TAKE CONTROL OF YOUR DIABETES

Self-management Education Program
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WHAT IS DIABETES?

Diabetes is a group of diseases caused when a person’s body does not produce enough insulin. This result is too much sugar in the blood, also called hyperglycemia. Untreated, diabetes damages the eyes, kidneys and other parts of the body.

Quick facts

1. Diabetes affects nearly 11% of people in the U.S. That’s approximately 26 million people and the number is growing.*

2. Diabetes risk factors include:
   > Growing older
   > Family history
   > Being overweight
   > Being inactive
   > Stress
   > Being African-American, Latino or Native American

3. Diabetes can be controlled by diet, exercise and often, medication. It is important to talk to your doctor about a care plan that works for you.

* Source: Data Source: Centers for Disease Control and Prevention, National Center for Health Statistics, Division of Health Interview Statistics, data from the National Health Interview Survey. Statistical analysis by the Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Diabetes Translation.
KINDS OF DIABETES

Type 1
> Sometimes called “insulin dependent” or “juvenile” diabetes
> Affects about 10% of people with diabetes
  • Mainly young people though it can be diagnosed in people age 30 and older
  • Unclear what causes this diabetes to occur
> The pancreas produces little or no insulin
> Controlled with insulin injections, meal planning and exercise

IMPORTANT: Symptoms of type 1 diabetes often occur suddenly and may include:
> Increased thirst
> Dry, itchy skin
> Increased urination
> Blurry vision
> Increased hunger
> Slow healing cuts
> Weight loss
> Vaginal infections
> Feeling tired and weak
> Numbness or tingling in feet and hands

Type 2
> Affects about 90% of people with diabetes
  • Usually diagnosed in people age 30 and older, though it can begin at a younger age
  • Often occurs in people who are overweight
  • Often occurs in people with family history
> The pancreas produces insulin, but it may not be enough or it may be used improperly
> Often controlled with meal planning and exercise
> Symptoms noted above may be milder or non-existent

NOTE: In the past, people with blood sugar that is above normal but below diabetic range have been called “pre-diabetic, borderline diabetic,” or “having a touch of sugar.” Today, they are called “high risk” for developing type 2 diabetes or heart disease. Diet and exercise changes are important.

Blood sugar numbers for high risk and diabetes

<table>
<thead>
<tr>
<th></th>
<th>Normal</th>
<th>High</th>
<th>Diabetes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fasting blood glucose</td>
<td>Below 100</td>
<td>100-125</td>
<td>126 or above</td>
</tr>
<tr>
<td>2 hour glucose tolerance test</td>
<td>Below 140</td>
<td>140-199</td>
<td>200 or above</td>
</tr>
<tr>
<td>A1C</td>
<td>5.6 or below</td>
<td>5.7 – 6.4</td>
<td>6.5 or above</td>
</tr>
</tbody>
</table>
MANAGE YOUR DIABETES
Know the five important parts of a self-management plan

1. **Diet**
   Talk to your doctor about creating a meal plan that helps control your blood sugar. Ask questions such as:
   - What foods should I eat?
   - How much should I eat?
   - How often should I eat?

2. **Exercise**
   Ask you doctor to help you create a sensible exercise plan that helps you:
   - Control your weight.
   - Manage your blood sugar.
   - Use your body’s insulin more effectively.

3. **Medication**
   If your doctor prescribe medication, be sure to take it as directed. Insulin injections are necessary if you have type 1 diabetes and may be recommended if you have type 2 diabetes. Based on your diabetes, you may:
   - Need pills.
   - Need insulin or other injections.
   - Need pills and injections.
   - Not need medication.

4. **Blood sugar testing**
   Your doctor may recommend testing to ensure that you are controlling your blood sugar or blood glucose (BG) levels. Blood testing helps determine what changes need to be made to help you get healthier and stay healthier.

5. **Team**
   As the leader of your diabetes self-management plan, you should feel confident turning to your care team for help and support. Your primary care physician works with you to connect you with health care professionals and services such as dentists, podiatrists, self-care education and more. It’s up to you to take responsibility for eating well, exercising, taking any medication as prescribed, and testing your blood sugar. Your team is always ready to help.

**IMPORTANT:** Wear a diabetes Medic Alert bracelet at all times to make sure you get the right care in a medical emergency.
DIET

DIET GOALS
1. Control blood glucose and blood fat levels
2. Reach and stay at a reasonable weight
3. Eat a healthy diet

MEAL PLANNING

Know the three main ways to control your portions

The American Diabetes Association recommends eating all food in moderation and having balanced meals each day.

1. The portion plate method
   Use your plate as a guide to balance your carbohydrates, protein and fats.

2. “Hand Jive” Method
   Try your hand at estimating portion sizes:
   - Fist = 1-1½ cups
   - Palm = “Your” 3 oz. portion
   - Thumb tip = 1 teaspoon

3. Choose Your Foods
CHOOSE YOUR FOODS

Your dietitian will provide a meal plan with your needs in mind. The division of your calories between carbohydrate, protein and fat will depend on those needs. In general, 60-70 percent of your calories will come from a combination of carbohydrate foods and monounsaturated fat. The rest of your calories will come from protein foods and other kinds of fat. Eating the same amount of carbohydrate foods at mealtime and snacks will help control your blood sugars.

1. **Carbohydrates**
   - **Sugars**
     Found in fruits, some vegetables, milk, and sweets
   - **Starches**
     Found in cereals, breads, grains, beans, lentils, and starchy vegetables
   - **Fiber**
     Found in whole grains, beans, lentils, fruits, vegetables, nuts and seeds
   
   **Quality carb check**: High-quality carbohydrates foods include fiber, vitamins, minerals and lower calories. Poor quality carbohydrate foods include sweets, sugary beverages and highly refined starches.

2. **Protein**
   - **Animal protein**
     Found in chicken, turkey, fish, eggs, milk and cheese
   - **Plant protein**
     Found in soy-based foods, beans, lentils, grain, seeds and nuts

3. **Fat**
   Found in oils, butter, cheese, proteins and sweets.
   Note: Cut back on food high in fat and calories to help lose and maintain weight.
"GOOD FATS"

Monounsaturated fats help lower cholesterol and preserve good cholesterol levels.
> Canola, olive and peanut oils
> Avocados and most nuts

Omega 3 fatty acids may lower blood triglyceride levels.
> Fish
> Flaxseed and canola oil
> Walnuts

Polyunsaturated fats help lower total cholesterol but effects on good cholesterol levels are unclear.
> Canola, olive and peanut oils
> Fish
> Walnuts

"BAD FATS"

Saturated fats raise your bad cholesterol and your risk of developing heart disease. Also called hydrogenated fat, partially hydrogenated fat and trans fatty acids.
> Beef and pork
> Reduced fat dairy products
> Palm and coconut oil
> Shortening and hard margarine
> Processed pastries and cookies

Dietary cholesterol can increase bad cholesterol. Some people are sensitive to dairy.
> Meats, especially liver
> Egg yolks
> High fat dairy products

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TEN TIPS FOR CUTTING CALORIES

1. Choose lean meat such as loin and round cuts and “Select” grade.
2. Trim fat from meat and skin from poultry.
3. Bake, broil or grill with non-stick spray instead of frying with vegetable oil.
4. Flavor and tenderize with marinades, herbs, and spices.
5. Limit high-fat sauces, gravies, salad dressings, and spreads.
6. Replace butter and margarine with butter-flavored seasoning.
8. Substitute high-fat ingredients with lower fat ingredients.
9. Replace chips and cookies with pretzels and popcorn. Fill up on vegetables and fruit.
10. Order restaurant dishes with dressing, sauce or gravy on the side. Lightly dip your food instead of saturating it.
NUTRITION AND BLOOD PRESSURE

High blood pressure (hypertension) occurs more often in people with diabetes. An eating plan called “Dietary Approaches to Stop Hypertension” (DASH) has been developed by the National Institutes of Health.

A summary of the DASH plan
(This summary is based on 2,000 calories a day. You may need more or fewer servings depending on your individual calorie plan.)

1. Eat 8-10 servings of fruits and vegetables every day.
2. Eat or drink 2 or 3 servings of low fat or fat free dairy every day.
3. Eat 7-8 servings of grains and grain products every day.
4. Eat 4-5 servings of nuts, seeds and dry beans every week.
5. Keep the diet low in total fat, saturated fat, and cholesterol.
6. Limit sodium to less than 2,300 mg/day to lower blood pressure.

Tips to help you lower your daily sodium

1. Avoid adding or limit salt in cooking or at the table.
2. Avoid or limit high-salt canned soups, canned and cured meats, pickled food, and most fast foods.
3. Read food labels to help find lower sodium packaged and convenience foods.
4. Visit www.nhlb.nih.gov/health/health-topics/topics/dash

TIPS TO INCREASE FIBER

1. Choose whole grain foods.
2. Snack on fresh fruits and vegetables
3. Add beans or lentils to salads and stews.
4. Choose soups with vegetables and beans.
5. Eat at least one cup of vegetables daily.

Daily fiber recommendations
The American Diabetes Association (ADA) recommends a daily fiber intake for adults is 21-38 grams.
SUGARS AND SWEETENERS

Any caloric sweeteners that you use should be included in your carbohydrate “allowance” at meals or snacks. Caloric sweeteners include white sugar, honey, corn syrup, pancake syrups, molasses, and fruit juice concentrates. Sugars add extra calories and are considered a poor quality of carbohydrate.

Sugar alcohols: sorbitol, manitol, xylitol, and starch hydrolysates

These are sweetening agents used by manufacturers in food, chewing gums, and some medications. They have fewer calories than regular sugar but are not calorie-free. They have a laxative effect if eaten in large quantities.

Non-nutritive (low-calorie) sweeteners

There are five of these products approved by the FDA as sweeteners or flavor enhancers and moderate use is considered safe. Since they have no (or very few) calories, they do not cause a blood glucose response. They are summarized here:

Saccharin – (Sweet 10, Sweet ‘N’ Low, Sugar Twin, and Sprinkle Sweet)

Aspartame – (NutraSweet, Equal, Sweet Mate). Loses its sweetness at high temperatures.

Acesulfame-K – (Sunnette, DiabetiSweet, Sweet One, Swiss Sweet). Can be used in baking and cooking. Often used in combination with aspartame.

Sucralose – (Splenda). Can be used in baking and cooking.

Neotame – Approved for use in food processing either alone or in combination with other sweeteners. Can be used in baking and cooking.

Herbal sweetener – Stevia (derived from a shrub). Generally recognized as safe (GRAS) for use in sweeteners. (Truvía, Sun Crystals, Monk Fruit)
DIABETES AND ALCOHOL GENERAL GUIDELINES

1. Discuss the use of alcohol with your physician.

2. Do not drink on an empty stomach. Alcohol increases the risk of low blood sugar reactions. Monitor blood glucose more carefully after drinking.

3. Do not drink alcohol during or several hours before or after exercise. The combination of alcohol and exercise may cause hypoglycemia (low blood sugar).

4. Use alcohol in moderation. Moderation is defined as no more than two drinks per day for men or one drink per day for women. A serving or “a drink” of alcohol is described as:

<table>
<thead>
<tr>
<th>Drink</th>
<th>Amount</th>
<th>Carbohydrate Grams</th>
<th>Approximate Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Beer</td>
<td>12 fl. oz.</td>
<td>Ranges 3-7</td>
<td>100</td>
</tr>
<tr>
<td>Regular Beer</td>
<td>12 fl. oz.</td>
<td>13</td>
<td>150</td>
</tr>
<tr>
<td>Table-type Wine</td>
<td>5 fl. oz.</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>Dessert-type Wine</td>
<td>5 fl. oz.</td>
<td>14</td>
<td>150</td>
</tr>
<tr>
<td>Distilled spirits</td>
<td>1.5 fl. oz.</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>(rum, whiskey, gin, vodka)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crème de menthe</td>
<td>1.5 fl. oz.</td>
<td>20</td>
<td>150</td>
</tr>
<tr>
<td>Margarita</td>
<td>6 fl. oz.</td>
<td>15-30 (depends on type of mix)</td>
<td>150-250</td>
</tr>
<tr>
<td>Bloody Mary (made with 1 1/2 fl. oz. vodka)</td>
<td>16 fl. oz.</td>
<td>15</td>
<td>150</td>
</tr>
<tr>
<td>Wine Cooler</td>
<td>12 fl. oz.</td>
<td>30</td>
<td>250</td>
</tr>
<tr>
<td>Nonalcoholic beer</td>
<td>12 fl. oz.</td>
<td>14</td>
<td>60-75</td>
</tr>
</tbody>
</table>

5. Calories from alcohol are metabolized similar to fat. If you already have high blood triglyceride levels, you may need to reduce or eliminate alcohol from your diet. To prevent high blood sugar, avoid using mixes with large amounts of sugar (such as regular sodas and fruit juices). Small amounts of alcohol used in cooking do not usually need to be counted. Alcohol is reduced in content (and calories) with extended cooking.

6. If you are of desirable weight, you will not need to decrease your food intake to allow for an occasional drink.

7. If you are overweight, count the calories from alcohol as part of your total food intake.

8. Always carry diabetes identification. One drink is enough to give your breath a smell of alcohol. Since the symptoms of intoxication and hypoglycemia are similar, a low blood sugar may be mistaken for intoxication causing a delay in treatment.
1. Look at Serving Size
   > Is this the amount you will eat?
   > In the example: 2 waffles
   > Numbers are given per serving

2. Look at the Total Carbohydrate
   > Fibers and sugars as well as other carbohydrates are included
   > A serving of 2 waffles = 36 grams
   > A serving = 2 carbohydrate choices

3. Look at the Total Fat
   > A choice = 8 grams
   > Divide the fat grams by 5 (1 fat choice)
   > A serving = 1 ½ fat choices

4. Using your meal plan
   > Count the 2 waffles as 2 carbohydrate choices and 1 ½ fat choices
   > Regular syrup would be extra carbohydrate
   > Any fat you add would be counted as extra fat

### Nutrition Facts

<table>
<thead>
<tr>
<th>Amount Per Serving</th>
<th>Per Waffle</th>
<th>Per Serving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calories</td>
<td>220</td>
<td>110</td>
</tr>
<tr>
<td>Calories from Fat</td>
<td>70</td>
<td>35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Fat</th>
<th>8 g</th>
<th>12%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saturated Fat</td>
<td>1.5 g</td>
<td>8%</td>
</tr>
<tr>
<td>Trans Fat</td>
<td>0 g</td>
<td>4%</td>
</tr>
<tr>
<td>Polyunsaturated Fat</td>
<td>1 g</td>
<td></td>
</tr>
<tr>
<td>Monounsaturated Fat</td>
<td>5 g</td>
<td></td>
</tr>
<tr>
<td>Cholesterol</td>
<td>25 mg</td>
<td>8%</td>
</tr>
<tr>
<td>Sodium</td>
<td>430 mg</td>
<td>18%</td>
</tr>
<tr>
<td>Potassium</td>
<td>65 mg</td>
<td>2%</td>
</tr>
<tr>
<td>Total Carbohydrate</td>
<td>36 g</td>
<td>10%</td>
</tr>
<tr>
<td>Dietary Fiber</td>
<td>6 g</td>
<td></td>
</tr>
<tr>
<td>Sugars</td>
<td>3 g</td>
<td></td>
</tr>
<tr>
<td>Other Carbohydrates</td>
<td>27 g</td>
<td></td>
</tr>
<tr>
<td>Sugar Alcohols</td>
<td>0 g</td>
<td></td>
</tr>
<tr>
<td>Protein</td>
<td>5 g</td>
<td></td>
</tr>
</tbody>
</table>

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

### Carbohydrate Choices

<table>
<thead>
<tr>
<th>Carbohydrate Choices</th>
<th>Carbohydrate Grams</th>
</tr>
</thead>
<tbody>
<tr>
<td>½</td>
<td>6-10</td>
</tr>
<tr>
<td>1</td>
<td>11-20</td>
</tr>
<tr>
<td>1 ½</td>
<td>21-25</td>
</tr>
<tr>
<td>2</td>
<td>26-35</td>
</tr>
<tr>
<td>2 ½</td>
<td>36-40</td>
</tr>
<tr>
<td>3</td>
<td>41-50</td>
</tr>
<tr>
<td>3 ½</td>
<td>51-55</td>
</tr>
<tr>
<td>4</td>
<td>56-65</td>
</tr>
<tr>
<td>4 ½</td>
<td>55-70</td>
</tr>
<tr>
<td>5</td>
<td>71-80</td>
</tr>
</tbody>
</table>

### Daily Values

<table>
<thead>
<tr>
<th>Calories</th>
<th>2,000</th>
<th>2,500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fat</td>
<td>Less than 65g</td>
<td>Less than 80g</td>
</tr>
<tr>
<td>Sat Fat</td>
<td>Less than 20g</td>
<td>Less than 25g</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>Less than 300mg</td>
<td>Less than 300mg</td>
</tr>
<tr>
<td>Sodium</td>
<td>Less than 2,400mg</td>
<td>Less than 2,400mg</td>
</tr>
<tr>
<td>Potassium</td>
<td>Less than 3,500mg</td>
<td>Less than 3,500mg</td>
</tr>
<tr>
<td>Total carbohydrate</td>
<td>Less than 300g</td>
<td>Less than 375g</td>
</tr>
<tr>
<td>Dietary fiber</td>
<td>25g</td>
<td>30g</td>
</tr>
</tbody>
</table>
TIPS FOR EATING OUT

> Avoid fried foods and fatty proteins like sausages.
> Avoid cheese-covered or cheese-filled foods.
> Avoid cream sauces.
> Avoid mayonnaise.
> Share entrées.
> Ask your server to bring the take home box at the same time food is served (then divide it right away so you’ll have another meal for tomorrow).
> Save buffet restaurants for special occasions.
> Ask for salad dressings and sauces on the side.
> Request printed nutrition information at fast food restaurants to help make healthier choices.
> Look for the “Heart Healthy” logo that identifies lower fat selections on many menus.
> Order sandwiches with whole grain bread. Order oatmeal for breakfast. Order brown rice if given the option.
> Drink water or non-caloric beverages with your meal.
> Go easy on the bread and avoid the butter (you could save 100 plus calories)
> Order food as plain as possible. Dishes covered with sauces and gravies will often have more fat, calories, and sodium.
> Select a few restaurants where you know you can make better choices and then visit those most often.
BLOOD GLUCOSE GOALS

What should your blood sugar be? The answer can depend on many things, and each person should discuss with his doctor or diabetes educator what his personal target range should be. Here are some general guidelines:

<table>
<thead>
<tr>
<th>Pre-meal blood sugar</th>
<th>2 hours after eating</th>
</tr>
</thead>
<tbody>
<tr>
<td>*ADA Recommended Diabetes Control (mg/dl)</td>
<td>80-130</td>
</tr>
</tbody>
</table>

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

KNOW YOUR TARGET BEFORE AND AFTER MEALS

The more carbohydrate that is eaten at a meal, the higher the blood sugar will rise after the meal. Another way to see how a meal affects your blood sugar is to test before and 2 hours after a specific meal. A 40-50 point rise in your blood sugar would be considered acceptable.

HEMOGLOBIN A1C

- The A1C test is a lab test ordered by your doctor - no need to fast for this test.
- The A1C tells what your blood sugar has averaged over the last three months.
- This test should be done every three to six months.
RECOMMENDED A1C GOALS

<table>
<thead>
<tr>
<th>A1C</th>
<th>Estimated average glucose</th>
<th>Within normal range</th>
<th>ADA recommended diabetes control</th>
<th>AACE recommended diabetes control</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-5.6</td>
<td></td>
<td>Less than 7</td>
<td>Less than 6.5</td>
<td></td>
</tr>
</tbody>
</table>

Current research suggests that an A1C goal between 7 and 8 may be safer for older patients with serious health problems or frequent low blood sugars.

This chart shows how your A1C compares to an average three-month blood glucose.

What was your last A1C?

What was your 3-month average?

When is your next A1C due?

OBTAINING SUPPLIES

Strips and lancets are covered for most Cigna patients. For some plans there is no copay for supplies. You will need a prescription from your primary care doctor in order to get your testing supplies covered. Your doctor will need to write on the prescription how often you need to test.
CARING FOR YOUR METER AND STRIPS

- Meters need to be used at room temperature for accurate readings.
- Strips need to be kept in their container and protected from extremes in temperature.
- Use the control solution to check your strips when:
  - Your readings are not what you expect.
  - You open a new bottle of strips.
  - You think your strips may have been damaged.
- Control solution is only good for three months after opening the bottle, so be sure to date the bottle when you open it.
- Remember that some meters require a code change when you open a new bottle or package of strips.
- If you have any questions or concerns about using your meter, there is a 24-hour toll-free phone number on the back of your meter.

WHEN TO SELF-TEST

How often you test your blood sugar depends on your individual needs. Some people need to check their blood sugar 4 – 6 times per day. Others may only test 2 or 3 times per week.

- Blood sugars are often tested before meals and before a bedtime snack for people on insulin.
- Testing schedules can vary for people not on insulin. One option is to test 2-3 days per week, before meals, and occasionally 2 hours after eating. Another option is to test once a day, varying the times. Your doctor may have a specific schedule that he wants you to follow.
- If you take an evening injection of insulin, occasionally test your blood sugar at 3:00 AM to check for low blood sugar that may occur without symptoms.
- Test your blood sugar before and after exercise when you want to see the effect of exercise on your blood sugar level.
- Test when you don't feel “right” or when you experience symptoms of high or low blood sugar.
- Test more often when you are sick.

Your doctor or diabetes educator can help you set up a testing schedule that gives you the information you need to manage your diabetes.

Self-testing steps

- Wash and dry hands without using alcohol.
- Hang your hand at your side to help get the blood to your fingertips.
- Try to poke finder on the side near tip.
- Gently squeeze finger until you get a round drop of blood.
KEEP RECORDS

You will benefit most from testing your blood sugar when you keep good records of the results. These records will help you and your doctors identify problems in your diabetes and treatment plan.

You may use record sheets, log books, computer programs or smartphone applications to record your results. Recording the blood sugar in columns according to the time of day makes them easier to read and more meaningful. Keep track of anything that may have affected your blood sugar reading. (Make photo copies of the blank record sheet at the end this booklet.)

Bring your blood sugar records and/or blood glucose meter to all of your appointments with your doctor and diabetes educators.

BLOOD SUGAR READINGS

<table>
<thead>
<tr>
<th>DATE</th>
<th>BREAKFAST</th>
<th>LUNCH</th>
<th>DINNER</th>
<th>BEDTIME</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before</td>
<td>Before</td>
<td>Before</td>
<td>Before</td>
</tr>
<tr>
<td></td>
<td>2 hours after</td>
<td>2 hours after</td>
<td>2 hours after</td>
<td>2 hours after</td>
</tr>
<tr>
<td></td>
<td>Insulin or Pills / Notes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15
HIGH BLOOD SUGAR

High blood sugar (hyperglycemia) is the major sign of diabetes. Hyperglycemia occurs when the pancreas does not make enough insulin and/or the insulin is not used well by the body. Many times a person with high blood sugar will not have any noticeable symptoms.

More likely when you:
> Eat too much food.
> Skip your diabetes medication.
> Are inactive.
> Have physical stress (illness, infection, surgery, pregnancy).
> Have emotional stress.
> Take other medications that raise your blood sugar.

What to do:
> Make sure diet, medication and exercise are correct.
> Drink water to stay hydrated.
> Check your blood sugar every 4 hours.
> Call your doctor if your blood sugar is over 250 mg/dL consistently or over 350 mg/dL for several tests.

SYMPTOMS
> Frequent urination
> Extreme thirst
> Blurred vision
> Sleepy
> Nausea
> Hunger
LOW BLOOD SUGAR

Low blood sugar (hypoglycemia) occurs when the blood sugar falls below 70mg/dL. This condition may be very serious if not treated correctly or promptly. Some people may be unaware of any symptoms.

It is important to know that these symptoms may happen suddenly.

> You may feel different each time.
> You may feel these symptoms at different blood sugar readings.
> Be sure that your family, friends, coworkers, etc., are familiar with these symptoms. They may notice changes before you do.

TREATMENT FOR LOW BLOOD SUGAR

> If your blood sugar is between 50 and 70, use the following 15/15 treatment rule.
> If you cannot test your blood sugar but are having symptoms, assume that it is low and begin the treatment immediately.
> If your blood sugar is below 50, start treatment with at least 30 grams of carbohydrate instead of 15 grams.

SYMPTOMS

- Shaky
- Sweating
- Rapid Heartbeat
- Anxious
- Weakness / Fatigue
- Dizzy
- Hungry
- Blurry Vision
- Headache
- Irritable

More likely when you:
- Delay or skip a meal or don’t eat enough carbohydrates.
- Increase your activity without adjusting insulin, medicine, or food.
- Take too much insulin or diabetes medicine.
- Drink alcohol.
- Take other medicine that lowers your blood sugar

More likely if you take these medications:
- Insulin
- Glyburide
- Glipizide
- Glimeperide
- Glucotrol
- Glucotrol XL
- Amaryl
- Prandin
- Starlix
- Nateglinide

Any combination medication containing one of the above.

LOW BLOOD SUGAR

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- Amaryl
- Prandin
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- Nateglinide

Any combination medication containing one of the above.
15/15 TREATMENT RULE

1. Eat 15 grams of carbohydrate.
2. Test blood sugar in 15 minutes. If still less than 70, eat another 15 grams of carbohydrate.
3. Test blood sugar again in 15 minutes. Continue to do this until your blood sugar is above 70.
4. Once your blood sugar is over 70, and if there is still more than ½ hour before your next meal, eat a light snack with carbohydrate.
5. Test blood sugar again in 15 minutes to be sure it is at an acceptable level.

SOURCES OF 15 GRAMS CARBOHYDRATES

> 3-4 glucose tablets. (Check the label to see how many tablets are equal to 15 grams of carbohydrate).
> 1 tube (37.5g) Glucose gel. Glutose 15
> 3 – 4 hard candies (peppermints, butterscotch, etc.)
> 1/2 cup (4 oz.) orange or apple juice or regular fruit drink
> 1/2 can of regular (non-diet) cola or soft drink
> 1 tablespoon of honey, syrup, or table sugar
> 2 tablespoons of raisins
> 1 cup regular Gatorade
> 1 cup milk
> 7 Lifesavers
> 1/2 cup regular gelatin

NOTE: The diabetes medicines Precose (Acarbose) and Glyset (Miglitol) keep some types of carbohydrate from breaking down into simple sugars. Treat low blood sugars with glucose tablets or milk.

CARRY SOME FORM OF CARBOHYDRATES AT ALL TIMES

Prevent low blood sugar

1. Eat meals and snacks on time.
2. Adjust insulin or food for exercise, if necessary.
3. Know the onset, peak, and duration of your insulin or diabetes medication. This is important so you will know when you are at the greatest risk for low blood sugar.
4. Monitor blood glucose, especially if you are feeling strange or different from normal.

Glucagon is a hormone that raises blood sugar. Glucagon is available by prescription in the form of an injection. It may be recommended that you have this medicine available if you are on insulin. It is given to someone having a severe low blood sugar reaction who is unable to swallow. Family members and coworkers can be shown how to inject it. There are various safety concerns with this medication. A session to learn how to use this hormone can be arranged with your diabetes educator. There are several brands available.
KETOACIDOSIS

This happens when there is not enough insulin in the body to move sugar out of the blood stream and into the cells.

When this happens, you do not use sugar for body fuel the way you are supposed to. Instead, the body breaks down fat and muscle tissue for its fuel.

When fat and muscle are broken down for fuel, there is a waste product made as well. This waste product is ketones, a type of acid. When ketones build up in the bloodstream it can be very dangerous.

<table>
<thead>
<tr>
<th>Who</th>
<th>When</th>
<th>Signs</th>
</tr>
</thead>
</table>
| > Common in people with type 1 diabetes. | > May happen over several hours or several days. | > Common signs that occur that occur with high blood sugar plus:  
  - Nausea  
  - Abdominal pain  
  - Shortness of breath  
  - Fruity or alcohol odor to breath  
  - Ketones in urine |
| > Rare in people with type 2 diabetes. | > Likely to occur if the blood sugar is over 250mg/dL. | |

<table>
<thead>
<tr>
<th>Common causes</th>
<th>What to do</th>
<th>Prevention</th>
</tr>
</thead>
</table>
| > Skipping or taking too little insulin  
> Physical stress (illness, infection, injury)  
> Emotional stress | > Check your blood sugar every four hours  
> Check urine ketones  
> Drink extra amounts of water or non-calorie, caffeine-free liquids  
> Call your doctor or Urgent Care | > Take diabetes medication as directed  
> Check blood sugar on a regular basis  
> Follow your diabetes meal plan  
> If you become sick, follow the sick-day guidelines on page 40  
> Stay in close contact with your doctor |
TESTING FOR KETONES

Test for ketones in your urine if you are:
> Ill
> Feverish
> Vomiting
> Experiencing blood sugar spikes

This is especially important for people with type 1 diabetes. If you have type 2 diabetes, check with your doctor about ketone testing.

HOW TO TEST FOR KETONES

Ketones can easily be tested for by using a simple dip and read urine strip. These test strips may be purchased at a pharmacy without a prescription.

1. Dip a ketone test strip into a sample of urine, or pass strip through urine stream.
2. Wait the number of seconds indicated on the package of ketone strips.
3. Compare the color of the pad to the color chart on the bottle.
   The color of the pad will change if there are ketones in the urine.
4. Record the test result in your self-care diary.

If moderate or large amounts of ketones are present, call your doctor.

HYPERGLYCEMIC HYPEROSMOLAR NONKETOTIC SYNDROME (HHNS)

A complication that can result from very high blood sugar (usually greater than 600 mg/dL) is called hyperglycemic hyperosmolar nonketotic syndrome or HHNS. This can be a life-threatening condition resulting in severe dehydration.

<table>
<thead>
<tr>
<th>Who</th>
<th>Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; More common in older persons</td>
<td>&gt; High blood glucose (600mg/dL)</td>
</tr>
<tr>
<td>&gt; People with type 2 diabetes who are sick</td>
<td>&gt; Absence of ketones</td>
</tr>
<tr>
<td>&gt; People with undiagnosed diabetes who delay seeking treatment</td>
<td>&gt; Dehydration (dry mouth, dry skin)</td>
</tr>
<tr>
<td></td>
<td>&gt; Mental confusion</td>
</tr>
</tbody>
</table>

Prevention

> Check your blood sugar every four hours when sick or when blood sugar is over 250 mg/dl.
> Drink water to stay hydrated - about 8-10 8oz. glasses per day when sick and when blood sugars are high.
> Call your doctor or Urgent Care Center
# WHAT TO DO ON SICK DAYS

When you get sick, you may find it harder to control your blood sugar. It’s important to take extra steps to get better.

## Controlling your blood sugar

<table>
<thead>
<tr>
<th>Take your insulin or diabetes pill as prescribed. Don’t stop your medicine unless your doctor tells you to do so. Being sick may raise your blood sugar. You may even need to take extra insulin.</th>
<th>Call your doctor if you are not sure what to do.</th>
</tr>
</thead>
<tbody>
<tr>
<td>If your blood sugar is higher than usual or over 250, check your blood sugar every four hours. Write down your results.</td>
<td>If you have questions about testing, call your doctor for help. Call immediately if:</td>
</tr>
<tr>
<td>&gt; Blood sugar is much higher than usual, or is greater than 300.</td>
<td></td>
</tr>
<tr>
<td>&gt; Urine shows moderate to large ketones.</td>
<td></td>
</tr>
</tbody>
</table>

## What to eat

<table>
<thead>
<tr>
<th>Try to eat the usual amount of bread, fruit and milk. Eat smaller meals but eat every 4 hours. Liquids or soft foods may be easier on your stomach.</th>
<th>If you can’t eat regular food, try eating the following foods every hour or two:</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; ½ cup juice</td>
<td></td>
</tr>
<tr>
<td>&gt; 1 cup soup</td>
<td></td>
</tr>
<tr>
<td>&gt; 1/3 cup grape, cranberry, or prune juice</td>
<td></td>
</tr>
<tr>
<td>&gt; ½ cup ice cream</td>
<td></td>
</tr>
<tr>
<td>&gt; ½ cup regular Kool-Aid, or regular soft drinks</td>
<td></td>
</tr>
<tr>
<td>&gt; 1 slice toast or 6 saltines</td>
<td></td>
</tr>
<tr>
<td>&gt; 1 cup Gatorade</td>
<td></td>
</tr>
<tr>
<td>&gt; ½ cup regular Jell-O</td>
<td></td>
</tr>
</tbody>
</table>

If you have been throwing up or feel nauseated, try liquids and sip very slowly.

It’s important to drink plenty of non-calorie liquids. Have 1/2 glass of water, broth, or tea every hour especially if you have been throwing up, have diarrhea, or are urinating more often.

Call your Doctor if:
| > Nausea, vomiting or diarrhea last more than 12 hours |
| > You can’t hold down any food or liquids at all |
| > You are very drowsy or confused |
| > You have stomach pain, shortness of breath, very dry mouth or fruity breath |
| > You don’t know what to do |

## Rest

Do not exercise

## Where to call when your doctor’s office is closed

Know where to call if it’s after normal office hours.

Medicare Advantage patients can call the Cigna-HealthSpring 24 Hour Health Information Line at **1-800-356-0665**.

All others can call the Cigna Health Information Line at **1-602-787-3299**.

Call 911 if you need immediate attention or can’t drive to the emergency room.
EXERCISE

BENEFITS SPECIFIC TO DIABETES

Improved insulin sensitivity
Regular aerobic exercise makes body cells more receptive, or sensitive, to insulin. This means that a physically fit person needs less insulin to move glucose into a cell than an inactive person does.

Reduction in blood sugar immediately following an exercise session
Exercise overcomes insulin resistance. At rest, a muscle needs insulin to use glucose. However, an exercising muscle does not need insulin to use glucose. Consequently, an individual with diabetes will often see a decrease in blood sugar following exercise.

Weight control
Regular aerobic exercise can promote weight loss. If an overweight person with diabetes loses 5% of his/her current weight, blood glucose control often improves. For example, if you weigh 200 pounds, and lose 10, you will often see an improvement in your blood sugar numbers. Losing weight actually reduces insulin resistance. However, if a person is not overweight, losing more weight will not improve blood glucose control.

HOW FAR CAN YOU GO ON A TANK OF POPULAR FOODS?

<table>
<thead>
<tr>
<th>Food</th>
<th>Calories</th>
<th>Miles to walk*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burger King (double whopper)</td>
<td>970</td>
<td>6.5</td>
</tr>
<tr>
<td>Snickers Bar (2.07 oz.)</td>
<td>280</td>
<td>2</td>
</tr>
<tr>
<td>Sausage Egg McMuffin</td>
<td>450</td>
<td>3.5</td>
</tr>
<tr>
<td>McDonald French Fries (Large)</td>
<td>570</td>
<td>4.2</td>
</tr>
<tr>
<td>Pizza Hut 6” Supreme Pan Pizza</td>
<td>710</td>
<td>5.3</td>
</tr>
<tr>
<td>Margarita (12 oz.)</td>
<td>350</td>
<td>2.7</td>
</tr>
<tr>
<td>Jack-in-The-Box (Chicken Sandwich)</td>
<td>400</td>
<td>4</td>
</tr>
<tr>
<td>Taco Bell Chicken Burrito</td>
<td>390</td>
<td>3.2</td>
</tr>
</tbody>
</table>

* Based on a 175 lb. Person  Calories taken from Company websites. (2007)
# BODY MASS INDEX (BMI)

An estimation of body fat for adults ≥ 20 years old

<table>
<thead>
<tr>
<th>Height</th>
<th>150</th>
<th>160</th>
<th>170</th>
<th>180</th>
<th>190</th>
<th>200</th>
<th>210</th>
<th>220</th>
<th>230</th>
<th>240</th>
<th>250</th>
<th>260</th>
<th>270</th>
<th>280</th>
<th>290</th>
<th>300</th>
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</thead>
<tbody>
<tr>
<td>4'10”</td>
<td>31</td>
<td>34</td>
<td>36</td>
<td>38</td>
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<tr>
<td>5’2”</td>
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<td>5’4”</td>
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<td>6’2”</td>
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<td>37</td>
</tr>
</tbody>
</table>

To determine your BMI, find your height and follow the line over to your weight. The number in the box where the two cross is your BMI.

**For example:** A person who weighs 180 pounds and is 64 inches tall (or 5’4”’) has a BMI of 31 and would be considered in the obesity range.

---

**BMI calculator and tables**

National Heart, Lung, and Blood Institute


**Weight management**

Includes weight risk assessment, menu planner, sample menus and more.

CALORIES “BURNED FOR 30 MINUTES OF CONTINUOUS ACTIVITY

<table>
<thead>
<tr>
<th>Activity</th>
<th>Body of weight (pounds)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>130</td>
</tr>
<tr>
<td>Sitting</td>
<td>36</td>
</tr>
<tr>
<td>Mop The Floor</td>
<td>110</td>
</tr>
<tr>
<td>*Walking (3 Mph)</td>
<td>142</td>
</tr>
<tr>
<td>Cycling (Leisure)</td>
<td>110</td>
</tr>
<tr>
<td>Swimming (Slow)</td>
<td>216</td>
</tr>
<tr>
<td>Running (5 Mph)</td>
<td>225</td>
</tr>
</tbody>
</table>

*To burn about 3500 calories (equal to 1 pound of fat) a 175 pound person will need to walk 60 minutes every day for approximately 10 days.

AMERICAN DIABETES ASSOCIATION
RECOMMENDATIONS FOR PHYSICAL ACTIVITY

Aerobic (cardio) exercise

Aerobic exercise means “with oxygen”. It is the rhythmic movement of large muscle groups (legs, hips, and arms). Examples of aerobic exercise are cycling, jogging, swimming, dancing and walking.

Benefits of aerobic exercise
> Improve blood sugar control
> Reduce risk of heart disease
> Assist with weight loss

How much is recommended
> 150 minutes a week of moderate to vigorous intensity

How often
> At least 3 days a week
> Don’t go more than two consecutive days without exercise
Stretching/flexibility training

Stretching helps keep your body flexible. Being flexible improves mobility and can prevent injuries. It is important to warm-up your muscles with gentle movements (like walking, marching in place, riding a stationery cycle, or “swaying” to the music) before stretching.

As your body heats up, muscle and connective tissue become flexible and easier to stretch. Stretching a “cold” muscle can result in injury. Stretching before and after exercise can decrease the risk of injury and may even prevent muscle soreness that can develop the day after exercise. Yoga and tai chi are especially helpful for older people with diabetes who need to improve balance. Flexibility training should not be a substitute for aerobic and resistance training.

Benefits of strength exercises

- Improves muscle tone
- Builds muscle
- Maintains bone density
- Improves energy

How much is recommended

- Target all major muscle groups
- Progress to 3 sets of 8 – 10 repetitions

How often

- 2-3 times a week
- Skip a day in between


Stretching Tips

- Move into each stretch slowly and hold the stretch for 20-30 seconds.
- Go to the point of feeling a moderate stretch, but no pain.
- Never move quickly into a stretch or “bounce” at any time during the stretch.

Cool Down

Always end an exercise session with a slow cool down. You should never suddenly stop exercising. A sudden stop in exercise can cause blood to pool in the muscles that are being exercised (i.e., your legs). This slows blood return to the heart, which in turn, reduces the amount of blood which will get to your brain, and could cause you to faint. An example of a good cool down exercise would be 5 minutes of slow walking.
APPLY THE F.I.T.T. PRINCIPLE OF EXERCISE

**Frequency**
- If your major goal is weight loss, improved blood sugar control, or improved lipids, you should exercise daily.

**Intensity**
- An easy, valid measure of exercise intensity is the “talk test.” During exercise, you should be breathing harder than at rest, but you should still be able to talk.
- If you are exercising so intensely that it is difficult to carry on a conversation, you need to slow down.
- On the other hand, if you can sing, you are not exercising hard enough.

**Type**
- Aerobic exercise is the type of exercise that most effectively burns calories for weight reduction. An additional benefit of regular aerobic exercise is improved cardiovascular endurance.
- Aerobic exercise involves the continuous rhythmic motion of large muscle groups like the hips and legs.
- Examples of aerobic exercise include: walking, jogging, dancing, cycling, swimming, stair-stepping machines, aerobics and jazzercise classes, rowing, and cross-country skiing.

**Time**
- In order to achieve weight loss, or to modify your blood sugar and/or lipids, gradually increase the amount of time you exercise to at least 30 minutes per session.

**Talk to your doctor before starting an exercise program if you:**
- Are over age 35.
- Take prescription medication.
- Have been sedentary for over six months.
TEN TIPS FOR EXERCISING SAFELY WITH DIABETES

1. Test your blood sugar before exercise.
   > If you take insulin or diabetes pills that can cause low blood sugar and your blood sugar is less than 100, you should eat a carbohydrate before exercise. This will reduce the risk of having a low blood sugar reaction during exercise.
   > In general you should have at least 15 grams of carbohydrates for every 30 minutes of planned activity.
   > For example, if you test your blood sugar before a planned 20-minute walk and it is 90, you should have 1 serving of carbohydrate (1 starch, 1 fruit, or 1 milk).
   > If your walk is scheduled to last 45 minutes, and your blood sugar is 90, you would want to have 2 servings of carbohydrate (1 starch and 1 milk).
   > About 15 minutes after you have eaten carbohydrate, test your blood sugar to be sure that it is greater than 100 before starting to exercise.
   > If you have an infection, or feel like you are coming down with a cold, and your blood sugar is significantly higher than usual, or greater than 250, delay your exercise until you feel better.

2. Test your blood sugar after exercise.
   > It is a good idea to test your blood sugar immediately, one hour, and two hours after exercise. This will help you see how exercise affects your blood sugar.
   > Exercise can cause a reduction in blood sugar for up to 24 hours after the exercise session.
   > Look for the delayed effects of exercise on blood sugar, especially if exercise is new to you.

3. Exercise when your blood sugar is on the rise.
   > About one to two hours after a meal is an ideal time to exercise. If this is not possible, check your blood sugar to see if a snack is needed.

4. Carry a source of fast acting carbohydrate (i.e. B-D Glucose Tabs) with you in case a low blood sugar reaction (hypoglycemia) occurs during exercise.
   > Be aware of any symptoms of low blood sugar, such as shakiness, weakness, and dizziness.

5. Carry your ID with you.
   > Wear an identification bracelet or necklace that states you have diabetes.

6. If necessary, bring other appropriate medications along.
   > i.e., nitroglycerine, asthma inhaler
7. **Drink water.**
   - Drink plenty of water before, during, and after exercise to prevent dehydration.
   - 8 ounces before exercise
   - 8 ounces for every 20 minutes of heavy exercise
   - 8 ounces after exercise

8. **Check your feet after exercise.**
   - Always wear cotton socks with good fitting walking or tennis shoes.
   - Check your feet after every exercise session for any injuries, calluses, or sores.

9. **Do not drink alcohol for several hours before or after exercise.**
   - Alcohol and certain medications may contribute to hypoglycemia during exercise.
   - If you have any questions, check with your doctor about your medication.

10. **Stop exercising immediately if you have chest pain, shortness of breath, nausea, dizziness, or pain in your feet.**

### SPECIAL INFORMATION FOR PEOPLE WHO TAKE INSULIN

**In order to prevent low blood sugar during exercise:**

1. Always measure blood sugar before, during, and after exercise.

2. Be sure that insulin is injected into fatty tissue rather than into the muscle.
   - Insulin injected into the muscle is absorbed faster than insulin injected into fatty tissue. This could cause a premature drop in blood sugar.

3. Unplanned exercise requires extra carbohydrate.
   - People taking insulin should eat 20-30 grams of carbohydrate per 30 minutes of exercise.
   - For unplanned exercise you may also need to reduce insulin after exercise. Talk to your doctor or diabetes educator for help with this.

4. If exercise is planned, you may need to decrease your insulin dosages before and after exercise.
   - The number of insulin units to be reduced will depend on the exercise intensity and duration.
   - Ultimately, your personal experience will let you know how much you need to reduce your insulin to prevent low blood sugar during or after exercise. Again, ask your doctor for his/her direction on this.

5. After exercise, an extra carbohydrate rich snack may be necessary.
RECOMMENDATIONS FOR EXERCISING WHEN YOU HAVE DIABETES COMPLICATIONS

People who have lived with diabetes for a number of years may begin to notice some complications in certain systems and organs of the body. Areas of the body at risk to damage from diabetes include: the nervous system (neuropathy), the eyes (retinopathy), the kidneys (nephropathy), and the heart (cardiovascular disease).

**Neuropathy**

Damaged nerves can lead to injury that is not noticed with activities like prolonged walking or jogging. Therefore, it is important that you examine your feet before and after exercise, and that you use good footwear.

One type of neuropathy (autonomic) can interfere with your body’s ability to recognize low blood sugar (hypoglycemia unawareness). This may require more frequent blood sugar testing in order to prevent a sudden low blood sugar reaction.

<table>
<thead>
<tr>
<th>Recommended</th>
<th>Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swimming</td>
<td>Treadmill Walking</td>
</tr>
<tr>
<td>Bicycling</td>
<td>Prolonged Walking</td>
</tr>
<tr>
<td>Rowing</td>
<td>Jogging</td>
</tr>
<tr>
<td>Tai Chi</td>
<td>High impact or step aerobics</td>
</tr>
<tr>
<td>Chair Exercise</td>
<td></td>
</tr>
</tbody>
</table>

**Retinopathy**

<table>
<thead>
<tr>
<th>Recommended</th>
<th>Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stationary Cycling</td>
<td>Any activity which causes straining or breath holding</td>
</tr>
<tr>
<td>Walking</td>
<td>Activities that lower the head below the waist</td>
</tr>
<tr>
<td>Swimming</td>
<td>Jogging</td>
</tr>
<tr>
<td>Low intensity machine rowing</td>
<td>Weight lifting</td>
</tr>
<tr>
<td></td>
<td>High impact aerobics</td>
</tr>
<tr>
<td></td>
<td>Racquet sports</td>
</tr>
</tbody>
</table>

**Hypertension, nephropathy and cardiovascular disease**

<table>
<thead>
<tr>
<th>Recommended</th>
<th>Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking</td>
<td>Any activity which causes straining or breath holding</td>
</tr>
<tr>
<td>Bicycling</td>
<td>Heavy weight lifting</td>
</tr>
<tr>
<td>Swimming</td>
<td>Sprinting</td>
</tr>
<tr>
<td>Dancing</td>
<td>Rapid stair climbing</td>
</tr>
</tbody>
</table>

Check with your physician or specialist for guidelines specific to your condition.
## SAMPLE 12-WEEK WALKING PROGRAM

<table>
<thead>
<tr>
<th>Warm-up (slow walking)</th>
<th>Exercise (brisk walking)</th>
<th>Cool-down (slow walking)</th>
<th>Total time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Week 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session A</td>
<td>5 min</td>
<td>5 min</td>
<td>5 min</td>
</tr>
<tr>
<td>Session B</td>
<td>5 min</td>
<td>5 min</td>
<td>5 min</td>
</tr>
<tr>
<td>Session C</td>
<td>5 min</td>
<td>5 min</td>
<td>5 min</td>
</tr>
</tbody>
</table>

Continue with at least 4-5 exercise sessions each week. Total 150 minutes each week

<table>
<thead>
<tr>
<th>Warm-up (slow walking)</th>
<th>Exercise (brisk walking)</th>
<th>Cool-down (slow walking)</th>
<th>Total time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Week 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 min</td>
<td>7 min</td>
<td>5 min</td>
<td>5 min</td>
</tr>
<tr>
<td><strong>Week 3</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 min</td>
<td>9 min</td>
<td>5 min</td>
<td>5 min</td>
</tr>
<tr>
<td><strong>Week 4</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 min</td>
<td>11 min</td>
<td>5 min</td>
<td>5 min</td>
</tr>
<tr>
<td><strong>Week 5</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 min</td>
<td>13 min</td>
<td>5 min</td>
<td>5 min</td>
</tr>
<tr>
<td><strong>Week 6</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 min</td>
<td>15 min</td>
<td>5 min</td>
<td>5 min</td>
</tr>
<tr>
<td><strong>Week 7</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 min</td>
<td>18 min</td>
<td>5 min</td>
<td>5 min</td>
</tr>
<tr>
<td><strong>Week 8</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 min</td>
<td>20 min</td>
<td>5 min</td>
<td>5 min</td>
</tr>
<tr>
<td><strong>Week 9</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 min</td>
<td>23 min</td>
<td>5 min</td>
<td>5 min</td>
</tr>
<tr>
<td><strong>Week 10</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 min</td>
<td>26 min</td>
<td>5 min</td>
<td>5 min</td>
</tr>
<tr>
<td><strong>Week 11</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 min</td>
<td>28 min</td>
<td>5 min</td>
<td>5 min</td>
</tr>
<tr>
<td><strong>Week 12</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 min</td>
<td>30 min</td>
<td>5 min</td>
<td>5 min</td>
</tr>
</tbody>
</table>

Adapted from Exercise and your Heart. Designed by the National Heart, Lung, and Blood Institute. Washington, D.C.
MEDICATIONS FOR DIABETES

Very few people with diabetes can control their blood sugar with only a meal plan and exercise on a long-term basis. Along with a meal plan and exercise, most people will also need to take medicine.

The medication may be diabetes pills, insulin or other injectable medications. Your doctor will prescribe the exact kind and amount of medication you should have. It is important to follow your doctor’s directions carefully when taking your diabetes medications.

PILLS FOR DIABETES

Pills for diabetes are not insulin. Insulin cannot be taken by mouth because stomach juices destroy it. Your body has to be able to make some insulin for the pills to help (type 2 diabetes). Pills are not a cure. You still need diet and exercise programs to keep your blood sugar in good control. The following charts give a summary of the different kinds of diabetes pills.

MEDICATIONS FOR TYPE 2 DIABETES

Class – Biguanides

<table>
<thead>
<tr>
<th>Generic name</th>
<th>Brand name</th>
<th>Peak action</th>
<th>When taken</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metformin</td>
<td>Glucophage Riomet</td>
<td>None</td>
<td>&gt; 2-3 times daily with meals</td>
<td>&gt; Helps keep liver from producing too much sugar.</td>
</tr>
<tr>
<td>(Maximum daily dose 2550 mg)</td>
<td></td>
<td></td>
<td>&gt; Divided doses with meals</td>
<td>&gt; Rarely causes low blood sugar when used alone.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&gt; May cause diarrhea, nausea, upset stomach or gas, which usually goes away in a few weeks.</td>
</tr>
<tr>
<td>Metformin ER</td>
<td>Glucophage XR</td>
<td>None</td>
<td>Usually once daily (at the evening meal)</td>
<td>&gt; Less problems generally occur with use of extended release metformin. Taking with a meal also helps.</td>
</tr>
<tr>
<td>(extended release)</td>
<td>Fortamet Glumetza</td>
<td></td>
<td></td>
<td>&gt; Metformin is removed from the body by the kidneys, and may be stopped if kidney function is below a certain level.</td>
</tr>
<tr>
<td>(Maximum daily dose 2000 mg)</td>
<td></td>
<td></td>
<td></td>
<td>&gt; It should not be taken if you drink excessive amounts of alcohol.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&gt; If instructed to stop Metformin for a test requiring a dye injection, follow directions given.</td>
</tr>
</tbody>
</table>
# MEDICATIONS FOR TYPE 2 DIABETES (CONTINUED)

## Class – DPP-4 Inhibitor oral

<table>
<thead>
<tr>
<th>Generic name</th>
<th>Brand name</th>
<th>When taken</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sitagliptin (Maximum daily dose 100 mg)</td>
<td>Januvia</td>
<td>Daily, with or without food</td>
<td>&gt; Stimulates insulin production when blood sugar is high, especially after meals.</td>
</tr>
<tr>
<td>Saxagliptin (Maximum daily dose 5 mg)</td>
<td>Onglyza</td>
<td>Daily, with or without food</td>
<td>&gt; Decreases the amount of sugar released by the liver.</td>
</tr>
<tr>
<td>Linagliptin (Maximum daily dose 5 mg)</td>
<td>Tradjenta</td>
<td>Daily, with or without food</td>
<td>&gt; Lower doses recommended if kidney disease is present. (not Tradjenta)</td>
</tr>
<tr>
<td>Alogliptin (Maximum daily dose 25 mg)</td>
<td>Nesina</td>
<td>Daily, with or without food</td>
<td>&gt; May increase risk of pancreatitis.</td>
</tr>
</tbody>
</table>

## Class – Sodium-Glucose Co-Transporter 2 (SGLT2) Max

<table>
<thead>
<tr>
<th>Generic name</th>
<th>Brand name</th>
<th>Whentaken</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canagliflozin (Maximum daily dose 300 mg)</td>
<td>Invokana</td>
<td>Daily before first meal</td>
<td>&gt; Low risk hypoglycemia</td>
</tr>
<tr>
<td>Dapagliflozin (Maximum daily dose 10 mg)</td>
<td>Farxiga</td>
<td>Daily in the morning with or without food</td>
<td>&gt; Lower BP, modest weight decrease</td>
</tr>
<tr>
<td>Empagliflozin (Maximum daily dose 25 mg)</td>
<td>Jardiance</td>
<td>Daily in the morning with or without food</td>
<td>&gt; Increases LDL, UTI, yeast infections</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt; Do not use with severe renal impairment</td>
</tr>
</tbody>
</table>

## Class – Dopamine Agonist

<table>
<thead>
<tr>
<th>Generic name</th>
<th>Brand name</th>
<th>When taken</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bromocriptine (Maximum daily dose 4.8 mg daily)</td>
<td>Cycloset</td>
<td>Taken once daily within 2 hours of waking in the morning.</td>
<td>&gt; Increases insulin sensitivity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt; Keeps liver from producing too much sugar after meals.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt; Most common side effect is nausea</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt; Not recommended for people with low blood pressure or migraines.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt; No significant weight gain</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt; Rarely causes low blood sugar if used alone.</td>
</tr>
</tbody>
</table>
### Class – Meglitinides

<table>
<thead>
<tr>
<th>Generic name</th>
<th>Brand name</th>
<th>Peak action</th>
<th>When taken</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repaglinide (Maximum daily dose 16 mg)</td>
<td>Prandin</td>
<td>1 hour</td>
<td>Right before meals</td>
<td>&gt; Stimulates insulin production. &lt;br&gt; &gt; May cause hypoglycemia, but is less likely than with sulfonylureas. &lt;br&gt; &gt; Do not take if skipping a meal.</td>
</tr>
<tr>
<td>Nateglinide (Maximum daily dose 360 mg)</td>
<td>Starlix</td>
<td>1 hour</td>
<td>Right before meals</td>
<td></td>
</tr>
</tbody>
</table>

### Class – Thiazolidinediones

<table>
<thead>
<tr>
<th>Generic name</th>
<th>Brand name</th>
<th>Peak action</th>
<th>When taken</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pioglitizone (Maximum daily dose 45 mg)</td>
<td>Actos</td>
<td>None</td>
<td>Once daily</td>
<td>&gt; Improves insulin resistance. Rarely causes low blood sugar when used alone. &lt;br&gt; &gt; May take 4-6 weeks or longer to see full effects on blood sugar. &lt;br&gt; &gt; May cause weight gain and fluid retention. &lt;br&gt; &gt; Not recommended for people with congestive heart failure or liver disease. &lt;br&gt; &gt; Blood test for liver function recommended before starting and periodically thereafter. &lt;br&gt; &gt; May increase risk of fractures in women and ovulation in women who are not ovulating but haven’t gone through menopause. &lt;br&gt; &gt; Actos may increase risk for bladder cancer.</td>
</tr>
<tr>
<td>Rosiglitazone (Maximum daily dose 8 mg)</td>
<td>Avandia</td>
<td>None</td>
<td>1-2 times daily</td>
<td></td>
</tr>
</tbody>
</table>

Avandia products will no longer be available in Cigna pharmacies. Avandia will only be available through specially certified pharmacies after November 2011.
### Class – Sulfonylureas

<table>
<thead>
<tr>
<th>Generic name</th>
<th>Brand name</th>
<th>Peak action</th>
<th>When taken</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glipizide (Maximum daily dose 40 mg)</td>
<td>Glucotrol</td>
<td>1-3 hours</td>
<td>1-2 times daily 30 minutes before meals</td>
<td>&gt; Stimulates insulin production</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&gt; May cause hypoglycemia (low blood sugar)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&gt; Important not to skip meals on this medication.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&gt; Use alcohol with caution—may increase risk of low blood sugar.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&gt; Glyburide is a safety concern for the elderly and is not recommended.</td>
</tr>
<tr>
<td>Glipizide ER (extended release, maximum daily dose 20 mg)</td>
<td>Glucotrol XL (extended release)</td>
<td>None</td>
<td>Once daily</td>
<td></td>
</tr>
<tr>
<td>Glyburide (Maximum daily dose 20 mg)</td>
<td>Diabeta Micronase Glynase Pretabs</td>
<td>2-4 hours</td>
<td>1-2 times daily with meals</td>
<td></td>
</tr>
<tr>
<td>Glimeperide (Maximum daily dose 8 mg)</td>
<td>Amaryl</td>
<td>2-3 hours</td>
<td>Once daily with a meal</td>
<td></td>
</tr>
</tbody>
</table>

### Class – Alpha Glucosidase Inhibitors

<table>
<thead>
<tr>
<th>Generic name</th>
<th>Brand name</th>
<th>Peak action</th>
<th>When taken</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acarbose (Maximum daily dose 150 mg if weight under 132 lb. and 300 mg if weight over 132 lb.)</td>
<td>Precose</td>
<td>None</td>
<td>With first bite of each meal</td>
<td>&gt; Slows break-down of carbohydrates into sugar, lowering after meal rise in blood sugar.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&gt; Does not cause low blood sugar when used alone. However, when used with insulin, sulfonylureas or meglitinides, low blood sugars need to be treated with glucose or milk.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&gt; Side effects include gas, bloating, diarrhea. It helps to start with a low dose and build-up</td>
</tr>
<tr>
<td>Miglitol (Maximum daily dose 300 mg)</td>
<td>Glyset</td>
<td>None</td>
<td>Same as above</td>
<td></td>
</tr>
</tbody>
</table>
## Combination medications

<table>
<thead>
<tr>
<th>Generic name</th>
<th>Brand name</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glyburide and Metformin (Maximum daily dose 20 mg./2000 mg)</td>
<td>Glucovance</td>
<td></td>
</tr>
<tr>
<td>Pioglitazone and Metformin (Maximum daily dose 45 mg/2550 mg)</td>
<td>Actoplus Met</td>
<td></td>
</tr>
<tr>
<td>Glipizide and Metformin (Maximum daily dose 20 mg./2000 mg)</td>
<td>Metaglip</td>
<td></td>
</tr>
<tr>
<td>Rosiglitazone and Metformin (Maximum daily dose 8 mg./2000 mg)</td>
<td>Avandamet</td>
<td></td>
</tr>
<tr>
<td>Rosiglitazone and Glimeperide (Maximum daily dose 8 mg./4 mg.)</td>
<td>Avandaryl</td>
<td></td>
</tr>
<tr>
<td>Pioglitazone and Glimeperide (Maximum daily dose 30 mg./4 mg)</td>
<td>Duetact</td>
<td></td>
</tr>
<tr>
<td>Sitagliptin and Metformin (Maximum daily dose 100 mg./2000 mg)</td>
<td>Janumet</td>
<td></td>
</tr>
<tr>
<td>Alogliptin and Metformin (maximum daily dose 25 mg/2000 mg)</td>
<td>Kazano</td>
<td></td>
</tr>
</tbody>
</table>
| Sitagliptin and Simvastatin (Maximum daily dose 100 mg./40 mg) | Juvisync | > First combination of a diabetes medication (Januvia) with a Cholesterol lowering medication (Zocor).  
> Januvia comments as noted on previous page  
> Zocor (Simvastatin):  
> Helps lower total cholesterol, LDL and Triglyceride levels and increase HDL levels.  
> Should not be used if active liver disease.  
> Blood test for liver function recommended before starting and periodically thereafter.  
> May cause muscle weakness |
| Pioglitazone and Metformin (Maximum daily dose 30 mg./2000 mg) | Actoplus Met XR |           |
| Sitagliptin and Metformin (Maximum daily dose 100 mg./1000 mg) | Janumet XR |           |
| Saxagliptin and Metformin (Maximum daily dose 5 mg./2000 mg) | Kombiglyze XR |           |
| Repaglinide and Metformin (Maximum daily dose 10 mg./2500 mg) | Prandimet |           |
| Linagliptin and Metformin (Maximum daily dose 5 mg./2000 mg) | Jentadueto |           |
### Combination medications (continued)

<table>
<thead>
<tr>
<th>Generic name</th>
<th>Brand name</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alogliptin and Metformin (Maximum daily dose 25 mg./2000 mg)</td>
<td>Kazano</td>
<td></td>
</tr>
<tr>
<td>Pioglitazone and Alogliptin (Maximum daily dose 45 mg./25 mg)</td>
<td>Oseni</td>
<td></td>
</tr>
<tr>
<td>Canagliflozin and Metformin (Maximum daily dose 300 mg./2000 mg)</td>
<td>Invokamet</td>
<td></td>
</tr>
</tbody>
</table>

### Class – Incretin Mimetic-injectable

<table>
<thead>
<tr>
<th>Generic name</th>
<th>Brand name</th>
<th>When taken</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exenatide (Maximum daily dose 20 mcg.)</td>
<td>Byetta</td>
<td>Before meals, twice a day</td>
<td>&gt; For people with type 2 diabetes who are taking oral medicines. Precautions must be taken to avoid low blood sugar.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Byetta). Weekly</td>
<td>&gt; Byetta should not be administered after a meal.</td>
</tr>
<tr>
<td>Exenatide Extended Release (Maximum daily dose 2 mg)</td>
<td>Bydurean</td>
<td>Take once weekly.</td>
<td>&gt; Should not be used if excessive alcohol use, gallbladder problems or high triglycerides because of increased risk of pancreatitis.</td>
</tr>
<tr>
<td>Liraglutide (Maximum daily dose 1.8 mg)</td>
<td>Victoza</td>
<td>Once daily, anytime of day</td>
<td>&gt; Victoza should not be used with history of thyroid cancer.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>with or without food.</td>
<td></td>
</tr>
<tr>
<td>Albilglutitde (Weekly maximum dose 50 mg)</td>
<td>Tanzeum</td>
<td>Weekly (any time of day</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>with food)</td>
<td></td>
</tr>
<tr>
<td>Dulaglutide (Weekly max dose 1.5mg)</td>
<td>Trulicity</td>
<td>Take once weekly</td>
<td>&gt; Should not be used with history of thyroid cancer</td>
</tr>
</tbody>
</table>

### Class – Amylin Mimetic- injectable

<table>
<thead>
<tr>
<th>Generic name</th>
<th>Brand name</th>
<th>When taken</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; Pramlintide</td>
<td>Symlin</td>
<td>Before meals with 30 grams</td>
<td>&gt; For people with type 1 or type 2 diabetes who are taking insulin.</td>
</tr>
<tr>
<td>&gt; (Maximum daily dose)</td>
<td></td>
<td>or more of carbohydrate.</td>
<td>&gt; Precautions must be taken to avoid low blood sugar.</td>
</tr>
<tr>
<td>&gt; Type 1 – 60 mcg. 3 times a day</td>
<td></td>
<td>(2 servings of carbs.)</td>
<td>&gt; Do not mix Symlin and insulin in the same syringe.</td>
</tr>
<tr>
<td>&gt; Type 2 – 120 mcg. 3 times a day</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
DIABETES MEDICATIONS

What do I take?

Why am I taking it?

How much of it do I take?

When do I take it?

What will it do for me?

What do I do if I get side effects?
**DIABETES AND INSULIN**

**Who needs to inject insulin?**
People with Type 1 Diabetes cannot make insulin. Therefore, they must take daily insulin injections to survive. Also, about 30-40% of patients with Type 2 Diabetes need to take insulin injections to keep their blood sugars in good control.

**Why is insulin taken by injection?**
Insulin cannot be taken by mouth because the stomach juices would destroy it.

**How does insulin work?**
After injection, insulin is picked up by the blood stream and carried throughout the body. It helps glucose enter body cells in order to provide energy for your body.

**How is insulin measured?**
Insulin is measured in units.

**Are there different types of insulin?**
Insulin works on different time schedules, according to the type. This makes it possible to use insulin for many different situations, schedules, and lifestyles. Insulin is classified according to how fast and how long it works.
## SUMMARY OF INSULIN TIME/ACTIONS

<table>
<thead>
<tr>
<th>Insulin type</th>
<th>When taken</th>
<th>Major effect</th>
<th>Effect shown by blood sugar</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rapid acting</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humalog (lispro)</td>
<td>Within 15 minutes of a meal</td>
<td>60-90 minutes after meal</td>
<td>2 hours after meal</td>
</tr>
<tr>
<td>Novolog (aspart)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apidra (glulisine)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Short acting</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular</td>
<td>30 minutes before meal (usually breakfast and supper)</td>
<td>Morning injection</td>
<td>Morning injection</td>
</tr>
<tr>
<td>Humulin R</td>
<td></td>
<td>&gt; Between breakfast and lunch</td>
<td>&gt; Before lunch</td>
</tr>
<tr>
<td>Novolin R</td>
<td></td>
<td>Evening injection</td>
<td>Evening injection</td>
</tr>
<tr>
<td>Afrezza</td>
<td></td>
<td>&gt; Between supper and evening snack</td>
<td>&gt; Before bedtime</td>
</tr>
<tr>
<td><strong>Intermediate acting</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPH</td>
<td>Before meal (usually breakfast and supper)</td>
<td>Morning injection</td>
<td>Morning injection</td>
</tr>
<tr>
<td>Humulin N</td>
<td></td>
<td>&gt; Between lunch and supper</td>
<td>&gt; Before supper</td>
</tr>
<tr>
<td>Novolin N</td>
<td></td>
<td>Evening injection</td>
<td>Evening injection</td>
</tr>
<tr>
<td><strong>Pre-mixed insulins</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rapid acting with intermediate:</td>
<td>Before meal (usually breakfast and supper)</td>
<td>Morning injection</td>
<td>Morning injection</td>
</tr>
<tr>
<td>&gt; Humalog mix 75/25</td>
<td></td>
<td>&gt; Between breakfast and lunch</td>
<td>&gt; Before lunch</td>
</tr>
<tr>
<td>&gt; Humalog mix 50/50</td>
<td></td>
<td>Evening injection</td>
<td>Evening injection</td>
</tr>
<tr>
<td>&gt; Novolog mix 70/30</td>
<td></td>
<td>&gt; Between supper and evening snack</td>
<td>&gt; Before bedtime</td>
</tr>
<tr>
<td>Short acting with intermediate:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Novolin 70/30</td>
<td></td>
<td>For specific guidance, talk to your educator</td>
<td></td>
</tr>
<tr>
<td>&gt; Humulin 70/30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Humulin 50/50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Long acting:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lantus (glargine)</td>
<td>AM or Bedtime</td>
<td>No peak</td>
<td>Primarily before breakfast</td>
</tr>
<tr>
<td>Levemir (detimir)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tovjeo (glargine)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tresiba (degludec)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**CARE OF INSULIN**

1. Always have an extra bottle in case you break one or lose it. Keep insulin you are not using in the refrigerator.

2. Insulin can be kept at room temperature (less than 86 F), while it is being used.

3. Always check the date on your insulin bottle. **Do not use out of date insulin.**

4. Date it when first opened and discard after 28-30 days. Levemir can be used up to 42 days. Tresiba can be used up to 56 days.

5. Regular, Humalog, Novolog, Lantus, Levemir and Tresiba insulins should be clear, like water. If they are not clear, throw it away.

6. All other insulins are cloudy, like skim milk. If cloudy insulin has clumps, doesn’t mix well, or coats the bottle, throw it away.

7. Before each use, roll cloudy insulin bottle or pen between your hands about 20 times and turn it up and down. **Do not shake it.**

8. When traveling with insulin, protect it from getting too hot or too cold. Do not pack insulin directly on ice. When traveling by plane, keep medications and prescription information with you. **Never let insulin freeze or get too hot.**

---

**Injection sites**

Insulin is always injected into fat, not muscle. Most people use the abdomen and upper part of their legs. The upper arms (fatty area) and the buttocks can also be used. Do not inject into arms or legs right before exercise because exercise will cause insulin to be absorbed more quickly.
DISPOSAL OF SYRINGES, PEN NEEDLES AND LANCETS

1. You can dispose of used syringes, pen needles and lancets in an empty, resealable container. A bleach bottle is recommended.

2. When the container is full, close securely and tape. If you live in an area that recycles, you need to write, “do not recycle” in permanent marker on the bottle. You may then place in your regular trashcan - not recyclables.

3. Do not recap, bend, or break needles. It puts you at risk for sticking yourself with the needle.

4. If desired, you may clip the needle with a B-D Safe Clip, which clips and stores more than one year’s supply of needles.

OTHER IMPORTANT INFORMATION ABOUT INSULIN

1. Do not skip meals or snacks when you are using insulin. This greatly increases the chance for low blood sugar reactions.

2. Always take your insulin, even when you are sick. If you have questions, call your doctor.

3. If you take an evening dose of NPH, 70/30 or 75/25 insulin, make sure to eat a bedtime snack.

4. If you have difficulty holding the syringe and bottle stable while drawing up insulin, or have difficulty seeing the numbers on the syringe, try a B-D Magniguide (available at your pharmacy).

5. Syringes may be pre-filled and stored in the refrigerator for 1 month. Regular and NPH insulin may be pre-mixed in a syringe and stored in the refrigerator for 1 week. If a syringe that has been stored in the refrigerator contains cloudy insulin, it needs to be rolled between the hands before injecting. Lantus should not be prefilled.

6. NPH and regular insulin, 70/30 “lin”, can be purchased without a prescription if necessary.
OTHER MEDICATIONS AND NON-PRESCRIPTION DRUGS

Because you do not need a doctor’s okay to buy over-the-counter and/or “recreational” drugs, you need to take extra precaution to ensure your safety with these items. Some of these drugs may have unexpected effects on your diabetes. If you ever have a question about a drug or medication, ask your pharmacist or doctor.

Drugs that may increase blood sugar

CORTICOSTEROIDS
Drug names: Prednisone, Kenalog, Cortisone, and others
Used to treat: Various illnesses including asthma, arthritis, multiple sclerosis, and myasthenia gravis.

DIURETICS
Drug names: Hydrochlorothiazide (Hctz), Edecrin, Lasix, chlorothiazide, indapamide
Used to treat: High blood pressure and/or congestive heart failure.

EPINEPHRINE
Drug names: Adrenaline
Used to treat: For emergencies such as a severe allergic reaction (anaphylaxis) or a severe asthma attack. Similar medications are used in decongestant cold medications and diet pills.

ESTROGENS AND BIRTH CONTROL PILLS
Drug names: Various names
Used to treat: Prevent pregnancy and menopausal effects.

THYROID MEDICATIONS
Drug names: Synthroid, Levothroid, Levoxyl
Used to treat: People who are not producing thyroid hormones or who have had their thyroid gland removed.

LITHIUM CARBONATE
Drug names: Eskalith, Lithane
Used to treat: Manic-depressive disorder.

NICOTINIC ACID
Drug names: Niacin (in large doses). This is a B vitamin.
Used to treat: High cholesterol.

PHENOBARBITAL
Drug names: Phenobarbital (only brand)
Used to treat: Epilepsy or as a sedative/sleeping pill.

PHENYTOIN
Drug names: Dilantin
Used to treat: Epilepsy or other nervous system disorders.

RIFAMPIN
Drug names: Rifampin (only dispensed)
Used to treat: Tuberculosis. This medication raises blood sugars only in people who use diabetes pills.

STATINS
Drug names: Lipitor, lovastatin, simvastatin, atorvastatin, Mevacor
Used to treat: High Cholesterol. Benefits of medications outweigh risks.
Drugs that may lower blood sugar:

**MONOAMINE OXIDASE INHIBITORS OR MAO INHIBITORS**

**Drug names:** Parnate, Nardil

**Used to treat:** Severe depression

**SULFA DRUGS**

**Drug names:** Sulfamethoxazole/Trimethoprim (SMX/TMP), Bactrum, Septra

**Used to treat:** This is an antibiotic used for infections. If taken with a Sulfonulure (Glyburide, Glipizide, Glucotrol, Glucotrol XL, or Glucovance), this medication may cause low blood sugar.

Other medications or drugs

**ALCOHOL**

Alcoholic beverages may cause different reactions in different people. A lot of this depends on the type of drink you are having as well. The main danger to people with diabetes is that it may cause a severe drop in blood sugar. This seems to be especially true with people who take either insulin or diabetes pills. Alcohol may also increase blood sugar if a large amount is used over a long period of time.

**CAFFEINE**

Usually found in soft drinks, coffee and tea, but this is also seen in “pep” pills such as Vavarin and No-Doz. Taken in large quantities they may raise your blood sugar. They may also make you feel shaky or lightheaded, as if you were having a low blood sugar. Note that caffeine also dehydrates you.

**DECONGESTANTS AND DIET PILLS**

Medications such as Co-Tylenol, Sudafed, Dexatrim, and Dietac, have epinephrine-like medications in them. (These include Ephedrine, pseudoephedrine, phenylpropanolamine, phenylephedrine, and epinephrine.) These may increase blood sugar as well as blood pressure.

**COUGH MEDICATIONS AND SORE THROAT PRODUCTS**

Products labeled “expectorants” loosen a cough. Products called “suppressants” quiet a cough. Most cough syrups, cough drops, or sore throat lozenges contain sugar. Use sugar free products containing less than 15% alcohol such as Diabetic-Tussin, Robutussin sugar-free, Halls sugar-free cough drops, or Nice cough drops.

**FEVER REDUCERS AND PAIN RELIEVERS**

**Tylenol:** For most minor aches, pains, or fever, Tylenol or acetaminophen products are safe for most people. Tylenol liquid is available sugar-free. If you have liver disease or drink more than 1-2 alcoholic drinks per day, check with your doctor to see if this medicine is right for you.

**Aspirin:** The amount of aspirin taken to relieve minor aches or pains usually will not cause any concern. However, if you are taking large doses to control chronic pain, this may cause your blood sugar to drop especially if you take diabetes pills. Never take aspirin if you have a history of stomach ulcers or if you are taking a blood thinner such as Coumadin. Ask your doctor if you should be taking a low dose (81 mg) of aspirin daily to lower your risk of a heart attack.

**Aleve, Ibuprofen, Motrin, Advil:** These medications do not generally affect your blood sugar. However, they have been associated with kidney and cardiovascular disease and because of this you should ask your doctor before taking.
To reduce your risk, manage your A, B, Cs

<table>
<thead>
<tr>
<th></th>
<th>Goal is below 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>A is for A1C</td>
<td>Goal is below 7</td>
</tr>
<tr>
<td>B is for Blood Pressure</td>
<td>Goal is below 140/90</td>
</tr>
<tr>
<td>C is for Cholesterol</td>
<td>Goal is LDL less than 70 with heart disease</td>
</tr>
<tr>
<td>D is for Diet</td>
<td>Goal is LDL less than 100 without heart disease</td>
</tr>
<tr>
<td>E is for Exercise</td>
<td></td>
</tr>
</tbody>
</table>

Cardiovascular disease

People with diabetes are twice as likely to have a heart attack or a stroke. In fact, two out of three people with diabetes will die of heart attacks or strokes. A heart attack or stroke occurs when there is a narrowing of the large blood vessels. If the blood flow to the heart is blocked, a heart attack occurs. If the blood flow to the brain is blocked, a stroke occurs. The following warning signs may occur with a heart attack or stroke:

**Warning signs of a heart attack**

- Pain or tightness in the center of the chest
- Discomfort in one or both arms
- Discomfort in the back, neck, jaw or stomach
- Shortness of breath
- Nausea, light-headedness, or breaking out into a cold sweat

**Warning signs of a stroke**

- Sudden numbness or weakness in the face, arm, or leg (especially on one side of the body)
- Sudden confusion
- Trouble speaking, understanding or walking
- Dizziness, loss of coordination or balance
**Kidney disease**

Over time, diabetes may damage the blood vessels of the kidney.

This kidney damage, called diabetic kidney disease, has no early symptoms. It happens when waste products back up in the body instead of leaving in the urine. It’s very important to treat urinary tract and kidney infections promptly. Kidney damage can be found at an early and treatable stage with a yearly urine test called microalbumin. Another blood test to check kidney function is called GFR (glomerular filtration rate). The GFR measures the amount of blood your kidneys filter per minute. Blood pressure control is also very important in preventing kidney damage. Achieving the recommended goal of less than 140/90 may mean taking more than one blood pressure medicine. ACE inhibitor therapy or Angiotensin II receptor blocker (ARB) therapy may also be used to prevent or slow kidney damage.

**Eye problems**

Damaged blood vessels in the eye (diabetic retinopathy) can bleed or become blocked and cause blindness. This often happens slowly and may have no symptoms in the early stages. If you notice any sudden changes like flashing lights, black spots, or a black or pink curtain blocking part of your vision, report it to your doctor immediately. It is very important for you to have a complete dilated eye exam every year.

**Nerve damage and sexual problems**

When blood sugar is high, nerve cells swell and scar, causing damage to the nerves, called neuropathy. The nerves can lose their ability to send signals through the body the way they should and this can lead to the symptoms listed here. If you have any of these symptoms, be sure to discuss them with your doctor.

- Numbness, tingling, pain or loss of feeling in the lower legs and feet, especially at night.
- Problems in sexual function in both men and women.
- Changes in stomach and bowel function.

**Frequent infections**

High blood sugar levels can reduce your body’s ability to fight off many kinds of infections, including the flu. Talk with your doctor about getting your flu vaccine.

**Teeth and gum disease**

Diabetes may also cause tooth and gum disease. Brushing your teeth two or three times daily, flossing daily, and a dental checkup and cleaning every six months can help prevent these problems.

Smoking increases your risk of heart attack, stroke, eye, kidney, and nerve problems.
1. **Clean**
Clean and check feet daily. Wash daily with warm (not hot) water and mild soap. Dry well, especially between the toes. Do not soak or scrub feet. Dove is an example of a good mild soap.

2. **Check**
Check all over for blisters, corns, calluses, scratches, color changes, swelling, and sores.

3. **Condition**
Use a moisturizer or cream as needed for dry skin. Choose one without perfume or alcohol. Do not put lotion or creams between your toes.

4. **Care**
> Let your doctor take care of your calluses and corns.
> Have your feet examined by your doctor a minimum of 2 times a year.
> Take your shoes and socks off at each doctor visit.

5. **Cover**
Always wear closed shoes, sneakers, or slippers to protect your feet. Make sure they fit correctly and don’t rub or scratch. Choose socks that let your feet “breathe.” Always wear clean socks with shoes. Never go barefoot.

6. **Use Caution**
> Avoid actions that restrict circulation (smoking, crossed legs).
> Avoid exposure to extreme temperatures. Protect your feet from sunburn.
> Avoid burns from hot water bottles, hot tubs, or hot swimming pool decks.
> Test water temperature with your elbow.
> Walk in good light.
> Be careful in slippery places.
> Always wear closed shoes.
> Break-in new shoes slowly.

7. **Call**
> Call your doctor with any change.
> Call your doctor if you have pain, swelling, soreness, cuts, scrapes or bruises that do not heal, or any changes in your feet.

8. **Control**
Control your blood sugars to reduce the risk of foot problems.

---

**EIGHT STEPS TO HEALTHY FEET**

Since you have diabetes you may have decreased blood flow to your feet. Diabetes can also cause damage to nerves which can lead to numbness in your feet. When your feet are numb, you may injure them without even knowing it. This can result in infections and other complications. Taking good care of your feet every day is the best way to prevent problems.
HOW TO CUT YOUR TOENAILS

1. Soften toenails in warm water before attempting to cut them. An ideal time would be after a bath or shower.
2. Use only toenail-clippers. Do not use scissors to trim toenails.
3. Take short cuts across the nail. Start at the corner, cutting the nail straight across, even with the end of the toe.
4. Do not cut into corners. This may cause an ingrown toenail and infection.
5. File any ragged edges with an emery board.
6. If you cannot cut your toenails because they are too tough or thick, ask your doctor if you should see the podiatrist or nail technician.
7. Use only a Q-Tip or washcloth to clean under the toenails.
8. If you cannot see or reach your feet, ask for help.

SKIN CARE

People who have diabetes should pay special attention to personal hygiene. High blood sugar, reduced circulation and decreased ability to feel can increase the chances of infection and cause other skin problems.

General Tips

1. Bathe daily using mild soap and warm water.
2. Use lotion to keep skin soft.
3. Attend to scratches, burns, and cuts immediately.

Treatment of Skin Injuries

1. Prompt care is essential.
2. Bathe affected area in warm water using a mild soap such as Dove.
3. Apply an antibiotic ointment and a sterile dressing or band-aid.
4. Never apply any of the following, which can be irritating to broken skin, unless told to do so by a doctor:
   > Betadine
   > Iodine
   > Alcohol
   > Mercurochrome
   > Merthiolate
5. If any signs of infection develop (swelling, discoloration, pain, or pus) or if you do not see signs of healing in 2-3 days, notify your physician immediately.
# PASSPORT TO BETTER HEALTH

Use this form as a tool to help you remember important tests and evaluations. Take it to your healthcare appointments and discuss any concerns you have.

<table>
<thead>
<tr>
<th>Test</th>
<th>How often</th>
<th>My goal</th>
<th>Date/ result</th>
<th>Date/ result</th>
<th>Date/ result</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1C</td>
<td>2 to 4 times a year</td>
<td><em>(Less than 7%)</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood Pressure</td>
<td>Each Doctor Visit</td>
<td><em>(Less than 140/90 mmHg)</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lipid Profile (Cholesterol and Triglycerides)</td>
<td>Once a Year</td>
<td>Cholesterol below 200</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>HDL more than 40-Men</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>HDL more than 50-Women</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LDL below 100</td>
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<tr>
<td></td>
<td></td>
<td>LDL below 70 if you have heart disease</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Triglycerides below 150</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kidney Function Microalbumin for Protein (Urine test for protein)</td>
<td>Once a Year</td>
<td>Less than 30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>Each doctor visit</td>
<td>My weight goal _______</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foot Exam</td>
<td>Each doctor visit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dilated Eye Exam</td>
<td>Once a year</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental Exam</td>
<td>Every 6 months</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flu Shot</td>
<td>Once a year</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumonia Shot</td>
<td>Keep up to date with your doctor</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

*2011 American Diabetes Association recommendations for adults with diabetes.*
Life with a Chronic Illness

Diabetes is a chronic illness. Chronic means it isn’t going away. Every day, every hour, and every minute you may need to react to some aspect of your diabetes care. This constant demand on your time and energy can be overwhelming for you and your loved ones. Because diabetes is a self-managed disease, the burden of care falls on your shoulders. When you add the day-to-day demands of diabetes care to the usual demands of your life, the stress can build up.

What is Stress and How Does it Affect My Diabetes?

Stress is any situation that causes your body to protect itself by going through a series of physical changes. It can be true danger (like a car swerving in front of you) or a strong emotion (like anger, frustration, or even worry). Regardless of the cause of your stress, the body reacts in the same way.

Physical Changes Can Occur with Stress.

(This reaction is called the fight or flight response.)

- Quickened heart rate to increase blood flow
- Rapid breathing to provide more oxygen
- Tense muscles to get ready for action
- Increased perspiration to prevent overheating
- Slowed digestion to allow more blood to go to the muscles
- Dilated pupils to improve vision
- Stored glucose enters the blood to provide quick energy
STRESS COMES AT YOU FROM DIFFERENT DIRECTIONS.

Physical sources
> Illness or infection
> Pain or injury
> Any poorly controlled disorder or disease
> Lack of sleep
> Smoking
> Excessive alcohol use
> Aging

Emotional sources
1. Stress can be caused by things that happen to you.
   > Call this life (mostly outside of your control).
   > This can be any situation from everyday hassles (like traffic) to devastating tragedies (like a death in the family).
   > Everyday you may find yourself dealing with challenging family issues, relationships, a job and, yes, your diabetes.

2. Stress can be increased by how you react to the things that happen to you.
   > This may be the only part of stress that you can control – how you react to any situation.
   > Improving your coping skills can decrease your stress
   > Increasing your awareness of your usual reactions is a good place to start

LEARN TO RECOGNIZE YOUR SYMPTOMS OF STRESS
To increase your awareness, check the symptoms you recognize in yourself.

<table>
<thead>
<tr>
<th>Physical symptoms</th>
<th>Physical symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; Grinding or clenching teeth</td>
<td>&gt; Stomach pain or cramping</td>
</tr>
<tr>
<td>&gt; Tension headaches</td>
<td>&gt; Dizziness</td>
</tr>
<tr>
<td>&gt; Fatigue</td>
<td>&gt; Palpitations</td>
</tr>
<tr>
<td>&gt; Chest pain</td>
<td>&gt; Nausea</td>
</tr>
<tr>
<td>&gt; Frowning, wrinkling forehead</td>
<td>&gt; Cold, clammy hands</td>
</tr>
<tr>
<td>&gt; Tightness, achy, tension</td>
<td>&gt; Rapid heartbeat</td>
</tr>
<tr>
<td>(especially neck, shoulders,</td>
<td>&gt; Hyperventilation</td>
</tr>
<tr>
<td>back, legs)</td>
<td></td>
</tr>
<tr>
<td>&gt; Increased or decreased appetite</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mental symptoms</th>
<th>Mental symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; Difficulty falling asleep</td>
<td>&gt; Poor memory</td>
</tr>
<tr>
<td>&gt; Inability to sleep</td>
<td>&gt; Lack of concern</td>
</tr>
<tr>
<td>&gt; Self doubt</td>
<td>&gt; Indecisiveness</td>
</tr>
<tr>
<td>&gt; Trouble concentrating</td>
<td>&gt; Mental confusion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emotional symptoms</th>
<th>Emotional symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; Fear, anxiety</td>
<td>&gt; Irritability</td>
</tr>
<tr>
<td>&gt; Frustration</td>
<td>&gt; Apathy</td>
</tr>
<tr>
<td>&gt; Anger</td>
<td>&gt; Loss of sense of humor</td>
</tr>
<tr>
<td>&gt; Worry</td>
<td>&gt; Nervousness</td>
</tr>
<tr>
<td>&gt; Feeling blue or depressed</td>
<td>&gt; Crying easily</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Behavioral symptoms</th>
<th>Behavioral symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; Less productive at work</td>
<td>&gt; Excessive use of alcohol or</td>
</tr>
<tr>
<td>&gt; Missed appointments or</td>
<td>tobacco</td>
</tr>
<tr>
<td>deadlines</td>
<td>&gt; Procrastination</td>
</tr>
<tr>
<td>&gt; Minor accidents</td>
<td>&gt; Withdrawal</td>
</tr>
<tr>
<td>&gt; Increased errors</td>
<td>&gt; Overeating</td>
</tr>
<tr>
<td>&gt; Restlessness</td>
<td>&gt; Working more obsessively than</td>
</tr>
<tr>
<td></td>
<td>usual</td>
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</table>
HOW STRESS AND DIABETES ARE RELATED

Direct connection
> Stress may trigger diabetes in some people, although the cause remains unclear.
> Stress causes the release of hormones that raise blood sugar.
> High amounts of anxiety and frustration about your diabetes can bring on the stress response.
> Too high or too low blood sugar is a physical stress and brings on the stress response.

Indirect connection
> A busy lifestyle may leave little time and energy for diabetes care.
> A high level of daily stress may cause diabetes care to be abandoned.
> Stressful situations may cause some to turn to unhealthy coping strategies (like food, drugs, or alcohol).
> Extreme swings in blood sugars may cause poor judgment, fatigue, and irritability thus creating stressful relationships.
> Emotional reactions to diabetes and complications, such as depression, anger, fear, or denial, may hinder diabetes control and increase stress.
SIX TIPS FOR REDUCING STRESS

Life in general
1. Step back and evaluate. Some things are beyond your control. Start with what you can fix.
2. Prevention. Learn your limits. Identify people and situations that are adding undue stress.
3. Establish priorities. Life is a balancing act. We each have only so much time and energy to balance between work, family, and self. Focus on what is important to you.
4. Think positive. Don’t waste energy on negative thoughts. You respond to what you tell yourself. Practice daily affirmations and make friends with uplifting people.
5. Communicate. Learn to express your feelings in constructive ways. Learn to listen to the feelings and suggestions expressed by others. Have an open mind.
6. Learn to laugh. Laughter is good medicine. It releases endorphins (body’s natural painkillers) and helps reverse the stress response.

Life with diabetes
1. Identify the barriers standing between you and the road to good health.
3. Life plus diabetes is a harder balancing act. Self-care will include exercise, blood testing, food planning and adequate rest. Fitting these into your busy life will require giving them a high priority.
4. Sort out your thoughts about diabetes. Identify the negative ones. Try to be realistic about your expectations of diabetes care.
5. Talk over your feelings and concerns with family, friends, or healthcare team. Attend a diabetes support group. Be open to new ideas and new treatments.
6. Being able to see humor in the frustrations associated with diabetes care, or any situation, can help relieve tension. Share stories with others and surround yourself with people who make you laugh.
DEPRESSION AND DIABETES

Depression affects about 20% of people with diabetes. It is two to three times more common in people with diabetes than in the general population. Depression makes it more difficult for people with diabetes to exercise, to eat right and to do many of the other things that are important in taking good care of their health. Recognizing and treating depression often results in better diabetes control.

**Why do people with diabetes get depressed?**

When people are told they have diabetes, it can cause many confusing feelings. They may feel sad over the loss of their health or they may worry about the problems diabetes can cause. Learning to take care of diabetes and making changes in diet and exercise can sometimes feel overwhelming. Plus, diabetes may cause changes in brain chemistry that can increase the risk of depression.

**What can you do if you think you are depressed?**

- There are many things you can do on your own to help with depression.
- Sometimes a person may need further help such as counseling or medication.

RESOURCES FOR STRESS MANAGEMENT

**Diabetes Support Groups**

Call the American Diabetes Association **1-800-343-2183** or talk to your diabetes educator.

**DLife.com**

The American Diabetes Association is committed to the care of people with diabetes and will be an important resource for you. You will find motivational resources, problem solving tips, and numerous other items of interest.

**Diabetes.org**

A web site featuring motivational and informative articles for your ‘diabetes life.’

**Cigna Behavioral Health Services**

Call **1-602-861-4731**

Consult your CIGNA Health Education brochure or local listings for classes offered through community colleges, city parks and recreation, libraries and churches. Attending a class on one or more of the following topics may help you to better manage your day-to-day stress.

- Parenting skills
- Time management
- Assertiveness training
- Tai chi or yoga
- Aerobic exercise
- Weight management
TIPS YOU CAN DO TO HELP YOURSELF

If you are feeling depressed
1. Stay active. Do something active every day, even if it is only for 10-15 minutes.
2. Have regular hours for going to bed and getting up. Even if you aren’t going anywhere, get cleaned up and dressed every day.
3. Try to get some sunlight every day.
4. Make time for activities you enjoy. Even if you don’t feel like doing it, schedule something you enjoy into your day then stick to it.
5. Spend time with supportive people. It is common to want to avoid people when you feel down, but it’s important to have the support of family and friends.
6. Break big problems into small steps. Depression can make you feel overwhelmed and low in energy. Set small goals to work on each day.

MY SELF-HELP PLAN FOR DEPRESSION
(Be sure to keep your plan easy and reasonable)

1. Stay active. (Examples: walk, dance, yoga, volunteer at the animal shelter) Every day next week I will spend ____ minutes doing ____________________.

2. Plan an activity you enjoy. (Examples: a hobby, an outing, an uplifting movie or video) Next week I will ___ (activity) on ______________________ (day/days).

3. Spend time with someone who helps you feel good about yourself, someone who makes you laugh, and someone who has a positive outlook on life. (Examples: go out for lunch, for coffee, go to a game, go to the mall go for a walk) Next week I will spend time with ____________ doing/talking about ________________________________________________________.

4. Break big problems into small steps. Problems I want to work on this week:
   Step 1.__________________________________________________________
   Step 2.__________________________________________________________
   Step 3.__________________________________________________________
DEPRESSION AND DIABETES

Symptoms of depression

☐ Persistent sad, anxious, or “empty” mood
☐ Feelings of hopelessness, pessimism
☐ Feelings of guilt, worthlessness, helplessness
☐ Loss of interest or pleasure in hobbies and activities that were once enjoyed, including sex
☐ Decreased energy, fatigue, being “slowed down”
☐ Difficulty concentrating, remembering, making decisions
☐ Insomnia, early-morning awakening, or oversleeping
☐ Appetite and/or weight changes
☐ Thoughts of death or suicide or suicide attempts
☐ Restlessness, irritability

If five or more of these symptoms are present every day for at least two weeks and interfere with routine daily activities such as work, self-care, childcare or social life, seek an evaluation for depression.

This checklist is from the National Institute of Mental Health, Depression and Diabetes Fact Sheet, 2002. For more information visit the National Institute of Mental Health web site. Nimh.nih.gov

It may help you to discuss depression with your doctor if you take the above check list with you to your next appointment so you can talk about the things you have checked.

These organizations and web sites are provided for your education and information and should not be considered an endorsement by Cigna-HealthSpring. Always clarify any information you receive about diabetes education with your physician.

ADDITIONAL COMMUNITY RESOURCES

Financial assistance

> Premium Medication Assistance (Financial Assistance Screening): 1-877-236-4471

Many financial assistance programs are available to qualifying patients. Please discuss this with your diabetes educator, your case manager, the center care coordinators, or your physician.

> Social Security Administration: (at various locations): 1-800-772-1213
## BLOOD SUGAR READINGS
### NON-INSULIN USERS

<table>
<thead>
<tr>
<th>Date</th>
<th>Breakfast</th>
<th>Lunch</th>
<th>Dinner</th>
<th>Bedtime</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before 2 hours after</td>
<td>Before 2 hours after</td>
<td>Before 2 hours after</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### American Diabetes Association Recommended Diabetes Control

- Pre-meal blood sugar: 80-130
- 2 hours after eating: Less than 180

[Diabetes.org](https://www.diabetes.org)
ACTION PLAN WORKSHEET

When writing an action plan, make sure it includes:

1. What you are going to do.
2. How much you are going to do.
3. When you are going to do it.
4. How many days a week (how often) you are going to do it.

Example:

This week I will:

1. Test my blood sugar (what)
2. Twice a day (how much)
3. Before and again two hours after breakfast (when)
4. Three days during the week (how many)

This week I will________________________(what)
________________________(how much)
________________________(when)
________________________(how often)

Rate your confidence level

0 1 2 3 4 5 6 7 8 9 10

Not confident------------------------------------------------------------------------------------------------Very confident

Day of the week   Comments:

☐ Monday
☐ Tuesday
☐ Wednesday
☐ Thursday
☐ Friday
☐ Saturday
☐ Sunday

Check off if completed