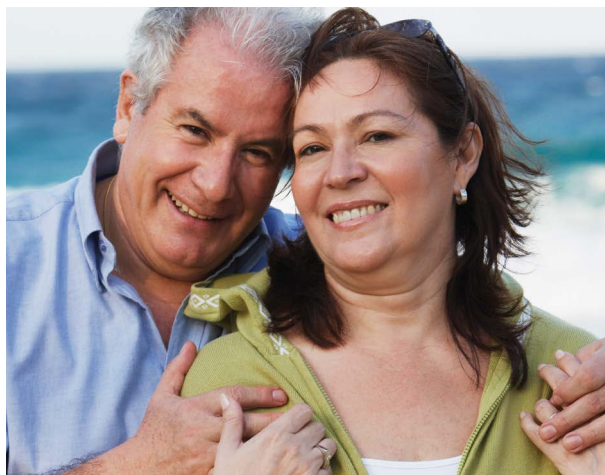
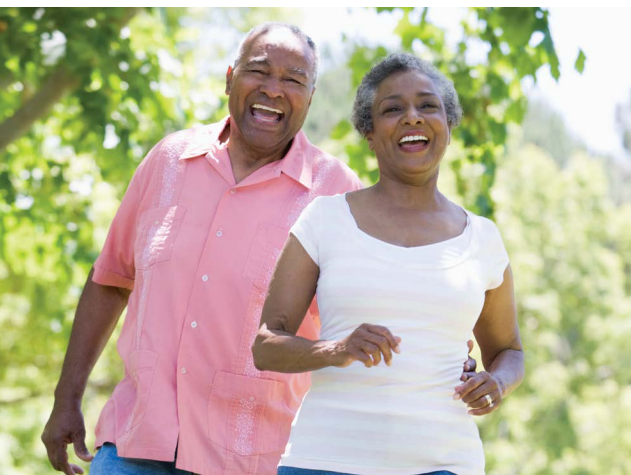


CITY OF HOPE

# DIABETES MANAGEMENT GUIDE FOR PATIENTS AND CAREGIVERS



## SURVIVAL SKILLS

Department of Clinical Diabetes, Endocrinology & Metabolism  
Diabetes Education Program  
City of Hope





# DIABETES MANAGEMENT GUIDE FOR PATIENTS AND CAREGIVERS

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# SURVIVAL SKILLS

*Department of Clinical Diabetes, Endocrinology & Metabolism*

June 2017





## Dear Patient, Family and Caregivers,

There are many ways to take care of diabetes and many “tools” you can use to learn more about what diabetes is and how to prevent some of the problems it can cause. This booklet is meant to give you the “survival skills” you need to get started. There is a lot more to know about diabetes and it will take time to learn about how it affects you (your spouse, friend or family members) and what you can do to control it such as, learning to make healthy food choices, keeping active and monitoring blood sugar. It is also important to know how to safely take certain medications and when you should call your doctor or nurse for help.

The outpatient diabetes education program at City of Hope will provide you with many tools you will need to control diabetes. You can call the diabetes education nurses for more information at 626-218-2251.

Diabetes Education Program Staff  
Department of Clinical Diabetes, Endocrinology & Metabolism

*This booklet was made by clinicians at City of Hope to give you basic information about diabetes adapted from the American Diabetes Association.*

*This information is intended to be used only with the guidance from health care providers at City of Hope.*

*We encourage you to take an active role in your care.*

*Our professionals are available to answer your questions or to address any concerns you may have about your diabetes care at City of Hope.*



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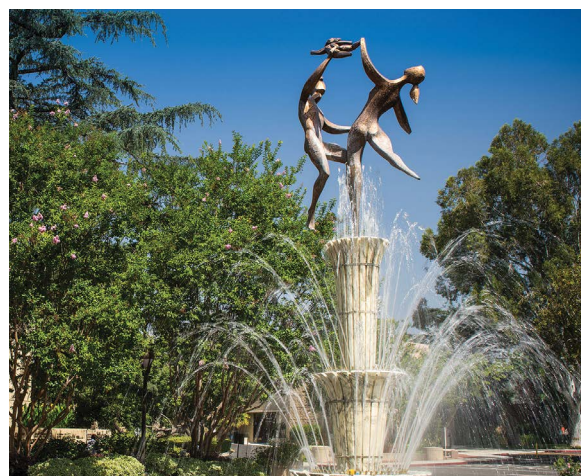
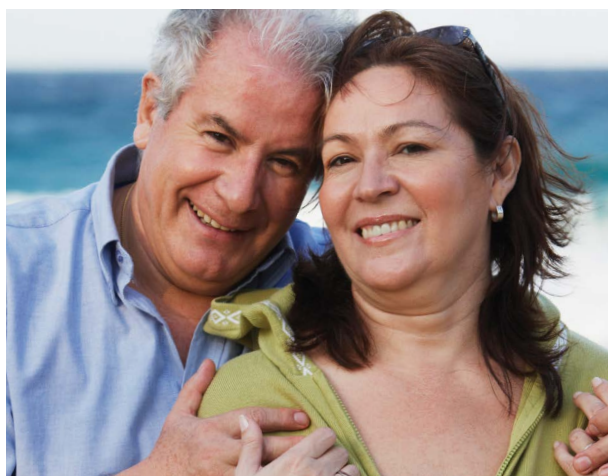
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# BASICS ABOUT DIABETES



**What Is Diabetes?**

**What Are the Common Symptoms of Diabetes?**

**Types of Diabetes**

**Why Do You Need to Take Care of Your Diabetes?**



# Get Started by Learning the Basics about Diabetes

## WHAT IS DIABETES?

Diabetes is a lifelong health condition in which the body does not make enough insulin or the body's cells are not using insulin very well. Insulin is a hormone made in the pancreas that is needed to change glucose (sugar) found in different foods into energy needed for daily life.

When the body is not changing glucose into energy as it should, glucose will build up in your blood. Persistently high blood glucose levels may cause harm to your eyes, kidneys, nerves, heart or other parts of your body. The key to taking care of diabetes is to keep your blood glucose as close to normal as possible. An acceptable blood glucose level for someone with diabetes is typically between 80 and 130 mg/dl, before meals. However, your doctor may give you a different blood glucose range that is best for you.



**Talk to your doctor about a good range for your blood glucose.**

## WHAT ARE THE COMMON SYMPTOMS OF DIABETES?

Symptoms of diabetes may include the following:

- Feeling more thirsty than usual or have dry mouth
- Going to urinate more often than usual
- Feeling very tired or weak
- Blurred vision
- Feeling very hungry — even though you are eating
- Cuts or sores that are slow to heal
- Weight loss — even though you are eating more
- Tingling, pain or numbness in the hands/feet

**If you have any of these symptoms, please let your doctor know.**

## TYPES OF DIABETES

- **Type 1 diabetes** mostly happens in children and young adults. People who have this type of diabetes must take insulin shots to help glucose get into their cells and give them energy. Only 5 percent of the people have this form of diabetes.
- **Type 2 diabetes** is a more common type of diabetes that mostly happens in adults. It can also happen in children and young adults. The body may not make enough insulin and/or may have trouble using insulin it makes. The person may control type 2 diabetes with meal planning and exercise alone, or may need pills or insulin to control diabetes.
- **Prediabetes** is when a person's blood glucose is higher than normal but not high enough to be diagnosed as having diabetes. You are still at risk for developing diabetes and heart disease.
- **Secondary diabetes** can happen when blood glucose rises due to medications such as **steroids** that people have to take to treat illnesses such as cancer. Certain illnesses/surgeries such as pancreatitis/pancreatectomies can also cause diabetes. High blood glucose levels **may** go away once the medication is stopped or the illness is better.
- **Gestational diabetes** is caused by the hormonal changes of pregnancy and goes away after the birth of the baby. However, women who have had gestational diabetes have about a 40 percent chance of developing type 2 diabetes later in life.

## WHY DO YOU NEED TO TAKE CARE OF YOUR DIABETES?

- To keep blood glucose within target range
- To feel good every day
- To prevent, delay or slow the progress of the complications of diabetes

To control your diabetes you will have a diabetes management plan (page 11) that is individualized for your body.

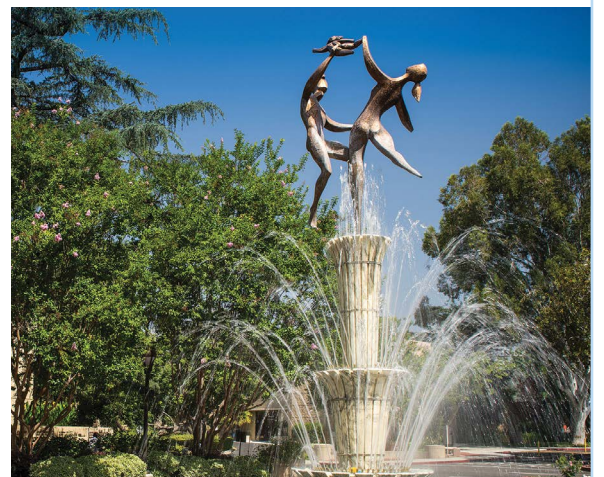
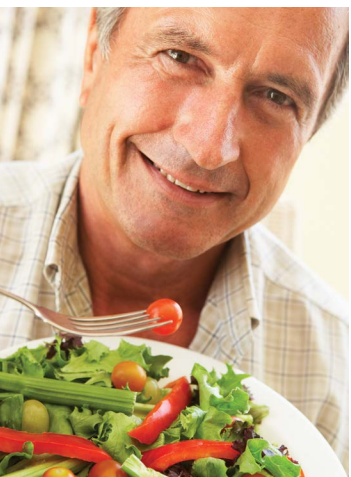
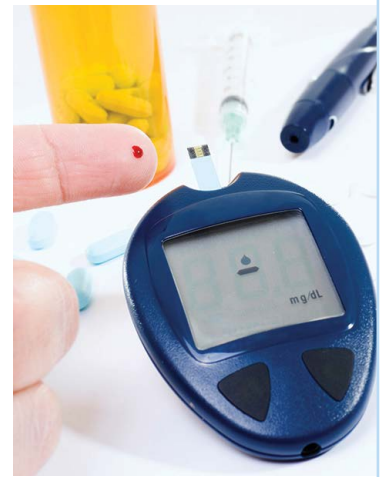
## WHO IS ON YOUR DIABETES HEALTH CARE TEAM TO SUPPORT YOU?

**You** are the most important member of your health care team. Each day you are the one who manages your diabetes. Talk to your doctor about how to best do this. There are other members on your health care team that will be key in helping you best manage your diabetes:

- Your doctor  
(primary care, endocrinologist)
- Diabetes nurse educator
- Nurse
- Dietitian



# AVOID LONG-TERM COMPLICATIONS



**Get Regular Checkups**  
**Diabetes Complications**  
**Foot Care**



# Avoid Long-term Complications

## GET REGULAR CHECKUPS

Diabetes puts you at greater risk for developing heart disease, kidney disease, eye disease and nerve disease. Additional screening and testing is needed for early detection and/or prevention of these complications. Work with your doctor to make sure you have the following tests done and try to stay within your target as indicated:





TEST	TARGET RANGE	HOW OFTEN
<b>Hemoglobin A1c</b>	less than 7%	Every 3 to 6 months
<b>Blood pressure</b>	less than 140/90	Each doctor visit/ask your doctor for your goal range
<b>Blood sugars</b>	Less than 130 before meals Less than 180 after meals	Ask your doctor for your goal range
<b>Weight</b>	ask your doctor	Each doctor visit
<b>Dental exam</b>	----	Every 6 months
<b>Foot exam</b>	----	Each doctor visit and complete exam each year
<b>Lipid panel: Total cholesterol</b>	less than 200	At least once a year
<b>Triglycerides</b>	less than 150	
<b>HDL (good cholesterol)</b>	more than 40 for men more than 50 for women	
<b>LDL (bad cholesterol)</b>	less than 100	
<b>Microalbuminuria (Kidney screening)</b>	Less than 30mg	Once a year
<b>Physical activity</b>	150 minutes a week, spread over at least 3 days/week	Ask your doctor for your goal time
<b>Dilated eye exam</b>	----	Once a year
<b>Flu shot</b>	----	Once a year
<b>Pneumonia shot</b>		Recommended for all people with diabetes who are 2 years of age and older

**Talk to your doctor about the following steps you can do to prevent complications:**




- Aspirin therapy
- Quitting smoking
- Your health care goals
- Pre-pregnancy — family planning counseling as needed
- Immunizations

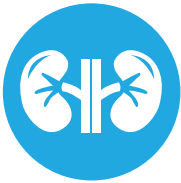





Uncontrolled diabetes increases your risk for many serious health problems. The good news is that with the correct treatment and recommended lifestyle changes, many people with diabetes are able to prevent or delay the onset of diabetes complications. The table on the following pages shows you possible diabetes complications, their definition and daily actions you can take to prevent health problems. Remember to talk to your health care team about your health goals and to come up with a plan that is best for you.

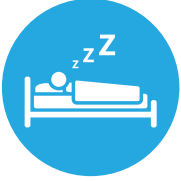

<b>DIABETES COMPLICATIONS</b>	<b>DEFINITION</b>	<b>DAILY ACTIONS</b>
<p><b>Heart Attack</b></p> 	<p>The blood moves through your vessels with too much force. Your heart has to work harder when blood pressure is high. The blood supply to part of the heart is blocked off. This can cause heart attacks.</p>	<ul style="list-style-type: none"> <li>▪ Keep your blood sugar, blood pressure and cholesterol within the normal range.</li> <li>▪ Lose weight/prevent weight gain (consult your health care provider).</li> <li>▪ Quit smoking.</li> <li>▪ Limit alcohol consumption (consult your health care provider).</li> <li>▪ Eat less salt — season with herbs and spices instead.</li> </ul>
<p><b>Stroke</b></p> 	<p>Blood supply to part of your brain has suddenly stopped.</p>	<ul style="list-style-type: none"> <li>▪ Keep your blood sugar, blood pressure and cholesterol within the normal range.</li> <li>▪ Exercise regularly as instructed by your doctor.</li> <li>▪ Quit smoking.</li> </ul>



DIABETES COMPLICATIONS	DEFINITION	DAILY ACTIONS
<p><b>Eye Damage</b> (retinopathy)</p> 	<p>Blood vessels in the eyes can swell and leak. Over time, it can lead to eye problems that lead to blindness.</p> <ul style="list-style-type: none"> <li>Retinopathy</li> <li>Other eye problems (glaucoma and cataracts)</li> </ul>	<ul style="list-style-type: none"> <li>Keep your blood sugar and blood pressure within the normal range.</li> <li>See your ophthalmologist (eye doctor) every year for a retinal exam with pupil dilation.</li> </ul>
<p><b>Dental Disease</b> (gum and plaque)</p> 	<p>High blood sugars can destroy your gums and bone around your teeth.</p>	<ul style="list-style-type: none"> <li>Keep your blood sugar within the normal range.</li> <li>Daily tooth brushing</li> <li>Daily flossing</li> <li>See your dentist every 6 months for checkups and teeth cleaning.</li> </ul>
<p><b>Nerve Damage</b> (neuropathy/foot complications)</p> 	<p>Nerve damage can occur throughout your body.</p> <p>Peripheral nervous system sends information from your brain and spinal cord (central nervous system) to the rest of your body. High blood sugars can damage the nerves.</p> <p>Damage to your peripheral nerves, often causes weakness, numbness and pain, usually in your hands and feet.</p>	<ul style="list-style-type: none"> <li>Keep your blood sugar within the normal range.</li> <li>Check your feet every day; use a mirror to see the bottom of your feet.</li> <li>Use your hands to feel for hot or cold spots, bumps or dry skin.</li> <li>Check for corns, calluses, blisters, red areas, swelling, ingrown toenails and toenail infections (report to your doctor).</li> <li>After bathing, dry your feet and seal in the remaining moisture with a foot cream <b>(do not put between your toes)</b>.</li> <li>Protect your feet to prevent foot ulcers and amputations (see page 9).</li> </ul>

DIABETES COMPLICATIONS	DEFINITION	DAILY ACTIONS
<p><b>Kidney Disease</b> (nephropathy)</p> 	<p>High blood sugars damage the kidneys causing them to work harder. The extra work is hard on the kidney filters. In time, the filters start to leak and useful protein is lost in the urine.</p> <p>Small amounts of protein in the urine are called microalbuminuria. You may require either hemodialysis or a kidney transplant if your kidneys are completely damaged.</p>	<ul style="list-style-type: none"> <li>• Keep your blood sugar and blood pressure within the normal range.</li> <li>• Lose weight/prevent weight gain (consult your health care provider).</li> <li>• Eat less salt; instead, season with herbs and spices.</li> <li>• Avoid alcohol and tobacco.</li> <li>• Exercise regularly as instructed by your doctor.</li> </ul>
<p><b>Diabetic Ketoacidosis</b> (DKA)</p> 	<p>When your cells don't get the glucose needed for energy, your body begins to burn fat for energy, which leads to the production of ketones.</p> <p>Ketones are the by-product of fatty acids, which can build up in the blood and cause a toxic environment called DKA.</p>	<ul style="list-style-type: none"> <li>• Keep your blood sugar within the normal range.</li> <li>• If you have type 1 diabetes check your urine for ketones (see page 16) when your blood sugar is more than 240mg/dl.</li> <li>• Ask your doctor or diabetes educator how to manage high blood sugar.</li> </ul>
<p><b>Hyperosmolar Hyperglycemic Nonketotic Syndrome</b> (HHNS)</p> 	<p>When the blood sugar rises (levels over 600 mg/dl), the body tries to get rid of the excess sugar by passing it into your urine. This can happen when either type 1 or type 2 diabetes is not being controlled properly, but HHNS is mostly seen in type 2.</p> <p>Urine becomes dark. You make a lot of urine at first, later you may not have to go to the restroom as often. You become very thirsty and dehydrated, causing HHNS. If this continues, seizures, coma and eventually death can occur.</p>	<ul style="list-style-type: none"> <li>• Keep your blood sugars within the normal range.</li> <li>• When you are sick, test your blood sugar more frequently (see page 18).</li> <li>• Drink plenty of water.</li> <li>• Ask your doctor or diabetes educator how to manage high blood sugar. (Refer to page 15-16.)</li> </ul>

DIABETES COMPLICATIONS	DEFINITION	DAILY ACTIONS
<p><b>Gastroparesis</b> (nerve damage)</p>	<p>The stomach takes too long to empty its contents (delayed gastric emptying). This is caused by damaged nerves.</p>	<ul style="list-style-type: none"> <li>▪ Keep your blood sugars within the normal range.</li> <li>▪ Eat small frequent meals, low in fat and low in fiber.</li> <li>▪ Talk to your doctor about how to manage symptoms. Ask for a consult with a clinical dietitian.</li> </ul>
<p><b>Sex and Intimacy</b> (erectile dysfunction /female sexual dysfunction)</p> 	<p>Blood vessels and nerves can become damaged.</p> <p>Emotional factors can interfere with sexual feelings and often lead to or worsen sexual dysfunction.</p>	<ul style="list-style-type: none"> <li>▪ Keep your blood sugars within the normal range.</li> <li>▪ Understand how sexual health, stress, heart issues and low testosterone levels can be affected by diabetes.</li> <li>▪ Talk to your physician.</li> </ul>
<p><b>Skin Changes</b></p>	<p>High blood sugars can cause changes in the small blood vessels, causing skin problems.</p> <p>General skin conditions:</p> <ul style="list-style-type: none"> <li>▪ Bacterial infections</li> <li>▪ Fungal infection</li> <li>▪ Itching</li> <li>▪ Allergic reactions</li> <li>▪ Diabetic blisters</li> </ul>	<ul style="list-style-type: none"> <li>▪ Keep your blood sugars within the normal range.</li> <li>▪ Practice good hygiene.</li> <li>▪ Keep skin clean and dry. Use talcum powder in areas where skin touches skin such as armpits, groin and under the breast area.</li> <li>▪ Avoid very hot baths and showers.</li> </ul>

DIABETES COMPLICATIONS	DEFINITION	DAILY ACTIONS
<p><b>Sleep Apnea</b></p> 	<p>Are you jolted awake by the sound of your own snoring?</p> <p>The airway is blocked when the mouth and throat relax during sleep, often for more than 10 seconds.</p> <p>Untreated sleep apnea may increase your blood sugar and increase your risk of high blood pressure, heart attack or stroke.</p>	<ul style="list-style-type: none"> <li>▪ Quit Smoking.</li> <li>▪ Lose weight/prevent weight gain (consult your health care provider).</li> <li>▪ Talk to your physician about possible treatment available.</li> <li>▪ Increase your sleeping hours (6 to 7 hours a day)</li> <li>▪ See resources on page <a href="#">55</a></li> </ul>
<p><b>Hearing Loss</b></p> 	<p>We do not know how diabetes is related — possible high blood sugars may cause damage to the small blood vessels in the inner ear. Studies found that hearing loss is twice as common in people with diabetes than those who don't have diabetes.</p>	<ul style="list-style-type: none"> <li>▪ Keep your blood sugars within the normal range.</li> <li>▪ Talk to your physician.</li> </ul>

## Foot Care

People with diabetes are more likely to have foot problems because over the years high blood sugar levels can damage blood vessels, causing poor blood flow to the lower legs and feet. Poor blood flow means a greater chance of infection. High blood sugar levels can also damage the nerves in your feet. If you are unable to feel a cut or a sore, serious damage can happen before you realize it.

### WHAT CAN YOU DO TO KEEP YOUR FEET SAFE?

Since feet are commonly affected by diabetes, it is important to practice proper foot care. Here are some basic points:

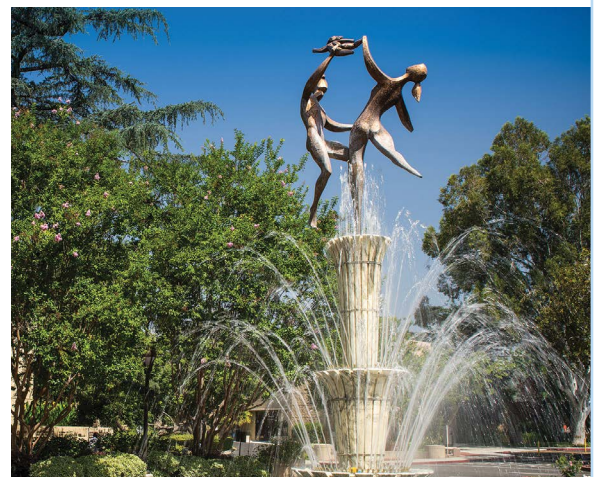
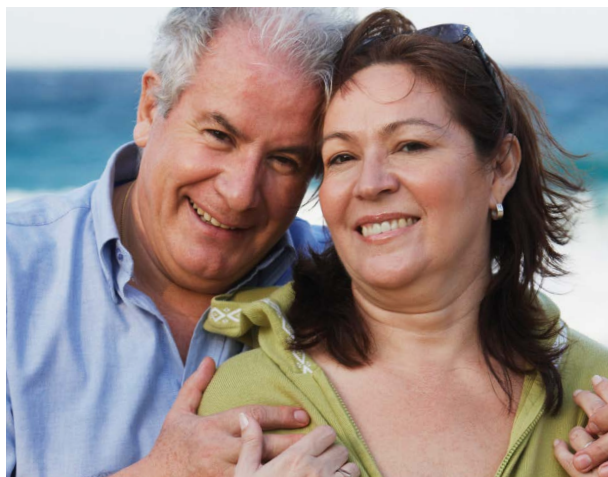
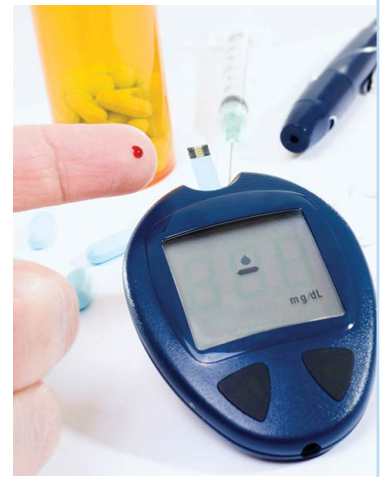
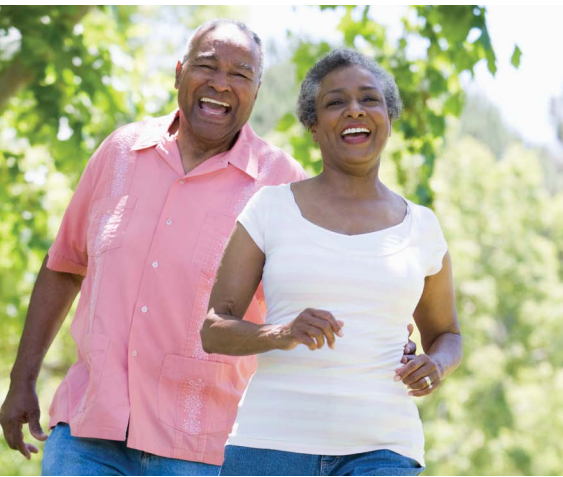
- Always wear footwear that fits well (break shoes in slowly).
- Never walk barefoot indoors or outdoors.
- Feel inside shoes for foreign objects (pebbles, nails or anything that could hurt your feet) and irregularities (sharp edges or cracks).
- Never use heating pads or hot water on feet.
- Wash your feet every day with warm water and mild soap.
- Dry your feet well, especially between the toes.
- Keep the skin soft with a foot cream or a thin coat of plain petroleum jelly or other such products (**do not** apply it between the toes). This helps to prevent drying or cracking of skin and calluses.
- Examine your feet every day. If you cannot see well, use a mirror or ask someone else to check your feet for you.
- Have a podiatrist (foot doctor) care for your toenails.
- **Report to your doctor or nurse:** all cuts, cracks, scrapes, bruises, blisters, corns, redness, calluses, color changes, swelling, temperature or sensation changes, drainage or ingrown toenails.
- Do not smoke because it damages the blood supply to your feet.
- To avoid blisters, always wear clean, soft socks that fit you. **Do not** wear socks or knee-high stockings that are too tight below the knee.
- Take your shoes and socks off every time you visit the doctor so he or she can check your feet.



**IT IS IMPORTANT TO PRACTICE PROPER FOOT CARE**



# TOOLS FOR YOUR DIABETES MANAGEMENT PLAN



- Why Should You Monitor Your Blood Sugar?**
- Record Your Results Using a Log Book/Record**
- What Should Your Target Range Be for Your Blood Sugar Level?**
- What Is Hemoglobin (A1c)?**
- What Do You Need to Know about High and Low Blood Sugar Levels?**
- There Are Medications That May Affect Your Blood Sugar Levels**
- Sick Day Management**
- Glucagon Emergency Kit: What Should Family/Friends Do for Low Blood Sugar?**
- Wear a Medical Identification Bracelet**





# Tools for Your Diabetes Management Plan

Your diabetes management plan will always include these components:

1. Monitoring your blood glucose (pages 11-14)
2. Keeping a record: blood sugar, food, activity (page 13)
3. Knowing how to manage **high blood sugar** and when to call the doctor or nurse (pages 15-16)
4. Knowing how to manage **low blood sugar** and when to call the doctor or nurse (pages 20-22)
5. Eating healthy and meal planning (pages 23-31)
6. Exercise — Staying physically active (pages 33-34)
7. Managing stress (pages 35-36)
8. Diabetes medication: pills and/or insulin (Pills — pages 41-43; insulin — pages 44-48; non-insulin injectable medication — page 49)
9. Behavioral Changes and Goal Setting in Diabetes Management (pages 57-58)



**Note:** Once you are able, you should attend the diabetes education program (City of Hope, 626-218-2251) and work with your health care team on other components of your management plan.

## WHY SHOULD YOU MONITOR YOUR BLOOD SUGAR?

Testing your blood sugar is a good tool to help you make decisions with your diabetes management. To monitor your blood sugar, you will need to test your blood sugar level using a “blood glucose meter.” By doing this, you will find out exactly how much sugar is in your blood at the time of the test. This information will help you make decisions as you care for your diabetes each day.

## DO YOU NEED TO TEST YOUR BLOOD SUGAR LEVEL EVERY DAY?

- Testing is individualized. How often you test your blood sugar level will be based on your doctor’s recommendations.
- With **type 2** diabetes, you should test your blood sugar at least once a day and more when you are ill. Try testing at different times each day such as before each meal and/or two hours after meals and/or at bedtime.

- If you use insulin, for either **type 1** or **type 2** diabetes, you should test at least four times a day, before each meal and at bedtime.
- If you are feeling different than normal, test your blood sugar to see if it is related to your blood sugar levels. This may alert you to a problem with high or low blood sugars and you can notify your doctor if needed.
- Your doctor may have specific recommendations based on your treatment and blood sugar goals. Your diabetes nurse can also help you determine when to test.

**IF YOU ARE FEELING DIFFERENT THAN NORMAL, TEST YOUR BLOOD SUGAR TO SEE IF IT IS RELATED TO YOUR BLOOD SUGAR LEVELS.**

## IMPORTANT TIPS TO HELP YOU USE YOUR BLOOD SUGAR MONITORING METER

### Follow testing directions that came with your meter.

- Wash your hands with soap and warm water before using the meter. Using alcohol to clean your finger is not necessary.
- Use the lancet/needle device to prick your finger. Pricking the sides of your fingertips may be less painful (Rotate your fingers).
- Keep all unused strips in the original bottle with the cap on tight and store in a cool, dry place.
- After testing your blood sugar, throw away your used strips in the trash can.
- Dispose of your used lancet/needles, based on your community guidelines. **DO NOT THROW YOUR LANCET/NEEDLES IN THE TRASH OR RECYCLE.** Call your local waste department for further instructions.



*Meter and lancet*



*Sharps container*

# RECORD YOUR RESULTS USING A LOG BOOK/RECORD

It is very important to keep a **written record** or **logbook** of your blood sugars to help you keep track of your diabetes control (daily diabetes log sheets, pg. 59).

Some people test before meals **and/or** two hours after meals to understand how different foods may increase the blood sugar. Write down your blood sugar numbers, time taken, what foods you are eating, when and how long you exercise, your illness, your emotions and your pain level (scale of 1-10; 1:little pain; 10:very painful).

Most new monitors have a memory of your blood sugar levels; however, keeping a written record helps you track your numbers so it is easier to identify patterns or causes of low and high numbers.

<b>DAILY DIABETES LOG (SAMPLE)</b>										Week of: _____	
DAY	BREAKFAST		LUNCH		DINNER		BEDTIME		OTHER/SNACK		
	Before	After	Before	After	Before	After	Before		Pre Post	Carbs Insulin	
<b>Mon.</b>											
Comments											
<b>Tue.</b>											
Comments											
<b>Wed.</b>											
Comments											
<b>Thu.</b>											
Comments											
<b>Fri.</b>											
Comments											
<b>Sat.</b>											
Comments											
<b>Sun.</b>											

## WHAT SHOULD YOUR TARGET RANGE BE FOR YOUR BLOOD SUGAR LEVEL?

The target range for your blood sugar level will depend on your age and overall health condition. Your doctor and the diabetes team will teach you the target range that is best for you. **Ask your doctor for your goal range.**

BLOOD SUGAR GOALS		
WHEN TO TEST	GOALS FOR PEOPLE WITH DIABETES	YOUR GOAL
Before meals	80-130mg/dl	
2 hours after a meal	Less than 180mg/dl	

*(American Association of Clinical Endocrine before meals < 110mg/dl and 1 to 2 hours after meals < 140mg/dl; goals must be individualized to personal patient needs)*

## WHAT IS HEMOGLOBIN (A1C)?

A blood test ordered by your doctor and completed at the lab department, **A1c** shows how your blood sugar levels have been over the past two to three months. This type of test is another important way to monitor your diabetes since it gives you the big picture of your overall diabetes control, while a blood glucose test using your meter gives you a snapshot of that moment. Recommendations for the A1c test include:

- The A1c can be drawn every three months or six months or once a year.
- The A1c goal for most people with diabetes is 7% or below.
- Talk with your doctor about what your goal should be for the A1c test.

GOALS FOR HEMOGLOBIN A1C RESULTS	
Target range for most people with diabetes	7% or below
Talk to your doctor — possible change in your diabetes treatment plan	8% or above

*(American Association of Clinical Endocrine A1c < 6.5% for patients without concurrent serious illness and at low hypoglycemic risk; A1c > 6.5% for patients with concurrent serious illness and at risk for hypoglycemia)*

Studies have shown that higher A1c results are linked to increased risk for long-term complications (page 4).

## WHAT DO YOU NEED TO KNOW ABOUT HIGH BLOOD SUGAR LEVELS?

**High blood sugar (hyperglycemia)** is when there is too much sugar in your blood. If your blood sugar levels stay above 200 mg/dl for more than one to two hours, then your blood sugar level is too high. This may be happening if you:

- Skip your diabetes pills or insulin
- Eat too much
- Are not getting enough physical activity
- Are feeling stressed, sick or in pain
- Are taking medicines that can cause high blood sugar

(See page 17 for a list of medications that may cause high blood sugar.)

When your blood sugar is high, you may have the following gradual signs and symptoms:

### SYMPTOMS OF HIGH BLOOD SUGAR




Very thirsty



Needing to pass urine more than usual




Very Hungry



Sleepy



Blurry vision



Infections or injuries heal more slowly than usual

## WHAT CAN YOU DO IF YOU HAVE HIGH BLOOD SUGAR?

The most important thing you can do for high blood sugar is learn how to control it by:

- Drinking plenty of sugar-free liquids (e.g., water)
- Testing your blood sugar daily or every two hours or until your blood sugar level is less than 200 mg/dl
- Checking for ketones if you have **type 1 diabetes** and your blood glucose is higher than 240mg/dl



- Ask your doctor or diabetes educator how to manage high blood sugar (you may need an insulin correctional scale).
- Exercise only if your blood sugar is less than 300 mg/dl, if you have **type 2 diabetes** and you do not have any symptoms of high blood sugars. Consider testing your blood sugar before and after exercising.
- **Never take extra diabetes medication unless recommended by your doctor or nurse.**

**Note:** Call your doctor or nurse right away if your blood sugar is over 300mg/dl for several tests in a row or if you have ketones in your urine (Keto-Dipstick).

## THERE ARE MEDICATIONS THAT MAY AFFECT YOUR BLOOD SUGAR LEVELS

The following is a list of medications that may increase your blood sugar levels. This list **does not** have the full range of medicines that may impact blood sugar levels. If you are taking any of these medications let your doctor or nurse know in order to individualize your plan of diabetes treatment.

<b>GENERIC NAME — (BRAND NAMES)</b>			
<b>Abacavir</b> (Ziagen)	<b>Chlorthalidone</b> (Chlorthalidone Tab., Clorpres, Tenoretic, Thalitone)	<b>Gemtuzumab</b> <b>Ozogamicin</b> (Mylotarg)	<b>Phenytoin</b> (Dilantin, Phenytek)
<b>Acetazolamide</b> (Diamox®)	<b>Cortisone</b>	<b>Hydrochlorothiazide + Metoprolol</b> (Lopressor HCT)	<b>Pseudoephedrine</b> (Claritin D, Sudafed)
<b>Albuterol</b> (Ventolin®, Proventil®)	<b>Corticosteroids</b>	<b>Indapamide</b> (Lozol)	<b>Prednisone</b> (Sterapred)
<b>Amphotericin B</b> (Amphocin®, Fungizone®)	<b>Dexamethasone</b>	<b>Levothyroxine</b> (Synthroid, Levoxyl)	<b>Rituximab</b> (Rituxan)
<b>Atenolol + Chlorthalidone</b> (Tenoretic)	<b>Esterified Estrogens + Methyltestosterone</b> (Estratest)	<b>Methylprednisolone</b> (Depo-Medrol, Solu- Medrol)	<b>Sotalol</b> (Betapace, Betapace AF, Sorine)
<b>Betaxolol</b> (eyedrops), Kerlone (oral)	<b>Ethacrynic Acid</b> (Edecrin, Sodium Edecrin)	<b>Metoprolol</b> (Lopressor, Toprol XL)	Tacrolimus (Prograf, Protopic)
<b>Caffeine</b> (Large amounts)	<b>Everolimus</b> (Afinitor)	<b>Nadolol</b> (Corgard)	<b>Torseamide</b> (Demadex, Demadex oral)
<b>Captopril + Hydrochlorothiazide</b> (Capozide®)	<b>Fluoxetine</b> (Prozac, Sarafem)	<b>Niacin, Niacinamide</b> (Niacor, Nicotinex)	<b>Total Parenteral Nutrition</b> (TPN)
<b>Carvedilol</b> (Corego)	<b>Gatifloxacin</b> (Tequin)	<b>Nystatin</b> (Mycostatin, Nystat-Rx, Pedi-Dri)	<b>Triamcinolone</b> (Aristocort, Flutex)
<b>Chlorothiazide</b> (Diuril)	<b>Furosemide</b> (Lasix)	<b>Octreotide Acetate</b> (Sandostatin®)	<b>Ziprasidone</b> (Geodone)

*(This is not a complete list of medications that may impact your blood sugars.)*

# Sick Day Management

“Sick” means having a fever, nausea, vomiting, diarrhea or congestion in your head or chest. The stress of being ill usually causes your blood sugar to rise.

## WHEN YOU ARE SICK, WHAT STEPS SHOULD YOU TAKE TO CONTROL YOUR BLOOD SUGAR LEVELS?

- Test your blood sugar every 2 to 4 hours (at least every 4 hours).
- Rest as much as possible. (This will be a time that you skip your regular exercise.)
- Call your doctor and/or nurse educator regarding your diabetes medication. You may need to take your usual dose of Glucophage (metformin), a sulfonylurea (such as glyburide or glucotrol) or insulin.
- Drink at least 8 ounces (1 cup) of caffeine-free liquids every hour while awake to prevent dehydration. If drinking causes you to vomit try sucking on an ice pop or try drinking 1 to 2 tablespoons of fluid every 20 minutes.
- Check with your diabetes care team before taking any over-the-counter medicines, like aspirin, cough syrup, or decongestants, to see if they might raise or lower your blood sugar.
- If you have type 1 diabetes, check your urine or blood for ketones if your blood sugar stays above 250mg/dl (ketones, page 16).
- You may be vomiting, having diarrhea or your blood sugar may be higher than 250mg/dl. Even so, you need to continue to take in carbohydrates (“carbs”). To prevent low blood sugar, try to eat or drink about 10-15 grams of carbs per hour. Fluids with **15 grams** of carbohydrates are:
  - ½ cup fruit juice (like orange, apple or grape)
  - ½ cup regular (not sugar free nor diet soda) soda pop
  - ½ cup regular gelatin dessert
  - 1 slice of toast **or** 6 soda crackers
  - 1 popsicle (double stick)
  - 1 cup chicken soup with noodles
  - 1 cup lowfat milk





**Call your nurse or doctor if:**

- Your blood sugar is less than 70mg/dl or higher than 240 mg/dl for more than six hours.
- Diarrhea lasts more than four hours or you have severe abdominal pain
- You have a fever (101.5F or higher)
- You can't eat or drink for four hours.
- Your illness lasts for more than 24 hours
- You have moderate to large amounts of ketones in your urine for more than six hours (Type 1)
- You have severe pain in your stomach, have chest pain, or have a hard time breathing

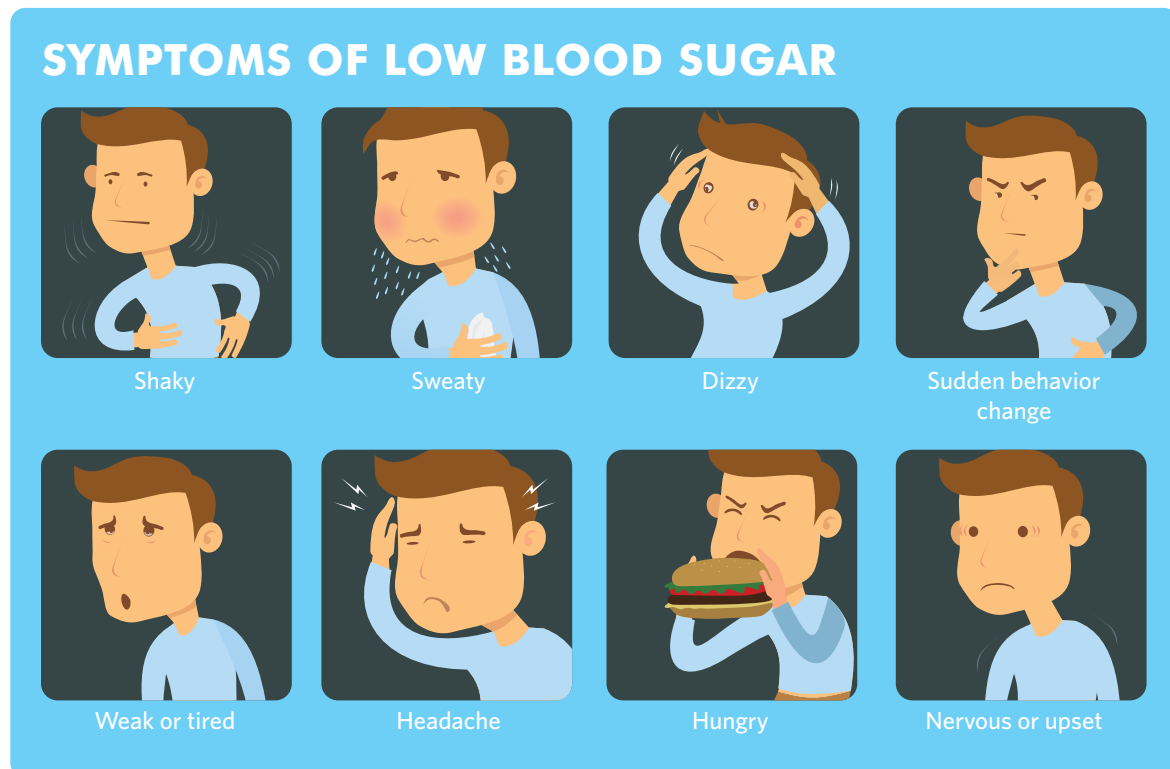
**Call the City of Hope Nursing Triage at 626-218-7133.**

## WHAT DO YOU NEED TO KNOW ABOUT LOW BLOOD SUGAR LEVELS?

**Low blood sugar levels (hypoglycemia)** can happen fast and become severe if not controlled. If your blood sugar level drops below 70 or 80 mg/dl, you have low blood sugar. This may be happening if you:

- Take too much diabetes medicine
- Are more physically active than usual
- Eat too few carbohydrates or skip meals
- Take other medicines for other health problems
- Drink alcoholic beverages

When your blood sugar is low you may have the following abrupt signs and symptoms:



## WHAT CAN YOU DO IF YOU HAVE LOW BLOOD SUGAR?

- **Check** your blood sugar right away
- **Treat** by eating or drinking something high in sugar (choose one), such as:
  - 4 ounces ( $\frac{1}{2}$  a cup) of fruit juice
  - 4 ounces ( $\frac{1}{2}$  a cup) of soda pop (not diet)
  - 3 or 4 glucose tablets
  - 5 or 6 hard candies that you can chew quickly (such as mints)
- **Wait** 15 minutes and then check your blood sugar again. Once your blood sugar is above 80 mg/dl, eat your next meal or a snack that has carbohydrates and a protein such as  $\frac{1}{2}$  meat sandwich, cheese and 5 crackers, or a glass of lowfat milk, to help keep your low blood sugar from dropping too low again.

### **Call your doctor or nurse right away if your blood sugar level remains below 70 or 80 mg/dl after 30 minutes or if:**

- You have 3 or 4 low blood sugar results in a row, during one day or over several days.
- You have low blood sugar at the same time every day for several days.
- Your symptoms of low blood sugar are severe.

**For urgent matters, call City of Hope Nursing Triage 24 hours, 7 days a week at 626-256-7133.**

## GLUCAGON EMERGENCY KIT

### **What should family and/or friends do if you pass out or cannot take some form of sugar by mouth due to severe low blood sugar?**

Make sure you and a member of your family or a friend understand exactly what to do in this situation. Patients with severe low blood sugar who have passed out or cannot take some form of sugar by mouth can take Glucagon. It is **emergency medicine** (prescription from your doctor) used to treat severe hypoglycemia (low blood sugar) in patients with diabetes who have passed out or cannot take some form of sugar by mouth (Given by someone else).

Glucagon is by prescription only and must be used only as directed by your doctor. Make sure you and a member of your family or a friend understand exactly when and how to use this medicine before it is needed. Glucagon is packaged in a kit with a vial/ bottle of powder containing the medicine and a syringe filled with liquid to mix with the medicine. Directions for mixing and injecting the medicine are in the package. Read the directions carefully and ask your health care professional for additional explanation, if necessary.

Glucagon should not be mixed after the expiration date printed on the kit and on the vial/bottle. Check the date regularly and replace the medicine before it expires. Store in a cool dry place.



### **Someone should call 911 and give glucagon if available.**

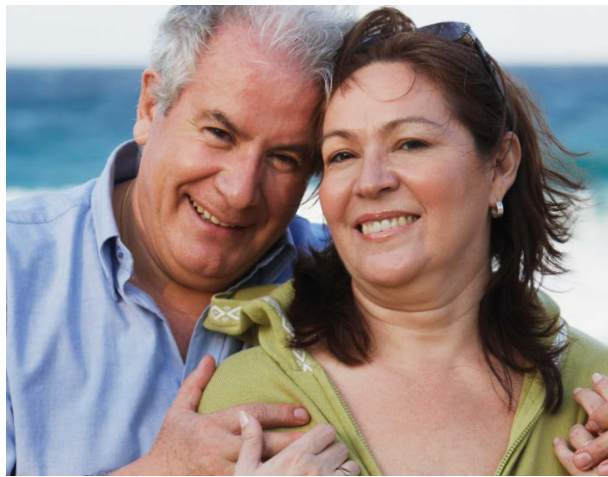
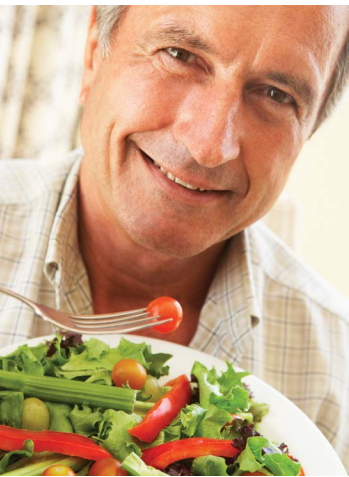
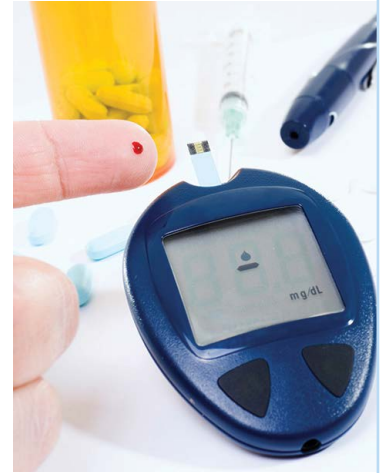
## WEAR A MEDICAL IDENTIFICATION BRACELET

It is important for you to wear or carry some form of medical identification at all times. It can provide key information should a medical emergency arise. Medical alert jewelry can be ordered from such companies as:

1. **MedicAlert** (1-888-633-4298 or [www.medicalert.org](http://www.medicalert.org))
2. **American Medical Identifications** (1-800-363-5985 or [www.americanmedical-id.com](http://www.americanmedical-id.com))
3. **Lauren's Hope** (1-800-360-8680 [www.laurenshope.com](http://www.laurenshope.com)).

There are many other companies that can provide these services.

# HEALTHY EATING AND MEAL PLANNING



**What are Carbohydrates?**

**What is Fiber?**

**What are Artificial Sweeteners?**

**What are Sugar Alcohols?**

**What are Proteins?**

**What is Cholesterol?**

**Planning Your Meals**

**Sample Menu for Diabetes Management**



# Healthy Eating and Meal Planning

A healthy eating plan will help you manage your diabetes every day to keep your blood sugar at your goal range. Eating healthy will also help you prevent other health problems. This is not a diet, it is healthy eating the whole family can enjoy.



Remember:

- Eat 3 meals a day, plus a healthy snack as needed; balanced meals help prevent high and low blood sugars. **Consult your dietitian.**
- Eating regular meals helps control hunger and prevents overeating at the next meal.
- Do not skip meals; Try to eat about the same time every day.
- Always eat a variety of foods from the six food groups: carbohydrates (grains/starches), protein, milk/yogurt, vegetables, fruits and fats

**The next pages will help you learn about the various benefits you can get from your foods. Use this information along with the recommendations of your diabetes health care team to plan your meals.**

## WHAT ARE CARBOHYDRATES?

Carbohydrates are sugars and starches that turn into blood sugars. These foods are our main source of energy. EXCESS carbohydrate can raise your blood sugar too high. It is important to limit your total carbohydrate intake at each meal. Foods that have carbohydrates include:

- **Starches** (Complex carbohydrates) such as rice, crackers, yams, potatoes, cereals, lentils, dried beans, corn, peas, bread, lima beans and pasta/noodles
- **Sugars** (Simple carbohydrates) include both natural and added sugars found in foods such as fruits, milk, yogurt, sweets, desserts and soda/juices (do not drink juices unless you have a low blood sugar reaction).



**Note:** High fiber food choices are encouraged. Small amounts of sugar are allowed as part of your total carbohydrate for the meal.



## SHOULD I INCLUDE CARBOHYDRATES AT EVERY MEAL?

Include carbohydrates in every meal and snack. Be sure to spread your carbohydrate intake evenly throughout the day. **Tips for adding healthy carbohydrates to your meals:**

1. Start your day with whole grain foods such as hot cereal (old fashioned oats, steel cut oats) or cold cereal that has whole grain and is low in sugar.
2. If you are eating bread for lunch, choose whole wheat, rye or other whole grains. You can also have brown rice or quinoa, which are whole grains.
3. Eat whole fruits instead of drinking juices. There is two times as much fiber in a whole orange then a 12-ounce glass of orange juice.

**For a list of carbohydrate food servings see page 29.**

## CARBOHYDRATE COUNTING

Carbohydrate counting, or “carb counting,” is a meal planning technique for managing your blood glucose levels. Carbohydrate counting helps you stay within your carbohydrate goal at each meal. You set a limit for your maximum amount of carbohydrate to eat for a meal. With the right balance of physical activity and medicine (if needed), you can help to keep your blood glucose levels in your target range.

**Consult with your doctor, diabetes nurse educator or dietitian for more information.**

## WHAT IS FIBER?

Fiber is a plant material the body passes through the digestive system, an important function to prevent constipation. Fiber also provides nutrients supporting the healthy bacteria in your gut. Fiber can be soluble or insoluble:

- Soluble fiber slows digestion and nutrient absorption from the stomach. **Examples: fruits (blackberries, orange), oats, oat bran, legumes (peas and beans), nuts, seeds and vegetables (brussels sprouts).** It is called soluble because it mixes with water and digestive enzymes. Soluble fiber can help control blood sugar and may help lower your cholesterol.
- Insoluble fiber may prevent constipation by helping food pass through more quickly. **Examples: wheat, wheat bran, barley, whole grains, fruit (apple, raspberries), pinto beans and sweet potatoes.** It does not mix with water but instead absorbs water which gives you a feeling of fullness. This can be an aid with weight loss. Also, fiber moves through your digestive system to get rid of waste, toxins and materials your body does not need.



### Other benefits of fiber are:

- May help regulate the blood glucose for better diabetes management
- Helps prevent constipation
- Helps keep weight under control — may slow onset of hunger

A meal plan that is high in fiber (25-30 grams per day) may help to control blood glucose levels and hemoglobin A1c. **Consult your dietitian for more information.**

## WHAT ARE ARTIFICIAL SWEETENERS?

Artificial sweeteners are also called sugar substitutes, compounds that offer the sweetness of sugar without the calories. They do not affect blood glucose levels and may be consumed in moderation. The US Food and Drug Administration (FDA) has tested and approved six artificial sweeteners. This means that experts have agreed that they are safe for use by the public in appropriate amounts.

- Aspartame (Equal, NutraSweet)
- Saccharin (Sweet'N Low, Sugar Twin, Sweet Twin)
- Acesulfame-K (Sunnet, Sweet One)
- Neotame and sucralose (Splenda)
- Rebaudioside A or Rebiana (Stevia) comes from the stevia plant and is now generally recognized as safe by the FDA as a food additive and table top sweetener.
- Advantame

## WHAT ARE SUGAR ALCOHOLS?

Sugar alcohols are carbohydrates from plant based products that are altered through a chemical process. These sugar substitutes provide somewhat fewer calories than table sugar (sucrose), mainly because they are not well absorbed and may even have a small laxative effect. Some people may experience gas, bloating, diarrhea, abdominal cramps and discomfort even when small amounts are ingested. The sugar alcohols commonly found in foods are sorbitol, xylitol, lactitol, mannitol, maltitol and hydrogenated starch hydrolysates. They are often used to sweeten sugar-free candies and gum. The sugar alcohols are partially absorbed and may increase the blood sugar level slightly.

## WHAT ARE PROTEINS?

Proteins are made up of essential and non-essential amino acids. They are very important for building and repairing the tissue in the body including hair, nails, blood cells, muscle and more.

- Protein-rich foods include meat, fish, poultry, eggs, milk (milk products) as well as vegetarian sources (soy, nuts and beans).
- Eating protein-rich foods at every meal is one way to assure that you get adequate protein to meet your body's need. (Consult your dietitian.)
- Aim for lean protein-rich foods. Fatty meats such as sausage, bacon, lunch meat and others can contain more saturated fat than protein which is not healthy for your heart.
- Protein-rich foods do not have much effect on the blood sugar.



### Choose lean sources of complete protein-rich foods:

- **Poultry:** chicken or turkey (white meat, no skin)
- **Fish:** fresh or frozen, plain: catfish, cod, flounder, trout, tuna, halibut, tilapia, orange roughy, smoked herring or salmon (lox)
- **Lamb:** roast, chop, leg
- **Shellfish:** clams, crab, lobster, scallops, shrimp
- **Beef:** select or choice grades trimmed of fat: ground round, roast (chuck, rib, rump), sirloin
- **Pork:** lean
- **Other:** egg whites, low fat cottage cheese, tofu, lowfat cheese (cheese with less than 5 grams of fat per ounce are best)

Limit the intake of red meats — including beef, veal, lamb and pork — to no more than two to three servings per week.

Increase fish in the meal plan two to three servings per week

**(Consult your dietitian for more information.)**

## Vegetarian sources of protein:

- Nuts/seeds
- Legumes (dried beans and peas such as lentils and pinto beans; also counts as a carbohydrate)
- Soy products (tofu, veggie burger)
- Quinoa (also counts as a carbohydrate)

**Limit/Avoid processed meats (lunch meat, bacon, sausage, bologna)**

## WHAT IS CHOLESTEROL?

Cholesterol is a fat made in your body but also found in animal foods. Cholesterol can clog your blood vessels. It is important to lower saturated fats and trans fats in your food if you have high cholesterol, high blood pressure, diabetes and/or heart disease.

Work with your doctor to figure out your risk for heart disease. (See page 3 for the basic guidelines for diabetes care.)



For more resources on how you can begin to reduce the factors that put you at risk of heart disease, visit the American Diabetes Association and the National Heart, Lung, and Blood Institute for information on their National Cholesterol Education Program (see page 54-55).

# Planning Your Meals

## GUIDELINES FOR HEALTHY EATING:

### 1. Eat a well-balanced meal.

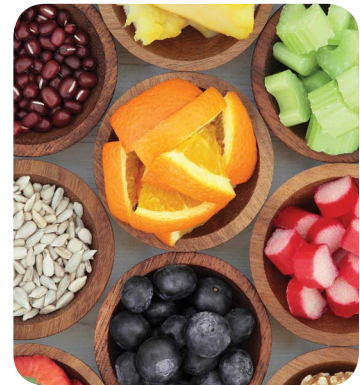
- Eat three balanced meals per day, about every four to five hours.
- Include a variety of foods from the six food groups at each meal (page 29-30).
- Be sure to include moderate amounts of low-fat protein to control between-meal hunger.
- Try to eat at the same time everyday.

### 2. Reduce your portion size of food.

- Especially carbohydrates: starches, fruits and milk
- Remember, you can have all types of carbohydrates, but in moderation.

### 3. Limit your intake of fat.

- Fat does not raise blood sugar, but can lead to being overweight. Excess body weight can raise blood sugar.
- A high-fat meal plan also increases your risk of heart disease. (*Avoid foods containing trans fats.*)
- Choose meats lower in fat: chicken, fish and lean cuts of beef and pork.
- Remove skin from chicken before preparing.
- Prepare your meats using less fat: grill, bake, boil or roast.
- Use low-fat, 1% milk or fat-free, skim milk.
- Increase your fiber in food choices: whole grain/wheat bread and vegetables.
- When eating out, choose foods lower in fat: grilled chicken sandwiches, baked potatoes and salads with low fat dressing.



## TIPS TO LIMIT YOUR FAT INTAKE

- Limit high saturated fat foods such as skin on poultry, sausages, luncheon meats, whole milk, cheeses and pastries.
- Avoid eating fried foods such as chips, french fries and doughnuts.
- Avoid foods that have added fats such as butter, margarine, cream cheese, gravies, cream sauces, sour cream and half and half creamers.

**Note: Do not aim for a “fat-free” meal plan.** A small amount of fat at each meal makes it tastier and helps to fight between meal hunger. Choose monounsaturated fats, such as avocado, olive oil, nuts and seeds. A handful of raw or dry-roasted almonds are a good snack option. Slivered almonds add flavor and texture to vegetables and salads.

# List of Food Choices for Meal Planning

(Not a complete list of foods)

## Starches/Grains

- 1 slice of wheat bread
- $\frac{1}{3}$  cup pasta
- $\frac{1}{2}$  cup beans/lentils
- $\frac{1}{3}$  cup rice
- 1 tortilla
- $\frac{1}{2}$  pita bread
- $\frac{1}{2}$  cup potatoes, corn, or peas
- 1 pancake (4" across)
- $\frac{3}{4}$  cup ready-to-eat cereal
- $\frac{1}{2}$  cup cooked cereal
- 3 cups of popcorn
- 6 saltine-type crackers



## Fruits

- 1 small apple
- $\frac{1}{2}$  banana
- 1 orange
- 1 cup strawberries
- 1 cup cantaloupe
- 1 cup papaya
- $\frac{1}{2}$  mango
- 17 small grapes
- $\frac{3}{4}$  cup blueberries
- $\frac{1}{2}$  grapefruit



## Dairy/Milk and Yogurt

- 1 cup of low-fat, 1% or fat-free milk
- 6 oz light yogurt or Greek yogurt



# List of Food Choices for Meal Planning

## Proteins *(Meat and meat substitutes)*

Portion size is an important part of meal planning. Per meal, a serving size is 4 oz. of raw meat, which is equal to 3 oz. of cooked meat — after bone and fat have been removed.

- ½ cup tofu
- beef, chicken, turkey, pork, fish
- cheese (reduced-fat) — mozzarella 2%, American 2%
- 1 egg/2 egg whites
- ham
- ¼ cup cottage cheese
- 1 tablespoon of peanut butter



## Fats

- 1 tsp. oil — Canola, olive, vegetable, corn
- 1 tablespoon of reduced-fat butter, margarine
- 1 tablespoon of mayonnaise
- 2 tablespoons of reduced-fat salad dressing
- 2 tablespoons of sour cream
- 1 tablespoon of cream cheese
- 10 peanuts
- 2 tablespoons of avocado
- 4 pecan halves



## Vegetable *(Non-starchy)*

Vegetables with small amounts of carbohydrates and calories are on the non-starchy vegetables list. Vegetables contain important nutrients. Try to eat at least two to three non-starchy vegetables choices each day (as well as from the carbohydrates/starches/grains list).

In general, one non-starchy vegetable choice is:

- ½ cup of cooked vegetables or vegetable juice or 1 cup of raw vegetables:

Artichoke	Celery	Peppers (all varieties)
Artichoke hearts	Cucumber	Radishes
Asparagus	Eggplant	Salad greens (endive, escarole, lettuce, romaine)
Beans (green, wax, Italian)	Green onions or scallions	Spinach
Bean sprouts	Greens (collard, kale, mustard, turnip)	Summer squash
Beets	Leeks	Tomato
Broccoli	Mushrooms	Tomatoes (canned)
Brussels sprouts	Okra	Water chestnuts
Cabbage	Onions	Zucchini
Carrots	Pea pods	
Cauliflower		

# Sample Menu for Diabetes Management

		<b><u>TOTAL CARBOHYDRATES</u></b>
<b>BREAKFAST</b> 7 a.m.	½ banana <b>or</b> ½ cup of strawberries	15 gm
	2 slices whole grain bread <b>or</b> 1 whole English muffin	<u>30 gm</u>
	1 egg/egg substitute <b>or</b> ½ oz low fat cheese/ham/turkey	<b>45 gm total</b>
	1 tbsp. tub margarine	
	Coffee <b>or</b> tea <b>or</b> water	
<b>SNACK</b> 9:30 a.m.	8 oz nonfat <b>or</b> low fat milk <b>or</b>	15 gm
	1 small fruit <b>or</b> ½ sandwich	
<b>LUNCH</b> 12 noon	2 slices bread <b>or</b> 2 corn tortillas <b>or</b> ⅔ cup rice <b>or</b> 1 medium potato	30 gm
	8 oz 1% lowfat milk <b>or</b> 1 small fruit	<u>15 gm</u>
	3 to 5 oz meat, chicken <b>or</b> fish (not fried or breaded)	<b>45 gm total</b>
	1 to 2 cups of non-starchy vegetable <b>and/or</b> green salad	
	1 tsp. mayonnaise <b>or</b> vinegrette dressing if desired	
	Diet soda, coffee <b>or</b> tea <b>or</b> water	
<b>SNACK</b> 3 p.m.	Greek yogurt <b>or</b> 8 oz lowfat milk <b>or</b> 6 crackers and 1 oz. of cheese	15 gm
	<b>or</b> small fruit and nuts	
<b>DINNER</b> 6 p.m.	1 cup pasta <b>or</b> ⅔ cup rice <b>or</b> 1 medium potato	30 gm
	8 oz lowfat milk <b>or</b> small fruit	<u>15 gm</u>
	3 to 5 oz fish, meat chicken ( <b>not</b> fried or breaded)	<b>45 gm total</b>
	1 to 2 cups non-starchy vegetables (carrots, broccoli, cauliflower, bok choy, pepper, spinach)	
	Salad greens with lowfat dressing (if desired)	
	Diet soda, coffee <b>or</b> tea <b>or</b> water	
<b>SNACK</b> 9 p.m.	1 small fruit with ½ cup cottage cheese	15 gm
	<b>or</b> ½ sandwich <b>or</b> 8 oz lowfat milk <b>or</b> Greek yogurt	

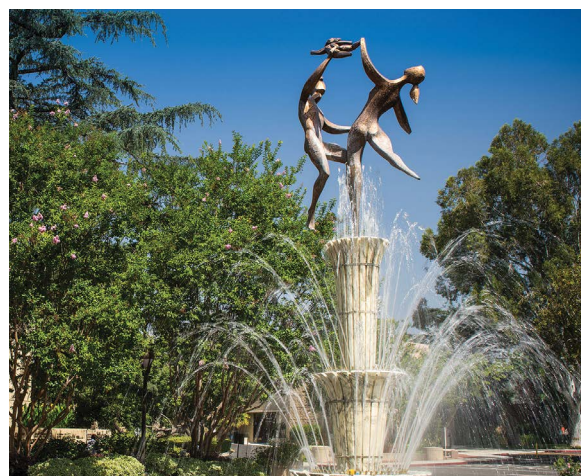
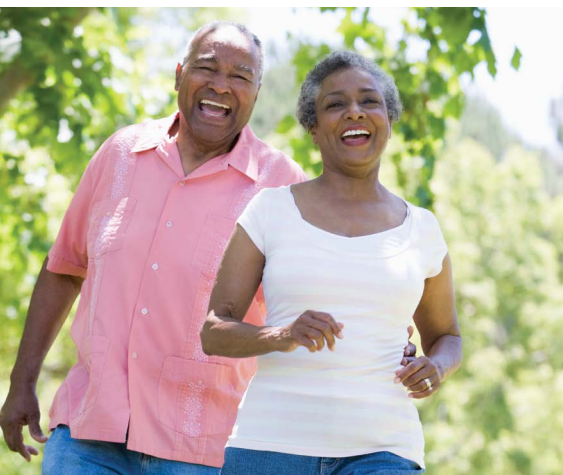
*Eat three meals a day with a snack if needed. Eat about every 4 to 5 hours and try to be consistent with the amount of carbohydrates at every meal if possible. This is an example only. Individual needs will greatly vary and are influenced by many factors. Consult with a dietitian for an individual meal plan.*

**(Your Plate Sample — page 56)**





# HEALTH AND EXERCISE



## Exercise Guidelines



# Health and Exercise

## EXERCISE GUIDELINES

Regular exercise helps lower your blood sugar and helps insulin work better. It also lowers blood pressure, cholesterol and stress; promotes weight loss, cardiovascular health, stamina, overall well-being and much more!

Some good examples of exercise include walking, jogging, swimming, biking, dancing and resistance training. Gardening and housework can also be good exercise. Attain and maintain reasonable body

weight. If you are overweight, you will need to set realistic weight loss goals (about 10 to 15 pounds at first). Allow a reasonable time to reach your goal. Do not lose more than 2 pounds per week.



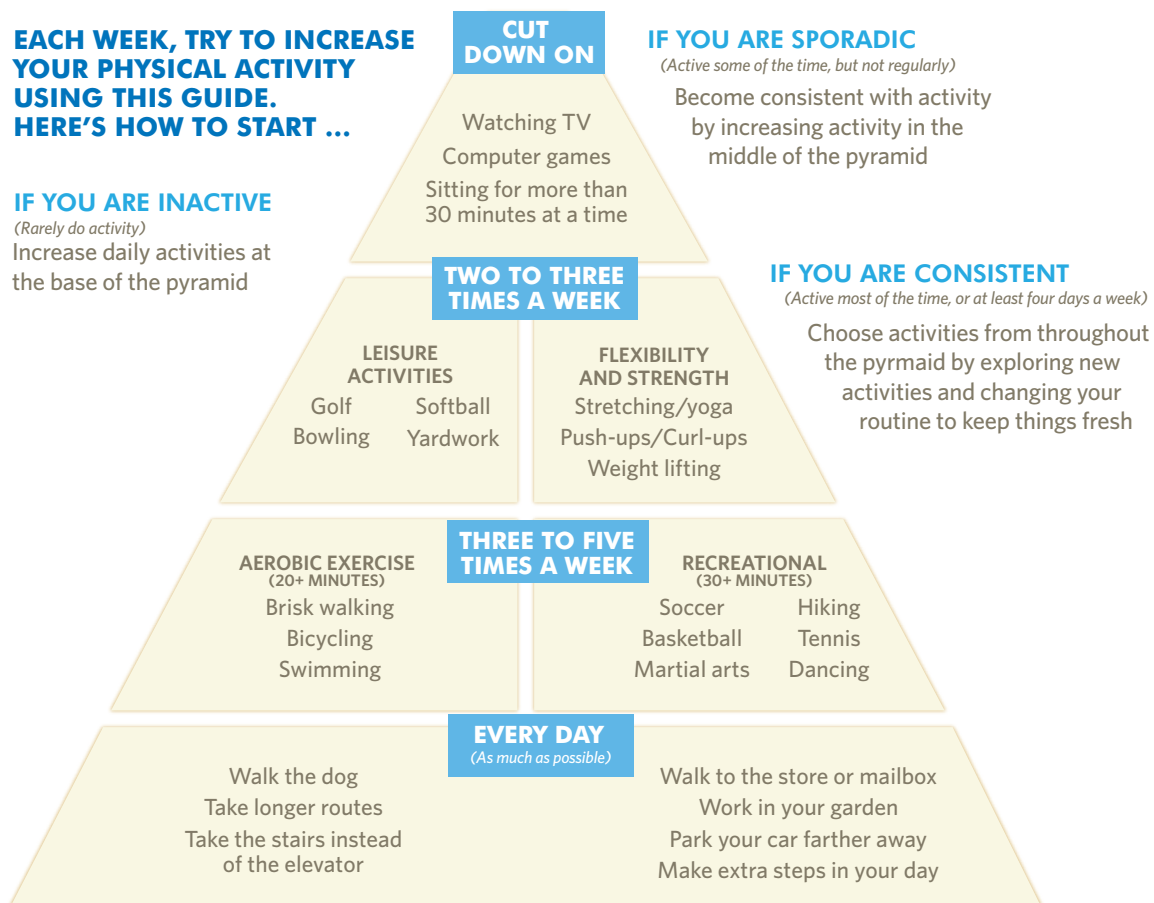
- **Talk to your doctor** before you start an exercise program. If you have diabetes and are over age 35, it is recommended you have a stress EKG. (A stress/exercise electrocardiogram — EKG or ECG — is a test that checks for changes in your heart while you exercise.)
- Consider checking your blood sugar before and after exercise. Exercise can affect your blood sugar for up to 24 hours.
- Start an exercise plan slowly. Try to exercise most days of the week for 30 to 60 minutes (150 minutes a week of moderate-intensity aerobic physical activity). Adults with type 2 diabetes should be encouraged to perform resistance training (hand weights, elastic bands or weight machines) at least twice per week. To help you get started, you can break up your exercise into three 10 minute sets and slowly increase your exercise time.
- Drink plenty of sugar free liquids before and after exercise. Remember to warm up before exercise and slowly cool down after exercising.

**REGULAR EXERCISE  
HELPS LOWER YOUR  
BLOOD SUGAR AND  
HELPS INSULIN  
WORK BETTER.**

- Delay exercise if your blood sugar is very high or you are experiencing symptoms of hyperglycemia. For type 1 diabetes, **DO NOT** exercise when your urine tests show ketones (see page 16) and your blood glucose is high. For Type 2 diabetes, **DO NOT** exercise and call your doctor if your blood sugar is over 300 mg/dl.
- If taking medications for diabetes that can cause low blood sugar (pages 41-42, 45 and 49 list all medications), always have some form of sugar with you such as glucose tablets or lifesavers (see pages 20-21 for information on low blood sugar).
- Wear some form of personal and medical identification (see page 22).
- Wear well-fitting, appropriate shoes while exercising to avoid injury of feet. Also wear socks that help keep the feet dry (cotton-polyester blend or polypropylene).
- Slow down and stop exercising if you feel any pain, dizziness or shortness of breath.
- Follow your doctor's recommendations if you have heart disease or long-term complications of diabetes that may be worsened with exercise.

## THE ACTIVITY PYRAMID

(Consult your doctor before starting a exercise plan)

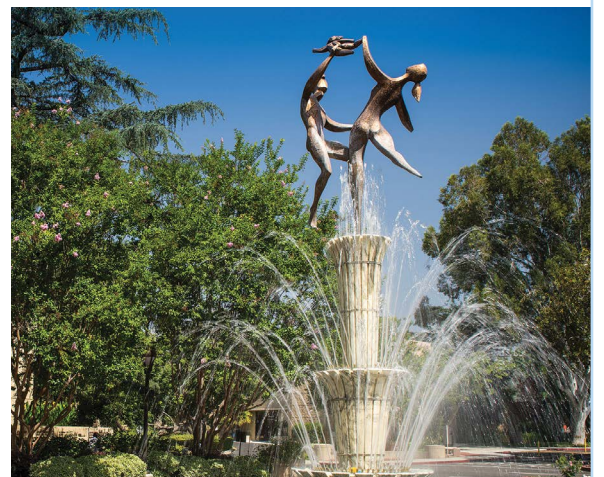
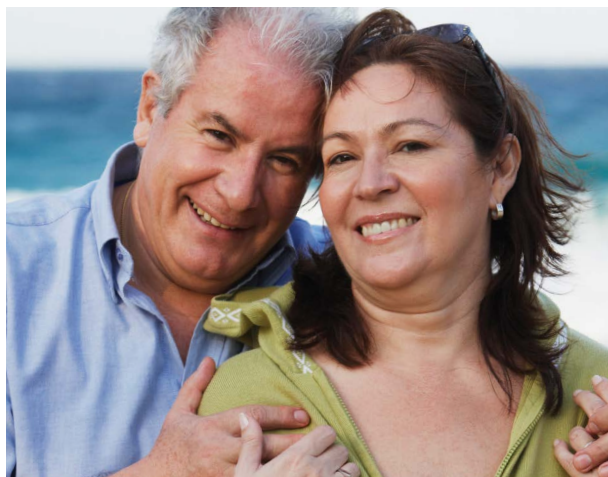
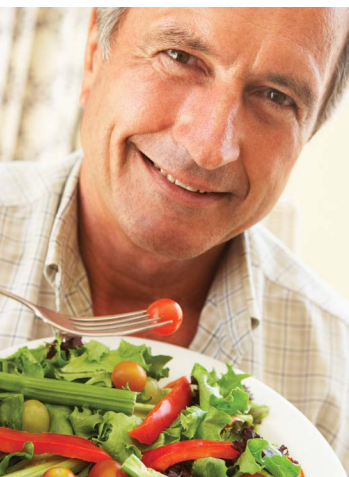


**BE CREATIVE IN FINDING A VARIETY OF WAYS TO STAY ACTIVE**

# MANAGING STRESS



Managing Stress



**Stress Can Increase Your Blood Sugar**

**High Blood Sugar Levels Can Cause Stress**

**Is Stress Affecting Your Blood Sugar Levels?**

**Learning to Relax**



# Managing Stress

## STRESS CAN INCREASE YOUR BLOOD SUGAR

Our bodies get ready to take action when we are faced with stress. This is called the fight-or-flight response. The cells of the body need sugar for energy to fight or turn away. For people with diabetes, insulin may not be available to let this extra sugar into the cells. So it stays in the blood vessels — when you test your sugars the number may be higher than the normal range.

## HIGH BLOOD SUGAR LEVELS CAN CAUSE STRESS

Managing diabetes on a day to day basis may be stressful. Having blood sugar values higher or lower than the normal range can also be stressful.

## IS STRESS AFFECTING YOUR BLOOD SUGAR LEVELS?

Here's how to find out:

- Before you check your blood sugar levels, rate your current stress level on a scale of 1 to 10. Write the number down.
- Check your blood sugar. Write your level down.
- After a week or two, look for a pattern. Do high stress levels and high blood sugar levels often occur together? If they do, stress may be affecting your blood sugar control.



**THERE ARE SEVERAL THINGS YOU CAN DO TO RELAX AND LOWER YOUR STRESS LEVEL.**

## LEARNING TO RELAX

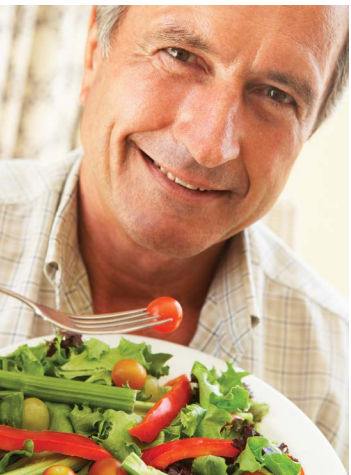
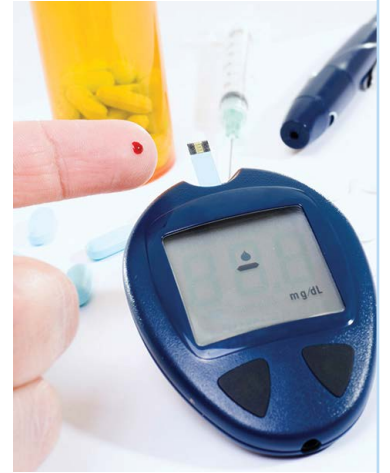
There are several things you can do to relax and lower your stress level.

- Increase your physical activity: Moving your body through a wide range of motion can help you relax.
- Do breathing exercises: Sit or lie down. Breathe in deeply, then push out as much air as you can. Breathe in and out again, this time focusing on relaxing your muscles. Continue for five to 20 minutes at a time.
- Try progressive relaxation: In this method, you tense and then relax the muscles of your body. Start with your toes and move up, one muscle group at a time, to your head.
- Replace negative thoughts with positive ones: Each time you find yourself having a bad thought (like, "I'm never going to get my blood sugar into my target range"), replace it with a positive one (like, "My blood sugar may not always be in my target range, but my last two readings were really close!")





# DIABETES AND DEPRESSION



**Recognizing Depression**

**Getting Help Is Worth the Effort**



# Diabetes and Depression

Depression is painful all by itself, but depression and diabetes together is a dangerous combination. Having diabetes increases your chances of having depression. This can make it difficult to manage diabetes effectively. Studies have shown that depressed people are more likely to skip medications, get little exercise, have an unhealthy meal plan and have difficulty managing their weight.

When combined with diabetes, depression contributes directly to:

- Poorer blood glucose control
- More frequent hospital visits
- Higher risk of long-term complications
- A shorter life span

The major factors that contribute to depression are your genes (family history), the amount of stress in your life, and how you think about yourself and your future. Talk to your doctor or nurse about how you can work together to get the support you need.

## RECOGNIZING DEPRESSION

Depression is more than just feeling down from time to time. If you have been feeling sad for several days, ask yourself if you're also feeling any of these symptoms:

- Loss of pleasure in doing things you used to enjoy
- Difficulty sleeping or sleeping more than usual
- Eating more or less than you use to, resulting in a fast weight gain or loss
- Trouble paying attention, lack of energy or nervousness
- Feeling guilty and like you are a burden to others
- Feeling worse in the morning than you do later in the day
- Feeling like you want to die or take your own life

## GETTING HELP IS WORTH THE EFFORT

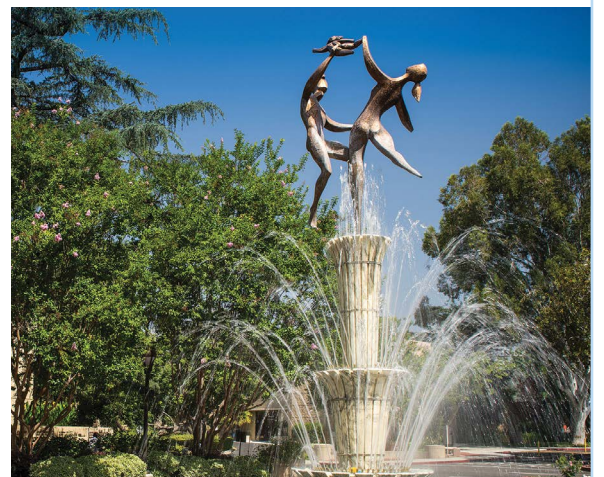
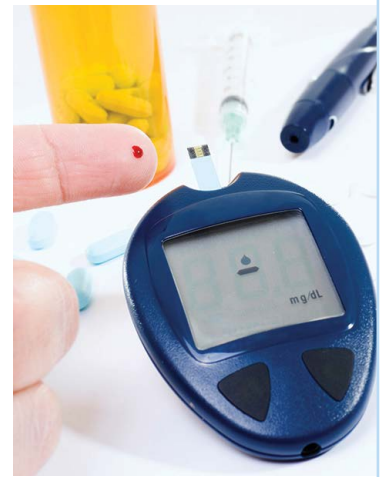
Good treatment for depression can help you to feel better, have more energy, have better concentration and feel greater interest and motivation to take care of your diabetes and live longer and happier.

### What you can do:

- First you **MUST** talk to your doctor.
- Get good sleep and regular exercise.
- Deal with your negative feelings.
- **Learn about helpful resources on page 55.**



# DIABETES MEDICATIONS



- Are There Oral Medications (Pills) for Diabetes?**
- How Do You Take Diabetes Pills?**
- What Should You Do if You Have Side Effects to the Medications?**
- What if You Are Breastfeeding?**
- What If You Are Taking Other Medications That Are Not For Diabetes?**
- What about Insulin Medication?**
- Insulin Tips**
- How Do You Draw Up and Inject Insulin**
- Insulin Pen Needles**
- Non-insulin Injectable Diabetes Medications**
- Steroids and Hyperglycemia (High Blood Sugar)**



# Are There Oral Medications (Pills) for Diabetes?

There are oral medications (pills) that your doctor may prescribe to help control your blood sugar levels. **They are NOT the same as insulin**, but some do help the body make more of its own insulin. Other diabetes medications are able to help the body use its own insulin better and control diabetes in other ways.

Some people need to take two, three or even four medications that act in different ways to help control diabetes. Sometimes oral medications are taken along with insulin too.

## HOW DO I TAKE DIABETES PILLS?

You must take your pill(s) exactly as your doctor prescribes. This is usually before or with a meal. Follow your meal plan, exercise regularly, maintain a desirable body weight and check your blood glucose regularly.

ORAL MEDICATIONS				
CLASS/MAIN ACTION	GENERIC NAME	BRAND NAME	WHEN TO TAKE	SIDE EFFECTS AND PRECAUTIONS
<b>Sulfonylureas</b> Stimulate insulin release from the pancreas	Glyburide	Micronase, DiaBeta, Glynase	Once or twice daily before meals	<b>Low blood sugar</b> , weight gain Eliminated through kidneys
	Glipizide	Glucotrol, Glucotrol XL <i>(Do not chew, cut or crush)</i>	30 minutes before meals, once or twice a day before meals	
	Glimepiride	Amaryl	Once or twice a day before a meal	
<b>Meglitinides</b> Stimulate quick insulin release from the pancreas	Repaglinide	Prandin	Take 30 minutes before meals	<b>Low blood sugar</b> and headache
	Nateglinide	Starlix		
<b>SGLT2 Inhibitors</b> (Sodium-Glucose Co-transporter 2) Decrease glucose reabsorption in the kidneys	Canagliflozin	Invokana	Once daily before first meal	<b>Low blood sugar</b> , dehydration and vaginal yeast infection
	Empagliflozin	Jardiance		
	Dapagliflozin	Farxiga	Once daily	
<b>Alpha-Glucosidase Inhibitors</b> Delay the digestion of carbohydrates	Acarbose	Precose	With first bite of meals	Gastrointestinal upset (gas or bloating)
	Miglitol	Glyset		
<b>Biguanides</b> Reduces glucose output from liver	Metformin	Glucophage Fortamet	During or after meals, 1 to 3 times a day	Gastrointestinal upset (diarrhea, bloating, nausea), fever, sore throat, unusual bleeding or bruising, rash, dark urine, light colored stools.
	Metformin Extended Release <i>(Do not chew, cut or crush)</i>	Glucophage XR	During or after meals, 1 to 2 times a day	

## ORAL MEDICATIONS

CLASS/MAIN ACTION	GENERIC NAME	BRAND NAME	WHEN TO TAKE	SIDE EFFECTS AND PRECAUTIONS
<b>Thiazolidinedione</b> Stimulate insulin receptors to lower blood sugar and improve the action of insulin	Pioglitazone	Actos	With or without food	Headache, infections and fatigue Frequent liver function blood tests required to monitor safety
<b>DPP-4 Inhibitors</b> Help body's hormones, lower liver glucose secretion and increase pancreatic insulin secretion	Sitagliptin	Januvia	Once a day with or without food	Headache, upper respiratory tract infection, nasopharyngitis, abdominal pain, nausea and vomiting
	Saxagliptin	Onglyza		
	Linagliptin	Tradjenta		
	Alogliptin	Nesina		
<b>Combination Drugs</b> Please refer to their class and main action section	Linagliptin/Metformin	Jentaducto	1 to 2 times a day with food	Please refer to their individual side effects and precautions
	Sitagliptin/Metformin	Janumet	Before meals, 1 to 2 times daily	
	Glyburide/Metformin	Glucovance	Before meals, 1 to 2 times daily	
	Glipizide/Metformin	Metaglip	Before meals, 1 to 2 times daily	
	Alogliptin/Pioglitazone	Oseni	Once a day	



## WHAT SHOULD YOU DO IF YOU HAVE SIDE EFFECTS TO THE MEDICATIONS?

All medications can affect people in different ways. Certain diabetes medications have side effects that cause symptoms such as mild diarrhea or slight weight gain that may be unpleasant, but are usually not very serious, and often go away as your body adjusts itself to the medication. However, some people have allergic reactions that should be reported to the doctor right away. These reactions include:

- Chest Pain
- Difficulty breathing
- Nausea or vomiting
- Skin rash or hives
- Dizziness
- Severe diarrhea
- Sudden weight gain

**ALL MEDICATIONS  
CAN AFFECT PEOPLE  
IN DIFFERENT WAYS.**

**Notify your doctor right away if you have any of these symptoms.**

Many diabetes medications can cause **low blood sugar**, which can be dangerous if left untreated. Symptoms of low blood sugar include feeling weak, shaky, sweaty, irritable, hungry or nervous. If you are on a medication that can cause low blood sugar, know how to treat low blood sugar and check your blood sugar if you feel any of the symptoms of low blood sugar. (see page 20)

## WHAT IF YOU ARE BREASTFEEDING?

Do not take diabetes medications if you are pregnant or breast feeding. Insulin is safe for pregnant and breast feeding women, but other diabetes medications may not be. Talk to your doctor.

## WHAT IF YOU ARE TAKING OTHER MEDICATIONS THAT ARE NOT FOR DIABETES?

- Do not use over the counter (nonprescription) medications without checking with your doctor first.
- Alcohol may interact with your diabetes medication. Talk with your nurse, doctor or pharmacist about whether it is safe for you to drink alcohol while on your medications.
- If you have several doctors, make sure all of them know about your diabetes and medications.

# What About Insulin Medication?

Normally your pancreas makes the hormone called insulin and you cannot live without it. If your pancreas does not make enough insulin, you will need to take insulin. Insulin gets into your system by injecting it into your body.

There are many types of insulin and different ways to inject insulin. Make sure you understand what type of insulin you are taking and how it works. Talk to your doctor or diabetes nurse educator about different ways to inject insulin.

## TYPES AND ACTIONS OF INSULIN

The chart on the next page describes the different types of insulin. It is important to know what type and how to take insulin in order to prevent a hypoglycemia reaction. Please refer to page 21 on how to treat a low blood glucose value (hypoglycemia).



*Vial (bottle) and syringe*



## RAPID-ACTING INSULIN

(Follow your doctors instructions. Use before meals and as a correctional scale to lower high blood sugar)

**(Rapid insulin is referred to as a bolus of insulin — given before you eat a meal)**

Different Types of Insulin	Onset ( <i>Time it takes to start working</i> )	Peak ( <i>When they have their greatest effect</i> )	Duration ( <i>How long it works on your blood sugars</i> )
Lispro-Humalog/ Aspart-Novolog	5 to 15 minutes	30 to 90 minutes	Less than 5 hours
Glulisine/Apidra		½ to 1 hour	
Afrezza ( <i>inhaled insulin</i> )		1 to 1½ hours	2 to 3 hours
		Up to 1 hour	

## SHORT-ACTING INSULIN

Novolin/Humulin Regular	30 to 60 minutes	2 to 3 hours	5 to 8 hours
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## INTERMEDIATE-ACTING INSULIN

Novolin/Humulin NPH	2 to 4 hours	4 to 10 hours	10 to 16 hours
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## LONG-ACTING INSULIN

**(Basal — Long acting insulin controls blood glucose between meals and at bedtime)**

Glargine/Lantus	2 to 4 hours	None	20 to 24 hours (an open pen is good for 28 days)
Glargine/Toujeo	2 to 4 hours		24 to 36 hours (an open pen is good for 42 days)
Glargine/Basaglar	1 to 2 hours		Up to 24 hours (an open pen is good for 28 days)
Detemir/Levemir	1 to 2 hours		Up to 24 hours (an open pen is good for 42 days)
Degludec/Tresiba	About 1 hour		Up to 24 hours (an open pen is good for 8 weeks)

## PRE-MIXED INSULIN

70/30 Novolin/Humulin NPH/Regular	30 minutes to 60 minutes	2 to 10 hours	Up to 16 hours
70/30 Novolog Mix	5 to 15 minutes	30 minutes to 10 hours	Up to 16 hours
Humalog 75/25	5 to 15 minutes	30 minutes to 10 hours	Up to 16 hours
Humalog 50/50	5 to 15 minutes	30 minutes to 10 hours	Up to 16 hours

*Insulin action times can vary with each injection. Time periods listed here are general guidelines only; please consult prescribing information for details.*

4 a.m.

8 a.m.

noon

4 p.m.

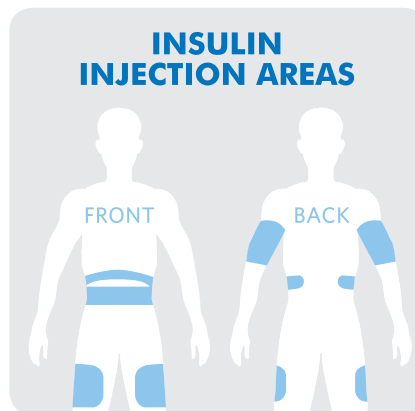
8 p.m.

MIDNIGHT

4 a.m.

## INSULIN TIPS

- Your doctor will tell you how much to take and when to take insulin.
- Take insulin about the same time(s) each day.
- Insulin injection site — Change the site where you give the injection by at least an inch each time you take insulin. Stay at least two inches away from the belly button (navel) and avoid giving injections into scars or the belly button itself.
- If your insulin looks discolored, lumpy or sticks to the sides of the vial (bottle), **DO NOT USE IT!** Always have a spare bottle or pen of insulin available.
- Pay attention to the expiration date on your insulin bottle or pen. Do not use the insulin after this date. If a bottle of insulin has been opened for more than 28 days, the strength may be decreased (see chart on page 45 for pen expiration).
- Open or in-use bottles of insulin may be stored at room temperature (less than 86° F). Refrigerate spare, unopened bottles and pens. Avoid direct sunlight or freezing.
- Try to get rid of air bubbles in the insulin syringe. Air bubbles take up space so you may not be getting your full dose of insulin.



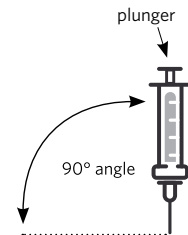
## HOW TO DRAW UP AND INJECT INSULIN

### To draw up and inject insulin with a vial (bottle) and syringe, do the following:

1. Wash hands.
2. Do a blood glucose test and write down results. (log book)
3. Roll the insulin vial between your hands to mix it.
4. Clean top of insulin bottle with alcohol.
5. Pull down plunger of syringe to allow units of air into the syringe and then put the air into the bottle.
6. Leave the needle in the bottle and turn the bottle and syringe upside down. Draw out units of insulin (as prescribed by your doctor).
7. Take needle out of the bottle. With the needle facing upward, look for air bubbles in the syringe. Remove air bubbles by tapping on the syringe, allowing them to float to the surface. Push the bubbles out with plunger and refill syringe with insulin as needed. (If you are drawing two types of insulin, be extra careful when pushing out bubbles to not lose any of the medication)
8. Clean skin with alcohol wipe, let dry. Gently hold up skin of the abdomen (belly), give injection at a 90 degree angle (go straight in like a dart) and push plunger all the way down.
9. Hold for a few seconds by counting to "10" (so the insulin can spread out and absorb), then pull syringe straight out.
10. Dispose used syringes in the sharps container (see page 12) or a sturdy plastic container with a lid that screws on (a liquid laundry detergent container works well). When the container is full, secure the lid with tape, label the container with the words "sharps" and dispose according to your local waste/trash company.  
**DO NOT RECYCLE. DO NOT PUT IN TRASH.**



Vial (bottle) and syringe



**NOTE:** There are different instructions for mixing two types of insulin or injecting insulin using an insulin pen or other insulin delivery device. Most devices come with directions. You may also ask your diabetes nurse educator for assistance.

# Insulin Pen Needles

An insulin pen is a convenient way to give yourself an insulin shot or injection. It looks like a large fountain pen. Disposable pens come already filled with medication. When a pen is empty or expired, throw it away.

You will need to attach a **new pen needle** onto the pen with each injection and remove it after every use. The pen may be kept in your pocket or purse at room temperature while in use. The insulin should not get warm or cold. It should not be exposed to direct sunlight. You should store unused/unopened pens in the refrigerator.



## HOW TO ATTACH THE PEN NEEDLE TO AN INSULIN PEN:

1. Remove the colored paper peel tab from the outer shield.
2. Push the needle straight onto the pen and twist until it is secured (not too tight).
3. Pull off the outer shield and set it aside. You will need it later to remove the needle from the pen.
4. Pull off the colored inner cover and prime your pen before injecting.

**Always prime your insulin pen before each injection.** It is very important you refer to the instructions of the pen manufacturer when preparing your pen for use. You will need to:

- Dial two units on your pen and then press the button to shoot some insulin into the air to make sure it works. **This is called an “air shot” or “priming” the pen.**
- If you do not see at least two drops of medication after repeated priming, remove pen needle and attach a new pen needle; repeat priming. If you do not see at least two drops after priming, use a new insulin pen and repeat all the steps. (Sometimes, when you put a needle on a pen a drop of medication may leak out. This **does not** mean the pen has been primed. You will still need to perform an “air shot” before you inject.)
- When you inject, hold the needle in your skin until you count slowly to “10” before removing the needle. If the needle is taken out too fast, insulin will leak out, affecting the dose that is delivered to you.
- If insulin does drip from the needle after you take it out of your skin, leave it in for a few more seconds the next time. If bleeding occurs, press firmly, but **DO NOT RUB** to avoid bruising.



# Non-Insulin Injectable Diabetes Medications

These are injectable diabetes medications that can lower your blood glucose.

DIABETES MEDICINES BY INJECTION (NON INSULIN)				
CLASS/ MAIN ACTION	GENERIC NAME	BRAND NAME	WHEN TO TAKE	SIDE EFFECTS AND PRECAUTIONS
<b>Incretins</b> <b>Hormone:</b> <b>(Glucagon-like peptide GLP-1)</b> Release insulin from the pancreas when your blood sugar is high It can also limit how much sugar goes into your blood from your liver and slow the emptying of food from your stomach	Exenatide	Byetta	Twice a day, 60 minutes before two main meals of the day	Nausea/vomiting, weight loss and severe abdominal pain (report symptoms to your health care provider)
	Exenatide (XR) Extended release	Bydureon	Once a week without regard to food	
	Liraglutide	Victoza	Once a day without regard to meals	Nausea/vomiting and diarrhea
	Albiglutide	Tanzeum	Once a week	Nausea, diarrhea, cough, upper respiratory tract infection, back pain, cold and flu symptoms
	Dulaglutide	Trulicity	Once a week	Nausea/vomiting, decrease in appetite, hypoglycemia and allergic reactions
<b>Amylin:</b> Slow down digestion of food, reduce appetite and decrease the amount of glucose released by your liver	Pramlintide (For Type 1 or 2 Diabetes)	Symlin	Immediately before major meals	Severe hypoglycemia risk 3 hours after injection, nausea and weight loss

## Steroids and Hyperglycemia (High Blood Sugar)

**Hyperglycemia** is an increased amount of sugar (glucose) in your blood. Medications such as steroids, often used for inflammation or as part of some cancer treatments, can cause increased blood sugar levels in people with or without diabetes.

The table below gives some examples of steroid medications:

GENERIC NAME	BRAND NAME(S)
Cortisone	Cortisone Acetate, Compound E, Cortone
Prednisone	Prednisone Intensol, Sterapred
Methylprednisone	
Dexamethasone	Decadron, Dexamethasone Intensol, Dexasone, Dexpak, Taperpak

### WHAT YOU CAN DO

If your blood sugar levels were high in the hospital, your doctor may tell you to learn to check your blood sugar levels at home. If you do not have a blood glucose meter you will need a prescription from your doctor for a meter and testing supplies (see page 12).

Try to get the meter while you are still in the hospital. You can then try out your meter and ask your nurse to help you in the event of problems.

### ESTABLISH BLOOD SUGAR GOALS WITH YOUR DOCTOR.

Experts in the field of diabetes recommend the following blood sugar levels:

AMERICAN DIABETES ASSOCIATION RECOMMENDED TARGETS FOR BLOOD GLUCOSE (PLASMA) IN NON-PREGNANT INDIVIDUALS WITH DIABETES			
	NORMAL	TARGET	WHEN TO TAKE ACTION
Before eating	Less than 110	80-130	Less than 80 or greater than 150
2 hours after eating	Less than 140	Less than 180	Less than 80 or greater than 200
Bedtime	Less than 120	110-150	Less than 110 or greater than 180

Taken from *Standard of Medical Care in Diabetes — 2017, Diabetes Care*, Vol. 40, Supplement, January 2017

**However, there are many factors that your doctor must consider when determining what goals are right for you. Your individual target level may be different than those listed in the table.**



## ESTABLISH A PLAN TO CONTROL YOUR BLOOD SUGAR LEVELS WHILE TAKING STEROIDS

If your blood sugar levels are above your established targets, it is important that you and your doctor develop a plan of treatment. If you will be using steroids only on a short-term basis you may not need any treatment. However, long term steroid therapy with high blood sugar levels requires management.

Treatments for high blood sugars include healthy eating, being active and taking medications. Because steroids primarily affect the blood sugars after meals, oral medications and/or injectable medications such as insulin will target these times. Taking steroids intermittently may only require blood sugar medications on the days surrounding the treatment.

Your blood sugar levels will usually return to normal two to three days after stopping your steroids. Keep a log book of your blood sugar numbers and share them with your healthcare provider frequently so he or she may adjust your blood sugar medications as needed.

City of Hope offers nutritional consults and diabetes education programs for those wanting to increase their knowledge of diabetes and hyperglycemia (high blood sugar) management.

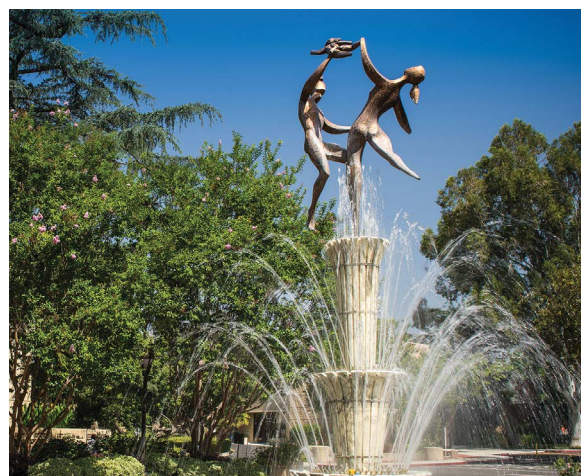
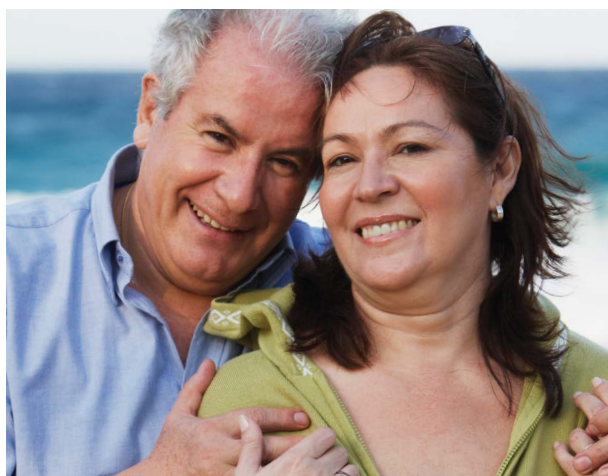
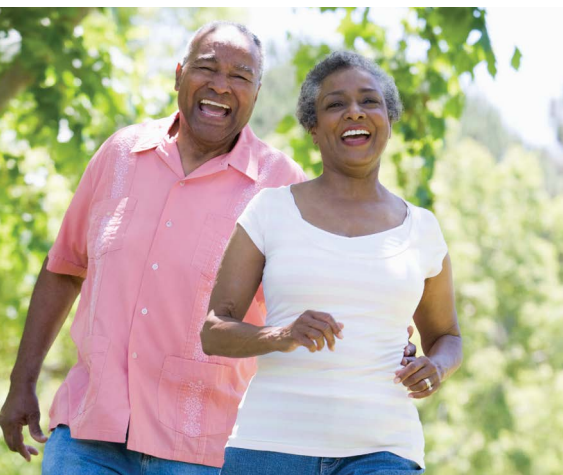
If you have questions, problems or would like more information, please call the Department of Clinical Diabetes, Endocrinology & Metabolism for more information at **626-256-4673, ext. 62251**.



*(Inscription from one of City of Hope's early leaders, Samuel H. Golter.)*

Diabetes is a lifelong condition that requires your attention on a daily basis. You can live well with diabetes. See your doctor regularly and set some goals for your diabetes management plan. Uncontrolled diabetes can lead to unwanted complications and even death. We encourage you to take control of your life and make the changes today to prevent and/or delay the complications of diabetes.

# IMPORTANT PHONE NUMBERS AND WEBSITES



**Important Phone Numbers**

**Important Resources**



# Important Phone Numbers

## Emergency (call for life threatening situations)

- Dial "911"

## City of Hope Nursing Triage Call Center (24 hours)

- 626-218-7133

## City of Hope ETC

- 626-218-5200

## Diabetes Education

- Monday to Friday 9 a.m. to 4:30 p.m.  
626-218-2251

## Diabetes & Cardiovascular Risk Reduction Program (DCVRRP) (*Weight Reduction Program*)

- 626-218-0440

My Pharmacy: \_\_\_\_\_

My Doctor's Name: \_\_\_\_\_

My Diabetes Nurse Educator: \_\_\_\_\_

My Dietitian: \_\_\_\_\_

# Important Resources

## **American Association of Clinical Endocrinologists**

245 Riverside Ave., Suite 200  
Jacksonville, FL 32202  
904-353-7878  
[www.aace.com](http://www.aace.com)

## **American Association of Diabetes Educators**

800-338-3633  
[www.diabeteseducator.org](http://www.diabeteseducator.org)

## **American Diabetes Association**

Attn: National Call Center  
1701 North Beauregard St.  
Alexandria, VA 22311  
800-342-2383  
[www.diabetes.org](http://www.diabetes.org)

## **American Heart Association/American Stroke Association**

800-242-8721  
[www.heart.org](http://www.heart.org)

## **American Cancer Society**

800-227-2345  
[www.cancer.org](http://www.cancer.org)

## **City of Hope Diabetes Program**

626-218-2251  
[CityofHope.org/clinical-program/diabetes](http://CityofHope.org/clinical-program/diabetes)

## **City of Hope (Biller Center Support Services)**

626-218-2273

## **JDRF Juvenile Diabetes Research Foundation**

800-533-2873

[www.jdrf.org](http://www.jdrf.org)

## **National Heart, Lung, and Blood Institute**

NHLBI Health Information Network

P.O. Box 30105

Bethesda, Maryland 20824-0105

301-592-8573

[www.nhlbi.nih.gov](http://www.nhlbi.nih.gov)

## **Smoker's Helpline, California**

800-NO-BUTTS (800-662-8887)

[www.nobutts.org](http://www.nobutts.org)

## **National Institute of Mental Health (NIMH)**

The National Institute of Mental Health, one of the 27 institutes and centers that make up the National Institutes of Health, is the lead federal agency for research on mental health.

301-496-8381

[www.nimh.nih.gov/health/topics/depression](http://www.nimh.nih.gov/health/topics/depression)

## **National Suicide Prevention**

Free, confidential 24-hour hotline for suicidal crisis or emotional distress

800-273-8255

[www.suicidepreventionlifeline.org](http://www.suicidepreventionlifeline.org)

## **Behavioral Diabetes Institute**

Addressing the unmet emotional needs of people with diabetes

P.O. Box 501866

San Diego, CA 92150

858-336-8693

[www.behavioraldiabetesinstitute.org](http://www.behavioraldiabetesinstitute.org)

## **American Sleep Association**

[sleepassociation.org](http://sleepassociation.org)

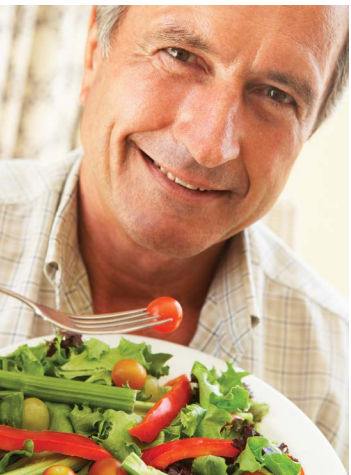
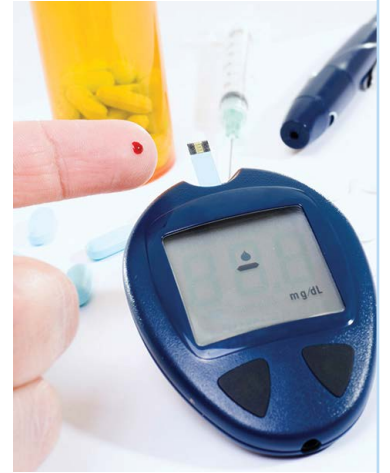
## **National Sleep Foundation**

[www.sleepfoundation.org](http://www.sleepfoundation.org)





# APPENDIX



**Your Plate**

**Behavioral Changes and Goal Setting in Diabetes Management**

**Setting Your Personal Goals**

**Daily Diabetes Log**



# Your Plate

**Vegetables** — Make room for your vegetables, fill 1/2 of your 9-inch plate; **Protein** — Fill 1/4 of your plate with lean meat, chicken, fish or tofu (3 ounces); **Starch** — Fill 1/4 of your plate with healthy grains or starchy vegetables; **Fruit and/or dairy** — add a serving with your meal as allowed; add small amount of **healthy fats** such as olive oil, avocado, nuts and seeds to complete your meal, add a **low-calorie drink**.

**LOW-CALORIE DRINK**  
Water  
Coffee  
Unsweetened Tea

**FRUIT**  
Small apple, banana, orange, strawberries, cantaloupe, papaya, mango, grapes, blueberries, grapefruit

**DAIRY**  
Fat-free, skim or 1% milk, plain soy milk, Greek yogurt, light yogurt

**NON-STARCHY VEGETABLES**  
Artichoke, artichoke hearts, asparagus, beans (green, wax, Italian), bean sprouts, beets, broccoli, Brussels sprouts, cabbage, carrots, cauliflower, celery, cucumber, eggplant

**MORE NON-STARCHY VEGETABLES**  
Broccoli, green onions or scallions, greens (collard, kale, mustard, turnip), leeks, mushrooms, okra, onions, pea pods, peppers (all varieties), radishes, salad greens (endive, escarole, lettuce, romaine), spinach, summer squash, tomato, tomatoes (canned), water chestnuts, zucchini

**1/2 VEGETABLES**

**1/4 STARCH**

**1/4 PROTEIN**

**GRAINS AND STARCHY VEGETABLES**  
Whole grain bread, whole grain pasta, beans/lentils, rice, whole grain tortilla, pita bread, potatoes, corn or peas, pancake (4" across), ready-to-eat cereal, cooked cereal, popcorn, whole grain crackers

**PROTEIN**  
Chicken, turkey, lean pork, lean beef, eggs, tofu, low-fat cheese, cottage cheese, peanut butter or almond butter, fish, such as tuna, salmon, cod or catfish, seafood such as shrimp, clams, crab

(This is not a complete list of foods.)

# Behavioral Changes and Goal Setting in Diabetes Management

You must be **ready** to make lifestyle changes for better diabetes management and to promote optimal health. In order to obtain optimal health goals, diabetes management tasks **must be seen as a priority**. If they are not, identify **why** they are not a priority.

Identify factors that will motivate you. Motivation is necessary to make changes.

Support from family and friends helps optimize goal attainment. Diabetes affects your whole family and circle of support.

Regular follow ups with your primary doctor, endocrinologist, diabetes nurse and dietitian are also encouraged for reinforcement of the lifestyle changes you are making.

Be realistic and make changes that you know you can make:

1. **Short-term** changes can be accomplished in the near future: today, next week or next month.
2. **Long-term** changes are to be accomplished in 12 months or longer.

Once you are ready to make behavioral changes, set some goals to promote improved diabetes management skills and have an action plan to be successful with your goals.

## GOAL SETTING

Your goals should be specific, measurable and achievable.

Examples:

- I will walk 20 minutes, three times per week.
- I will test my blood glucose at least two times every day and record it in my log book.
- I will keep a food journal of all my meals for five days.
- I will take my diabetes medication every morning before I eat breakfast.

## ACTION PLAN

What steps will you take to accomplish your goals?

Examples:

- I will set an alarm at 2 p.m. three days a week to walk for exercise.
- I will make myself a note to remember to test my blood sugar before breakfast and before dinner.
- I will set an alarm for 8 a.m. to remind me to take my diabetes pills in the morning.
- I will have my gym bag ready in my car to go to the gym after work.

# Setting Your Personal Goals

## EXAMPLE — GOAL SETTING

1. What is your goal?

**To eat healthier (more vegetables)**

2. How many times/minutes per day or week will you complete your goal?

**Eat vegetables three days a week with lunch and dinner**

3. What action will you need to be successful with your goal?

**I will prepare vegetables more often for lunch and dinner**

## YOUR PERSONAL GOAL #1

Date: \_\_\_\_\_

1. What is your goal?

---

2. How many times/minutes per day or week will you complete your goal?

---

3. What action will you need to be successful with your goal?

---

## YOUR PERSONAL GOAL #2

Date: \_\_\_\_\_

1. What is your goal?

---

2. How many times/minutes per day or week will you complete your goal?

---

3. What action will you need to be successful with your goal?

---

# DAILY DIABETES LOG

Week of: \_\_\_\_\_

DAY	BREAKFAST		LUNCH		DINNER		BEDTIME		OTHER/SNACK	
	Before	After	Before	After	Before	After	Before	Pre Post	Carbs Insulin	
<b>Mon.</b>										
Comments										
<b>Tue.</b>										
Comments										
<b>Wed.</b>										
Comments										
<b>Thu.</b>										
Comments										
<b>Fri.</b>										
Comments										
<b>Sat.</b>										
Comments										
<b>Sun.</b>										
Comments										

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Comments										

*Information for this booklet was adapted from:*

Behavioral Diabetes Institute

**[www.behavioraldiabetes.org](http://www.behavioraldiabetes.org)**

American Diabetes Association

**[www.diabetes.org](http://www.diabetes.org)**

Standards of Care 2017

**[https://professional.diabetes.org/sites/professional.diabetes.org/files/media/dc\\_40\\_s1\\_final.pdf](https://professional.diabetes.org/sites/professional.diabetes.org/files/media/dc_40_s1_final.pdf)**





CityofHope.org