

# DIABETES BASICS

## Your Toolkit



Updated March 2019

# Diabetes plan \_\_\_\_\_ Date: \_\_\_\_\_

- ◆ Take your diabetes medications as prescribed:

Medication	How to take

- ◆ Eat healthy portions for your meals
- ◆ Know when to check your blood sugar:
  - ☐ Before breakfast
  - ☐ Before lunch
  - ☐ Before dinner
  - ☐ 2 hrs after breakfast
  - ☐ 2 hrs after lunch
  - ☐ 2 hrs after dinner
  - ☐ Bedtime
- ◆ Call your clinic if you have symptoms described on page 20
- ◆ Bring your discharge papers, medications, blood sugar log and meter to your appointments:

Date	Time	Provider	Clinic	Phone #
		Doctor or nurse practitioner	Diabetes Clinic in 1M (1st floor, old main hospital)	415-206-8749

If you need urgent care, call your primary clinic first.  
Many clinics have urgent appointment slots (see p. 23).

If your primary care clinic cannot see you urgently, go to the  
**ZSFG Adult Urgent Care Clinic**  
 In building 5, 1<sup>st</sup> floor, 1E clinic  
 628-206-8052



# Checklist

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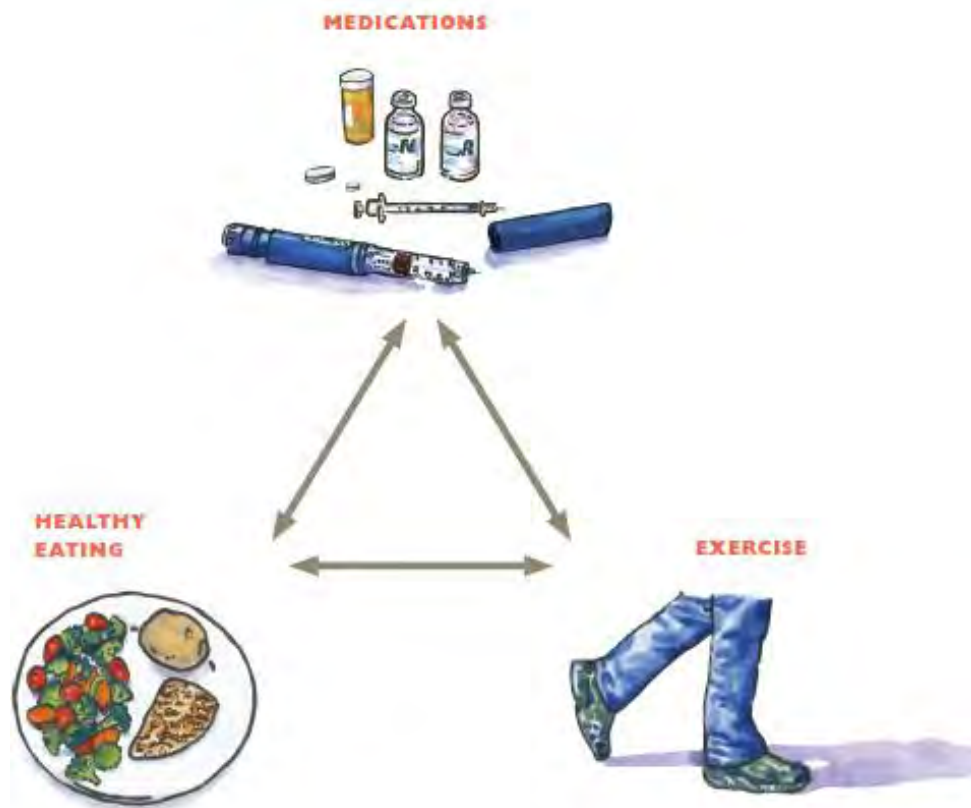
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# About diabetes

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## *Healthy diabetes balance*



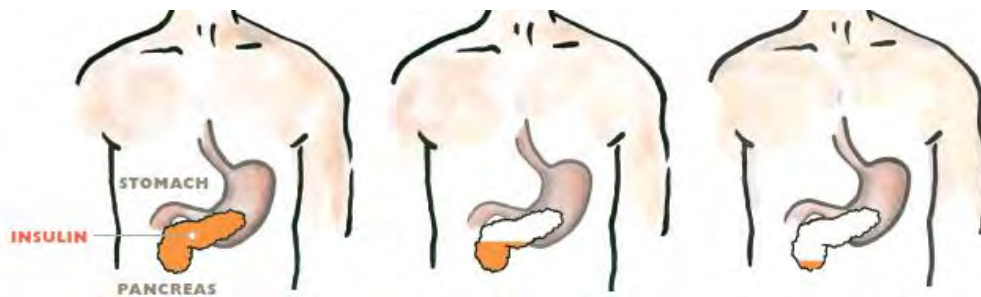
Eating healthy foods, exercising and taking the right medications are all important ways to control your diabetes. Keeping blood sugars in a safe range can prevent long-term complications in your eyes, kidneys, nerves and heart. We support you in making healthy changes to reach your goals.

Your health care team includes your doctor, nurse practitioner, nurse, diabetes educator, nutritionist, eye doctor, foot doctor, behavioral health specialist and pharmacist.



Normally, food is digested, breaks down into glucose (sugar) and goes into the bloodstream. Glucose comes from all carbohydrates, not just sugary foods. Your body needs glucose for energy and nutrition.

Diabetes is a condition in which the body cannot use glucose correctly. Insulin is a hormone that comes from your pancreas. Insulin helps bring glucose from the bloodstream into your body tissues. Without enough insulin, your blood sugar levels will be higher than normal.



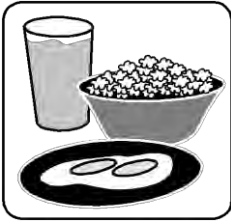
*Decreasing levels of insulin over time* →

There are two types of diabetes: type 1 and type 2. Type 2 diabetes is much more common—your pancreas makes less insulin over time and your body is resistant to the effects of insulin. Type 2 can be treated with diet, exercise, pills, insulin and other injectable medications.

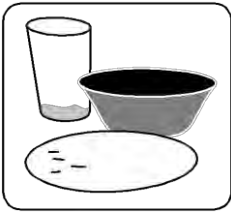
Type 1 diabetes is less common—the body's immune system damages the cells that make insulin. Type 1 must be treated with insulin.

Over 30 million people in the U.S. have diabetes. Another 84 million—1 in 3 people—have prediabetes. This is also a growing problem all over the world (2017 statistics). You are not alone!

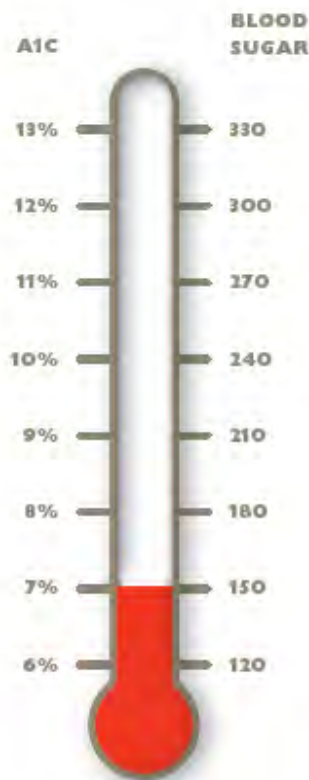
# Blood sugar goals in diabetes



Before meals, the ideal blood sugar is 80-130.



2 hours after meals, the ideal blood sugar is less than 180



The A1C lab test is your average blood sugar for the last 3 months

Keeping your A1C about 7% helps protect your eyes, kidneys, nerves and heart

## Blood sugar log

My goals:

[illegible]



# Using your Aviva meter



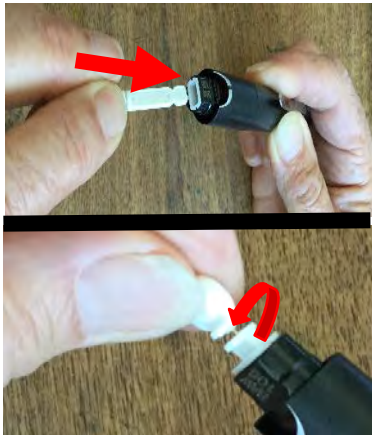
SET-UP

Turn the cap to the number you want.

1 is for sensitive skin  
5 is for thicker skin  
2-3-4 are in between



1. Pull cap straight off



2. Insert lancet...then twist cover off



3. Line up notches and replace cap



4. Press priming button all the way in (like a ballpoint pen)



5. Touch side of finger to end of lancing device



6. Press yellow release button to prick your finger



7. Gently squeeze finger to get a drop of blood





8. Insert test strip to turn meter on



9. Wait to see a blinking drop of blood



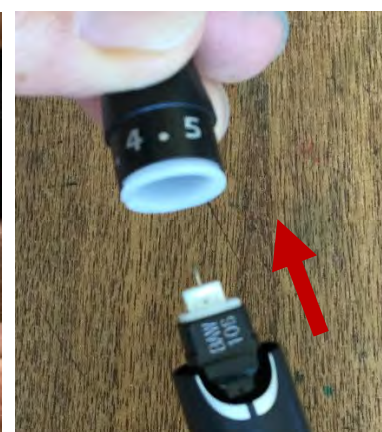
10. Apply drop of blood to yellow window on end of test strip



11. Read your blood sugar result



12. Pull test strip out to turn off meter



13. Remove cap



14. Use body of lancet device to push lancet off...



15. ...into sharps container

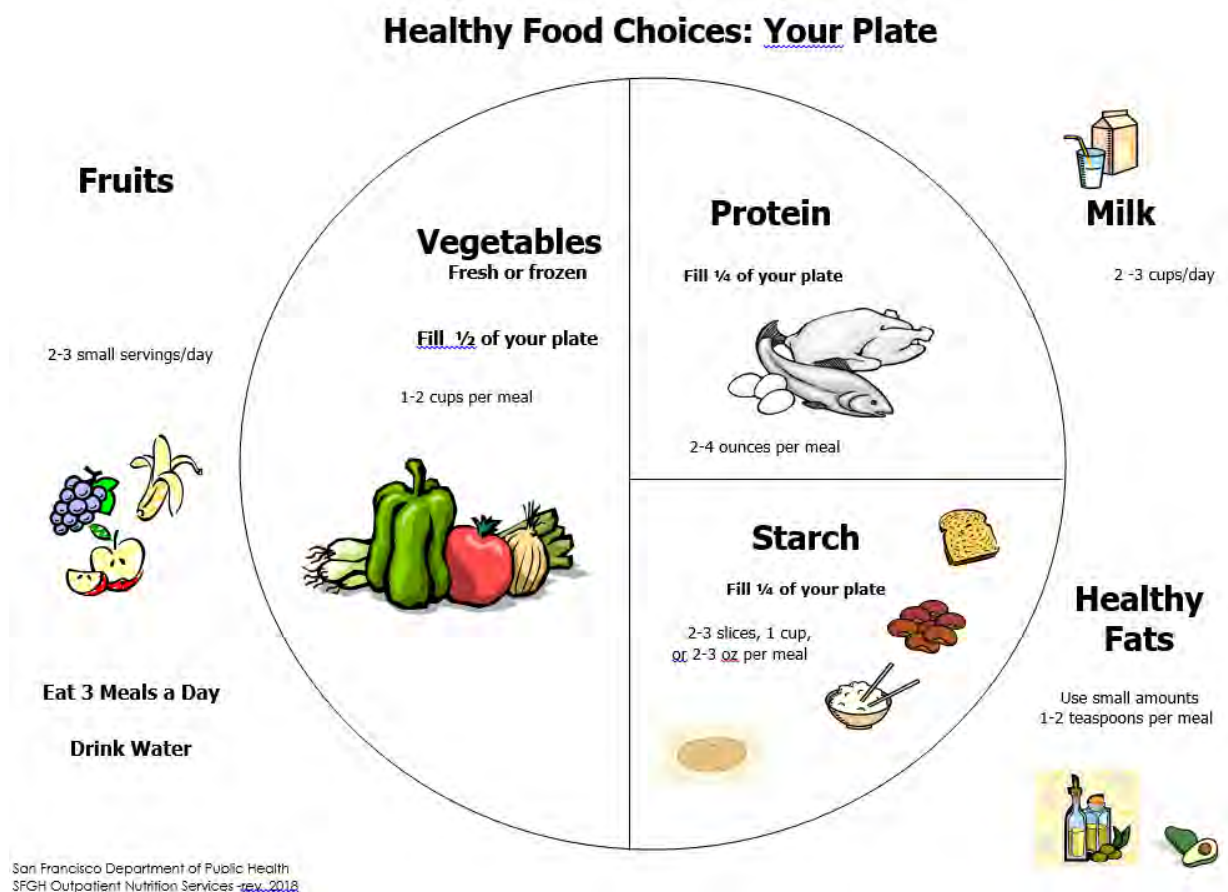


16. Replace cap. DONE

# Healthy eating guidelines

## Key points:

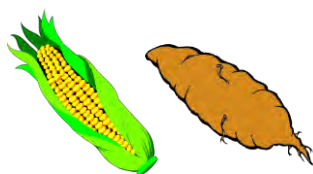
- People with diabetes don't have to buy special or expensive foods. Eat a variety of foods
- Eat 3 small meals per day. Avoid skipping meals
- Try to eat the same amount of carbohydrates from one day to the next
- Drink water. Avoid sugary drinks (juices, regular soda, energy drinks, Gatorade, Snapple, KoolAid, etc)
- Follow healthy portion guidelines:



## Understanding carbohydrates

- Carbohydrates are foods that turn into sugar in your body
- Choose whole grains when possible. Whole grains have more fiber which slows the rise of your blood sugar
- Avoid large servings of carbohydrates and drinks that raise your blood sugar too much
- Aim for a portion of carbohydrates that is  $\frac{1}{4}$  of your plate at each meal

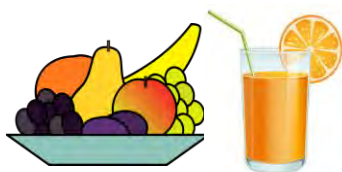
### Carbohydrates:



Corn, potatoes, yams, pumpkin, taro



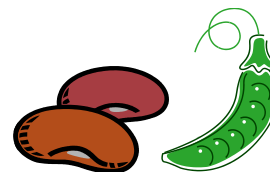
Rice, grains, cereals, oatmeal, pasta



Fruit, fruit juices



Bread, tortillas, rolls, crackers, bagels



Beans, peas, lentils



Cookies, cakes, pastries, sugary drinks, candy



Milk, yogurt

## Understanding foods that are NOT carbohydrates

- These foods do not raise your blood sugars very much
- Aim for a portion of vegetables that is  $\frac{1}{2}$  of your plate at main meals
- Aim for portion of protein that is  $\frac{1}{4}$  of your plate at main meals
- Use a little oil and fat but not too much



### Non-starchy vegetables

artichokes, asparagus  
green beans, beets  
broccoli, brussel  
sprouts, cabbage  
carrots, cauliflower  
cucumber, eggplant

kale, leeks, lettuce  
onions, okra  
tomato, peppers  
spinach, swiss chard,  
turnips, zucchini, etc



### Protein:

- beef, pork, lamb
- chicken, turkey
- fish, shrimp
- other seafood
- eggs
- cheese
- tofu



### Fats and oils:

- nuts, peanut butter
- oil
- mayonnaise
- sour cream
- cream cheese
- butter
- half and half



# Exercise

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## Why should I exercise?

- Exercise keeps your heart healthy
- Exercise improves your blood sugar
- Exercise may help you feel better
- Exercise may help you lose weight

## How often should I exercise?

- At least 30 minutes, 5 days a week
- Do more if you can

## What type of exercise is best?

- Do whatever you can enjoy without pain
- Ask your provider before you start a new exercise
- Cardio exercise is good for your heart. Weights, stretching and resistance exercise are good for your muscles. All types of exercise are helpful!



Exercise while sitting



Walking



Dancing



Aerobics



Resistance or weights

## Common medications

Many people with diabetes take pills and insulin to control their blood sugar. Ask your provider about the timing of your medications.



**Glipizide, glyburide or glimepiride**  
Take 30 minutes before meals.



**Metformin**  
Take after meals.



**Long-acting insulin**  
Usually bedtime and/or morning, no need to time with meals



**Short-acting mealtime insulin**  
Take before meals





## Medication side effects

Medications can lower your blood sugars to a safe range. Before starting your medications, learn about common mild side effects.

Medication	How it lowers your blood sugar	Some people may have these side effects
Glipizide, glyburide or glimepiride	Helps your body make more insulin	Low blood sugar, weight gain
Metformin	Decreases the sugar that your liver makes and helps your body be more sensitive to insulin	Diarrhea, bloating, stomach pain, gas, and metallic taste. Taking metformin with food will lessen these effects.
Insulin	Helps your body use sugar properly	Low blood sugar, skin irritation where you inject, weight gain

- If you are worried about how you feel when you take your medications, talk to your health care provider.
- See page 15-16 for information on recognizing and treating low blood sugars.



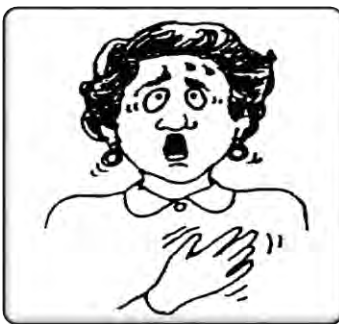
## Low blood sugar

Some diabetes medications can cause low blood sugars.  
Ask your provider about the medications you take.

You may feel...



Very hungry



Heart beating fast



Dizzy or shaky



Headache



Sweaty



Confused

Even if you feel fine, a blood sugar under 80 may be too low.

## What causes low blood sugars?

- Missing meals or not eating on time
- Doing more exercise than usual
- Taking your glipizide or short-acting insulin without eating

How can you treat low blood sugars? Eat or drink 15 grams of sugar such as:



4 glucose tablets



3 teaspoons sugar



2 teaspoons  
honey



6-7 hard candies



2 tablespoons  
raisins



$\frac{1}{2}$  cup juice or  
regular soda

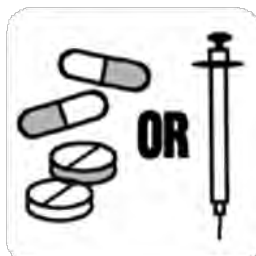
Recheck your blood sugar after 15 minutes. If your blood sugar is still under 80, treat again. Call your health care provider if you still can't get your sugar over 80.

Don't ignore a low blood sugar. Be prepared!

## When you're sick

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When you are sick, your blood sugar may be higher than usual.



Continue taking your diabetes medicine



Measure your blood sugar every 2-4 hours if it is higher than normal.

**\*\*Type 1:** check urine ketones. Call your provider if your sugar is over 240 and you have ketones

Try to eat the usual amounts of food at the usual times.



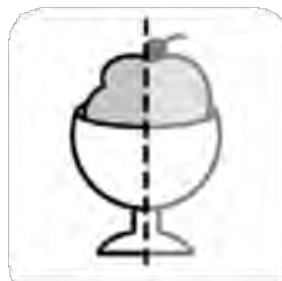
To avoid dehydration, drink at least 8 ounces of calorie-free fluids (water, broth, diet soda) every hour

If you can't eat because of nausea and vomiting, drink liquids or eat foods with carbohydrates.

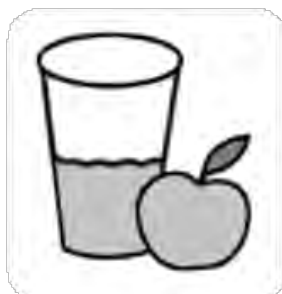
You can try these foods:



Gelatin  
(1/2 cup)



Ice cream  
(1/2 cup)



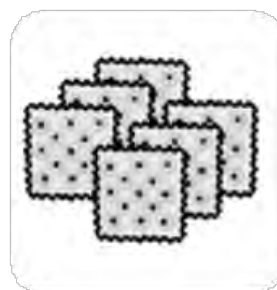
Fruit juice  
(1/2 cup)



Gatorade  
(1 cup)



Pudding  
(1/2 cup)



6 saltines

## Be safe

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Carry or wear diabetic identification



Always carry something with sugar or starch



Teach your family and friends to give you juice or sugar when your blood sugar is low



Drive only if your blood sugar level is above 100

**Teach your family and friends what to do if you pass out:**



Call 9-1-1, then administer glucagon



Do not give food or liquids to someone who is passed out



## When to call your clinic

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### Low blood sugar

If your sugar is less than 80 or you have signs of low blood sugar (see pages 15-16)



### High blood sugar

If your sugar is more than 300, if you are urinating a lot, feel very thirsty, have blurry vision or feel unusually tired

\*\* For type 1, call if your sugar is more than 240 and you have ketones in your urine



If you are **vomiting** for more than 8 hours and cannot hold down fluids



If you have **diarrhea** for more than 8 hours and cannot hold down fluids



If you have **fever, chills, new infections** or **sores**



## Take care of your feet

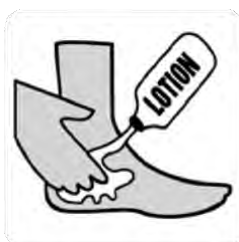
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Take your shoes and socks off at each provider visit for foot checks



Wash your feet with warm water every day. Dry them well, especially between the toes



Use a moisturizing lotion but not between the toes



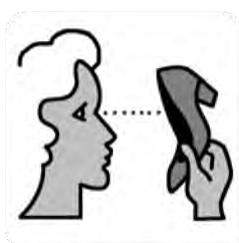
Check your feet every day for cuts, bruises, blisters, redness and swelling



Don't walk barefoot



Wear shoes that fit well



Check inside your shoes before putting them on. There may be something that can cut you



Cut your nails straight across as shown

*If you have a hard time taking care of your feet, ask your provider for a referral to a podiatrist*



## My primary care home

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<input type="checkbox"/> Chinatown Public Health Center 1490 Mason St.	415-364-7600
<input type="checkbox"/> Curry Senior Center 333 Turk St.	415-885-2274
<input type="checkbox"/> Castro-Mission Health Center 3850 17 <sup>th</sup> St.	415-934-7700
<input type="checkbox"/> Family Health Center 995 Potrero Ave.	415-206-5252
<input type="checkbox"/> Maxine Hall Health Center 1301 Pierce St.	415-292-1300
<input type="checkbox"/> Mission Neighborhood Health Center 240 Shotwell St.	415-552-3870
<input type="checkbox"/> Ocean Park Health Center 1351 24 <sup>th</sup> Ave.	415-682-1900
<input type="checkbox"/> Potrero Hill Health Center 1050 Wisconsin St.	415-648-3022
<input type="checkbox"/> Richard Fine People's Clinic, ZSFG 1001 Potrero Ave., 1M	415-206-8494
<input type="checkbox"/> Silver Avenue Health Center 1525 Silver Ave.	415-657-1700
<input type="checkbox"/> South of Market Health Center 229 7 <sup>th</sup> St.	415-503-6000
<input type="checkbox"/> Southeast Health Center 2401 Keith St.	415-671-7000
<input type="checkbox"/> St. Anthony's Free Medical Clinic 150 Golden Gate Ave., 2 <sup>nd</sup> floor	415-241-8320
<input type="checkbox"/> Tom Waddell Health Center 50 Lech Walesa (Ivy) St.	415-355-7400



## Selected resources

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<b>ZSFG Diabetes Clinic</b>	<b>415-206-8749</b>
Consultation with endocrinologists, nurse practitioners, nurse diabetes educators and nutritionists. Available by referral from primary care provider.	
<b>ZSFG Community Wellness Program</b>	<b>415-206-4995</b>
Various wellness programs and exercise classes. Open to the public <a href="http://www.sfghwellness.org">www.sfghwellness.org</a>	
<b>ZSFG Diabetes Support Group</b>	<b>415-206-8749</b>
Monthly support group. Open to the public. Call for time.	
<b>ZSFG Outpatient Nutrition</b>	<b>415-206-8748</b>
Call to find out about a nutritionist/dietician in your primary care clinic	
<b>CalFresh (food stamps)</b>	<b>415-558-1001</b>
Call or apply for food stamps at 1235 Mission St. <a href="http://www.benefitscalwin.org">www.benefitscalwin.org</a>	
<b>Tai Chi classes</b>	<b>415-206-8749</b>
Free weekly exercise group at ZSFG. Open to the public. Call for time.	
<b>SF Tobacco Free Project</b>	<b>415-206-6074</b>
Group meetings at ZSFG. Open to the public. Call for times.	
<b>California Tobacco Control Program</b>	<b>800-NO-BUTTS</b>
Various programs including free telephone hotline to help quit smoking	

## My diabetes goals

	How often	Results/date	Goal
A1C 	Every 3 months		7% for most people
Blood pressure 	Every visit		Under 140/80 for most people
Cholesterol 	Once a year		LDL under 100
Weight 	Every visit		My weight goal: _____
Eyes 	Once a year		Healthy eyes
Teeth 	Twice a year		Healthy teeth and gums
Feet 	Every visit		No cuts or sores
Urine protein 	Once a year		Under 30

- ☐ Do you have more questions? Ask your health care provider for a referral to see a nutritionist.



This “Diabetes Basics: Your Toolkit” has been updated from “Diabetes Basics”, Amalia Fyles, CDE, CNS, and Kelly Quinn, CDE, CNS (2013)

Icons and text on pages 5, 12, 15, 16, 17, 18, 19, 20, adapted with permission from “Live Your Life! Control Your Diabetes”, Lumetra

Images on pages 3, 4, 5 adapted from “Starting Insulin” flipchart teaching tool developed at ZSFG (2013), original illustrations by Mimi Sheiner

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Zuckerberg San Francisco General, Diabetes Program (2019)

