Basics of Diabetes
Scripps Whittier Diabetes Institute provides a complete set of diabetes services for Scripps Health. You – our patient – are front and center. Since our founding in 1981, we have helped patients and their families with the prevention, care and treatment of diabetes. Diabetes can be a serious disease, but you can control it by taking care of yourself and preventing some of the problems diabetes can cause.

You have taken your first step toward living a healthy life with prediabetes or diabetes by coming to Scripps, and we are here to help you. We prepared this guide with you in mind to provide information and answer any questions you may have. In these pages, you will find the tools you need for complete care of your condition, from monitoring your blood sugar level to making lifestyle changes.

If you need more answers, you will find experts in diabetes care and education at our five Scripps hospital campuses and more than 30 outpatient sites. We also offer numerous free support groups at a location in your neighborhood. Day in and day out, everyone at Scripps is dedicated to helping you make important decisions about your health.

Pioneering research by Scripps Whittier Diabetes Institute and experts around the world has led to many new discoveries about the disease and how to manage diabetes. Living with diabetes is still a challenge, but what has been learned offers hope to people living with the disease.

There is a lot of information to learn, but we are here for you as you embark on a journey to health and wellness. We hope this book will help you achieve a high quality of life with diabetes.

Sincerely,

Athena Philis-Tsimikas, MD
Corporate Vice President, Scripps Whittier Diabetes Institute
Services at Scripps Whittier Diabetes Institute

Scripps Whittier Diabetes Institute offers a wide range of diabetes services, from inpatient to wellness programs. As more and more is understood about diabetes it can be challenging to sift through all of the available and new information. Scripps Whittier Diabetes Institute has a dedicated staff of physicians, dietitians, nurses and support staff to help.

Patient Education Programs
Scripps provides patient education programs – recognized by the American Diabetes Association – at locations throughout San Diego County, from Chula Vista to Oceanside. Health care teams provide information and tools for individuals to manage their diabetes and make the best day-to-day decisions about their health and well-being. Options vary, from individual consultations and training to group classes.

Individual Consultations
Appointments are available for individuals with diabetes and gestational diabetes. Certified diabetes educators will go over all aspects of patient care, from how to monitor blood glucose levels at home to heart risk factors and other complications that diabetes may cause.

Group Classes
Group classes are available for those with type 1 and type 2 diabetes. Nurses, dietitians and diabetes health care providers share their expertise on managing diabetes. Individual questions are addressed in an open discussion format.

Insulin Training and Continuous Glucose Monitoring
Individualized training for optimizing insulin management and continuous glucose monitoring is provided by certified diabetes educators.

Diet and Nutrition
A healthy diet plays an important role in managing diabetes. Scripps Whittier offers nutritional counseling by registered dieticians. A variety of medical nutrition therapy services are offered, including meal planning and exercise strategies.
Hospital Diabetes Services
If you are hospitalized at a Scripps facility and diagnosed with diabetes, Scripps Whittier Diabetes Institute is there to help. We provide diabetes education to assist patients diagnosed with diabetes and help them manage and monitor their diabetes. Expert nurses are available to assist with optimizing blood sugar values during the hospitalization.

Support Groups
Monthly free support groups are ongoing to help you stay on track and live well with diabetes. For more information about patient education programs, call 858-626-5672.

Clinical Research
Clinical research offers people living with diabetes the opportunity to try new therapies and resources for treatment through clinical trials. Scripps Whittier Diabetes Institute participates in nearly 15 clinical research trials each year.

For example, the STAR 3 clinical trial studied the effectiveness of an integrated glucose management system that combined an insulin pump, continuous glucose monitoring and therapy management software. It was the only integrated system to receive FDA approval.

For more information on current clinical trials, call 858-626-5678 or visit scripps.org/services/diabetes/clinical-trials.

Community Programs and Support
Scripps Whittier Diabetes Institute is dedicated to caring for and educating people with diabetes through diabetes management and support programs throughout the San Diego community. For more than 15 years, Project Dulce, a nationally recognized program, has been highlighted as one of the most effective approaches to addressing diabetes to low-income and diverse populations. Project Dulce provides diabetes care at community health centers, community clinics, churches, senior housing facilities and other community locations. With innovative programs like Project Dulce, Scripps Whittier Diabetes Institute provides expertise in community-based diabetes education and health care delivery, while pioneering new approaches to diabetes care and management with the most vulnerable populations.

For more information on Project Dulce, call 1-866-791-8154.
Scripps Diabetes Resources
Scripps Whittier Diabetes Institute Program Locations

Call 1-877-944-8843 or visit scripps.org for more information.
Locations current as of 7/31/13
How Do I Know I Have Diabetes?

Monitoring your blood sugar is essential to staying healthy with diabetes. This section will highlight the symptoms of both high and low blood sugar. You will read about how to check your blood sugar and understand the results.
Living with Diabetes

What is Diabetes?
Diabetes is a lifelong disease. It affects how your blood sugar level is controlled in your body. If your blood sugar stays too high it can affect your health. Eat healthy foods, exercise and take your medications to help your blood sugar level stay healthy. Walking, swimming, strength training and riding a bike are examples of exercise.

How Do I Know I Have Diabetes?

<table>
<thead>
<tr>
<th>Blood Test</th>
<th>Without Diabetes</th>
<th>With Prediabetes (increased risk)</th>
<th>With Diabetes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fasting Blood Sugar</td>
<td>Below 100mg/dl</td>
<td>100-125mg/dl</td>
<td>126mg/dl or above</td>
</tr>
<tr>
<td>Random Blood Sugar</td>
<td>Below 140mg/dl</td>
<td>140-199mg/dl</td>
<td>200mg/dl or above</td>
</tr>
<tr>
<td>A1c</td>
<td>Below 5.7 percent</td>
<td>5.7 to 6.4 percent</td>
<td>6.5 percent or above</td>
</tr>
</tbody>
</table>
Types of Diabetes

Type 1

<table>
<thead>
<tr>
<th>Who?</th>
<th>Why?</th>
<th>Treatment</th>
<th>Precautions</th>
</tr>
</thead>
</table>
| • Children or young people, but it can occur at any age  
• Family history of diabetes  
• Family history of autoimmune diseases like lupus, celiac disease or rheumatoid arthritis | The pancreas, which makes insulin, stops making any insulin. Insulin helps to control the blood sugar levels. | • Healthy eating  
• Exercise  
• Medication: insulin | • Your body needs insulin all the time. You must take insulin every day.  
• Anyone taking insulin has a chance of getting low blood sugar (hypoglycemia).  
• If you are thinking of becoming pregnant, you should have a diabetes checkup. High blood sugars may hurt the baby. |

Type 2

<table>
<thead>
<tr>
<th>Who?</th>
<th>Why?</th>
<th>Treatment</th>
<th>Precautions</th>
</tr>
</thead>
</table>
| • Adults, but it can occur in children who weigh too much  
• Family history of diabetes | • Some organs in the body do not work right.  
• Your pancreas may not make enough insulin.  
• Your body may not use your insulin correctly (insulin resistance).  
• Your liver, which is like a “gas tank for sugar,” leaks sugar. | • Healthy eating  
• Exercise  
• Medication  
• Pills  
• Insulin  
• Other injectable diabetes medications | • Talk with your doctor before you stop taking any medication.  
• Some medications may cause your blood sugar to go too low.  
• If you are thinking of becoming pregnant, you should have a diabetes checkup. |
## Types of Diabetes

### Gestational Diabetes

<table>
<thead>
<tr>
<th>Who?</th>
<th>Why?</th>
<th>Treatment</th>
<th>Precautions</th>
</tr>
</thead>
</table>
| Women who have high blood sugar in the last few months of pregnancy and have a family history of type 2 diabetes | Pregnancy hormones increase insulin resistance and block your own insulin from working well. | • Healthy eating  
• Exercise  
• Medications | • Go to all of your doctor visits during and after pregnancy.  
• Six weeks after you have your baby, ask your doctor to check your blood sugar (two-hour glucose tolerance test).  
• You have a high chance of getting type 2 diabetes in the future, so make sure to have a yearly blood sugar check.  
• Before you become pregnant again, see your doctor to have your blood sugar checked.  
• High blood sugar may hurt the baby. |

### Prediabetes

<table>
<thead>
<tr>
<th>Who?</th>
<th>Why?</th>
<th>Treatment</th>
<th>Precautions</th>
</tr>
</thead>
</table>
| • Inactive adults  
• Overweight adults  
• Family history of diabetes | • The insulin in your body does not work the right way (insulin resistance).  
• Your blood sugar starts to go higher than normal, but not high enough to be called diabetes. | • Healthy eating  
• Exercise  
• Medication | • Prediabetes can turn into diabetes.  
• If you are thinking of becoming pregnant, you should have a diabetes checkup.  
• High blood sugar may hurt the baby. |
Testing Your Blood Sugar

Why should I test my blood sugar?
- To know if your blood sugar is too high or too low.
- So your doctor will be able to help control your diabetes. Bring your logbook or meter to every appointment.

When to test your blood sugar:
- **If you are not on insulin:** Test blood sugar before and two hours after the start of a meal. You should alternate testing between meals. *Example:* Test blood sugar before and two hours after the first bite of breakfast on Monday, before and two hours after the first bite of lunch on Tuesday, before and two hours after the first bite of dinner on Wednesday, etc.
- **If you are on insulin:** Test blood sugar before each meal and at bedtime.

Your individualized testing schedule: ____________________________________________________________________________

### NOT ON INSULIN

<table>
<thead>
<tr>
<th></th>
<th>BREAKFAST</th>
<th>LUNCH</th>
<th>DINNER</th>
<th>BEDTIME</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before</td>
<td>After</td>
<td>Before</td>
<td>After</td>
</tr>
<tr>
<td>Day 1</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Day 2</td>
<td></td>
<td></td>
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<tr>
<td>Day 3</td>
<td></td>
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</tbody>
</table>

### ON INSULIN

<table>
<thead>
<tr>
<th></th>
<th>BREAKFAST</th>
<th>LUNCH</th>
<th>DINNER</th>
<th>BEDTIME</th>
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<tr>
<td></td>
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</tr>
<tr>
<td>Day 1</td>
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<td>Day 2</td>
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<tr>
<td>Day 3</td>
<td></td>
<td></td>
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</tbody>
</table>
What do My Numbers Mean?

Blood Sugar (glucose)

Normally, blood glucose levels will vary throughout the day from 80 to 180 mg/dl. Blood glucose rises following meals and then returns to premeal levels about three hours after the meal.

To prevent high blood glucose following meals, people with diabetes should:

- Eat well-balanced meals.
- Get regular exercise.
- Take medication on time.
- Maintain a reasonable weight.

Blood Sugar Levels

*American Diabetes Association Target Ranges as follows:*

- Before Meals 80 to less than 130
- After Meals Less than 180
- Bedtime 100 to 140

Blood sugar targets vary for many reasons, so check with your healthcare provider for your specific goals.

*My Blood Sugar target range is:* ___________________________
Hemoglobin A1c

The Hemoglobin A1c blood sugar test indicates how well diabetes has been controlled over the past two to three months. This test is done with your lab work.

What the Numbers Mean

<table>
<thead>
<tr>
<th>A1c (in percentages)</th>
<th>4.5-6.0</th>
<th>5.7-6.4 (prediabetes)</th>
<th>6.5</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Blood Sugar</td>
<td>68-116</td>
<td>117-137</td>
<td>140</td>
<td>154</td>
<td>183</td>
<td>212</td>
<td>240</td>
<td>269</td>
<td>298</td>
</tr>
</tbody>
</table>

The American Diabetes Association (ADA) recommends an A1c of less than 7 percent. Your doctor may have a different goal for you.

My A1c ___________________________ on (date) ___________________________
Symptoms of High Blood Sugar (hyperglycemia)

**Causes:** Too much food, not enough medication, illness, surgery, stress, pain, infection or steroids  
**Onset:** Gradual. May progress to diabetic coma.  
**Blood Sugar:** Above 180 mg/dl

**Symptoms**

- Nausea
- Drowsiness
- Blurred Vision
- Dry Skin
- Hunger
- Extreme Thirst
- Frequent Urination

**Recommended Action**

- Check your blood sugar.  
- If your blood sugar is above 250 mg/dl for two days, call your doctor.
Symptoms of Low Blood Sugar (hypoglycemia)

**Causes:** Too little food, more than five hours from last meal, too much insulin or diabetes medicine, too much physical activity or alcohol

**Onset:** Sudden. May pass out if untreated.

**Blood sugar:** Below 70 mg/dl

**Symptoms**
- Shaking
- Sweating
- Rapid Heartbeat
- Headache
- Hunger
- Weakness, Fatigue
- Impaired Vision
- Anxious
- Irritable
- Dizziness

**Recommended Action**
- Check your blood sugar.
- If it is below 70 drink one-half to one cup juice, skim milk or regular soda, or chew five to six hard candies or four glucose tablets, or swallow one tube of glucose gel.
- Check your blood sugar in 15 minutes. If still below 70, take more sugar. If symptoms don’t stop, call your doctor.
- Eat a snack or meal within 30 minutes.

⚠️ If you have two lows on the same day or three lows in one week, call your doctor.
How to Check Your Blood Sugar

To test your blood sugar...

START

Wash your hands with soap and water.

Make sure your fingers are very dry.

Are your hands cold?

NO

Prick the side of your finger (it is not as tender as the tip). You can use any finger.

Squeeze out a big, fat hanging drop of blood.

Place hands under warm, running water and rub your fingers, or shake them while hanging your hands at your side.

Follow the directions for your method of testing EXACTLY.

Write your blood sugar on your record sheet.

HOORAY!!
You did it!
Safe Options for Sharps Disposal

Protect Yourself, Protect Others

Sharps are syringes, needles and lancets. They must be disposed of properly to prevent injury to people and the spread of germs.

Contact the County of San Diego Household Hazardous Waste at 1-877-713-2784 for information for disposal locations in your area.

Sharps should not be:
- Thrown in the garbage
- Flushed down the toilet
- Placed in recycling containers
- Brought to the hospital

Put sharps waste in its place.
- Sharps should be placed in a hard plastic or metal container with a tight cap or lid.
- Ask your local pharmacy if they take back used sharps.
- Take your used sharps to drop-off collection sites.
- Consider using a “mail back” service (fees apply).

For more information, visit: http://safeneedledisposal.org/ or http://www.sandiego.gov/environmental-services/ep/hazardous/medsharpsdisposal.shtml

Look in the government section of your local white pages for a household hazardous waste listing for your city or county.
Healthy Eating Guidelines

Your body needs a variety of nutrients to stay healthy. The major nutrients are protein, fat and carbohydrates. All have important roles in the body.
Healthy Eating

Carbohydrates provide much-needed fuel and energy. They are broken down into glucose to provide this energy. Even though carbohydrates raise blood glucose, it is best to have some in every meal. When planning meals, a balance of foods containing protein, fats and carbohydrates is best.

Food is not only a source of fuel and nourishment, food is also a source of pleasure. Having diabetes does not mean you have to eat special foods or never have dessert. Meal planning for diabetes includes the same guidelines used by anyone who wants to stay healthy.

Make Your Plate Look Like This!

**Carbohydrates**
Fruit, milk, plain or light yogurt, pasta/noodles, corn, peas/lentils, sweet potato, waffles/pancakes, sweets, lima beans, kidney beans, soy beans, potatoes, rice, couscous, whole grain bread, tortillas, pita bread, English muffins, bagels, winter squash, crackers, hamburger buns, hot dog buns

**Protein**
Chicken, turkey, fish, lean beef, lean pork, lean lamb, veal, low-fat cheese, egg/egg substitute, peanut butter, tofu, edamame

**Vegetables**
Artichokes, asparagus, bean sprouts, beets, broccoli, brussel sprouts, cabbage, carrots, cauliflower, eggplant, greens, green beans, okra, onions, parsnips, pea pods, peppers, spinach, summer squash, tomatoes, water chestnuts, zucchini (Celery, cucumbers, green onions, mushrooms, radishes and salad greens can be eaten in unlimited quantities.)

Weight Control
For weight control, fats should be used sparingly (e.g., salad dressings, avocado, seeds, nuts, butter, pesto, sour cream, cream cheese).
Below are some important facts about carbohydrates (carbs).

- Carbs raise your blood sugar.
- It is still important to eat some carbs at every meal.
- Carb foods such as grains, fruit and milk are healthy.
- Eating the right amount of carbs will help keep your blood sugar from going too high.

A carb serving is an amount of food that has 15 grams of carbohydrate.

(One carb serving = 15 grams carbohydrate)

How Many Carb Servings Can I Eat?

Answer: The number of carbohydrate servings you need is based on your body size, age and weight-loss goals.

- Most women need about 3 to 4 carb servings (45–60 grams) at each meal.
- Most men need 4 to 5 carb servings (60–75 grams) at each meal.
- If you eat snacks, choose 1 to 2 carb servings (15–30 grams).
What is a Carb Serving?

Use this chart to look up serving sizes of many common foods. Some foods, such as fresh fruit, don’t have labels. Also, when you eat away from home, food may be removed from its packaging. **Remember: One carb serving = 15 grams of carbohydrate**

### FRUIT

<table>
<thead>
<tr>
<th>Fruit</th>
<th>Serving Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple</td>
<td>1 small, 4 oz.</td>
</tr>
<tr>
<td>Apricots</td>
<td>4 fresh</td>
</tr>
<tr>
<td>Applesauce unsweetened</td>
<td>½ cup</td>
</tr>
<tr>
<td>Banana</td>
<td>1 small, 4 oz., or ½ large</td>
</tr>
<tr>
<td>Berries</td>
<td>1 cup</td>
</tr>
<tr>
<td>Cantaloupe</td>
<td>1/3 small</td>
</tr>
<tr>
<td>Canned fruit in own juice drained</td>
<td>½ cup</td>
</tr>
<tr>
<td>Dried Fruit</td>
<td>(check label)</td>
</tr>
<tr>
<td>Figs, fresh</td>
<td>2 medium</td>
</tr>
<tr>
<td>Grapefruit</td>
<td>½ large</td>
</tr>
<tr>
<td>Grapes or Cherries</td>
<td>6-10 large or 12-18 small</td>
</tr>
<tr>
<td>Juice</td>
<td>(100% fruit, check label)</td>
</tr>
</tbody>
</table>

*Kiwi*                          | 1 large             |
*Mango*                         | ½ large or ½ cup    |
*Melon*                         | 1 cup               |
*Mixed fresh fruit*             | 1 cup               |
*Nectarine*                     | 1 medium            |
*Orange*                        | 1 small, 6 ½ oz.    |
*Papaya cubes*                  | 1 cup               |
*Peach*                         | 1 medium            |
*Pear*                          | ½ large             |
*Pineapple, fresh*             | ¾ cup               |
*Pineapple, canned*            | ½ cup               |
*Plums*                         | 2 small             |
*Prunes dried*                 | 3                   |
*Raisins*                      | 2 Tbsp.             |
*Tangerine*                    | 2 small             |

### STARCHES/BREAD

<table>
<thead>
<tr>
<th>Starch</th>
<th>Serving Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bagel (check label)</td>
<td>¼ of lg., ½ med</td>
</tr>
<tr>
<td>Barley</td>
<td>½ cup</td>
</tr>
<tr>
<td>Beans, peas, lentils, corn</td>
<td>½ cup</td>
</tr>
<tr>
<td>(cooked)</td>
<td></td>
</tr>
<tr>
<td>Biscuit*</td>
<td>2½” dia.</td>
</tr>
<tr>
<td>Bread (check label)</td>
<td>1 oz. slice</td>
</tr>
<tr>
<td>Bun, hot dog or hamburger</td>
<td>½ (1 oz.)</td>
</tr>
<tr>
<td>Cereal, cold flaked or</td>
<td></td>
</tr>
<tr>
<td>Cereal, cooked (check label)</td>
<td>½ cup</td>
</tr>
<tr>
<td>Couscous</td>
<td>½ cup</td>
</tr>
<tr>
<td>Crackers</td>
<td>4-5</td>
</tr>
<tr>
<td>English muffin</td>
<td>½</td>
</tr>
<tr>
<td>Graham crackers</td>
<td>3 squares</td>
</tr>
<tr>
<td>Melba toast</td>
<td>5 slices</td>
</tr>
</tbody>
</table>

*Pancake*                  | 1, 4” across         |
*Pasta, cooked*            | ½ cup                |
*Pita bread*               | ½, 6” across         |
*Popcorn, no added fat*    | 3 cups               |
*Potato, 1 small*          | 3 oz.                |
*Potato, mashed*           | ½ cup                |
* Pretzels*                | ¾ oz.                |
*Rice, brown, wild or white (cooked)* | ½ cup |
*Squash (winter)*          | 1 cup                |
*Sweet potato or yam*      | ½ cup                |
*Tortilla*                 | 6” across            |
*Waffle*                   | 4” square            |
*Whole grain bread (check label)* | 1 slice (1 oz.) |

*Includes 1 fat serving*
What is a Carb Serving?

Use this chart to look up serving sizes of many common foods. Some foods, such as fresh fruit, don’t have labels. Also, when you eat away from home, food may be removed from its packaging. **Remember:** One carb serving = 15 grams of carbohydrate

<table>
<thead>
<tr>
<th>MILK PRODUCTS</th>
<th>OTHER CARBOHYDRATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buttermilk, low fat or nonfat.................. 1 cup</td>
<td>Sugar, honey, syrup.......................... 1 Tbsp.</td>
</tr>
<tr>
<td>Evaporated or skim milk.......................... ½ cup</td>
<td>Ice cream, light or no sugar added......... ½ cup</td>
</tr>
<tr>
<td>Nonfat yogurt, plain or light.................. 6 oz. (cup)</td>
<td>Pudding, sugar-free......................... ½ cup</td>
</tr>
<tr>
<td>Nonfat milk.................................... 1 cup</td>
<td>Soup, cream type.............................. 1 cup</td>
</tr>
<tr>
<td>1% Milk Soy milk, low fat or fat free.......... 1 cup</td>
<td></td>
</tr>
</tbody>
</table>

1 cup = 8 oz.
### Examples of 3- to 5-Carb Servings per Meal

#### 3-CARB-SERVING MEALS

- 1 whole wheat English muffin = 2 carb servings (serv.)
- 1 cup cubed cantaloupe = 1 carb serv.
- 1 ½ cups Cherrios = 2 carb serv.
- 8 ounces 1% milk = 1 carb serv.
- Meat sandwich: 2 slices whole wheat bread = 2 carb serv. (lean meat, mayo, mustard, lettuce)
  - 1 small apple = 1 carb serv.

- 2 cups bean (lentil, pinto) soup = 2 carb serv.
- 6 triscuits/saltines = 1 carb serv.
- Chicken/fish 3 oz.
  - 1 cup rice (brown better) = 3 carb serv.
  - 1 cup cooked broccoli

#### 4-CARB-SERVING MEALS

- 1 whole grain English muffin = 2 carb serv.
- ½ medium banana = 1 carb serv.
- 1 cup (8 oz.) fat free/1% milk = 1 carb serv.

- 6” Subway sandwich = 3 carb serv.
  - 1 (4 oz.) apple = 1 carb serv.

- 2 Vans/Eggo Toaster waffles = 2 carb serv.
  - 1 ¼ cup strawberries = 1 carb serv.
  - 8 ounces 1% milk = 1 carb serv.

- 1 cup Kashi Go Lean Crunch = 2 carb serv.
  - ¼ cup blueberries = 1 carb serv.
  - 8 ounces 1% milk = 1 carb serv.

- 2 chicken tacos (2 tortillas) = 2 carb serv.
  - ½ cup refried beans = 1 carb serv.
  - ½ cup rice = 1 carb serv.

- 3 oz. sirloin steak
  - ½ large baked potato = 2 carb serv.
  - 1 cup green beans
  - 1 small (1 oz.) dinner roll = 1 carb serv.
  - 8 oz. 1% milk = 1 carb serv.

#### 5-CARB-SERVING MEALS

- 2-egg veggie omelet
- 2 slices of toast = 2 carb serv.
- 1 Tablespoon regular jam = 1 carb serv.
- 1 teaspoon butter
- 1 medium banana = 2 carb serv.

- 3 slices of medium pizza Pizza Hut, Thin & Crispy Pizza = 5 carb serv.
- Tossed salad w/ light dressing

- 3-4 ounces fish
  - ½ cup corn = 1 carb serv.
  - ½ cup peas = 1 carb serv.
  - 1 cup cooked zucchini
  - ½ cup canned fruit drained = 1 carb serv.
  - 8 oz. 1% milk = 1 carb serv.
  - 1 piece cake, 2 in. square, no icing = 1 carb serv.

- 2 cups lasagna = 4 carb serv.
- 1 (1 oz.) garlic bread = 1 carb serv.
- Salad with light salad dressing
Estimating Portion Sizes

Fist = 1 cup
Example: three servings of pasta or two servings oatmeal
(one cup pasta = three servings)

Palm or deck of cards = 3 oz.
Example: a cooked serving of meat

Thumb Tip = 1 teaspoon
Example: a serving of mayonnaise or margarine

Handful = 1 or 2 oz. snack food
Example: One ounce nuts= one handful
Two ounces pretzels = two handfuls

Thumb = 1 oz.
Example: a piece of cheese

Carbs on a Food Label

Nutrition Facts
Serving Size 1 cup (8 oz)
Servings per container 3

Amount Per Serving
Calories 163 Calories from fat 27 % Daily Value
Total Fat 3 g 4%
Saturated Fat 0 g 0%
Cholesterol 10 mg 3%
Sodium 300mg 12%
Total Carbohydrates 32 g 10%
Dietary Fiber 5 g 20%
Sugars 3 g
Protein 2 g

Step 1
Look at the serving size.

Step 2
Look at the total grams (g) of carbohydrate only. Sugars are already counted in the total carbohydrate.

Step 3
Use scale below to know how many carb servings you’re eating.

| Close to 15g | 1 carb serving |
| Close to 30g | 2 carb servings |
| Close to 45g | 3 carb servings |
| Close to 60g | 4 carb servings |
| Close to 75g | 5 carb servings |
What About Sugar?

Sugars are found naturally in many foods. Sugar, honey, fructose, dextrose, molasses and corn syrup are examples. They are not healthier for you because they are “natural.”

Sugar alcohols are sorbitol, mannitol, maltitol and xylitol. They are used in many foods advertised as sugar-free or no-sugar-added. These sugar alcohols digest more slowly, but can still raise your blood sugar levels. When used in excess, they can cause gas, cramps, bloating and/or diarrhea.

Artificial sweeteners are Equal and NutraSweet (aspartame), Splenda (sucralose), Sweet’N Low (saccharin) and Truvia (stevia). They are found in products such as diet soda. These products do not affect your blood sugar.

**Important: Do not assume that sugar-free or fat-free foods are carbohydrate-free.**
Preventing heart disease and stroke in people with diabetes is crucial. If you have diabetes or prediabetes, you are at much higher risk of having heart disease or stroke.

Fats
Our bodies do need some fat and cholesterol, but too much can clog your arteries. To help control cholesterol levels, it is important to decrease the amount of total fat and saturated fat in the foods that you eat. Choose unsaturated fats as healthier choices. See next page for types of healthy and unhealthy fats.

Tips to decrease fat in your daily diet:
• Bake, broil, grill or steam instead of frying foods.
• Choose fruits, vegetables, whole grains and fat-free or low-fat dairy products.
• Cook with olive oil and margarine instead of butter.
• Limit store-bought or ready-made baked goods.
• Remove skin from poultry.
• Purchase lean-cut meats and trim off visible fat.

Salt
The body needs sodium (salt) to work right, but too much sodium can cause high blood pressure, fluid retention and weight gain.

Tips to decrease salt in your daily diet:
• Eat plenty of fresh fruits and vegetables.
• Use salt-free herbs and spices instead of adding extra salt to your food.
• Avoid fast food.
• Eat fewer processed foods. Examples: soups, lunch meats, frozen meals and instant mashed potatoes

Other ways to keep your heart healthy:
• Be more active.
• Move toward a healthy weight.
• Limit alcohol.
# Types of Fat

## Unsaturated Fats
*(choose more often)*

Typically liquid at room temperature

### Monounsaturated

- Olives/Olive oil
- Canola oil
- Peanuts/Peanut oil/Peanut butter
- Avocados/Avocado oil
- Nuts and oil from nuts

### Polyunsaturated

- Safflower oil
- Soybean oil
- Corn oil
- Sunflower oil
- Sesame oil
- Fish/Fish oil
- Walnut/Walnut oil
- Seeds

## Saturated Fats
*(choose less often)*

Typically solid at room temperature

- Meat
- Cheese/Cream cheese
- Egg yolk
- Whole and 2% Milk
- Ice Cream
- Cream/Sour cream
- Coconut oil
- Palm/Palm kernel oil
- Butter
- Organ meats
- Bacon
- Poultry with skin

## Trans Fat

Hydrogenated vegetable oil
Stick margarine
Alcohol and Diabetes

Caution:
• Be aware that alcohol can cause hypoglycemia (low blood sugar).
• If you choose to drink, be sure you eat.
• Do not drink on an empty stomach.
• Alcohol adds calories.

Tips:
• Avoid sweet wines, liqueurs and sweetened mixed drinks because of high sugar content.
• Acceptable mixers are diet carbonated beverages, club soda, mineral water or diet tonic.

Check with your doctor prior to drinking alcohol.
Diabetes and Exercise

Exercise is one of the best ways to manage your diabetes. Exercise will help you improve your blood sugar control, boost overall fitness and reduce your risk of developing complications from your diabetes, such as heart disease and nerve damage.
Why Should I Exercise?
• Exercise will help lower my blood sugar, blood pressure and cholesterol.
• Exercise will make me feel better.
• Exercise will help me sleep better.
• Exercise will help my heart and body.

What Can I Do?

Walk  Bike  Chair Exercises  Dance  Other _______

Talk with your doctor to see if it is OK for you to begin to exercise.

• Check your blood sugar before and after exercise.
• Your blood sugar may go too low if you have not eaten for a while.
• Carry something that has sugar in it, like glucose tablets or hard candies, in case your blood sugar goes low.
• Warm up before you exercise and cool down after you exercise.
• Work up to 30 minutes of exercise every day.
• Carry identification that says you have diabetes.
• Do not exercise if you are sick or not feeling well.
• Exercise indoors if it is very hot or cold outside.
• Wear comfortable shoes and clothes.
• Drink plenty of water.
Arm Circles: Sit up straight in a chair. Keep your feet flat on the floor. Tuck in your tummy. Extend arms out to the sides at shoulder level. Make sure the elbows are straight. Circle the arms to the front 4 times.

Hand Reaches: Sit in a chair. Place both hands on your shoulders. Extend your arm and reach toward the ceiling with your right hand. Return your right hand to your shoulder and repeat with your left hand. Gradually build up to 8 repetitions with each hand.

Lateral Stretch: Sit in a chair. Lift your right arm over your head and lean to the left. At the same time, make a C shape with your left arm (as if you were holding a baby). Gently stretch to the left. Change sides and repeat the exercise. Slowly build up to 8 repetitions on each side.

Marching in Place: Sit in a chair. Lift your left knee so that the foot is 6 inches off the floor. Lower your left knee. Lift your right knee so that the foot is 6 inches off the floor. Continue marching, lifting knees up and down.

Ankle Circles: Sit in a chair. Extend the right foot out in front. Circle the right ankle in 4 times. Circle the right ankle out 4 times. Repeat with the left foot.

Knee Pull: Sit in a chair. Pull your right knee into your chest. Hold the knee in for 4 seconds. Lower the leg. Repeat with the other knee.
To Be Successful in an Exercise Plan:

1. Team up
2. Commit to it
3. Schedule it

Exercise Philosophy:
More is better. Any is better than none. You don’t have to do it all at once. You don’t have to exhaust yourself. Everyone can find some exercise that’ll benefit them.
Healthy lifestyle choices, including diet and exercise, are the keys to managing diabetes. You also may need medications to help you maintain blood sugar levels. Sometimes, one medication is enough. In other cases, a combination of medications works better.
Learning About Diabetes Medications

It is important for you to know the name and dosage of the medication you are taking. You should not increase, skip or change your dosage unless you are told to do so by your physician.

## Pills

<table>
<thead>
<tr>
<th>Classification</th>
<th>Generic Name</th>
<th>Brand Name</th>
<th>How it works</th>
<th>My Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sulfonylureas</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tolazamide</td>
<td>Tolinase</td>
<td></td>
<td>Helps your pancreas make more insulin.</td>
<td></td>
</tr>
<tr>
<td>Tolbutamide</td>
<td>Orinase</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chlorpropamide</td>
<td>Diabinese</td>
<td></td>
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</tr>
<tr>
<td>Glyburide</td>
<td>Diabeta</td>
<td>Micronase</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Glynase PresTab</td>
<td></td>
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<tr>
<td>Glipizide</td>
<td>Glucotrol</td>
<td>Glucotrol XL</td>
<td></td>
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<tr>
<td>Glimepiride</td>
<td>Amaryl</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Important: Take with food/meals to avoid low blood sugar</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Meglitinides</strong></td>
<td></td>
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</tr>
<tr>
<td>Repaglinide</td>
<td>Prandin</td>
<td></td>
<td>Helps your pancreas make more insulin.</td>
<td></td>
</tr>
<tr>
<td>Nateglinide</td>
<td>Starlix</td>
<td></td>
<td>Helps improve your after meal blood sugar</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Important: Take with food/meals to avoid low blood sugar</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Biguanides</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metformin</td>
<td>Glucophage</td>
<td></td>
<td>Helps decrease the amount of sugar made by the liver.</td>
<td></td>
</tr>
<tr>
<td>Metformin ER</td>
<td>Glucophage XR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Important: Take with meals.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Alpha-Glucosidase</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acarbose</td>
<td>Precose</td>
<td></td>
<td>Slows the digestion of starches in the gut.</td>
<td></td>
</tr>
<tr>
<td>Miglitol</td>
<td>Glyset</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Important: Take with first bite of food.</strong></td>
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</tr>
<tr>
<td><strong>Thiazolidinediones (TZDs)</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Pioglitazone</td>
<td>Actos</td>
<td></td>
<td>Helps improve the way insulin works in muscle and fat cells. Help decrease the amount of sugar made by the liver.</td>
<td></td>
</tr>
<tr>
<td>Rosiglitazone</td>
<td>Avandia</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td><strong>Important: Report any ankle/feet swelling or shortness of breath</strong></td>
<td></td>
</tr>
<tr>
<td><strong>DPP 4 Inhibitors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sitagliptin</td>
<td>Januvia</td>
<td></td>
<td>Allows insulin to work longer and decreases the amount of sugar made by the liver.</td>
<td></td>
</tr>
<tr>
<td>Saxagliptin</td>
<td>Onglyza</td>
<td></td>
<td></td>
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<tr>
<td>Linagliptin</td>
<td>Trajenta</td>
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<tr>
<td>Alogliptin</td>
<td>Nesina</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Important: Take with or without food.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>SGLT 2 Inhibitors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canagliflozin</td>
<td>Invokana</td>
<td></td>
<td>Helps the kidneys clear excess glucose.</td>
<td></td>
</tr>
<tr>
<td>Dapagliflozin</td>
<td>Farxiga</td>
<td></td>
<td></td>
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<tr>
<td>Empagliflozin</td>
<td>Jardiance</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Important: Drink plenty of water to stay hydrated.</strong></td>
<td></td>
</tr>
</tbody>
</table>
# Injectable Medications for Diabetes

## Insulin

<table>
<thead>
<tr>
<th>DRUG TYPE/NAME</th>
<th>HOW IT WORKS</th>
<th>STARTS WORKING</th>
<th>WORKS STRONGEST</th>
<th>ENDS</th>
<th>INSTRUCTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RAPID ACTING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>API德拉 (Glulisine)</td>
<td>Bolus</td>
<td>5-15 Minutes</td>
<td>1-2 Hours</td>
<td>4-6 Hours</td>
<td>Looks clear. Take with meals.</td>
</tr>
<tr>
<td>Humalog (Lispro)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>NovoLog (Aspart)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>SHORT ACTING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular</td>
<td>Bolus</td>
<td>30-60 Minutes</td>
<td>2-3 Hours</td>
<td>6-8 Hours</td>
<td>Looks clear. Take 30 minutes before meals.</td>
</tr>
<tr>
<td><strong>INTERMEIDATE ACTING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPH</td>
<td>Basal</td>
<td>2-4 Hours</td>
<td>6-10 Hours</td>
<td>10-18 Hours</td>
<td>Looks Cloudy. Roll to mix. Take as ordered.</td>
</tr>
<tr>
<td><strong>LONG ACTING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lantus (Glargine)</td>
<td>Basal</td>
<td>1-2 Hours</td>
<td>No peak</td>
<td>Approximately 24 Hours</td>
<td>Looks clear. Take at same time every day. Do not mix with other insulins.</td>
</tr>
<tr>
<td>Levemir (Detemir)</td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>Toujeo (U300 Glargine)</td>
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<tr>
<td><strong>PRE-MIXED</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70/30 Humulin/Novolin</td>
<td>Combined Pre–Mix Basal and Bolus</td>
<td>30-60</td>
<td>Varies</td>
<td>10-16 Hours</td>
<td>Looks cloudy. Roll to mix. Take as ordered.</td>
</tr>
<tr>
<td>50/50 Humalog/Novolog</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75/25 Humalog</td>
<td>Combined Pre-Mix Basal and Bolus</td>
<td>5-15 Minutes</td>
<td>Varies</td>
<td>10-16 Hours</td>
<td>Looks cloudy. Roll to mix. Take with meal.</td>
</tr>
<tr>
<td>70/30 Humalog/Novolog</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Others

<table>
<thead>
<tr>
<th>DRUG TYPE AND NAME</th>
<th>HOW IT WORKS</th>
<th>POSSIBLE SIDE EFFECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Byetta/Bydureon (Exenatide)</td>
<td>Replaces naturally occurring GLP1 hormones. Helps to release insulin from the pancreas. Prevents liver from releasing too much sugar.</td>
<td>Nausea, vomiting Decreased appetite Constipation</td>
</tr>
<tr>
<td>Tanzeum (Albiglutide)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trulicity (Dulaglutide)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victoza (Liraglutide)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SYMLIN (Pramlintide)</td>
<td>Helps lower after-meal blood sugar levels. Used with insulin at mealtime.</td>
<td>Nausea, vomiting Decreased appetite</td>
</tr>
</tbody>
</table>
Giving Yourself Insulin

Insulin Syringe Instructions

1. Wash your hands.

2. Mixing Insulin: If you have cloudy insulin, you must gently roll bottle between hands to mix.

3. Place needle into vial.

4. Draw up dose.

5. Select injection site and clean area. Recommended sites: A, B and C.

6. Inject insulin. Count to 10 before removing.

7. Place used syringe in sharps container.
1. Wash your hands.

2. Attach pen needle.

3. Dial 2 units of insulin.

4. Waste 2 units of insulin.

5. Dial ordered insulin dose.

6. Select injection site and clean area. Recommended sites: A, B and C.

7. Inject insulin: count to 10 before removing.

8. Place used needle in sharps container.
Storage of Insulin and Other Injectables

Insulin must be stored properly to work best at controlling blood sugar.

Unopened insulin bottles or pens:
• Best stored in the refrigerator until expiration date.
• Be careful not to freeze insulin.

Opened insulin bottles or pens:
• May be stored at room temperature (59 to 86 degrees) for 28 to 30 days.
• Keep away from heat and light.

⚠️

Remember to:
• Rotate your injection sites and avoid areas that feel hard or tender, or look red.
• Eat regular meals four to five hours apart. Do not skip meals. If a meal is delayed, you may need a snack.
• Always carry a fast-acting sugar (glucose tabs or hard candy) and a wallet card with instructions on low blood sugar.
• Wear a medical alert bracelet or necklace, or carry an ID card that states you have diabetes.
Reducing Your Risk

Getting up-to-date care for diabetes can help you prevent long-term problems such as heart disease, stroke and eye, foot or kidney problems.
Diabetes Can Affect the Entire Body

Heart: Watch for chest pain and/or shortness of breath.

To reduce risk:
• Control your blood sugar.
• Control your blood pressure.
• Stop smoking.
• Eat less fat.
• Reduce salt intake.
• Be more active.
• Maintain a healthy weight.
• Take medications as prescribed.

Feet: Watch for pain, numbness or wounds.

To reduce risk:
• Control your blood sugar.
• Stop smoking.
• Check your feet every day for redness, blisters or injuries.
• Exercise as directed.
• Have a doctor or nurse check your feet at every doctor visit.

Kidneys: There may be no signs or symptoms.

To reduce risk:
• Control your blood sugar.
• Control your blood pressure.
• Stop smoking.
• Get a urine microalbumin test once a year.
• Have regular check-ups with your doctor.
Eyes: Watch for changes in vision.

To reduce risk:
• Control your blood sugar.
• Control your blood pressure.
• Stop smoking.
• Have a dilated eye exam every year.

Teeth and Gums

To reduce risk:
• Control your blood sugar.
• Stop smoking.
• Visit the dentist at least twice a year.
• Brush twice daily and floss daily.
• Use soft toothbrush.
• Denture-wearers: clean and rinse dentures daily.

Sexual Health

Women:
• High blood sugar levels may lead to yeast infections.
• If you are thinking of becoming pregnant, you will want to have a diabetes check up first. High blood sugar levels when you become pregnant can be very harmful for the baby.

Men:
• High blood sugar levels can contribute to erectile dysfunction (ED). If you are experiencing ED, talk to your doctor.

Depression

Depression and diabetes is common. If you are experiencing any of the following symptoms, please talk to your doctor.
• Tiredness, problems sleeping, restlessness.
• Headaches, pain, confusion, poor memory.
• Loss of interest, hopelessness, isolation, guilt, anger.
Standards of Care

Standards of Care are guidelines that can help people with diabetes live longer, healthier lives.

<table>
<thead>
<tr>
<th>Tests</th>
<th>Monitors</th>
<th>Test Frequency</th>
<th>ADA Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1c</td>
<td>2 to 3 month blood sugar average</td>
<td>Every 3 to 6 months</td>
<td>Less than 7 percent (or as advised by your doctor)</td>
</tr>
<tr>
<td>Blood Pressure</td>
<td>Checks the force of blood flow through vessels</td>
<td>Every doctor visit</td>
<td>Less than 140/90 mm Hg (Consider medications if out of target.)</td>
</tr>
<tr>
<td>LDL (bad cholesterol)</td>
<td>Risk of heart disease</td>
<td>Yearly</td>
<td>LDL below 100 mg/dl (Consider medications if out of target.)</td>
</tr>
<tr>
<td>Microalbumin (urine test)</td>
<td>Kidney function</td>
<td>Yearly</td>
<td>Less than 30 mcg/dl</td>
</tr>
<tr>
<td>Eye Exam (dilated)</td>
<td>Eye disease</td>
<td>Yearly</td>
<td>Normal</td>
</tr>
<tr>
<td>Foot Exam</td>
<td>Foot problems</td>
<td>Every doctor visit</td>
<td>Normal</td>
</tr>
<tr>
<td>Flu Shot</td>
<td></td>
<td>Yearly</td>
<td></td>
</tr>
<tr>
<td>Pneumonia Vaccine</td>
<td></td>
<td></td>
<td>At diagnosis (Repeat after 65 years old)</td>
</tr>
</tbody>
</table>
Heart and Blood Vessel Disease

Over time, high blood sugar can increase your risk for heart and blood vessel disease. Two out of three people with diabetes die from stroke or heart disease. Know the warning signs.

Normal Artery: Blood flows easily through smooth arteries.

Damaged Artery: High blood sugar damages the artery lining.

Artery at Risk: Plaque builds up in damaged artery lining, and the blood flow is blocked.

Warning signs of a heart attack

• Chest pain or discomfort
• Pain or discomfort in your arms, back, jaw, neck or stomach
• Shortness of breath
• Sweating
• Light-headedness
• Indigestion or nausea
• Tiredness
• Weakness

Warning signs of a stroke

• Weakness or numbness on one side of your body
• Sudden confusion or trouble understanding
• Difficulty talking
• Dizziness, loss of balance or trouble walking
• Trouble seeing out of one or both eyes
• Double vision
• Severe headache

If you are having warning signs of a heart attack or stroke, call 911.
People with diabetes need to take special care of their feet. See your doctor right away if you notice sores, cuts, calluses or any changes. Consult your doctor before self-treating.

1. Wash your feet daily with lukewarm water and soap.
2. Dry your feet well, especially between the toes.
3. Keep the skin supple with a moisturizing lotion (do not apply lotion between toes).
4. Check often for blisters, cuts or sores. Tell your doctor if you find something wrong.
5. Use an emery board to shape toenails even with the ends of your toes.
6. Change daily into clean, soft socks or stockings. Make sure you wear the correct size.
7. Keep your feet warm and dry. Always wear shoes that fit well and, if possible, wear special padded socks.
8. Never go barefoot – inside or outdoors.
9. Examine your shoes every day for damage or debris (pebbles, nails, etc.) that could injure your feet.

Take good care of your feet – and use them! A brisk walk every day stimulates circulation.
Smoking has severe effects on your diabetes and your health. You can help to prevent and reduce the serious problems of diabetes by quitting. Call the California Smokers’ Helpline — it’s Fast, it’s Free, and it’s Easy: 1-800-NO-BUTTS.

**Eyes**
Smoking can make vision problems worse which can lead to blindness.

**Teeth**
Smoking raises your risk of getting gum disease and losing your teeth.

**Nerves**
Smoking raises your risk of nerve damage. This can cause numbness, pain and problems with digestion.

**Heart**
Smokers with diabetes are 11 times more likely to have a heart attack or stroke than people who don’t have diabetes and don’t smoke.

**Feet & Legs**
Smoking can lead to serious foot and leg problems like infections, ulcers, and poor blood flow. Smoking raises your risk of amputation. Of people with diabetes who need amputations, 95% are smokers.

**Blood Sugar**
Smoking raises your blood glucose (sugar) and reduces your body’s ability to use insulin, making it more difficult to control your diabetes. In fact, smoking one cigarette can cut your body’s ability to use insulin by 15%.

**Kidneys**
Smoking triples your risk of getting kidney disease. Drugs that help prevent kidney failure don’t work as well for smokers.

---

**Quit Smoking Today**
Call the California Smokers’ Helpline at 1-800-NO-BUTTS
Chewing Tobacco: 1-800-844-CHEW

For more information about diabetes:
California Diabetes Program at (916) 552-9888 or www.caldiabetes.org
American Diabetes Association at 1-800-DIABETES (1-800-342-9383) or www.diabetes.org

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Problem Solving

It is important that you know how to manage diabetes when you are sick, whether it is a flu or cold. It is also important to know the warning signs of diabetes ketoacidosis, a life-threatening condition for those with type 1 diabetes.
What To Do If You Are Sick

If you are sick, you need to be extra careful.
1) Do not stop taking your diabetes medications, including your insulin or pills.
2) Call your doctor and ask if your doses need to be changed.
3) Check your blood sugar more often – every four hours. If you have type 1 diabetes, also test your urine for ketones.

What to Eat or Drink

Drink plenty of liquids, particularly if you have fever, vomiting or diarrhea. Eat your regular meals as you are able. If you are unable to eat solid foods, eat at least 15 grams of carbs every hour while you are awake.

Examples of a carb serving of 15 grams:
- One cup of soup
- Six saltine crackers
- One slice of dry toast
- One popsicle
- One-half cup of ice cream or frozen yogurt
- One-half cup cooked cereal
- One-half cup of soda or fruit juice
- Eight ounces of an energy drink, such as Gatorade

Call your doctor if you have any of the following:
- Vomiting or diarrhea
- Inability to keep liquids down
- A blood sugar level above 250 mg/dL for more than 4 hours
- Temperature of 101° F or higher
- Trouble breathing
- Ketones in your urine (for people with type 1 diabetes)
Diabetic Ketoacidosis (DKA) most often occurs in type 1 diabetes. Ketones are produced when your body starts burning fat for energy instead of sugar. Dangerously high levels of ketones can lead to diabetic coma or death. Know the warning signs and check urine for ketones, especially when sick.

**Warning signs:**
- Blood sugar above 250
- Nausea, vomiting and/or abdominal pain
- High levels of ketones in urine
- Frequent urination
- Thirst or a very dry mouth
- Muscle pain
- Fruity odor on breath
- Difficulty breathing (short, deep breaths)
- Hard time paying attention or confusion

If you don’t feel well and have one or more of the above symptoms, contact your doctor immediately or go to the nearest emergency room.

**What causes ketoacidosis?**
- **Not enough insulin.** Do not skip your insulin, even if you are unable to eat. You may need more insulin because you are sick.
- **Not enough food.** When you cannot eat, your body makes ketones. This causes nausea and vomiting.

DKA IS LIFE THREATENING
Section VII: Healthy Coping

Healthy Coping

Learning you have diabetes can be quite a shock. You may experience emotions such as disbelief, anger or depression. Learning how to cope mentally with diabetes is just as important as knowing how to physically manage diabetes.
Having fears about diabetes is normal. You can’t change the fact that you have been diagnosed with diabetes, but you can choose to make your emotional health a priority. Living well with diabetes takes time and effort. Diabetes can be tough to handle.

Do you feel any of the following about the daily hassles of managing your health?
• Overwhelmed
• Angry
• Unmotivated
• Scared
• Sad
• Frustrated
• Burned Out

Addressing these emotional aspects of your diabetes is important for long-term success. Think about ways you can take care of your whole self (mind, body and spirit). Some suggestions include talking to your doctor about your feelings, taking your medications every day and attending a support group (see resource page or contact Scripps Whittier Diabetes Institute (1-858-626-5672) or Behavioral Diabetes Institute (1-858-336-8693) for additional information). In addition, avoid alcohol and drugs.

Take time to relax by:
• Walking
• Dancing
• Yoga
• Deep breathing
• Daily sunlight

• Spend time with family and friends

I like to: ______________________________________
______________________________________________
______________________________________________
______________________________________________
______________________________________________
You Are Not Alone
Many patients newly diagnosed with diabetes feel alone and unable to connect with those around them. Social media — websites you can interact with and that allow you to interact with other visitors — can help. A two-way street, social media gives you the ability to connect with others who have diabetes to share stories and ask questions. Learn how to control your diabetes with others.

Social Media for Patients with Diabetes

• Diabetes Mine
  *This site was created by and for patients as a “diabetes newspaper with a personal twist.”*
diabetesmine.com/category/essential-diabetes/emotions

• Diabetes Advocates
  *A collective of individuals and organizations that offers expertise, resources and support to those touched by diabetes. We believe that connecting with others living with and caring for diabetes, and providing emotional and anecdotal support, goes hand-in-hand with the support of a health care provider.*
diabetesadvocates.org

• Tu Diabetes
  *A community of people touched by diabetes, run by the Diabetes Hands Foundation.*
tudiabetes.org

• Es Tu Diabetes.org
  *Una comunidad de personas afectadas por la diabetes, un programa de la Diabetes Hands Foundation.*
estudiabetes.org

• You Can Do This Project
  *Collects personal powerful videos of patients affected by diabetes. Share your diabetes story. Be a light in someone else’s darkness.*
youcandothisproject.com

• dLife
  *Makes diabetes applications that you can use to log glucose levels, find recipes and nutrition information. Watch dLife videos and connect with the dLife community and experts to get answers to diabetes related questions. You can graph weekly or monthly levels and track trends, which you can email to yourself or your health care provider.*
dlife.com

Scripps Health does not control, endorse or guarantee the accuracy of information contained on the above websites. Please consult your health care provider with any questions or concerns regarding your health.
Section VIII: My Action Plan

My Action Plan

Now it’s time to come up with an action plan to manage your diabetes. Use the information in this guide and from your health care providers to figure out a plan that meets your needs and helps put you in the driver’s seat.
Gaining control of diabetes is like taking a trip.

1. Decide where to go.
2. Plan the steps to get there.
3. Decide how long you will stay.
4. Pack your belongings.
My Goal

Setting goals and changing habits will help you improve your diabetes, as well as your general health.

Choose one goal from the list below:

- Healthy Eating
- Being Active
- Monitoring (Blood Sugars)
- Taking Medication
- Problem Solving
- Healthy Coping (depression, denial, anger)
- Reducing Risks (prevention care, complications, foot/dental care, eye exam)

In order to meet this goal I will:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Patient Signature ______________________________ Date ______________

Educator Signature ______________________________ Date ______________
What if I Have More Questions?

If you need more answers, call us at 877-944-8843. There is a lot to learn, and we are here for you. Following are additional resources you may find helpful in your journey to health and wellness. Thank you for letting us be a part of that journey.
Scripps Health Resources
Scripps provides a free physician referral helpline.
1-800-SCRIPPS (727-4777)
scripps.org

Scripps Whittier Diabetes Institute
Provides classes on diabetes care, eating smart, weight loss, exercise; and help individuals newly diagnosed with diabetes find support groups
858-678-7050 • 877-Whittier (944-8843)
Scripps.org/diabetes

Scripps Whittier Diabetes Institute
Project Dulce
Diabetes management programs are available for the uninsured and underserved. Diabetes education is available in different languages.
1-866-791-8154 • scripps.org/diabetes

Academy of Nutrition and Dietetics
1-800-877-1600 • eatright.org

American Diabetes Association
1-800-Diabetes/342-2383 • diabetes.org

American Heart Association
1-800-242-8721 • 858-410-3850
americanheart.org • heartsource.org

Becton, Dickinson and Company (BD)
1-201-847-6800 • 1-888-232-2737
bd.com/diabetes

Behavioral Diabetes Institute
858-336-8693 • behavioraldiabetes.org

Behavioral Diabetes Institute
858-336-8693 • behavioraldiabetes.org

Costco: Prescription program is available to all. Affordable meters, lancets, testing strips and glucose tablets are available.
1-800-806-0129 • costco.com

Juvenile Diabetes Research Foundation (JDRF)
San Diego Chapter • 858-597-0240 sandiego@jdrf.org • jdrfsd.org

National Diabetes Information Clearinghouse
1-800-860-8747 • diabetes.niddk.nih.gov

Taking Control of Your Diabetes
858-755-5683 • 1-800-998-2693 • tcoyd.com

United States Department of Agriculture Food Guidelines • choosemyplate.gov
USDA Diet Supertracker • 1-888-779-7264

Ventanilla de Salud at Mexican Consulate:
Provides information and enrollment into health insurance plans, accessing local health services/education & screenings
619-308-9964 • http://ventanillas.org/

Project Concern International works in partnership with the Mexican Consulate 858-279-9690 • projectconcern.org

Walmart: Affordable meters and test strips, less expensive insulin and syringes.
619-336-0395 • walmart.com
“Through philanthropy we help to heal, enhance and save lives.”

For more information about ways you can support Scripps Whittier Diabetes Institute and the benefits of giving, please call 858-678-7808 or visit scrippshealthfoundation.org