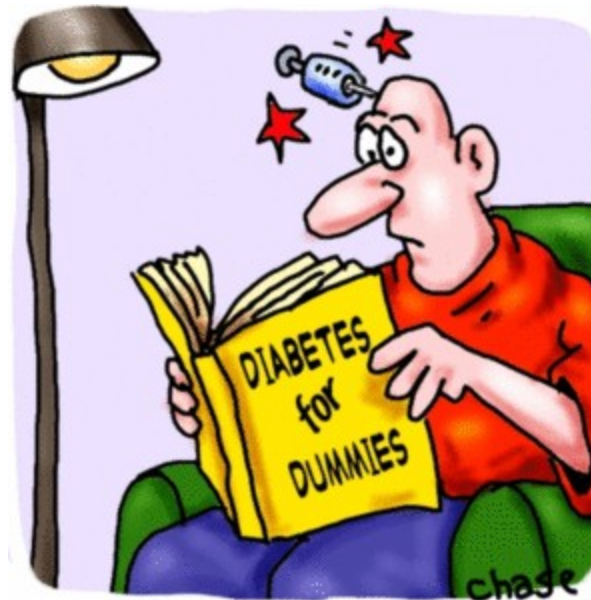


Diabetes 101

Lifestyle Seminar

Today's Objective

To educate participants on Diabetes Nutrition Management.



Diabetes Agenda

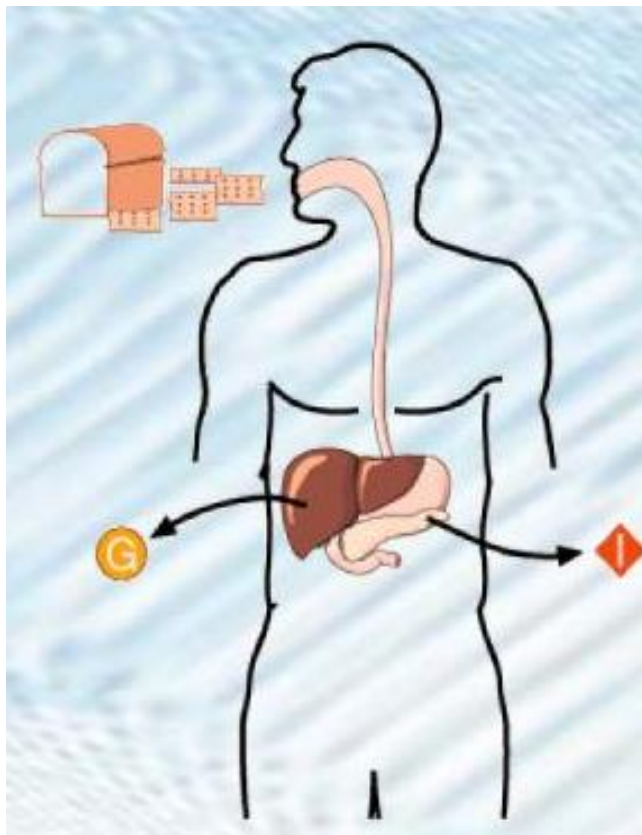
- **Understanding Diabetes**
- **Recommended treatment**
- **Goals for eating right**
- **First step in meal planning**
- **Carbohydrate, protein and fat – the body's fuel source**
- **Reading a food label**
- **Putting it all together**
- **Portion control**
- **Eating away from home**
- **Plan ahead**

Facts about Diabetes

- 26 million Americans with Diabetes and one quarter of them do not know they have it.
- 79 million Americans have Pre-Diabetes, which increases their risk for type 2 diabetes, heart disease and stroke.
- By 2050, 1 in every 3 adult Americans will have diabetes if current trends continue.
- There is no known cure
- Treatment is available to control symptoms



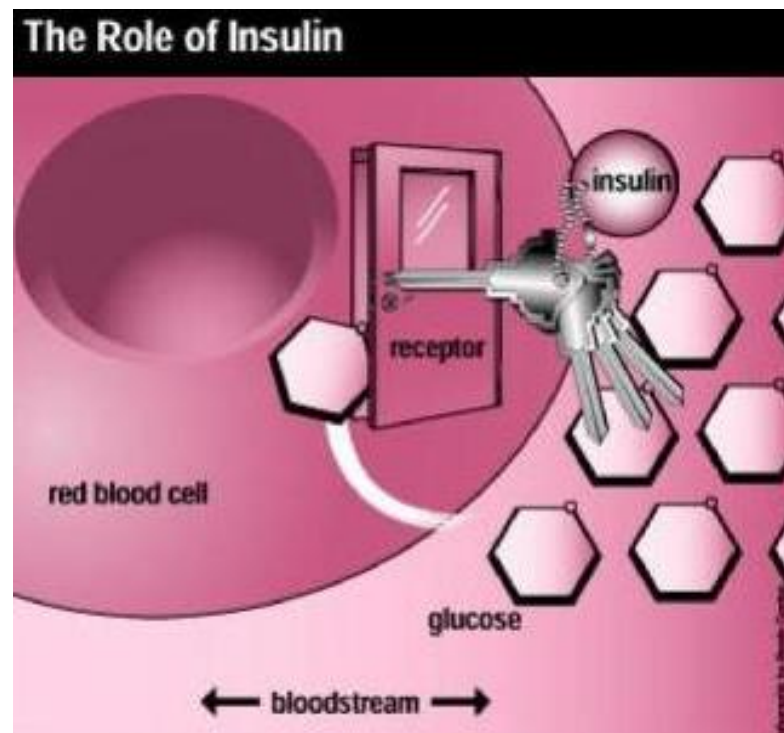
Understanding Diabetes



- The cells in our body need energy to function
- Some of the food we eat is turned into sugar called glucose
- Glucose is carried through the bloodstream to our cells and used by our body for energy

How glucose gets into our cells

- The cells in our body have receptor sites or doors where glucose must enter
- Insulin, a hormone made by the pancreas, is needed to unlock the receptors (doors) and let glucose in

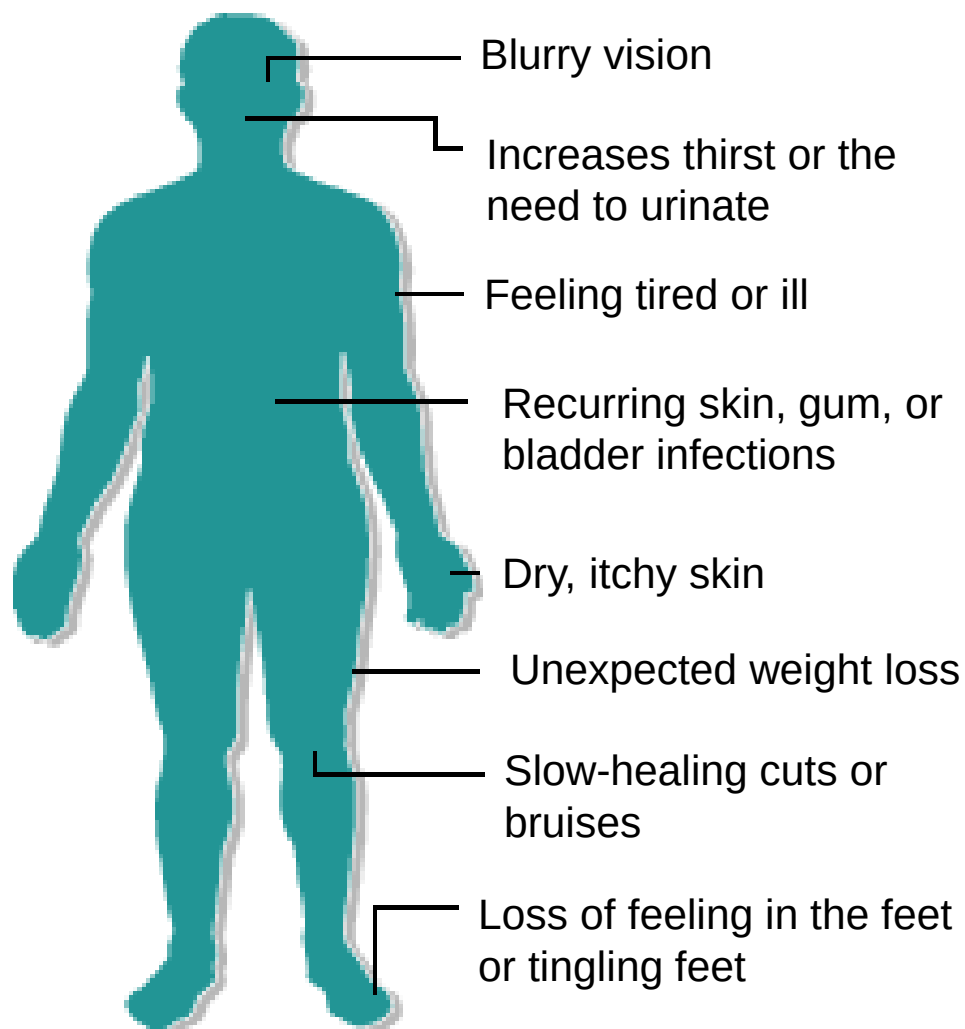


Types of Diabetes

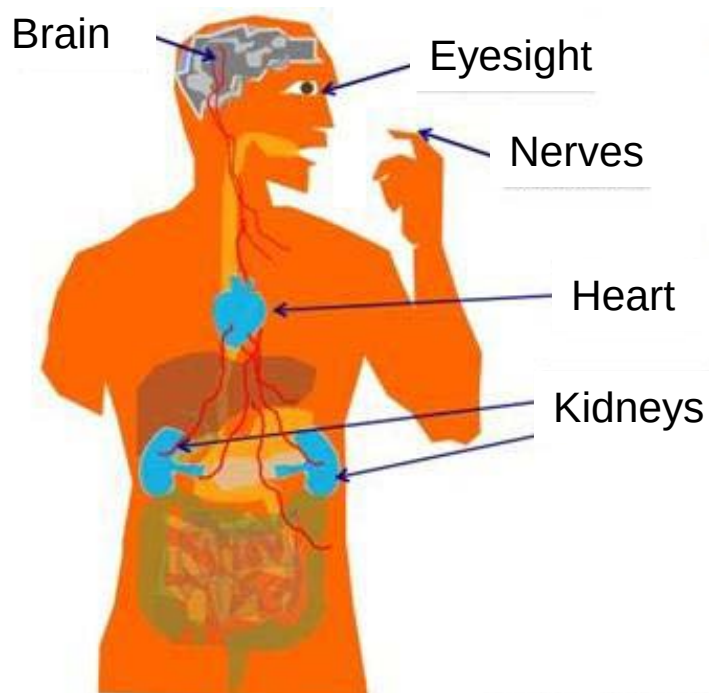
- **Type 1 – Pancreas does not make insulin**
- **Type 2 – Insulin cannot be used effectively because there are not enough receptor sites on the cells**
- **Gestational Diabetes**
- **Pre-Diabetes**



Sign and Symptoms of Diabetes

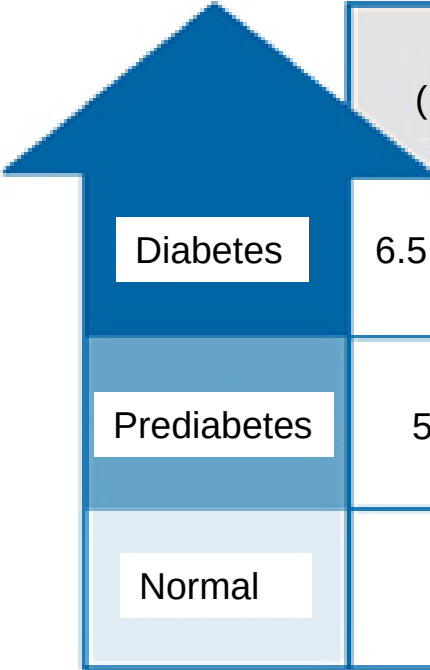


Complications of Diabetes



- **Complications develop mainly because of high blood sugar levels over the years**
- **Diabetes increase the risk of getting:**
 - Heart problems
 - Stroke
 - Eye sight problems
 - Kidney problems
 - Foot problems
 - Skin problems

Blood Test Levels for Diagnosis of Diabetes and Prediabetes



	A1C (Percent)	Fasting Plasma Glucose (mg/dL)	Oral Glucose Tolerance Test (mg/dL)
Diabetes	6.5 or above	126 or above	200 or above
Prediabetes	5.7 to 6.4	100 to 125	140 to 199
Normal	<5.7	99 or below	139 or below

Definitions: mg = milligram, dL = deciliter

For all three tests, within prediabetes range, the higher the test result, the greater the risk of diabetes.

Treatment of Diabetes

- **Type 1 – Diet and insulin shots**
- **Type 2 – Diet, exercise, oral medications, and in some cases insulin**
- **Gestational Diabetes – diet, exercise and in some cases insulin**
- **Pre-Diabetes – Weight loss, exercise and healthy eating**



Successful Treatment Includes

- Eating right and controlling CHO intake
- Exercising
- Weight loss
- Monitoring blood glucose levels
- Taking medication
- Educating yourself about the disease



Goals of Eating Right and Managing Your Diabetes

- **Healthy eating – eat more whole grains, legumes, fruits, vegetables and low fat milk.**
- **Try to decrease fat (especially saturated fat) in your diet.**
- **Weight control**
- **Keep blood glucose levels in normal range**
- **Physical activity**



First Step in Diabetes Meal Planning

- **Eat meals and snacks at regular times each day**
- **Eat about the same amount of carbohydrates with each meal**
- **Try not to skip meals**
- **If you want to lose weight, decrease portion sizes**
- **Eat a wide variety of foods each day. Try new foods**
- **Read nutrition labels**
- **Eat high fiber foods**
- **Drink plenty of water**
- **Use less added fat, sugar and salt**
- **Get active**

Types of Fuel for Our Body



- **Carbohydrate**
- **Protein**
- **Fat**

What You Should Know About Carbohydrates

- **Part of food that affects blood glucose levels the most**
- **All carbs contain sugar (Glucose, Fructose or Galactose)**
- **The body converts Fructose and Galactose to Glucose, the body's energy source**

Sources of Carbohydrate

- **Sugar**
- **Starch**
- **Milk / Yogurt**
- **Fruit**
- **Non-starchy vegetables**
- **Fiber**
- **Sugar Alcohols**



What is a Serving of Carbohydrate?

- **15 grams of carbohydrate in one serving**
- **15 grams =**
 - 1 slice of bread, ½ hamburger/hot dog bun
 - 6-inch tortilla
 - ½ cup potatoes, peas, corn, beans
 - 1/3 cup cooked rice/pasta
 - 1 cup milk
 - 1 small piece of fruit
 - ½ cup fruit juice



How Much Carbohydrate to Eat

- **45-65% of total calories**
- **Typical intake is 50% of calories**
- **Example of daily intake**
 - 1500 kcal = 12 servings
 - 2000 kcal = 16 servings



Sugar

- Both sugar and starches are turned into glucose
- Any carbohydrate can be a part of your food plan
- Everyone should limit their intake of sugary foods



Sugar Alcohol

- Found in a variety of foods labeled “Sugar-Free”
- They do not contain any alcohol
- Food may still have calories from carbohydrate

Low-Calorie Sweeteners

- Sweet tasting
- No calories or carbohydrate
- Some can be used in cooking



Benefits of Fiber

- Only found in plant foods
- Cannot be digested (broken down to glucose)
- Can help lower the risk of certain diseases
- Promotes satiety



Understanding the Food Label

- Food label is for one serving
- Check serving size
- Total carbohydrate is important for meal planning

Nonfat Milk	
Serving Size 8 fl oz (240mL)	
Servings Per Container 2	
Amount Per Serving	
Calories 80	Calories from Fat 0
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Cholesterol less than 5mg	1%
Sodium 130mg	5%
Total Carbohydrate 12g	4%
Dietary Fiber 0g	0%
Sugars 11g	
Protein 8g	
Vitamin A 8% • Vitamin C 4%	
Calcium 30% • Iron 0% • Vitamin D 25%	
* 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 85g 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

How many Carbohydrate Servings?

Chili with Beans	
Nutrition Facts	
Serving Size: 1 cup (253 g)	
Servings per container: 2	
Amount per Serving:	
Calories 260	Calories from Fat 72
	% Daily Value
Total Fat 8g	13%
Saturated Fat 3g	17%
Cholesterol 130mg	44%
Sodium 1010mg	42%
Total Carbohydrate 22g	7%
Dietary Fiber 9g	36%
Sugars 4g	
Protein 25g	

Protein

- The main function of protein in our body is to build and repair body cells and tissues
- Found in both plant and animal foods
- Does not affect blood glucose levels as much as carbohydrate

How much protein do I need?

- **15-20% of total calories**
- **For example:**
 - 1500 kcal: 56-75 grams per day
 - 2000 kcal: 75-100 grams per day



Choose Your Protein Wisely

- **Animal-based protein foods can be high in fat, especially saturated fat.**
- **Choose lean meats, fish and chicken.**
- **Include high-fiber, low-fat plant proteins like beans and legumes.**

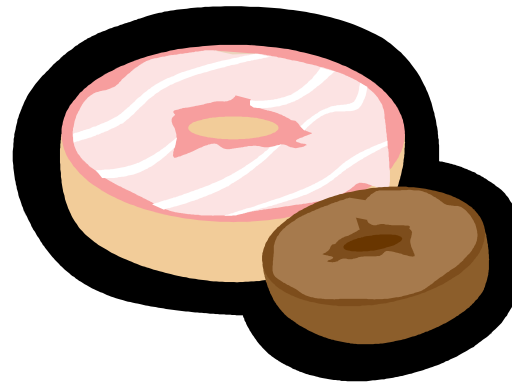
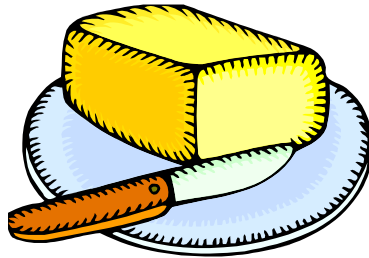


Facts about Fat

- **Essential to good health**
- **Typical intake should be 30% or less of total calories**
- **1500 calories: 50 grams per day**
- **2000 calories: 65 grams per day**

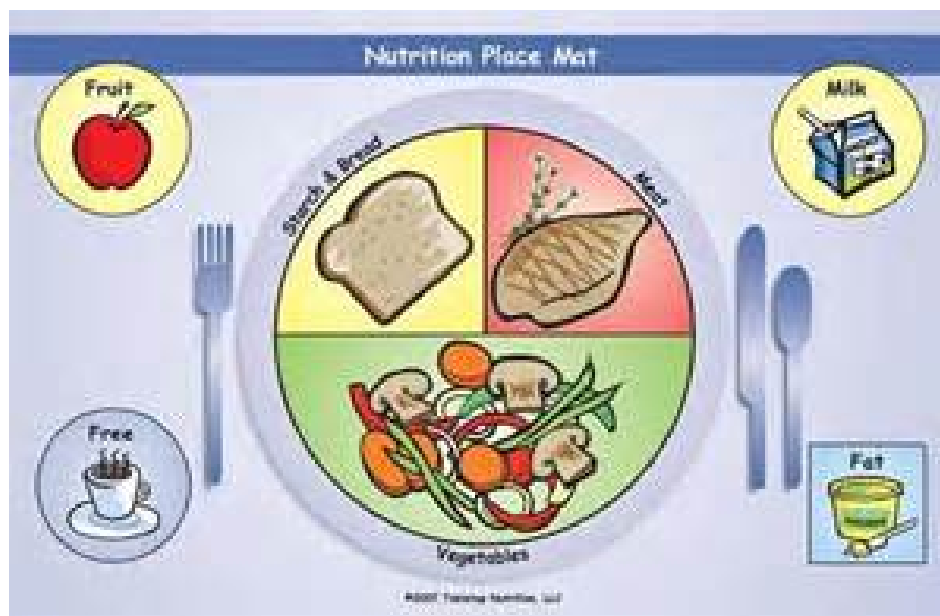
Types of Fat in Food

- Choose mono or polyunsaturated fats – found in plant foods
- Decrease saturated fat – found mostly in animal foods
- Decrease trans-fats – found in partially hydrogenated vegetable shortening



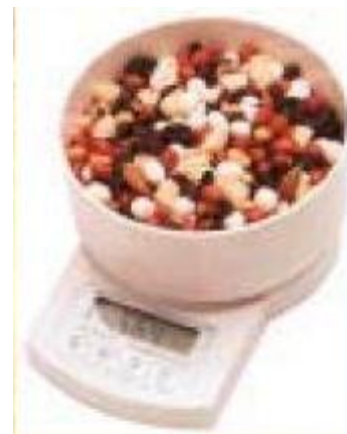
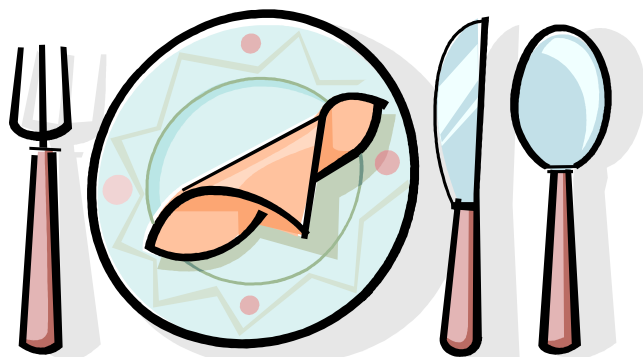
Putting it all Together: Diabetes Meal Plan

- Eat a variety of foods from each group
- Watch your portion sizes
- Choose a calorie level to meet your energy needs and not exceed them



Watch for “Portion Distortion”

- **Become familiar with portion sizes by weighing and measuring your food at home**
- **Using the same plate, bowl, glass, etc. for commonly eaten food will help**



Eating Away From Home

- Know your meal plan and how different foods fit
- Learn to avoid extra fat and salt
- Avoid buffets
- Take control of how much eat. Try ordering the lunch or appetizer portion
- Ask for dressing on the side
- Ask for a to-go container with your dinner
- Eat slowly and taste every bite



Plan Ahead

- **Preplanned meals help you avoid temptation**
- **Prepare some meals ahead of time for those busy nights**
- **Transform your leftovers into another dish**
- **Keep a well stocked pantry**
- **Keep ingredients for quick meals if you are feeling rushed**

Summary

- **Take an active role in managing your diabetes by learning how to keep your blood sugar in control**
- **Choose healthy foods and follow your meal plan**
- **Try to eat the same amount everyday at the same time**
- **Stay active**
- **Maintain a healthy weight**