	R	8		3		4						*Worked out longer than usual- Drank orange juice.
	N/L	20	121		181		118	8	105		*6:30 10:00 a.m. 90 10:15 p.m.	
Tues	R	8		2		4						
	N/L	20	112		104		115	8	130			
Wed	R	8		3		4		4			155	*Dinner out. Also no a.m. exercise. Ketones negative.
	N/L	20	109		158		161	8	*242		10pm	
Thurs	R	8		2		4						
	N/L	20	111		114		110	8	113			
Fri	R	8		2		3						*Did not eat much lunch- Busy day!
	N/L	20	102		112		68	8	115			
Sat	R	8		3		4						
	N/L	20	124		161		118	8	122			
Sun	R	9		2		4						*slept late.
	N/L	20	*175		99		110	8	109			

R=Regular N=NPH L=Lente or Ultralente (UL)

Glucose Log Sheet

Use this log sheet—or one like it that your health care provider may give you—
to keep a record of your daily blood glucose levels.

Daily Log

Week Starting _____

	Insulin type	Breakfast		Lunch		Dinner		Bedtime		Other		Notes
		Dose	Blood Sugar	Dose	Blood Sugar	Dose	Blood Sugar	Dose	Blood Sugar	Dose	Blood Sugar	
Mon	R											
	N L											
Tues	R											
	N L											
Wed	R											
	N L											
Thurs	R											
	N L											
Fri	R											
	N L											
Sat	R											
	N L											
Sun	R											
	N L											

R=Regular N=NPH L=Lente or Ultralente (UL)

Your Health Care Providers

Primary Doctor

Name: _____

Telephone number: _____

Your Questions: _____

Important points: _____

Eye Doctor (Ophthalmologist, Optometrist)

Name: _____

Telephone number: _____

Your Questions: _____

Important points: _____

Foot Doctor (Podiatrist)

Name: _____

Telephone number: _____

Your Questions: _____

Important points: _____

Dentist

Name: _____

Telephone number: _____

Your Questions: _____

Important points: _____

Dietitian

Name: _____

Telephone number: _____

Your Questions: _____

Important points: _____

Diabetes Educator

Name: _____

Telephone number: _____

Your Questions: _____

Important points: _____

Counselor

Name: _____

Telephone number: _____

Your Questions: _____

Important points: _____

Other

Name: _____

Telephone number: _____

Your Questions: _____

Important points: _____

Glossary

Albumin A protein found in blood plasma and urine. The presence of albumin in the urine can be a sign of kidney disease.

Autoimmune process A process where the body's immune system attacks and destroys bony tissue that it mistakes for foreign matter.

Beta cells Cells that make insulin. Beta cells are found in areas of the pancreas called the islets of Langerhans.

Bladder A hollow organ that urine drains into from the kidneys. From the bladder, urine leaves the body.

Blood glucose The main sugar that the body makes from the food we eat. Glucose is carried through the bloodstream to provide energy to all of the body's living cells. The cells cannot use glucose without the help of insulin.

Blood pressure The force of the blood against the artery walls.

Two levels of blood pressure are measured: the highest, or systolic, occurs when the heart pumps blood into the blood vessels, and the lowest or diastolic occurs when the heart rests.

Blood sugar *see* Blood glucose.

Calluses Thick, hardened areas of the skin, generally on the foot, caused by friction or pressure. Calluses can lead to other problems, including serious infection and even gangrene.

Carbohydrate One of three main groups of foods in the diet that provide calories and energy. (Proteins and fats are the others.; Carbohydrates are mainly sugars (simple carbohydrates) and starches (complex carbohydrates, found in bread, pasta, beans) that the body breaks down into glucose.

Cholesterol A substance similar to fat that is found in the blood, muscles, liver, brain,

Take Charge of Your Diabetes

and other body tissues. The body produces and needs some cholesterol. However, too much cholesterol can make fats stick to the walls of the arteries and cause a disease that decreases or stops circulation.

Corns A thickening of the skin of the feet or hands, usually caused by pressure against the skin.

Diabetes The short name for the disease called *diabetes mellitus*. Diabetes results when the body cannot use blood glucose as energy because of having too little insulin or being unable to use insulin. See also Type 1 diabetes, Type 2 diabetes, and Gestational diabetes.

Diabetes pills Pills or capsules that are taken by mouth to help lower the blood glucose level. These pills may work for people who are still making insulin.

Diabetic eye disease A disease of the small blood vessels of the retina of the eye in people with diabetes. In this disease, the vessels swell and leak liquid into the retina, blurring

the vision and sometimes leading to blindness.

Diabetic ketoacidosis High blood glucose with the presence of ketones in the urine and bloodstream, often caused by taking too little insulin or during illness.

Diabetic kidney disease Damage to the cells or blood vessels of the kidney.

Diabetic nerve damage Damage to the nerves of a person with diabetes. Nerve damage may affect the feet and hands, as well as major organs.

EKG exam A test that measures the heart's action. Also called an electrocardiogram.

Flu An infection caused by the 'flu' virus. The flu usually causes fever, cough, headaches, congestion, and sore throat.

Food exchanges A way to help people stay on special food plans by letting them replace items from one food group with items from another group.

Gestational diabetes A type of diabetes that can occur in pregnant women who have not been known to have diabetes before. Although gestational diabetes usually subsides after pregnancy, many women who have had gestational diabetes develop Type 2 diabetes later in life.

Gingivitis A swelling and soreness of the gums that without treatment, can cause serious gum problems and disease.

Glucagon A hormone that raises the blood glucose level. When someone with diabetes has a very low blood glucose level, a glucagon injection can help raise the blood glucose quickly.

Glucose A sugar in our blood and a source of energy for our bodies.

Heart attack Damage to the heart muscle caused when the blood vessels supplying the muscle are blocked, such as when the blood vessels are clogged with fats (a condition sometimes called hardening of the arteries).

HDL (high-density lipoprotein) A

combined protein and fatlike substance. Low in cholesterol, it usually passes freely through the arteries. Sometimes called “good cholesterol.”

Hemoglobin A1c A test that sums up how much glucose has been sticking to part of the hemoglobin during the past 3-4 months. Hemoglobin is a substance in the red blood cells that supplies oxygen to the cells of the body.

High blood glucose A condition that occurs in people with diabetes when their blood glucose levels are too high. Symptoms include having to urinate often, being very thirsty, and losing weight.

High blood pressure A condition where the blood circulates through the arteries with too much force. High blood pressure tires the heart, harms the arteries, and increases the risk of heart attack, stroke, and kidney problems.

Hormone A chemical that special cells in the body release to help other cells work. For example, insulin is a hormone made in the pancreas to help

Take Charge of Your Diabetes

the body use glucose as energy.

Hyperglycemia *see* High blood glucose.

Hypertension *see* High blood pressure.

Hypoglycemia *see* Low blood glucose.

Immunization Sometimes called vaccination; a shot or injection that protects a person from getting an illness by making the person 'immune' to it.

Impotence A condition of being unable to keep an erect penis and ejaculate. Some men who have had diabetes a long time become impotent if their nerves have become damaged.

Influenza A contagious viral illness that strikes quickly and severely. Signs include high fever, chills, body aches, runny nose, sore throat, and headache.

Inject To force a liquid into the body with a needle and syringe.

Insulin A hormone that helps

the body use blood glucose for energy. The beta cells of the pancreas make insulin. When people with diabetes can't make enough insulin, they may have to inject it from another source.

Insulin-dependent diabetes *see* Type 1 diabetes.

Ketones Chemical substances that the body makes when it doesn't have enough insulin in the blood. When ketones build up in the body for a long time, serious illness or coma can result.

Kidneys Twin organs found in the lower part of the back. The kidneys purify the blood of all waste and harmful material. They also control the level of some helpful chemical substances in the blood.

Laser surgery Surgery that uses a strong ray of special light, called a laser, to treat damaged parts of the body. Laser surgery can help treat some diabetic eye diseases.

Low blood glucose A condition that occurs in people with diabetes when their blood glucose levels are too low. Symptoms

include feeling anxious or confused, feeling numb in the arms and hands and shaking or feeling dizzy.

LDL (or low-density lipoprotein) A combined protein and fatlike substance. Rich in cholesterol, it tends to stick to the walls in the arteries sometimes called “bad cholesterol.”

Meal plan A guide to help people get the proper amount of calories carbohydrates, proteins, and fats in their diet. *See also* Food exchanges.

Mg/dL Milligrams per deciliter. Term used to describe how much glucose (sugar) is in a specific amount of blood. In self-monitoring of blood glucose, test results are given as the amount of glucose in milligrams per deciliter of blood. A fasting reading of 70 to 110 mg/dL is considered in the normal (nondiabetic) range.

Nephropathy *See* Diabetic kidney disease.

Neuropathy *See* Diabetic nerve damage.

Non-insulin-dependent diabetes *See* Type 2 diabetes.

Pancreas An organ in the body that makes insulin so that the body can use glucose for energy. The pancreas also makes enzymes that help the body digest food.

Periodontitis A gum disease in which the gums shrink away from the teeth. Without treatment, it can lead to tooth loss.

Plaque A film of mucus that traps bacteria on the surface of the teeth. Plaque can be removed with daily brushing and flossing of teeth.

Retinopathy *See* Diabetic eye disease.

Risk factors Traits that make it more likely that a person will get an illness. For example, a risk factor for getting Type 2 diabetes is having a family history or diabetes.

Self-monitoring blood glucose A way for people with diabetes to find out how much glucose is in their blood. A drop of blood from the fingertip is placed on a special coated strip of paper that “reads” (often through an electronic meter) the amount of glucose in the blood.

Take Charge of Your Diabetes

Stroke Damage to a part of the brain that happens when the blood vessels supplying that part are blocked, such as when the blood vessels are clogged with fats (a condition sometimes called hardening of the arteries).

Support group A group of people who share a similar problem or concern. The people in the group help one another by sharing experiences, knowledge, and information

Type 1 diabetes A condition in which the pancreas makes so little insulin that the body can't use blood glucose as energy. Type 1 diabetes most often occurs in people younger than age 30 and must be controlled with daily insulin injections.

Type 2 diabetes A condition in which the body either makes too little insulin or can't use the insulin it makes to use blood glucose as energy. Type 2 diabetes most often occurs in people older than age 40 and can often be controlled through meal plans and physical activity plans. Some people with Type 2 diabetes have to take diabetes pills or insulin.

Ulcer A break or deep sore in the skin. Germs can enter an ulcer and may be hard to heal.

Vitreectomy An operation to remove the blood that sometimes collects at the back of the eyes when a person has eye disease.

Yeast infection A vaginal infection that is usually caused by a fungus. Women who have this infection may feel itching, burning when urinating, and pain, and some women have a vaginal discharge. Yeast infections occur more frequently in women with diabetes.

Resources

The following is a list of organizations that can offer information on diabetes over the phone or can send written materials.

Ask your health care team to

help you find other resources of information or support.

For a listing of local organizations, refer to the 1999 Diabetes Resource Guide.

American Association of Diabetes Educators
444 North Michigan Avenue, Suite 1240
Chicago, Illinois 60611
800-832-6874
800-TEAM-UP4 (for names of diabetes educators)

American Diabetes Association
1660 Duke Street
Alexandria, Virginia 22314
800-DIABETES (342-2383)
800-232-3472
703-549-1500

American Dietetic Association
216 West Jackson Boulevard, Suite 800
Chicago, Illinois 60606-6995
800-745-0775
800-366-1655 (consumer nutrition hotline, Spanish speaker available)

American Heart Association
National Center
7272 Greenville Avenue
Dallas, Texas 75231
214-373-6300

Take Charge of Your Diabetes

American Optometric Association
1505 Prince St.
Alexandria, Virginia 22314
800-262-3947
703-739-9200

Indian Health Service Diabetes Program
5300 Homestead Road N.E.
Albuquerque, New Mexico 87110
505-248-4182

International Diabetic Athletes Association
1647-B West Bethany Home Road
Phoenix, Arizona 85015
800-898-IDAA
602-433-2113

Juvenile Diabetes Foundation International
432 Park Avenue South
New York, New York 10016-8013
800-223-1138

Medical Eye Care for the Nation's Disadvantaged Senior Citizens
The Foundation of the American Academy of Ophthalmology
P.O. Box 429098
San Francisco, California 94142-9098
800-222-EYES (3937)

National Eye Institute
National Eye Health Education Program
2020 Vision Place
Bethesda, Maryland 20892-3655
800-869-2020 (to order materials)
301-496-5248

National Institute of Diabetes and Digestive and Kidney Diseases
National Diabetes Information Clearinghouse
1 Information Way
Bethesda, Maryland 20892-3560
800-GET LEVEL (800-438-5383)
301-654-3327

U.S. Public Health Service
Office of Minority Health Resource Center
P.O. Box 37337
Washington, DC 20013-7337
800-444-MHRC (6472)

Others: _____

Notes