

# Diabetes Basics

## Living Well With Diabetes Series

Clinical Health Education



What do you know about how your  
blood sugar impacts your health?

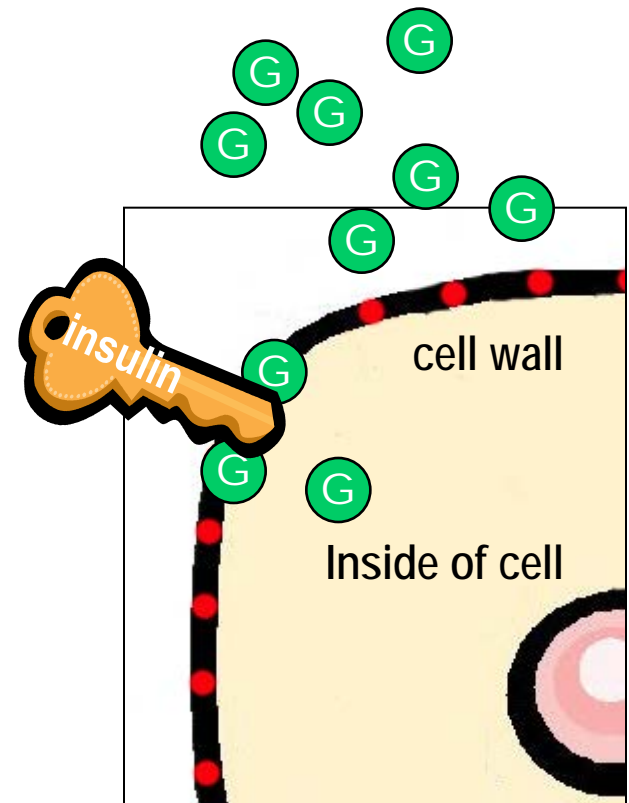
What are you doing to care  
for yourself now?

# What is Diabetes?

Type 1	Type 2
<ul style="list-style-type: none"><li>■ Pancreas produces little or NO insulin</li>          <li>■ Develops suddenly</li><li>■ Insulin dependent</li></ul>	<ul style="list-style-type: none"><li>■ Pancreas produces some insulin</li><li>■ Insulin resistance (cells do not use insulin properly)</li>          <li>■ Develops over time</li><li>■ Use of medications and/or insulin may vary</li><li>■ Lifestyle and genetic factors</li></ul>

# Blood Glucose

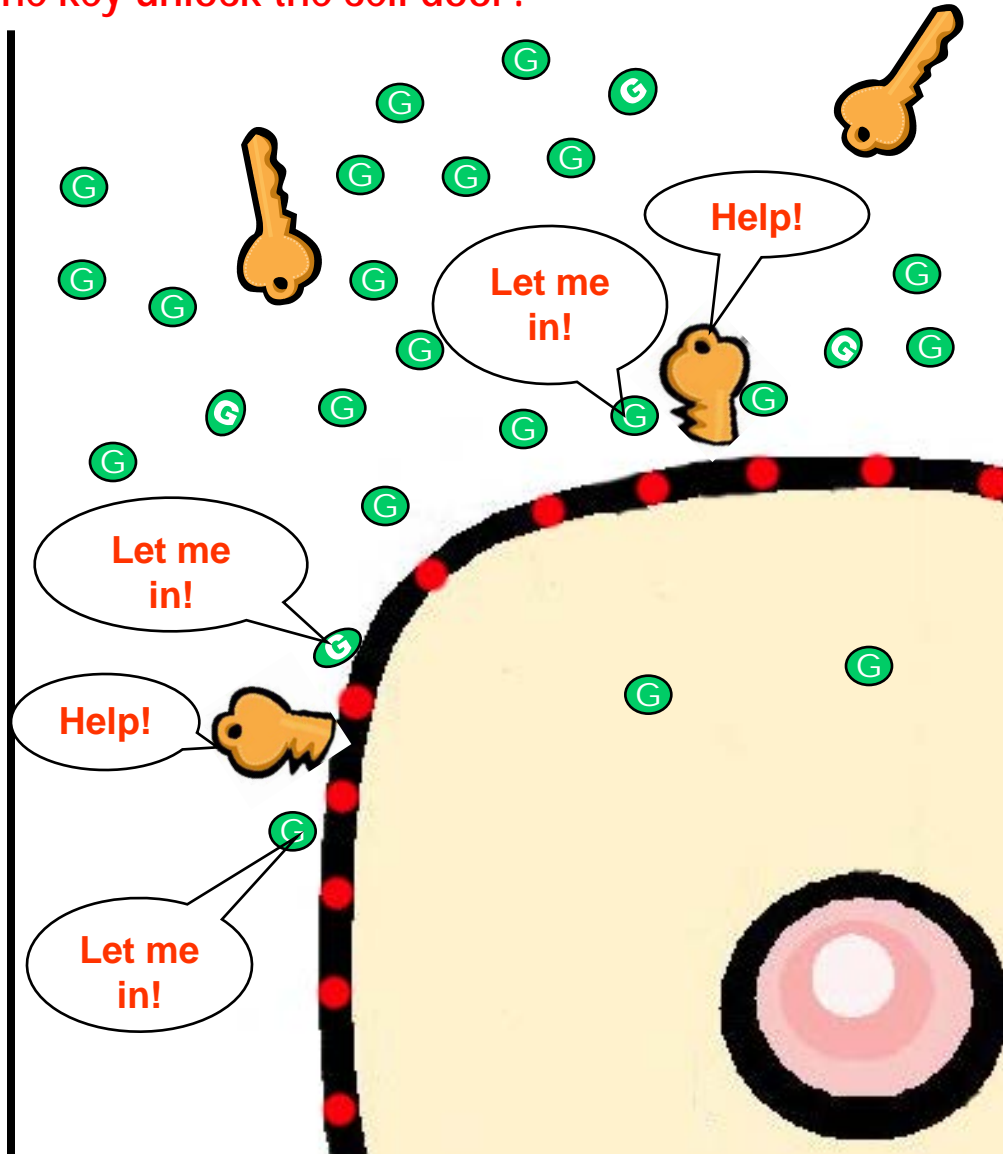
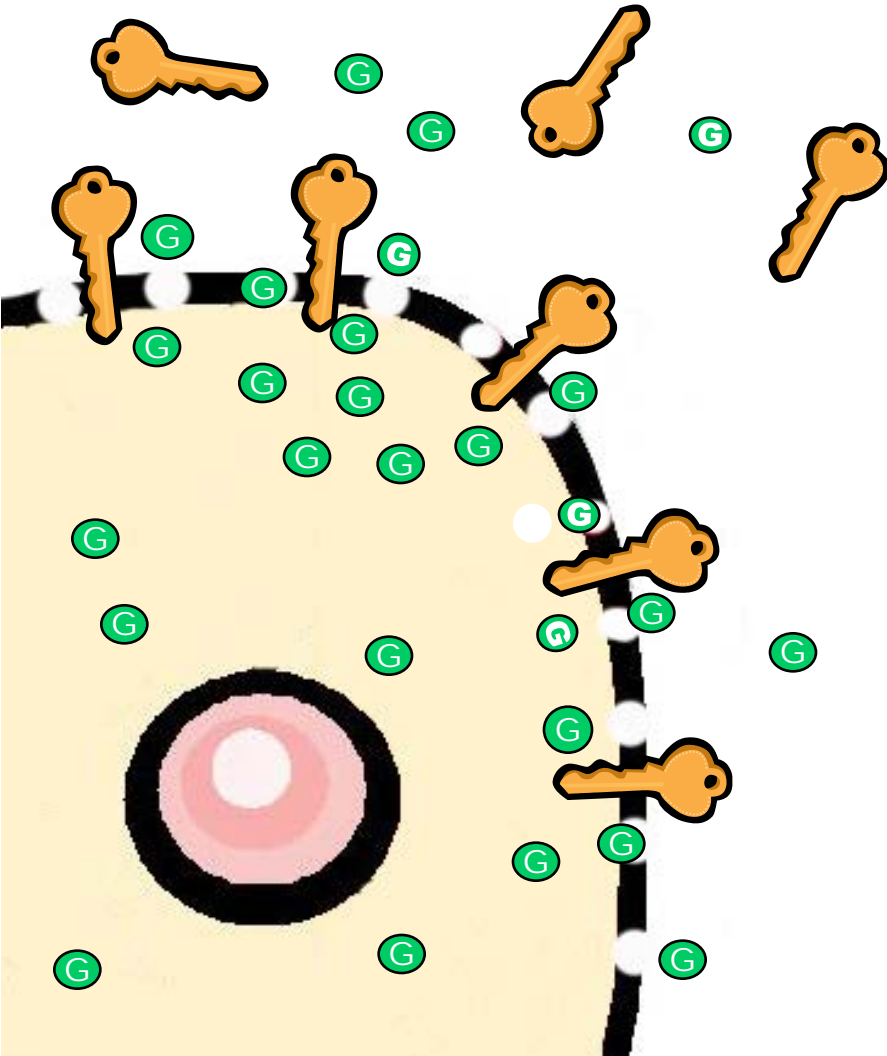
- The food you eat is broken down into glucose
- Then it enters your bloodstream
- Glucose can only enter your cells if **insulin**, produced from your pancreas, is there to help and works properly



## How Insulin Functions

## Lack of Insulin and Insulin Resistance

Name 3 ways to reduce insulin resistance.  
What can you do to help the key unlock the cell door?



# Reduce Insulin Resistance

- **Reduce Inflammation**
  - Lose belly fat
  - Focus on unprocessed, plant-based foods
  - Exercise regularly
  - Manage stress and depression
  - Sleep well

# Diabetes Diagnosis

Range	HgbA1C	Fasting Glucose
Normal	4.4-5.6	60-99
Prediabetes	5.7-6.4	100-125
Diabetes	6.5 and above	126 and above

# Preventing Complications

Can you reduce your risk for long-term complications?

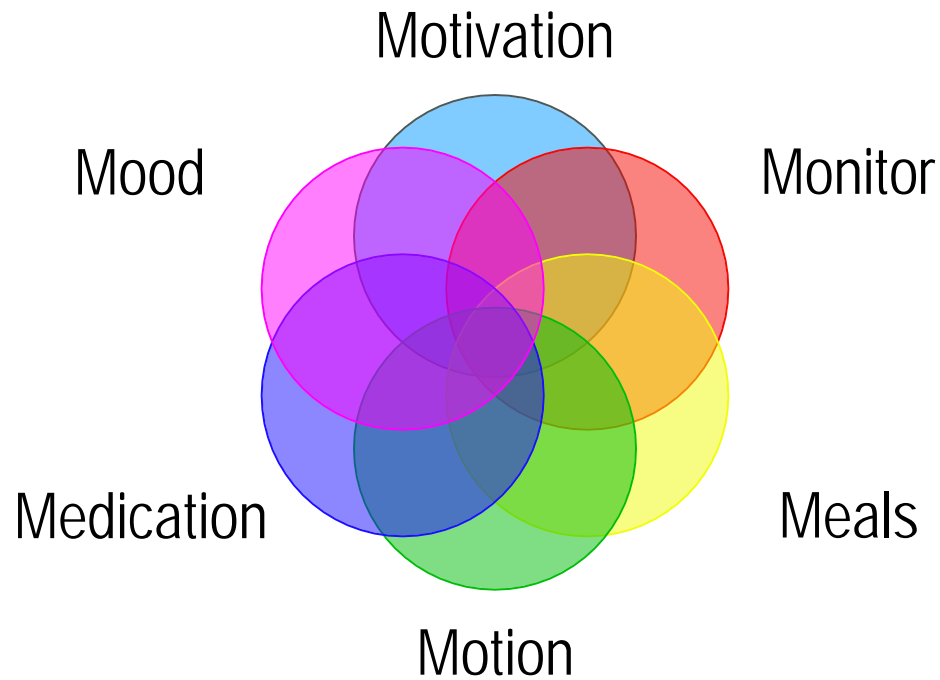
- Heart disease
- Stroke
- Blindness
- Kidney failure
- Amputations

## Special note for women

Women with diabetes **must** control blood sugar before pregnancy and have a healthy weight. Discuss the safety of all medications and supplements with your provider. If you are not ready or don't want to become pregnant talk with your provider about effective birth control options. Plan for a healthy family!



# 6 Ms of Diabetes Self Care



# Monitor

## How often do you test?

- |                      |   |               |
|----------------------|---|---------------|
| ■ Before Meals       | → | 70-130        |
| ■ 2 hrs. After Meals | → | less than 180 |
| ■ Before Bed         | → | 100-140       |

- Use a new lancet and test strip
- Clean and dry hands, no lotion
- Use lowest effective setting
- Rotate testing site
- Dispose of sharps properly
- Call manufacturer with questions
- Record your readings (*see sample glucose log*)

# Hyperglycemia

## High blood sugar

### ■ Symptoms

- Frequent urination
- Thirst
- Vision changes
- Weak, tired, sleepy
- Nauseated
- Confused, anxious
- Headache, hungry
- Unexpected weight loss

### ■ Causes

- Missing your medications
- Illness, infections, injury
- Hormonal changes
- Diet
- Stress

# Treating High Blood Sugar

- Test your blood sugar
- Drink water or fluids without sugar or caffeine
- Take your medications if you missed them
- Modify diet (do not skip a meal)
- Increase activity

# Hypoglycemia

## Low blood sugar

### ■ Symptoms

- Anxious, nervous
- Sleepy
- Sweaty, shaky
- Angry, irritable
- Slurred speech
- Confusion, headache
- Hunger
- Vision changes

### ■ Causes

- Skipping meals
- More than 4 or 5 hours between meals
- More active than usual
- Too much insulin or medication
- Alcohol (without meal)

# Treating Low Blood Sugar

## Eat Sugar

- If blood sugar is less than 70, take 15 grams of fast acting sugar
- If less than 50, take 30 grams
- 4 oz. fruit juice/soda, 8 oz. milk, 4 glucose tablets, 4 sugar packets or 1Tbsp. honey/syrup

## Wait 15 minutes

- Rest for 15 minutes, then recheck
- If still less than 70, take another 15 grams of sugar
- If still low after 3 tries, call Kaiser Advice Line or go to the nearest emergency room

## Eat a Meal

- Eat a substantial snack or meal with carbohydrate
- Apple with nuts
- Yogurt with fruit
- Healthy Eating Plate Method (balanced) meal

# Contact Your Medical Provider If...

- You faint or feel confused
- Your blood sugar is over **300** for 2 days
- Your blood sugar is less than **70** three times in one week
- You lack water in your body:
  - No urination for 8 hours
  - Dry or cracked lips

Call 911 for medical emergencies

# Meals

See *Eating Well With Diabetes and Carbohydrate Basics* and *Food for Thought* fliers



## Eat Regularly

Eat 3 meals a day  
Eat every 4 to 5 hours  
Add a snack if needed



## Avoid Processed Foods

Limit fatty, sugary and  
salty foods  
  
Limit sweetened  
beverages



## Eat a Variety

Eat whole,  
unprocessed foods  
  
Focus on plants



# Food for Thought

What is included in a “health promoting” diet?

[www.ForksOverKnives.com](http://www.ForksOverKnives.com)

(click to watch 2 minute film trailer)



# Benefits of a plant-based diet

- Lower risk of death from ischemic heart disease and stroke
- Lower LDL “bad” cholesterol levels
- Lower rates of hypertension
- Lower risk of type 2 diabetes
- Lower body mass index (BMI)
- Lower overall cancer rates
- Lower risk of heart failure
- 73 percent decrease in coronary events, like a heart attack
- 70 percent decrease in the risk of dying from a coronary event

# Foundational foods to promote health

Mediterranean, DASH and Vegetarian Diets emphasize plants:

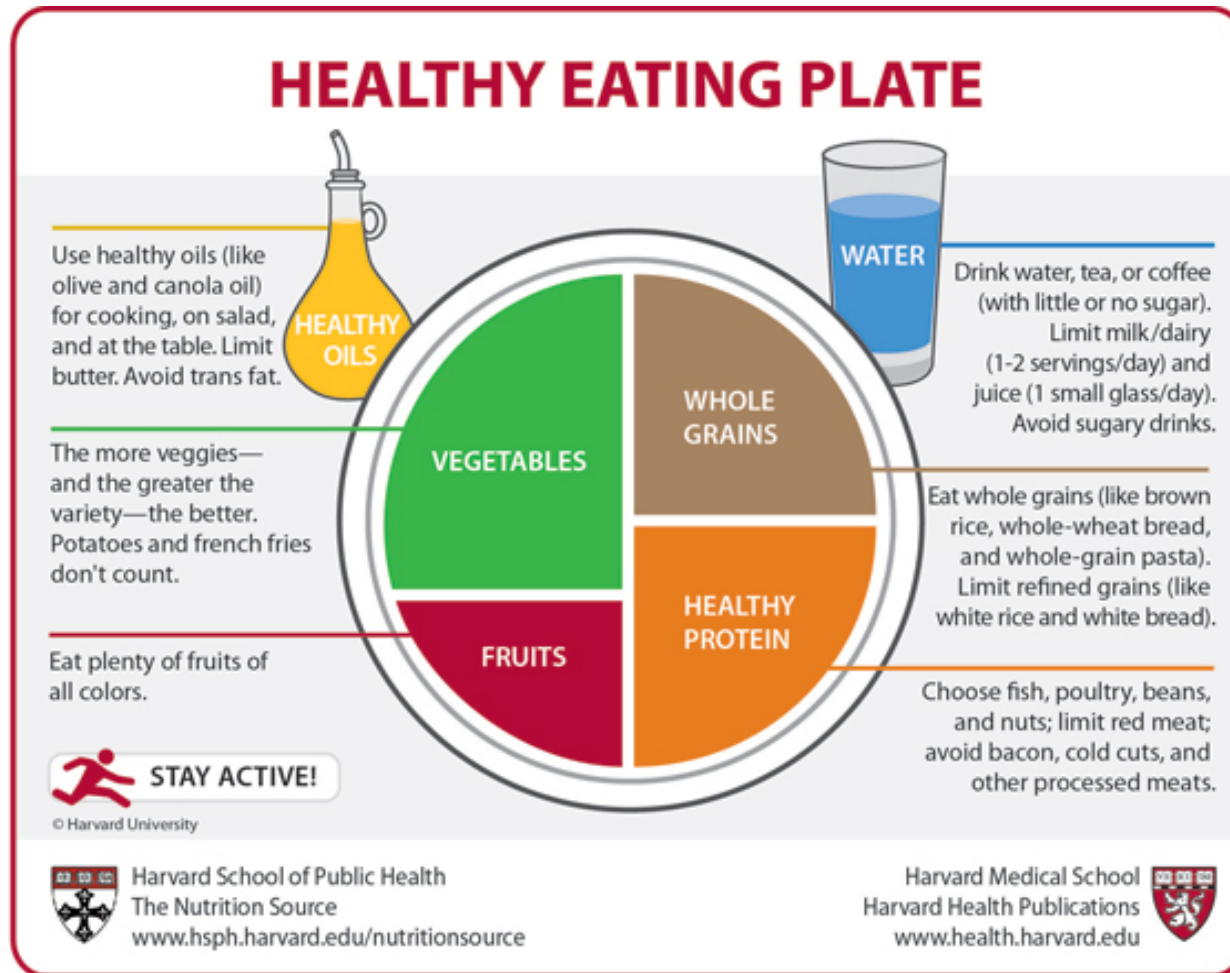
- Whole Grains
- Vegetables
- Fruits
- Beans
- Peas
- Lentils
- Nuts
- Seeds

"Research on a [low fat 100% plant based] diet has found that carb and calorie restrictions were not necessary and still promoted weight loss and lowered participants' A1C."  
-American Diabetes Association

"People on the low-fat 100% plant based diet reduced their HbA1C levels by 1.23 points, compared with 0.38 points for the people on the American Diabetes Association diet. In addition, 43% of people on the low-fat [plant-based] diet were able to reduce their medication, compared with 26% of those on the American Diabetes Association diet."  
-The Permanente Journal, Spring 2013



# Healthy Eating Plate



## Plant-Based Options

Choose plant-based milk instead of cow's milk

- soy, almond, rice, oat

Choose plant-based protein at meals instead of animal proteins

- beans, peas, lentils
- nuts, seeds, nut butters
- tofu and soy foods

Discuss individual dietary needs with your provider or registered dietitian

# Read Food Labels

- Start with Serving Size
- Low Fat (3g or less per serving)
- Low Sodium (2300mg or less daily)
- Fiber: 3 grams or more per serving, add slowly over 2-3 weeks
- Drink 6-8 cups of fluids per day to keep things moving (unless otherwise indicated)
- Buy whole, cracked or rolled grains
- Buy whole foods (single ingredient) or minimally processed foods (few ingredients)

## Nutrition Facts

Serving Size 1 bar (40g)  
Servings Per Container 5

Amount Per Serving	
<b>Calories</b>	140
Calories from Fat	35
% Daily Value*	
<b>Total Fat</b> 4g	<b>6%</b>
Saturated Fat 1.5g	<b>9%</b>
Trans Fat 0g	
Polyunsaturated Fat 0.5g	
Monounsaturated Fat 1.5g	
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 90mg	<b>4%</b>
<b>Total Carbohydrate</b> 29g	<b>10%</b>
Dietary Fiber 9g	<b>35%</b>
Sugars 10g	
<b>Protein</b> 2g	

Vitamin A 2%    ●    Vitamin C 0%  
Calcium 10%    ●    Iron 2%

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

		Calories 2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

**INGREDIENTS:** CHICORY ROOT EXTRACT, CHOCOLATE CHIPS WITH CONFECTIONERS SHELLAC (CHOCOLATE CHIPS [SUGAR, CHOCOLATE LIQUOR, COCOA BUTTER, DEXTROSE, MILK FAT, SOY LECITHIN], ETHANOL, SHELLAC, HYDROGENATED COCONUT OIL), ROLLED OATS, CRISP RICE (RICE FLOUR, SUGAR, MALT, SALT), BARLEY FLAKES, HIGH MALTOSE CORN SYRUP, HIGH FRUCTOSE CORN SYRUP, SUGAR, CANOLA OIL, HONEY, GLYCERIN, MALTODEXTRIN, PALM KERNEL OIL, TRICALCIUM PHOSPHATE, SOY LECITHIN, SALT, NONFAT MILK, PEANUT OIL, COCOA PROCESSED WITH ALKALI, NATURAL FLAVOR, BAKING SODA, COLOR ADDED, ALMOND FLOUR, PEANUT FLOUR, SUNFLOWER MEAL, WHEAT FLOUR, MIXED TOCOPHEROLS ADDED TO RETAIN FRESHNESS. CONTAINS SOY, MILK, ALMOND, PEANUT, SUNFLOWER AND WHEAT INGREDIENTS.

# Nutrition Classes

Sign up today!

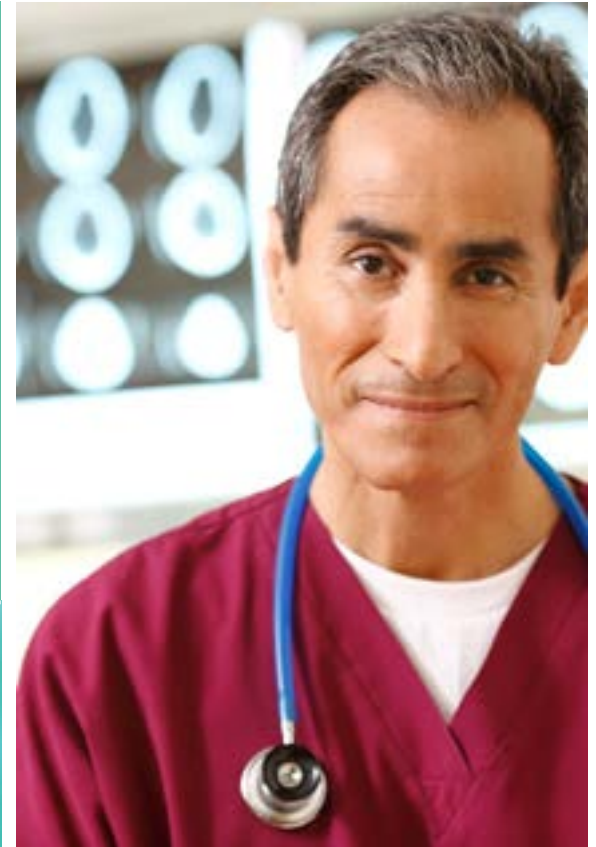


- **Serving Up Health:** Introduction to nutrition, dining out, portion distortion
- **Diabetes Nutrition**
- **Plant-Based Nutrition:** Plant-based menus and recipes
  - While avoiding meat entirely is not for everyone, eating a diet with few or no animal products and lots of plant foods has long been associated with lower rates of disease.

# What Do You Get From Regular Exercise?

“If exercise could be packed into a pill, it would be the single most widely prescribed and beneficial medicine in the nation.”

—Robert Butler, M.D. International Longevity Center



# The Benefits of Regular Exercise

- Raises HDL, reduces LDL and triglycerides
- Helps lose or maintain weight
- Lowers blood pressure, blood sugar
- Strengthens heart, lungs, bones
- Improves flexibility, balance, posture
- Raises metabolism and energy level
- Improves memory and brain function
- Tones muscles
- Boosts self-esteem
- Boosts immune system
- Reduces emotional stress
- Improves blood circulation
- Reduces depression and anxiety
- Helps regulate hormones, sleep cycle
- Enhances sense of well-being

Reduced risk for Alzheimer's disease, cancers, dementia, depression, diabetes, heart attack, heart disease, high blood pressure and osteoporosis



# Get F.I.T.T. Today

## Frequency

- Try not to skip more than two days in a row
- All at once or in small amounts throughout the day

## Intensity

- Are you able to talk?
- Can you sing?
- Can you whistle while you work?

## Time and Type

- 20 minutes 7 days or 30 minutes 5 days
- Which aerobic, strength training, or flexibility exercises do you **enjoy**?

# Medication Guidelines

- Take your medication as prescribed
- Pills or insulin **DO NOT** take the place of healthy habits
- Talk with your doctor before you stop or change medications
- Talk with a pharmacist before taking over-the-counter medications
- Always discuss potential side effects
- Wear a medical alert bracelet or carry a wallet card for emergencies



# Medications

- Metformin (Glucophage®)
  - Keeps the liver from releasing too much glucose
  - May take with food
- Glipizide (Glucotrol®)
  - Helps the pancreas to make more insulin
  - Take 30 minutes before a meal
- Insulin
  - Helps the body get the blood sugar into the cells and out of the bloodstream

# Mood

“Studies show that people with diabetes have a greater risk of depression than people without diabetes. There are no easy answers about why this is true.”

-American Diabetes Association



## Depression and Stress

- The fight or flight response can cause blood sugars to rise.
- Contact your doctor if you experience loss of pleasure or energy, changes in appetite or sleep, trouble concentrating, feelings of guilt or suicidal thoughts.
- Call 911 for emergencies

# Motivation

- How does motivation affect diabetes?
- How can we become motivated?
  - Action creates motivation
- If you feel resistant to making changes, it's normal.
  - Resistance to change is universal. Don't let it stop you.
  - Make the changes anyway and show resistance who's boss.



"Resistance is not out to get you personally. It doesn't know who you are and doesn't care. Resistance is a force of nature. It stunts us and makes us less than we are and were born to be."

Steven Pressfield, *The War of Art*

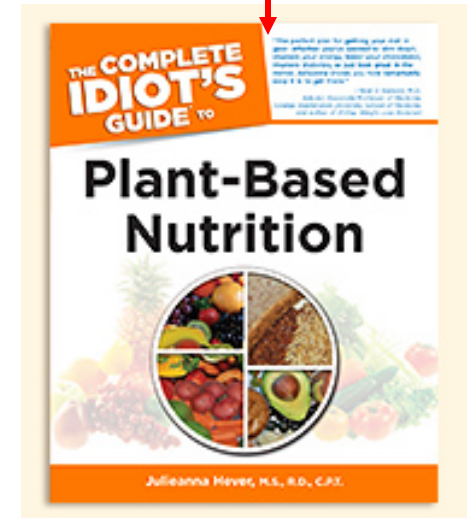
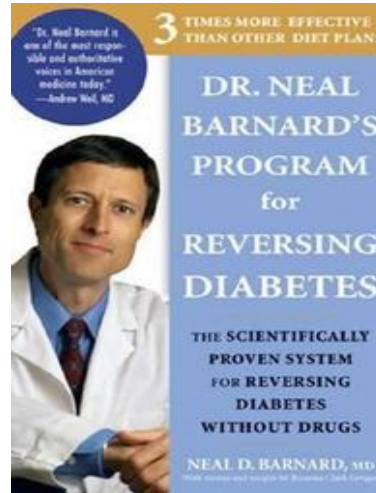
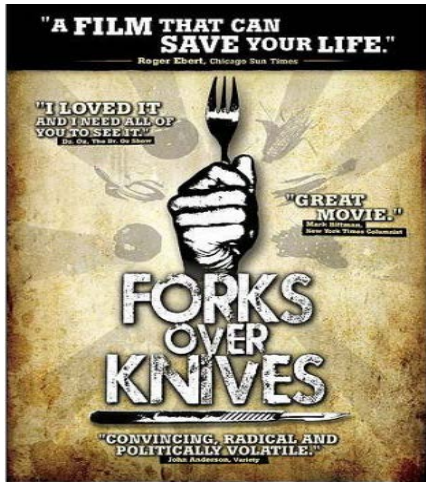
# My SMART Plan

Telephone Wellness Coaching 1-866-251-4514

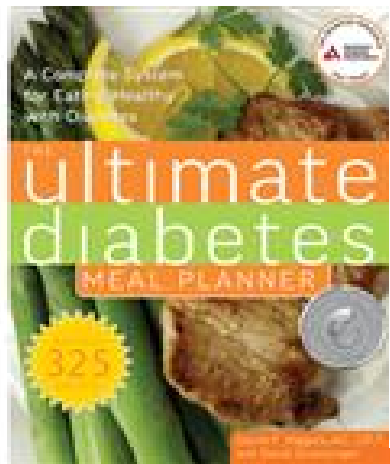
- **S**et a Behavioral Goal
  - Observable, measurable, short-term, achievable, challenging
- **M**onitor Your Progress
  - Tracking behavior changes behavior
- **A**rrange Your World for Success (home or work place)
  - List 3 ways to make the healthy choice easier
- **R**ecruit Support
  - Ask for the support you need
- **T**reat Yourself
  - Behavior that is rewarded is repeated

# Resources: Film and Books

Currently for sale in Kaiser Health Promotion Centers \$15



Currently for sale in Kaiser Health Promotion Centers \$20



Currently for sale in Kaiser Pharmacy Centers \$6.95

