



Scripps Whittier Diabetes Institute

The Basics of Diabetes



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The 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 many of our outpatient sites. 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

Updated, November 2019

Scripps Diabetes Care and Prevention Services

Our team of nutrition, diabetes, and prevention experts provide individuals with the knowledge and tools they need to make the best day-to-day decisions about their health and well-being. We have a variety of programs and services available in English and Spanish. Services are provided at multiple locations throughout San Diego County.

Diabetes self-management education

A series of 5 classes covering healthy eating, physical activity, blood sugar monitoring, medications, and staying well. One-on-one training available on starting insulin, continuous glucose monitoring, use of insulin pumps, and more. Covered by most insurances; scholarships are available to those without coverage.

Nutrition Counseling

Registered dietitians provide guidance on meal planning, weight management, exercise strategies, and customized meal plans for a variety of specific medical conditions. Covered by most insurances.

Diabetes Prevention Program

Year-long program focusing on weight management through healthy eating and physical activity. Approved by Medicare and demonstrated to reduce the risk of getting diabetes among those with prediabetes. Eligibility criteria apply. Covered by most insurances.

Healthy Living

A series of 3 classes to promote healthy eating, physical activity and not smoking—all which will reduce the risk of chronic disease. Open to anyone at no cost.

Clinical Trials

Our clinicians are trialing new state-of-the-art diabetes treatments. If qualified, you may receive enhanced clinical care and compensation for time and travel.

Support Groups

Type 2 Diabetes

Stay current, connected, and supported in your diabetes care. Share your questions and concerns with others in an open and comfortable environment. Facilitated by the Scripps Diabetes Care and Prevention team.

Type 1 Diabetes

Exchange ideas and learn about new tools and techniques for living with Type 1 diabetes. A certified diabetes educator facilitates this informative and friendly group. Both are free and open to the public.



Call **858-678-7050** to learn more or to enroll in one of our programs.

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Section 1. What is Diabetes?



What is Diabetes?

Diabetes is a lifelong condition. 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 you stay healthy with diabetes.

Living with Diabetes

How Do I Know I Have Diabetes?

Blood Test	Without Diabetes	With Prediabetes (increased risk)	With Diabetes
Fasting Blood Sugar	Below 100mg/dl	100-125mg/dl	126mg/dl or above
Random Blood Sugar	Below 140mg/dl	140-199mg/dl	200mg/dl or above
A1c	Below 5.7 percent	5.7 to 6.4 percent	6.5 percent or above

Pre-Diabetes

Who?	Why?	Treatment	Precautions
<ul style="list-style-type: none"> • Inactive adults • Overweight adults • Family history of diabetes. 	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Healthy eating • Exercise 	<ul style="list-style-type: none"> • 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.

Types of Diabetes

Type 1

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

Type 2

Who?	Why?	Treatment	Precautions
<p>Adults, but it can occur at any age.</p> <p>Overweight and or/ inactive adults are at increased risk.</p> <p>Family history of diabetes.</p>	<p>Your pancreas may not make enough insulin</p> <p>Your pancreas may not use your insulin correctly (insulin resistance)</p> <p>Your liver, which is like a "gas tank of sugar," leaks sugar</p>	<p>Healthy eating</p> <p>Exercise</p> <p>Medications</p>	<p>Talk to your doctor before you stop taking any medications.</p> <p>Some medications may cause your blood sugar to go too low or too high.</p> <p>If you are thinking of becoming pregnant, you should have a diabetes checkup. High blood sugar may hurt the baby.</p>

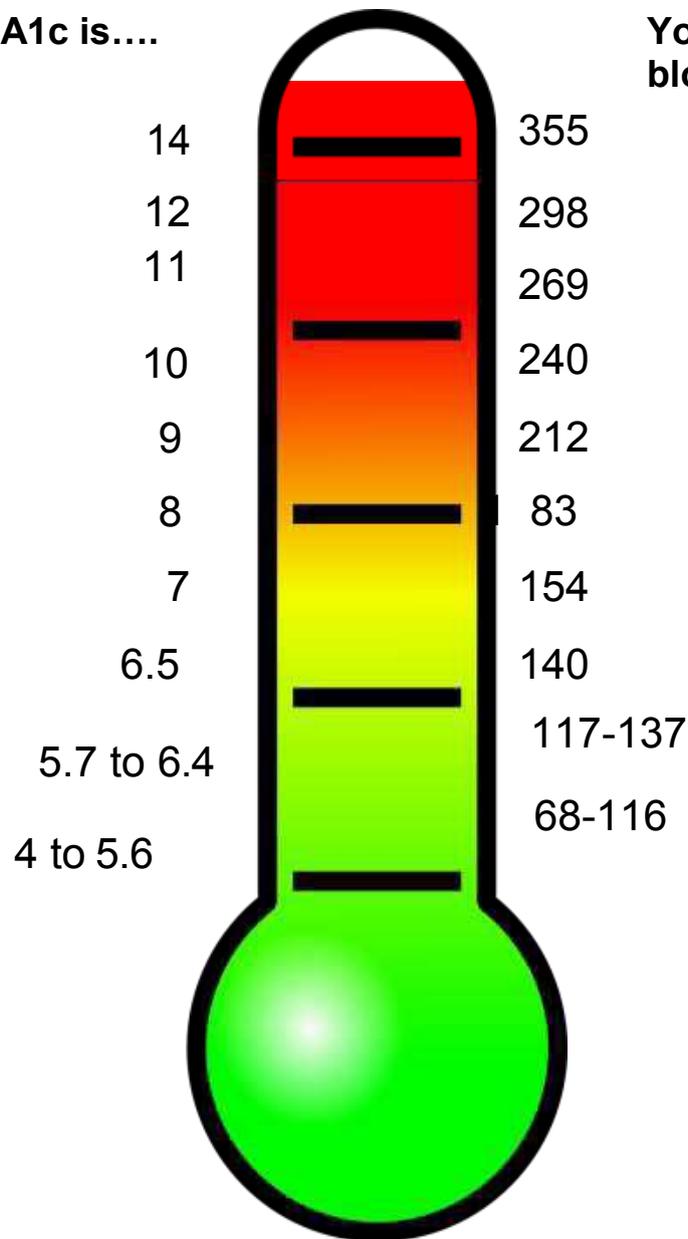
Gestational Diabetes

Who?	Why?	Treatment	Treatment
<p>Women who have high blood sugar in the last few months of pregnancy</p>	<p>Pregnancy hormones increase insulin resistance and block your own insulin from working well</p>	<p>Healthy eating</p> <p>Exercise</p> <p>Medications are sometimes needed</p>	<p>Go to all of your doctor visits during and after pregnancy.</p> <p>Get a 2-hour glucose tolerance test 6 weeks after you have your baby.</p> <p>Have annual blood sugar checks. You have a higher risk of type 2 diabetes.</p> <p>Have a blood sugar check before becoming pregnant again.</p>

What does A1 c Mean?

If your A1c is....

Your average daily blood sugars are....



My A1c goal is: _____

My A1c _____ % On (date) _____

Section 2. Blood Sugar Monitoring



How do I monitor my blood sugar?

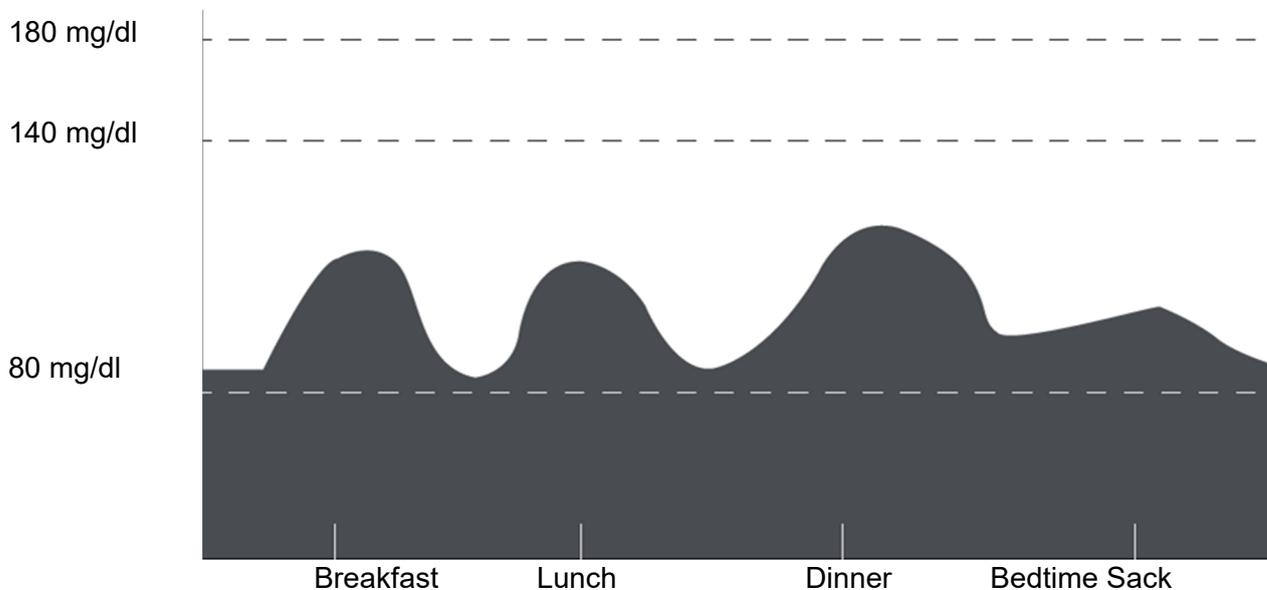
Monitoring your blood sugar is essential to staying healthy with diabetes. This section will highlight the symptoms of both high and low blood sugar. You will read about how to check your blood sugar and understand the results.

What do My Numbers Mean?

Blood Sugar (glucose)

Normally, blood glucose levels will vary throughout the day. 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: _____

How to Test Your Blood Sugar

To test your blood sugar...

START

Review your meter's quick start guide for your meter's instructions



Wash your hands with warm, soapy water. It's less painful to prick when your hands are warm.



Set up your meter and have a test strip ready before you prick.



Set up your lancing device with a new lancet, set at the correct depth for you. Use a new lancet each time you test. Used lancets can cause finger pain.



Insert the test strip into the meter. When a picture of a drop appears on the screen, it's time to apply the blood to the strip.



Prick your finger on the outer sides closest to the tip. Place the lancet device firmly against your finger. Gently squeeze the finger until the blood drop appears. Change the site you prick each time to avoid sore fingers and calluses. Use both sides of each finger and thumbs.



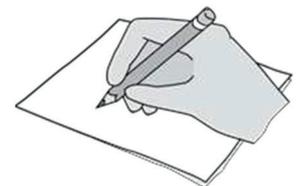
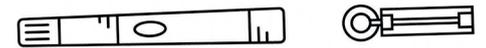
Touch and hold the blood drop to the edge of the test strip until you see your results.



Log your results in your logbook to share with your provider.



HOORAY!
You did It!



Blood Sugar Monitoring

Why should I check my blood sugar?

- Helps you learn how food, physical activity, stress, and medicine affect your blood sugar.
- Helps you and the doctor or nurse decide which medicine is best for you.

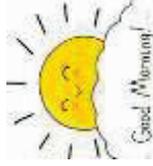
How often should I check my blood sugar?

- Ask your doctor or nurse how often blood glucose should be checked.
- Any time you think or feel your blood glucose is low, and then until your blood glucose reaches greater than 90.

When should I check my blood sugar?

- Circle the times you will check your blood sugar on the log.
- If you are sick, check your blood sugar more often.

Write in your blood sugar numbers in the chart below



Breakfast



Lunch



Dinner



Day of week	Before	2 hrs after	Before	2 hrs after	Before	2 hrs after	Bedtime
Monday							
Tuesday							
Wednesday							
Thursday							
Friday							
Saturday							
Sunday							

Bring your logbook and /or meter to each visit with your doctor or nurse.

Low Blood Sugar (Hypoglycemia)

Causes: Too little food, more than five hours from last meal (during waking hours), too much insulin or diabetes medications, 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

What to do:

<p>1. </p> <p>Check your blood sugar.</p>	<p>2. </p> <p>If below 70, eat or drink something to raise the blood sugar fast.</p> <p>Some examples:</p> <ul style="list-style-type: none"> --½ cup fruit juice (4 oz.) --½ cup (4 oz.) regular soda --1 tablespoon sugar or honey --6 jelly beans --4 glucose tablets 	<p>3. </p> <p>Check your blood sugar in 15 minutes. If it is still below 70, repeat step 2.</p>	<p>4. Eat a snack or meal within 30 minutes.</p> <p> If you have hypoglycemia between meals, eat a heavy snack (½ sandwich with milk, 4-6 crackers with peanut butter and a small apple) or a Glucerna or Choice Bar</p>
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Always carry a fast-acting sugar with you. If you have two lows on the same day or three lows in one week, call your doctor.

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 Ketoacidosis.

Blood Sugar: Above 180 mg/dl

Symptoms



Nausea



Drowsiness



Blurred Vision



Dry Skin



Hunger



Extreme Thirst



Frequent Urination

What to do:



Check your blood sugar



If your blood sugar is above 250mg/dl for two days, call your doctor

DKA (Diabetic Ketoacidosis) and Ketones

Diabetic Ketoacidosis (DKA) is a serious illness that can lead to diabetic coma (passing out for a long time) or even death.

Ketones are produced when your body burns fat for energy instead of sugar. High levels of ketones are a warning sign that your blood sugar is very high or that you are getting sick.

Ketones can poison the body. When ketone levels get too high, you can develop DKA. DKA can happen to anyone with diabetes, though it is rare in people with type 2.

Treatment for DKA usually takes place in the hospital. You can help prevent it by learning the warning signs and checking your blood sugar regularly. If you have Type 1 Diabetes, also check your ketones if your blood sugar is over 250 mg/dL.

What are the warning signs of DKA?

DKA usually develops slowly. But after vomiting starts, DKA can develop in a few hours. Symptoms include:

- Thirst or dry mouth
- Frequent urination
- Blood sugar above 250
- High ketone levels
- Feeling tired
- Dry or flushed skin
- Nausea, vomiting, or stomach pain (contact your health provider if vomiting lasts more than 2 hours)
- Difficulty breathing (short, deep breaths)
- Fruity breath odor
- A hard time paying attention or confusion



Ketoacidosis (DKA) is dangerous and serious.

If you have any of the above symptoms, contact your doctor IMMEDIATELY, or go to the nearest emergency room of your local hospital

DKA (Diabetic Ketoacidosis) and Ketones

How Do I Check for Ketones?

Ask your doctor when and how you should check for ketones. You can check for ketones with a simple urine test kit which is available at any pharmacy without a prescription.



When Do I Check?

- When you are sick, check every 4 to 6 hours.
- When blood sugar is more than 250 mg/dL, check every 4 to 6 hours.
- When you have any symptoms of DKA.

What If I Find High Levels of Ketones?

Call your doctor when you find *moderate or large levels of ketones* after testing more than once. Moderate levels are 40-80 mg/dL and large levels are 80-160 mg/dL. Often your doctor can tell you what to do and how to test over the phone.

Do **NOT** exercise when your urine tests show ketones and your blood glucose is high. Your diabetes could be out of control.

What Causes DKA?

Here are some reasons for moderate or large ketone levels:

- **Not enough insulin**
Maybe you did not give yourself enough insulin. Or your body could need more insulin than usual because of illness.
- **Not enough food**
When you cannot eat, your body makes ketones. This causes nausea and vomiting.



DKA is life threatening!
Know the symptoms!

Sick Day Guidelines

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. Choose sugar free cough syrup and other over the counter medicine.
4. Check your blood sugar more often – every four hours. 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 Carb Serving of 15 grams:

- 1 cup of soup
- 6 saltine crackers
- 1 slice of dry toast
- 1 popsicle
- 1/2 cup of ice cream or frozen yogurt
- 1/2 cup cooked Cereal
- 1/2 cup of soda or fruit juice
- 8 ounces of a sports 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)

Section 3. Healthy Eating



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.

My Plate

A Healthy Meal Tastes Great



The 9 inch Plate Method is a simple way to plan meals. This plate shows proper portions. Add fruit and dairy for a balanced meal.



9-inch plate



Let's Plan Your Meal

Breakfast

Starch
Whole grain has more fiber and more nutrients.

Dairy
Best to choose low fat or fat free dairy products

Protein
Low-fat proteins are better for your heart and waistline.

Fruit
Choosing whole fruits over fruit juice will help you feel fuller. You can always add vegetables.

Food items shown: Oatmeal, Bread, Cold Cereal, 1% Milk, Low-fat Yogurt, Egg, Low-fat or Natural Peanut Butter, Ham, Apple, Banana, Orange.

Lunch/Dinner

Starch
Some vegetables are higher in starch (corn, peas, yams) and belong on this part of the plate.

Vegetables
Fill half your plate with more than one vegetable, so you won't get tired of your favorites.

Protein
Bake, broil, boil or steam your protein instead of frying.

Food items shown: Corn, Yams, Potatoes, Brown Rice, Peas, Broccoli, Lettuce, Okra, Carrots, Green Beans, Chicken, Beef, Fish.

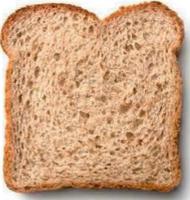
Carbohydrate Foods

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.
- Foods with carbs are not necessarily sweet tasting
- Carbs are the body's main energy source
- Carbs include sugars and dietary fibers

A carb serving is an amount of food that has 15 grams of carbohydrate.
(One carb serving = 15 grams of carbohydrate)

Examples of typical 1 carb serving foods:

 <p>Slice of Bread (1 ounce)</p>	 <p>8 ounces of milk</p>	 <p>1 small apple</p>
 <p>½ cup of corn</p>	 <p>2 cookies (i.e. Oreos)</p>	 <p>1/3 cup of rice or noodles</p>

How Many Carb Servings Can I Eat?

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

- 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			
Apple	1 small, 4 oz.	Melon	1 cup
Apricots	4 fresh	Mixed fresh fruit	1 cup
Applesauce (<i>unsweetened</i>)	½ cup	Nectarine	1 medium
Banana	1 small, 4 oz.	Orange	1 small, 6.5 oz
Berries	1 cup	Papaya cubes	1 cup
Cantaloupe	1/3 small	Peach	1 medium
Canned fruit (<i>drained</i>)	½ cup	Pear	½ large
Dried Fruit	Check label	Pineapple, fresh	¾ cup
Figs, fresh	2 medium	Pineapple, canned (<i>drained</i>)	½ cup
Grapefruit	½ large	Plums	2 small
Grapes or Cherries	6-10 large/12-18 small	Prunes, dried	3 each
Juice (<i>100% fruit, check label</i>)	3-4 oz	Raisins	2 Tablespoons
Kiwi	1 large	Tangerine	2 small
Mango	½ large/cup	Watermelon	1 cup

STARCHES/BREAD			
Bagel (<i>check label</i>)	¼ large/ ½ medium	Pasta, cooked	1/3 cup
Barley	1/3 cup	Pita Bread	½, 6" across
Beans, peas, lentils, corn (<i>cooked</i>)	½ cup	Popcorn, no added fat	3 cups
Biscuit	2 ½ inches across	Potato, 1 small	3 oz
Bread (<i>check label</i>)	1 oz. slice	Potato, mashed	½ cup
Bun, hot dog/hamburger	½ (1 oz)	Pretzels	¾ oz
Cereal, cold flaked or cooked	½ cup	Rice, brown/wild/white (<i>cooked</i>)	1/3 cup
Couscous	½ cup	Squash (winter)	1 cup
Crackers	4 to 5 each	Sweet potato/yam	½ cup
English Muffin	½	Tortilla	6" across
Graham Crackers	3 squares	Waffle	4" square
Melba Toast	5 slices	Whole Grain Bread (<i>check label</i>)	1 slice (1 oz.)
Pancake	1 – 4" across		

MILK PRODUCTS		OTHER CARBS	
Buttermilk, low/non-fat	1 cup/8 oz	Sugar	1 Tablespoon
Evaporated	½ cup	Honey, Syrup	1 Tablespoon
Nonfat yogurt (plain/light)	6 oz (cup)	Ice Cream, light	½ cup
Fat Free/Nonfat milk	1 cup/8 oz	Ice Cream, no sugar added	½ cup
Low Fat/1% Milk	1 cup/8 oz	Pudding, sugar free	½ cup
Soy Milk	1 cup/8 oz	Soup, cream type	1 Cup

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 Cheerios = 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 soup (lentil) = 2 carb serv.
6 triscuits/saltines crackers = 1 carb serv.

Chicken/fish 3 oz.
1 cup rice (brown better) = 3 carb serv. 1 cup cooked broccoli

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

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.
¾ cup blueberries = 1 carb serv. Ounces 1% milk = 1 carb serv.

2 chicken tacos (2 tortillas) = 2 carb serv.
½ cup refried beans = 1 carb serv.
⅓ 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.

Food Group and Serving Sizes

Non- Carbohydrate Choices

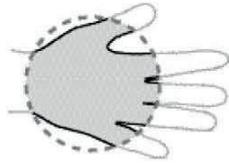
FAT	PROTEIN	VEGETABLES
Monounsaturated	Meats/Fish/Fowl	Veggies
Olive, Canola, Peanut oil, 1 tsp. Avocado, 2 Tbsp. or 1/8 Nuts: Almonds, Cashews, 6 Macadamia, 3 Peanuts, 10 Pecan halves, 4 Natural peanut butter, 1/2 Tbsp. Olives, 8-10 large Tahini or Sesame paste, 2 tsp.	Beef (sirloin, round, ground round, flank, rump, tenderloin, lean) Canadian Bacon Fish (Halibut, Sea bass, Salmon, Tilapia, Snapper, Mahi Mahi) Ham, lean Lamb (leg, chops, roast) Luncheon meat, 98% Fat-free Pork (loin, tenderloin) Poultry, no skin (chicken, turkey) Seafood Veal (lean chop, roast)	Vegetables, cooked, 1/2 cup Vegetables, raw, 1 cup For example: Artichoke Mixed Asparagus vegetables Beets (without Broccoli corn, peas Brussel Sprouts or pasta) Cabbage Mushrooms Carrots Okra Cauliflower Onions Celery Pea pods Cucumbers Peppers Eggplant Radishes Green beans Salad Greens Kale Sauerkraut Spinach Tomatoes Turnips Water Chestnuts Zucchini
Polyunsaturated	Cheese	
Corn, Flaxseed, Safflower, Soy, Sunflower, Sesame oil, 1 tsp. Margarine, tub or square, 1 tsp. Margarine, Lite, 1 Tbsp. Salad dressing, 1 Tbsp. Salad dressing, reduced fat, 2 Tbsp. Mayonnaise, 1 tsp. Mayonnaise, reduced fat, 1 Tbsp. Miracle Whip, 2 tsp. Seeds: Pumpkin, Sunflower, 1 Tbsp. Walnuts, 4 halves	Cottage cheese, low fat, 1/4 cup Cheese, nonfat or low fat, 1 oz. Parmesan cheese, grated, 2 Tbsp.	
Saturated Fat	Other	Notes
Bacon, 1 strip Butter, stick, 1 tsp. Coconut milk, 1 Tbsp. Cream, Half & Half, 2Tbsp. Cream Cheese, 1 Tbsp. Cream Cheese, reduced fat, 1½ Tbsp. Mayonnaise, 1 tsp. Margarine, stick, 1 tsp. Shortening, 1 tsp Sour cream, 2 Tbsp. Sour cream, reduced fat, 3 Tbsp.	Egg, 1 Egg substitute, 1/4 cup Egg whites, 2 Almond, Peanut, Cashew (natural) Butter, 2 Tbsp. Tofu, light, 4 oz. or ½ cup Tuna, water packed, ¼ cup (1 oz.) Protein Supplement drink, 4oz (50-60 calories) * <i>Includes 2 additional fat servings</i>	Note: Corn, peas, beans, lentils and potatoes are listed under Starch/Bread 1 cup = 8 oz. If you eat 3 cups or more of raw vegetables or 1-1/2 cups of cooked vegetables at one meal, count them as 1 carbohydrate choice (15 g carbohydrate).

Estimating Portion Sizes/ Food Label



Fist = 1 cup

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



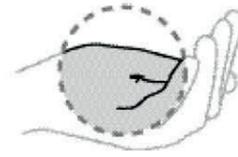
Palm or deck of cards = 3 oz.

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

Nutrition Facts

8 servings per container

Serving size **2/3 cup (55g)**

Amount per serving

Calories 230

% Daily Value*

Total Fat 8g Saturated	10%
Fat 1g <i>Trans</i> Fat 0g	5%
Cholesterol 0mg	
Sodium 160mg	0%
Total Carbohydrate 30g	7%
Dietary Fiber 4g	13%
Total Sugars 12g	14%
Includes 10g Added Sugars	20%
Protein 3g	
Vitamin D 2mg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 235mg	6%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Carbs on a Food Label

Step 1: Look at the serving size

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

Step 3: Use the table below to know how many carbohydrate 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

Healthy Snacks



VERY LOW AND NO CARBOHYDRATE SNACK IDEAS	
Raw veggies and reduced fat/low sugar dressing <i>(read label for <5 grams carb)</i>	Tossed salad (no croutons/beans) may add reduced fat/low sugar dressing <i>(read label for <5 grams carb)</i>
String cheese	Steamed non-starch vegetables (ex. spinach, carrots, broccoli, and zucchini)
Hard-boiled egg	Scrambled egg with low-fat melted cheese
Handful of nuts or seeds	Leftover chicken breast or salmon (grilled/roasted)
Celery and 1-2 Tbsp. nut butter	1 Sugar-free popsicle
1/2 cup, low fat Cottage cheese with diced carrots and scallions	Sugar-free Jell-O
SNACK IDEAS (~15-20 grams of carb)	
1 slice whole wheat toast 1 Tbsp. nut butter	1 cup lentil <u>or</u> pea soup and 5 carrot sticks
1/2 small whole wheat pita 2 Tbsp. hummus	1/2 small baked potato 1/3 cup plain Greek yogurt
1 corn tortilla with 1 oz. melted cheese and tomato salsa to taste	1/2 cheese sandwich Lettuce, tomato, mustard
4-6 oz. plain <u>or</u> "lite" yogurt 1/2 cup berries	1/4 cup low-fat cottage cheese 1 cup of cut melon
3/4 cup high fiber cereal (check label for carb) 4-6 oz. 1% low-fat milk 1 oz. nuts	1/2 English muffin 1/4 cup low fat cottage cheese and tomato slice
1 oz. cheese melted on 10 baked tortilla chips with tomato salsa to taste	1 oz. almonds (about 1 handful) 1 small apple
1/4 cup trail mix with almonds, walnuts, pumpkin seeds, raisins <u>or</u> cranberries	Greek yogurt <u>or</u> "lite" yogurt with 1 oz nuts

Heart Healthy Eating Tips

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 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 a healthier choice. *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 or canola oil instead of butter.
- Limit store-bought or ready-made baked goods.
- Remove skin from poultry after cooking.
- Purchase lean-cut meats and trim off visible fat.

Salt

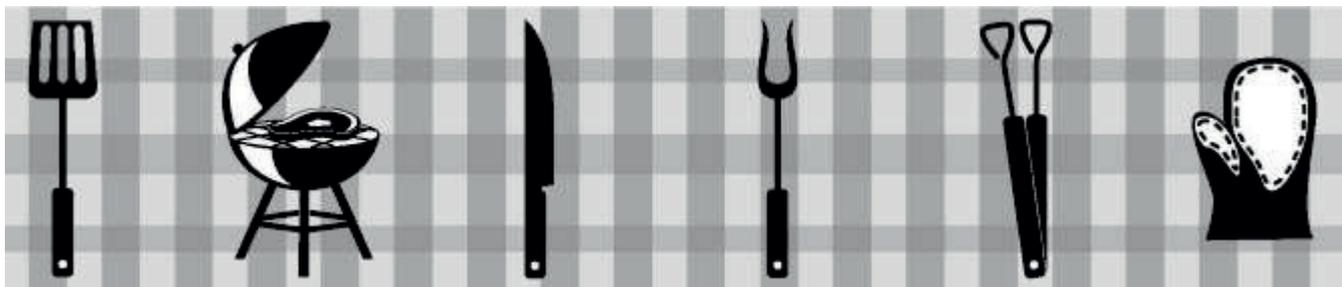
The body needs sodium (salt) to work right, but too much sodium can cause high blood pressure or fluid retention.

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.



Sugar and Fats

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 just because they are “natural.”

Sugar alcohols are sorbitol, mannitol, maltitol, and xylitol. They are used in 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, 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.

What about fats? – Unsaturated fats are healthier than Saturated or Trans fats

Unsaturated Fats (choose more often) Typically liquid at room temperature	
Monounsaturated	
Olive/Olive Oil	Avocados/Avocado Oil
Canola Oil	Nuts and oil from nuts
Peanuts/Peanut oil/Peanut butter	
Polyunsaturated	
Safflower oil	Sesame oil
Soybean oil	Fish/Fish oil
Corn oil	Walnut/Walnut oil
Sunflower oil	Seeds
Saturated Fats (choose less often) Typically solid at room temperature	
Meat	Coconut oil
Cheese/Cream cheese	Palm/Palm kernel oil
Egg yolk	Butter
Whole and 2% milk	Organ meats
Ice cream	Bacon
Cream/Sour Cream	Poultry with skin
Trans Fat	
Hydrogenated vegetable oil	
Stick margarine	

Alcohol and Diabetes

- Some diabetes medications conflict with alcohol
- ADA recommends daily intake of no more than 2 drinks day for men & 1 drink a day for women*
- Do not drink on an empty stomach
- Monitor yourself for low blood sugars
- Alcohol adds calories



*1 Drink = 12 oz. beer, 4-5 oz. wine or 1½ oz. liquor



Check with doctor prior to drinking alcohol.

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

Beverage	Serving Size	Carbohydrates	Calories
Beer			
Regular	12 oz	14 g	151 cal
Lite	12 oz	6 g	90 cal
Extra Lite	12 oz	3 g	70 cal
Non-alcoholic	11 oz	10 g	50 cal
Liquor			
Gin, Rum, Vodka, Whiskey, Tequila	1-1/2 oz.	0 g	107 cal
Wine			
Red, Rose, Dry White	4 oz	0.4-1 g	85 cal
Sweet Wine	4 oz	5 g	102 cal
Champagne	4 oz	12 g	132 cal
Other			
Margarita	12 oz	48 g	450 cal
Wine Coolers	12 oz	22 g	192 cal
Pina Colada	12 oz	85 g	648 cal

Section 4. Physical Activity



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. Walking, swimming, strength training and riding a bike are all examples of exercise.

My Exercise Plan

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
- Exercise will help my diabetes medications (insulin) work more efficiently and improve my blood sugar control

What can I do?



Walk



Bike



Chair Exercise



Dance



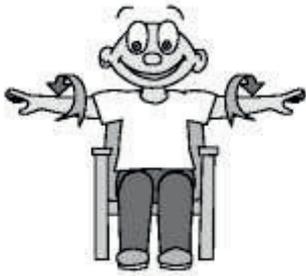
Other: _____



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

- Check your blood sugar before and after exercise.
 - For strenuous exercise, continue to monitor up to 12 hours afterwards
- 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.
 - If you have any symptoms of low blood sugar, stop exercising, check your blood sugar, and treat as needed.
- Warm up before you exercise and cool down after you exercise.
- Work up to 30 minutes of exercise 4 to 6 times a week.
- **Carry identification** that says you have diabetes (Medical alert; Real Id).
- 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.
- Don't drink alcoholic beverages before, during, or after physical activity.
- Avoid sitting over 30 minutes at a time.
- Exercise with a friend that knows about your diabetes and how to help.

Chair Exercises



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 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.

Section 5. Medications, Diabetes and your Health



Diabetes Medications

Healthy lifestyle choices, including diet and exercise, are the keys to managing diabetes. You may also 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, even if you are sick, unless you are told to do so by your physician.

Pills

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

Injectable Medications

Insulin

DRUG TYPE/NAME	HOW IT WORKS	STARTS WORKING	WORKS STRONGEST	ENDS	INSTRUCTIONS
RAPID ACTING					
APIDRA (Glulisine) HUMALOG (Lispro) NOVOLOG (Aspart)	Bolus	5-15 Minutes	1-2 Hours	4-6 Hours	Looks clear. Take with meals.
SHORT ACTING					
Regular	Bolus	30-60 Minutes	2-3 Hours	6-8 Hours	Looks clear. Take 30 minutes before meals.
INTERMEIDATE ACTING					
NPH	Basal	2-4 Hours	6-10 Hours	10-18 Hours	Looks Cloudy. Roll to mix. Take as ordered.
LONG ACTING					
LANTUS (Glargine) LEVEMIR (Detemir) TOUJEO (U300 Glargine)	Basal	1-2 Hours	No peak	Approximately 24 Hours	Looks clear. Take at same time every day. Do not mix with other insulins.
LONGER ACTING					
TRESIBA (Degludec)	Basal	1-2 Hours	No Peak	Up to 40 hours	Looks clear. Take at same time every day. Do not mix with other insulins
PRE-MIXED					
70/30 Humulin/Novolin	Combined Pre-Mix Bolus and Basal	30-60 Minutes	Varies	10-16 Hours	Looks cloudy. Roll to mix. Take as ordered.
50/50 Humalog/Novolog 75/25 Humalog 70/30 Humalog/Novolog	Combined Pre-Mix Basal and Bolus	5-15 min	Varies	10-16 Hours	Looks clear. Take with meal
70/30 Ryzodeg	Combined Pre- Mix longer acting Basal and Rapid	5-15 min.	No Peak	Beyond 24 hours	Take once daily with main meal

Others

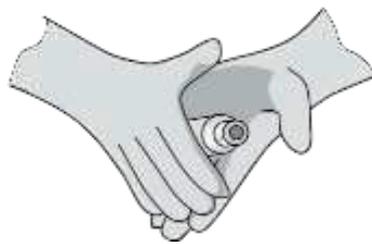
DRUGTYPE AND NAME	HOW IT WORKS	POSSIBLESIDEFFECTS
BYETTA/BYDUREON (Exenatide) TANZEUM (Albiglutide) TRULICITY (Dulaglutide) VICTOZA (Liraglutide)	Prevents liver from releasing too much sugar. Replaces naturally occurring GLP1 hormones.	Nausea, vomiting Decreased appetite Constipation
SYMLIN (Pramlintide)	Helps lower after-meal blood sugar levels. Used with insulin at mealtime.	Nausea, vomiting Decreased appetite

Giving Yourself Insulin

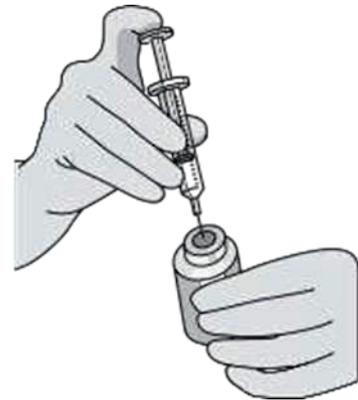
Insulin Syringe Instructions



1. Wash your hands.



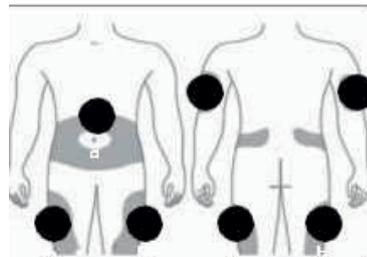
2. Mixing Insulin: If you have cloudy insulin, you must gently roll bottle between hands to mix



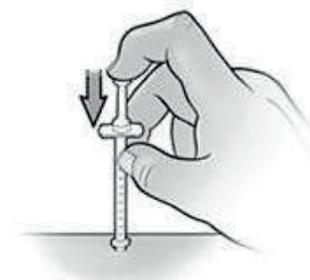
3. Clean top of vial, then place needle into vial.



4. Draw up dose.



5. Select injection site and clean area. Avoid areas that are hard, red or tender. Rotate sites.



6. Inject insulin. Count to 10 before removing.



Storage of insulin:

Unopened bottles or pens are best stored in the refrigerator; protect against freezing.

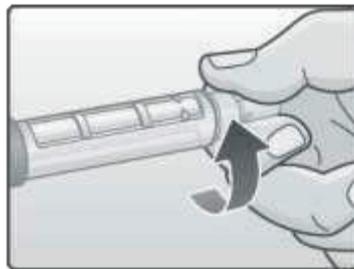
Opened bottles or pens may be stored at room temperature for 28-30 days after opening, some combination medications may not last as long - check packaging

Giving Yourself Insulin

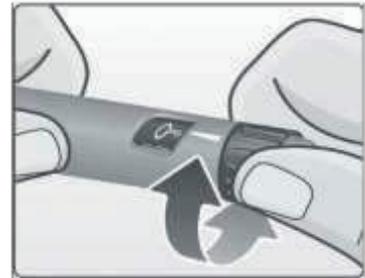
Insulin Pen Instructions



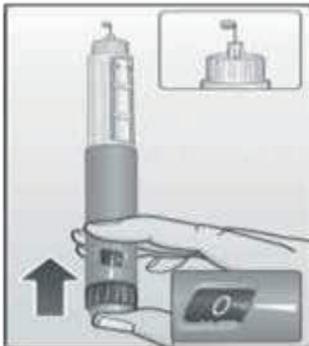
1. Wash your hands.



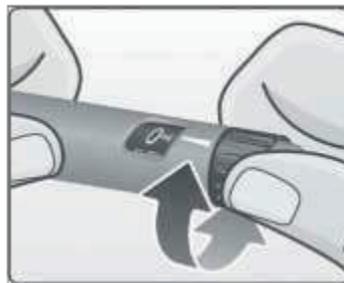
2. Attach pen needle and remove outer cap.



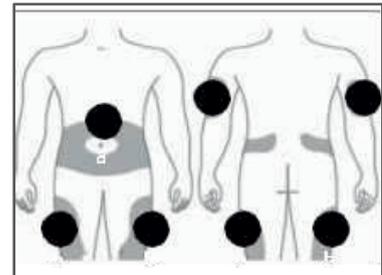
3. Dial 2 units of insulin.



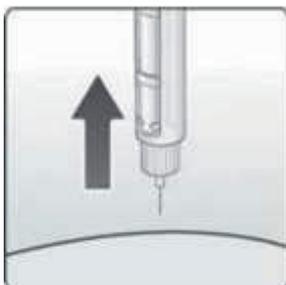
4. Waste 2 units of insulin to ensure needle is working.



5. Dial ordered insulin dose



6. Select injection site and clean area. Avoid areas that are hard, red or tender. Rotate sites.



7. Inject insulin: count to 10 before removing



8. Remove needle and place used needle in sharps container

Storage of insulin:

Unopened bottles or pens are best stored in the refrigerator; protect against freezing.

Opened bottles or pens may be stored at room temperature for 28-30 days after opening, some combinations may not last as long - check packaging.

Diabetes Can Affect the Entire Body

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 checkup 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.

Diabetes Distress

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.

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

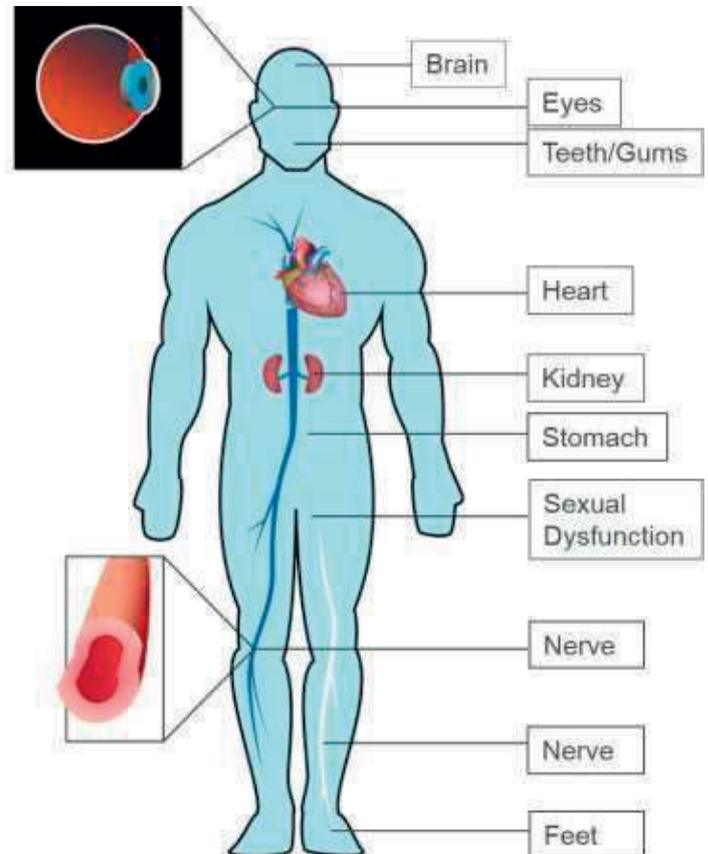
To reduce risk:

- 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



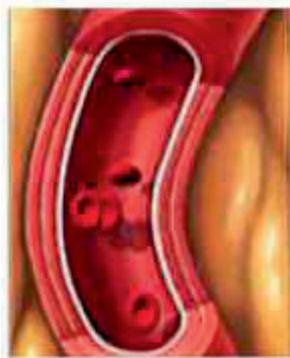
Health Maintenance Schedule

Health exams and tests that can help people with diabetes live longer, healthier lives.

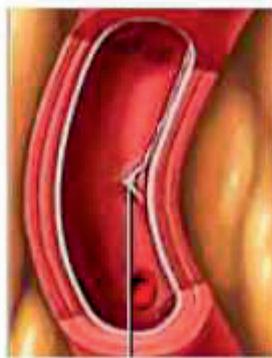
Tests	Monitors	Test Frequency	Recommendations	Your Last Test Result(s)	Test Date
A1c	2 to 3 month blood sugar average	Every 3 to 6 months	Less than 7 percent (or as advised by your doctor)		
Blood Pressure	Checks the force of blood flow through vessels	Every doctor visit	If above 120/80 add lifestyle changes If above 140/90, add medication in addition to lifestyle changes		
Cholesterol	Risk of heart disease	Yearly	A statin medication in addition to lifestyle changes is suggested in most people with diabetes. Risk factors include: <ul style="list-style-type: none"> • LDL above 100 mg/dl • Triglycerides above 150 mg/dl • HDL less than 40 mg/dl in men and less than 50 mg/dl in women 		
Microalbumin (urine test)	Kidney function	Yearly	Less than 30 mg/dL		
Eye Exam (dilated)	Eye disease	Yearly	Normal		
Foot Exam	Foot problems	Every doctor visit	Normal		
Flu Shot		Yearly			
Pneumonia Vaccine		At diagnosis and at age 65 years and older			
Other Vaccines		Check with your provider			

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.



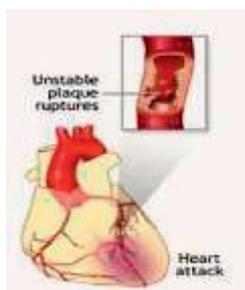
Damaged Artery:
High blood sugar damages the artery lining.



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

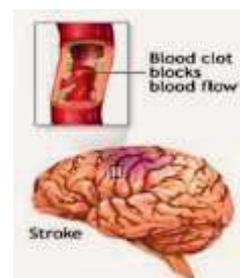
Warning signs of a heart attack

- 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

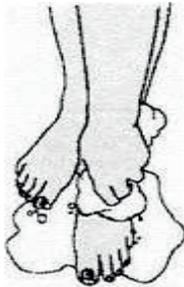


If you are having warning signs of a heart attack or stroke, call 911.

Foot Care



People with diabetes need to take special care of their feet. See your doctor if you notice sores, cuts, calluses or any changes. Ask 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.

Health Benefits of Quitting Smoking

Within 20 minutes:

- Blood pressure drops to normal.
- Pulse slows to normal.
- Temperature of hands and feet goes up to normal.

Within 12- 24 hours:

- Carbon monoxide level in blood decreases.
- Oxygen level in blood rises to normal.
- Chance of heart attack decreases.

Within 48- 72 hours:

- Damaged nerve endings start to re-grow.
- Sense of smell and taste begin to improve.
- Nicotine is out of the body after 3 days



Within a year...

2 weeks to 3 months:

- Blood circulation gets better throughout the body.
- Exercise gets easier.

1 to 9 months:

- Coughing, shortness of breath and sinus congestion all go down.
- Cilia re-grow in lungs, making it easier for the lungs to clean themselves and cut the rate of infections.
- Body's overall energy level goes up.

1 year:

- Risk of heart disease is cut by half.

For the rest of your life...

5 years:

- Risk of stroke goes down to the level of non-smokers.
- Risk of cancer of the mouth, throat, esophagus and bladder are cut in half.

10 years:

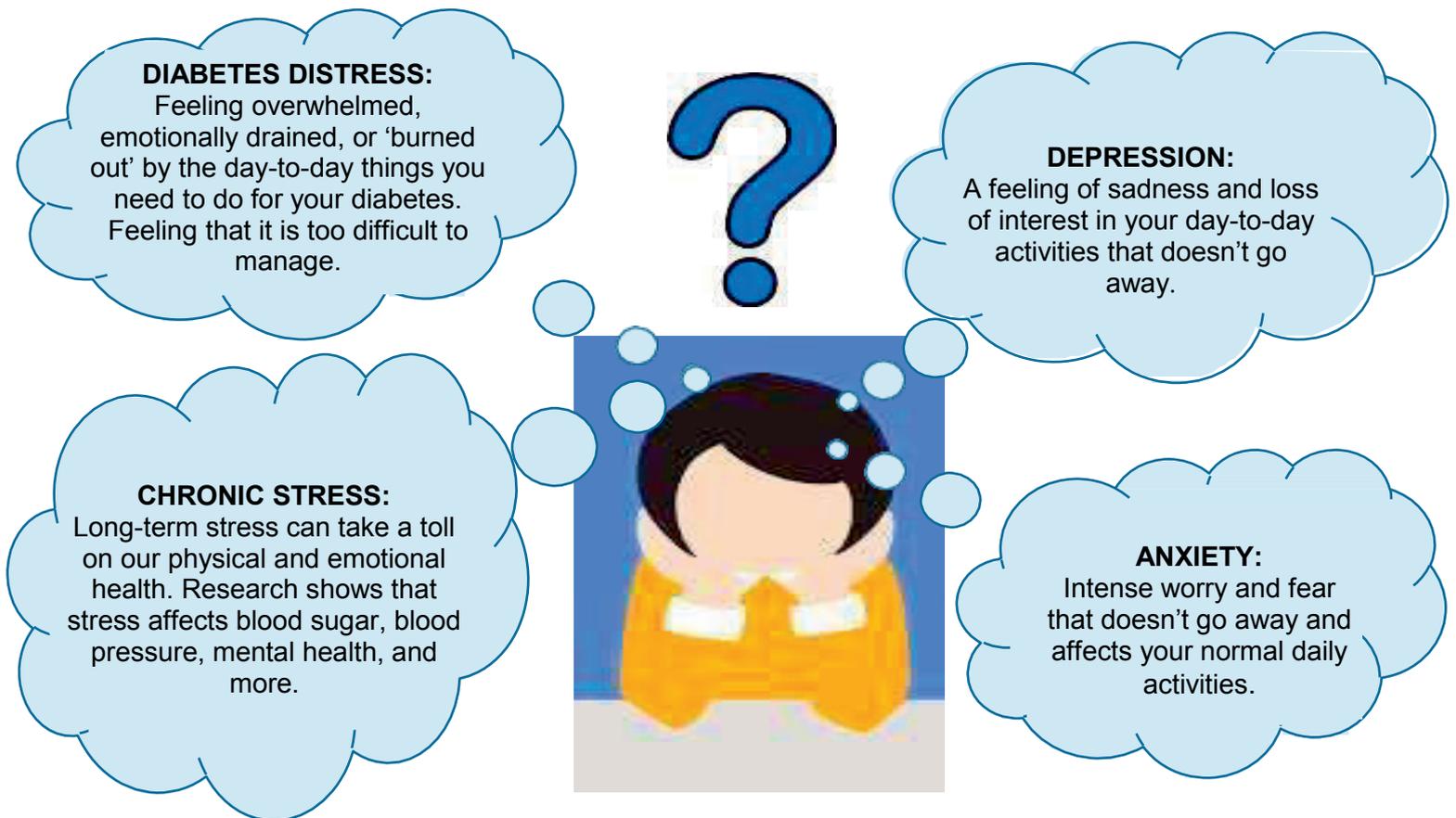
- Risk of lung cancer is cut in half.

15 years:

- Risk of heart disease and lung cancer returns to the levels of a non-smoker.
- Overall risk of death returns to nearly the level of someone who never smoked.

Information from US Centers for Disease Control and Prevention

Emotional Experiences

**DIABETES DISTRESS:**

Feeling overwhelmed, emotionally drained, or 'burned out' by the day-to-day things you need to do for your diabetes. Feeling that it is too difficult to manage.

DEPRESSION:

A feeling of sadness and loss of interest in your day-to-day activities that doesn't go away.

CHRONIC STRESS:

Long-term stress can take a toll on our physical and emotional health. Research shows that stress affects blood sugar, blood pressure, mental health, and more.

ANXIETY:

Intense worry and fear that doesn't go away and affects your normal daily activities.

If you find yourself experiencing any of the above feelings, YOU ARE NOT ALONE!

Dealing with diabetes or any chronic condition is not easy. It is common for people with diabetes to have trouble keeping appointments, taking medications, and doing self-care tasks like checking blood sugar.

Find Support!

- Talk to your doctor, nurse, or diabetes educator. Let them know how you feel.
- Tell a family member or friend that you are having a difficult time. Share how they can help you.
- Think of ways you can help yourself by taking the time to relax doing activities that you enjoy like walking, dancing, gardening, deep breathing, listening to music, or anything you like to do.
- Social media websites can help connect you with others who have diabetes to share stories and ask questions.
- **We are here to help: Call Scripps Whittier Diabetes Institute at 858- 678-7050 or e-mail: ScrippsDiabetesCare@scrippshealth.org**

Section 6. Resources and Helpful Information



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. The following are additional resources you may find helpful in your journey to health and wellness. Thank you for letting us be a part of your journey.

Driving and Diabetes

How can diabetes affect my driving?

Diabetes can make your blood sugar levels too high or too low, which can result in:

- Feeling sleepy, dizzy or confused
- Having blurred vision
- Losing consciousness or having a seizure



Can I still drive with diabetes?

Yes. If you are healthy with diabetes, there is no reason you can't drive. However, if you experience frequent or severe low blood sugars or vision problems, ask your healthcare provider for advice.

What if I have to cut back or give up driving?

There are many healthy and low-cost options to driving. In fact, more and more people without diabetes are taking advantage of eco-friendly transportation.

- Walk.
- Ride with family or friends.
- Use a ride sharing program like Uber or Lyft; or take a taxi.
- Call a service group, such as a senior center that offers transportation.
- Call Eldercare Locator (800-677-1116 or www.eldercare.gov) or your local Area Agency on Aging for transportation options.

How can I drive safely with diabetes?

- Check your blood sugar before driving, and don't drive if it's 80 mg/dL or below.
- Check your blood sugar every 3 hours or more if driving long distances.
- Always carry your meter and plenty of snacks, including a quick-acting source of sugar.
- Carry an alert tag or wallet card to inform emergency responders of your diagnosis. (available at www.diabetes.org; see page 55)

What if I have a low blood sugar while driving?

- If you feel any symptoms of hypoglycemia, pull over and check your blood sugar.
- If it's less than 80 mg/dL, take a fast-acting sugar such as juice or soda (not diet), hard candy, or glucose tablets. Wait 15 minutes. Recheck and retreat if needed.
- Once your blood sugar is in target, eat a more substantial snack or meal with protein.
- Don't drive until your blood glucose is stable and in target range.
- If you have low blood sugars without warning, don't drive until you have worked with your healthcare team to ensure you can recognize hypoglycemia.
- Consider a continuous glucose monitor to alarm you of a pending hypoglycemic event.

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What besides low blood sugar could impact my driving?

- Very high blood sugar may also affect driving. Talk to your healthcare provider about safe driving if you have a history of significant hyperglycemia.
- Long-term complications such as vision or nerve damage, or an amputation can make driving challenging. Ask your provider for a referral to a driver rehabilitation specialist. (Contact the Association of Driving Rehabilitation Specialists at 1-800-290-2344 or www.aded.net)

Commercial drivers and diabetes

- In California, commercial drivers with diabetes who use insulin need to pass an exam and are limited to driving within California, without passengers or hazardous materials.
- To drive between states, commercial drivers must apply for an exemption from the Federal Motor Carrier Safety Administration. Go to www.fmcsa.dot.gov/medical/driver-medical-requirements/driver-exemption-programs; email at medical exemptions@dot.gov; or call 1-855-368-4200.

Travel and Diabetes

Your diabetes is going to be with you for the rest of your life. But, just because your diabetes won't take a vacation, doesn't mean you can't! With some careful planning, you can enjoy a worry-free vacation. So, if you're going to be traveling - whether it's for a couple of days or a couple of weeks - here are some important tips to help you plan for your diabetes care needs!



1. Plan ahead

- a) Tell your health care provider about your plans. Ask for a letter stating that you have diabetes and a list of the medications and supplies you need. The letter should also provide an emergency plan. You should ask for prescriptions for your medications and supplies and ask if you should have a glucagon emergency kit.
- b) Discuss an emergency plan with your health care provider.
- c) Make sure that someone you are traveling with knows that you have diabetes, and what to do in an emergency.
- d) If you use insulin and will be traveling for several days, ask your health care provider for special instructions about insulin.
- e) Be sure to call your airline carrier for the most current travel restrictions.

2. What to pack

- a) Identification – wallet card, bracelet, necklace that identifies you as a person with diabetes. A medication card listing all the medications you are taking.
- b) Diabetes supplies
- c) Pack enough medications, needles, lancets, strips, etc. for the entire trip. (Bringing extra supplies is a good idea.)
- d) Keep your supplies near you at all times. Do not store them in the trunk of your car or pack them in the luggage you check.
- e) Bring comfortable shoes and cotton socks
 - Shoes that you have already worn are preferable.
 - If you are going to wear sandals, avoid those with a strap between the toes. Do not go barefoot at any time!
- f) Bring snacks and sources of fast acting sugar.
 - Fresh or dried fruits; crackers are good snack options.
 - Glucose tablets, hard candy and non-diet sodas are good quick sources of sugar.
- g) Your medical insurance card and a plan for medical emergencies.

We strongly recommend that you ask your health care provider for additional travel tips. The "Diabetes Travel Guide (2002)", published by the American Diabetes Association has many more great tips.

Diabetes Disaster Plan

Many regions in California are susceptible to wildfires, earthquakes, and flooding. When a disaster strikes, you may have no or limited access to power, water, internet and cellphone service.

Have an emergency kit ready!

Include:

- Contact information for your healthcare providers and pharmacy.
- List of current medications and medical conditions.
- 30-day supply of all medications, including insulin and supplies. Store insulin in a cooler with re-freezable gel packs.
- Blood glucose meter, 3 day supply of test strips, lancets, and extra batteries.
- Quick-acting source of sugar to treat hypoglycemia (like glucose tabs) and a glucagon kit if prescribed by your healthcare provider.



Advice for people with diabetes in emergencies

- **Tell people you have diabetes.** Use a medical ID bracelet or other medical ID.
- **Drink plenty of water.** High blood sugar can lead to dehydration.
- **Prevent infections.** Always wear shoes and check your feet often. Seek medical advice quickly if you have any sign of infection.

Have a Family Disaster Plan

- Download recommendations and a disaster plan list from www.readysandiego.org or your County's Office of Disaster Preparedness. Or use one of the following resources:
- **American Red Cross-San Diego and Imperial Counties:** 858-309-1200
<http://www.redcross.org/local/california/san-diego/disaster-preparedness>
- **California Governor's Office of Emergency Services:** 916-657-9494 Website:
<http://www.caloes.ca.gov/>
- **Federal Emergency Management Agency:** 800-621-FEMA (3362) <https://www.fema.gov/>

Technology and Diabetes

Thousands of patients with diabetes utilize technology to help them successfully manage their blood sugars. Please talk with your health care team if you are interested in learning more about technology to help manage your diabetes.

Insulin Pumps

- Attached by a very small needle which is removed
- Worn continuously and insulin is infusing continuously
- Requires some information to be entered such as blood sugars and carbohydrates
- Information about insulin delivery can be downloaded to a computer and shared with your doctor



Insulin pump with tubing

Continuous Glucose Monitors (CGM)

Some monitors provide:

- Monitors blood sugar every 5 minutes
- Real-time information about current glucose levels and trends
- Alerts and alarms when glucose is too high or too low



Insulin pump without tubing



Glucose sensor



Some monitors and sensors can transmit results to a smartphone



Insulin delivery patch with set doses

Hazardous Waste

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/environmentalservices/ep/hazardous/medsharpsdisposal.shtml>

Resources

Healthcare

- Scripps Health Resources: www.scripps.org, 1-800-SCRIPPS (1-800-727-4777) – free physician referral help line
- Health Center Partners of Southern California: <https://hcpsocal.org>; referral to community health centers for low-income and uninsured

Medications - Patient Assistance Programs

- Johnson & Johnson Patient Assistance: www.jipaf.org, 1-800-652-6227
- Lilly Diabetes Supplies: www.insulinaffordability.com
- Merck: www.merckaccessprogram.com/hcc
- Novo Nordisk: www.novonordisk-us.com/patients-and-providers/affording-your-medicines.html

Emotional Support

- Behavioral Diabetes Institute: behavioraldiabetes.org, 858-336-8693
- San Diego County Mental Health Services: www.sandiegocounty.gov/hhsa/programs/bhs/
- San Diego Access and Crisis Line: 888-724-7240

Community Resources

- 211sandiego.communityos.org – hotline and database for community and disaster resources
- Meal on Wheels: meals-on-wheels.org – for seniors in need
- Lions Optometric Vision Clinic: sdcos.org – vision care for low-income
- California Smokers' Helpline: californiasmokershelpline.org, English: 1-800-NO BUTTS (1-800-662-8887), Spanish: 1-800-45-NO FUME (1-800-456-6386)
- Benefits Check Up: benefitscheckup.org – resources on government benefits for seniors

Diabetes Education and Advocacy

- American Diabetes Association: www.diabetes.org
- Diabetes Forecast: www.diabetesforecast.org
- Juvenile Diabetes Research Foundation (JDRF): www.jdrf.org
- National Diabetes Education Program: www.ndep.nih.gov
- National Informational Clearinghouse: www.diabetes.niddk.nih.gov, 1-800-860-8747
- Taking Control of Your Diabetes: www.tcoyd.com, 1-800-998-2693

Website Forums

- A Sweet Life: www.asweetlife.org
- DiaTribe: diatribe.org
- Glu: www.myglu.com; for those with Type 1
- EsTuDiabetes (Spanish): www.estudiabetes.org

To learn more about Scripps Diabetes Care, visit scripps.org/diabetesinfo or call 1-877-944-8843.

