Sisserou Talks About Health and Nutrition

Dominica Ministry of Health and Environment
Archbold Tropical Research and Education Center
East Carolina University, Greenville, NC, USA
2009
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- Staples
- Legumes, Nuts and Seeds
- Vegetables
- Fruits
- Foods from Animals
- Fats and Oils

Nutrient Groups
- Water
- Carbohydrates
- Proteins
- Fats and Oils
- Vitamins
- Minerals

Sanitation and Safety
Dietary Guidelines

- Start your day with breakfast
- Always try to eat a variety of foods everyday
- Eat more vegetables and fruits everyday
- Reduce fat and oil intake
- Choose less sweet foods and drinks
- Use less salt, salted foods, seasonings & salty snacks
- Make physical activity a part of your daily life
- Drink water several times a day
- If you use alcohol, do so in moderation

Nutrients and Disease

- Obesity
- Cardiovascular disease
- Hypertension
- Diabetes Mellitus
FOOD GROUPS

- Staples
- Legumes, Nuts & Seeds
- Vegetables
- Fruits
- Fats & Oils
- Foods from Animals
Staples

Grains
- barley
- bread
- cereals
- corn
- corn meal

crackers
- macaroni
- oats
- porridges
- rice
- spaghetti

Fruits
- banana
- breadfruit
- cassava
- eddo
- plantain

Starchy Veggies, Roots and Tubers
- dasheen
- sweet potatoes
- potato
- yam

Legumes, Nuts & Seeds

- almonds
- blackeye peas
- Brazil nuts
- cashews
- cow peas
- green peas
- gungo/pigeon peas
- kidney beans
- lima beans
- macadamia
- melon seeds
- peanuts
- pine nuts
- pistachio
- pumpkin seeds
- sesame seeds
- soy beans
- sunflower seeds
- walnuts

Vegetables

- asparagus
- bamboo shoots
- bean sprouts
- beets
- bok choy
- broccoli
- brussels sprouts
- cabbage bush
- carrots
- cassava leaves
- cauliflower
- celery
- christophene
- cucumber
- dasheen leaves
- eggplant
- lettuce
- kale
- mustard greens
- mushrooms
- okra
- onions
- peppers
- pumpkin
- radishes
- spinach
- string beans
- tomato
### Fruits
- apples
- apricots
- cantaloupe
- cherries
- currants
- grapefruit
- figs
- grapes
- guava
- lemons
- limes
- mango
- orange
- pawpaw
- papaya
- passion fruit
- peaches
- pears
- pineapple
- plums
- pomegranate
- prunes
- raisins
- strawberries
- sugar apple
- sweet sop
- tangerine
- watermelon

### Foods from Animals

#### Meats
- beef
- chicken
- duck
- egg
- fish
- fish roe
- frog
- goat
- guinea pig
- iguana
- lamb
- mutton
- pork
- rabbit
- turkey
- turtle
- shellfish
- whale

#### Offals
- liver
- heart
- kidney
- stomach
- feet
- tail
- pancreas
- brain
- intestine
- head
- lung
- tongue

#### Dairy
- cheese
- cottage cheese
- cream cheese
- ice cream
- milk
- yogurt

### Fats & Oils
- avocado
- butter
- coconut products
- corn oil
- flax seed oil
- olive oil
- margarine
- mayonnaise
- meat fat
- peanut oil
- shortening
- safflower oil
- salad dressing
- suet
- vegetable oil
NUTRIENT GROUPS

- Water
- Carbohydrates
- Fats & Oils
- Protein
- Vitamins
- Minerals
**WHAT DOES IT DO FOR THE BODY?**

- Carries away wastes
- Transports nutrients
- Forms structure of cells, tissues and organs
- Moistens eyes, mouth and nose
- Hydrates skin
- Regulates body temperature
- Enables body to do its work
- Acts as a lubricant around joints
- Protects body organs from shock

**WHERE DO WE GET IT?**

- Water in foods
- Liquids (beverages)
- Water created by metabolism

**HOW MUCH DO WE NEED?**

- Adult males (19 and older) - 3.7 liters per day
- Adult females (19 and older) - 2.7 liters per day

**WHAT CAN AFFECT OUR NEED FOR WATER?**

- Pregnancy and lactation
- Sickness and fever
- Diarrhea and vomiting
- Surgery, blood loss or burns
- Age
- Physical activity
- Extreme temperature and humidity
- Certain medications
- Certain diseases such as diabetes
- Excess alcohol consumption
**WHAT DO THEY DO FOR THE BODY?**

Provide energy

**WHERE DO WE GET THEM?**

- **Simple carbohydrates** – naturally occurring in some fruits, some vegetables, milk and dairy products
- **Complex carbohydrates** – starch (grains) and fiber (outer portion of cereal grains, fruits, legumes (dried beans and peas) and most vegetables (especially root vegetables such as yams and potatoes)
- **Added sugar** – added to sweeten foods and beverages

**HOW MUCH DO WE NEED?**

<table>
<thead>
<tr>
<th>Dietary Guidelines</th>
<th>Carbohydrate</th>
<th>Added Sugars</th>
<th>Fiber</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 to 65% of total calories</td>
<td>less than 10% of total calories</td>
<td>14 g per 1000 calories</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dietary Reference Intakes</th>
<th>45 to 65% of total calories</th>
<th>25% or less of total calories</th>
<th>Adults under 50</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Men – 38 g</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Women – 25 g</td>
</tr>
<tr>
<td>Adults over 50</td>
<td></td>
<td></td>
<td>Men – 30 g</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Women – 21 g</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>World Health Organization</th>
<th>55 to 75% of total calories</th>
<th>0 to 10% of total calories</th>
<th>Lower limit – 27 g</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Upper limit – 40 g</td>
</tr>
</tbody>
</table>

**HEALTH BENEFITS OF DIETARY FIBER**

- Obesity – replaces calories from fat; provides satiety; prolongs eating due to chewiness of foods
- Digestive Tract – provides bulk and aids motility
- Diabetes – delays glucose absorption
- Heart Disease – slows absorption of cholesterol
FATS & OILS

WHAT DO THEY DO FOR THE BODY?

- Provide energy
- Store energy
- Protect organs
- Form cells
- Nourish skin and hair
- Insulate body from extreme temperatures
- Provide flavor, texture and satiety in the diet

WHERE DO WE GET THEM?

Meat, poultry, fish and animal products; Plant oils (for example - corn, canola, safflower, sesame, sunflower, peanut, soybean, olive); Nuts and seeds

TYPES OF FATS

**Saturated** – all animal meats, butter, cheese, coconut, coconut oil, cream, lard, palm oil, whole fat dairy products

**Monounsaturated** – almonds, avocados, canola oil, cashews, olive oil, olives, peanut butter, peanuts, poultry

**Polyunsaturated** – almonds, corn oil, cottonseed oil, fish, soft margarine, mayonnaise, pecans, safflower oil, sesame oil, soybean oil, sunflower oil, walnuts

**Trans** – from processed foods such as hard stick margarine, cake, cookies, doughnuts, chips, shortening, fast foods

HOW MUCH DO WE NEED?

<table>
<thead>
<tr>
<th>Dietary Guidelines for Americans</th>
<th>American Heart Association</th>
<th>Dietary Reference Intakes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limit total fat to 20 to 35% of total calories</td>
<td>Total fat – 30% or less of total calories</td>
<td>Total fat – 20 to 35% of total calories</td>
</tr>
<tr>
<td>Limit saturated fat (from animal products) to 10% of calories</td>
<td>Saturated and trans fat – less than 10% of total calories</td>
<td>Polyunsaturated fats</td>
</tr>
<tr>
<td>Limit cholesterol (from animal products) to 300 mg or less daily</td>
<td>Polyunsaturated fats – up to 10% of total calories</td>
<td>Omega 6 (linoleic acid) – 5 to 10% of total calories</td>
</tr>
<tr>
<td>Limit intake of trans fats (from processed foods)</td>
<td>Monounsaturated fats – up to 20% of total calories</td>
<td>Men – 17 grams per day</td>
</tr>
<tr>
<td></td>
<td>Cholesterol – less than 300 mg on average</td>
<td>Women – 12 grams per day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Omega 3 (linolenic acid) – 0.6 to 1.2% of total calories</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Men – 1.6 grams per day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Women – 1.1 grams per day</td>
</tr>
</tbody>
</table>
**Protein**

**WHAT DO THEY DO FOR THE BODY?**

- Support growth
- Repair body tissues
- Part of body structures (skin, muscles, teeth, organs, etc)
- Maintain fluid balance
- Maintain acid-base balance
- Regulate hormones
- Regulate enzymes
- Strengthen immune function (form antibodies)
- Transport nutrients
- Provide energy

**WHERE DO WE GET THEM?**

- **Milk and dairy products** - cheese, ice cream, yogurt, cottage cheese
- **Meat** - beef, pork, poultry, fish, shellfish, game
- **Animal products** - eggs, egg substitutes
- **Legumes** - black beans, black-eyed peas, garbanzo beans or chickpeas, great northern beans, kidney beans, lentils, lima or butter beans, pinto beans, red beans, soybeans, split peas, white navy beans
- **Nuts** - nut butters and seeds
- **Tofu** - soybean curd

**HOW MUCH DO WE NEED?**

**Dietary Reference Intakes (DRIs)**
- Based on calories: 10 to 35% of total calories
- Based on body weight: Recommendation for healthy adults
  - 0.8 grams of protein per kilogram of healthy body weight

**World Health Organization (WHO)**
- Based on Calories: 10-15% of total calories

**WHAT ARE THE HEALTH ADVANTAGES OF A NON-MEAT BASED DIET?**

Protein from plant foods is higher in fiber, richer in certain vitamins and minerals, and lower in fat compared to meats. This can result in lower rates of heart disease, cancer, diabetes, obesity and better digestive health.
**VITAMINS**

<table>
<thead>
<tr>
<th>WATER SOLUBLE</th>
<th>FAT SOLUBLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>B Vitamins</td>
<td>Vitamin A</td>
</tr>
<tr>
<td>Thiamin</td>
<td>Vitamin D</td>
</tr>
<tr>
<td>Riboflavin</td>
<td>Vitamin E</td>
</tr>
<tr>
<td>Vitamin B6</td>
<td>Vitamin K</td>
</tr>
<tr>
<td>Folate</td>
<td></td>
</tr>
<tr>
<td>Vitamin B12</td>
<td></td>
</tr>
<tr>
<td>Biotin</td>
<td></td>
</tr>
<tr>
<td>Pantothenic acid</td>
<td></td>
</tr>
<tr>
<td>Vitamin C</td>
<td></td>
</tr>
</tbody>
</table>

**WHAT DO THEY DO FOR THE BODY?**

- Act as coenzymes in chemical reactions in the body
- Helps body use energy in food
- Promotes normal growth
- Supports normal appetite and nervous system
- Promotes health of skin and digestive system
- Strengthens immune system
- Helps form red blood cells

**WHERE DO WE GET THEM?**

- Fruits
- Vegetables
- Milk and dairy products (cheese, cottage cheese, margarine)
- Enriched and fortified foods
- Nuts and seeds
- Animal products such as eggs
- Meats, liver and fish

**HOW MUCH DO WE NEED?**

Very small amounts – varies with vitamin
WHERE DO WE GET THEM?

- Milk and dairy products
- Enriched and fortified foods
- Vegetables
- Fruits
- Legumes
- Nuts and seeds
- Meat, poultry, and seafood

WHAT DO THEY DO FOR THE BODY?

- Health of bones and teeth
- Muscle contraction and relaxation
- Nerve function
- Forms cells
- Regulate body functions
- Maintain fluid balance
- Maintain acid base balance
- Facilitate digestion
- Keep blood pressure healthy

HOW MUCH DO WE NEED?

Small amounts – varies according to the mineral

**MAJOR MINERALS**
(found in body in amounts greater than five grams)
- Calcium
- Phosphorus
- Magnesium
- Sodium
- Chloride
- Potassium

**MINOR or TRACE MINERALS**
(found in the body in amounts less than five grams)
- Selenium
- Manganese
- Fluoride
- Molybdenum
- Chromium
- Iodine
- Copper
- Zinc
- Iron
### Nutrition Facts

**Serving Size**: 1 cup  
**Servings per container**: 2

<table>
<thead>
<tr>
<th>Amount Per Serving</th>
<th>Calories: 250</th>
<th>Calories from Fat: 110</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>% Daily Value*</th>
<th></th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Total Fat</th>
<th>12g</th>
<th>18%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saturated Fat</td>
<td>3g</td>
<td>15%</td>
</tr>
<tr>
<td>Trans Fat</td>
<td>3g</td>
<td></td>
</tr>
<tr>
<td>Cholesterol</td>
<td>30mg</td>
<td>10%</td>
</tr>
<tr>
<td>Sodium</td>
<td>470mg</td>
<td>20%</td>
</tr>
<tr>
<td>Total Carbohydrate</td>
<td>31g</td>
<td>10%</td>
</tr>
<tr>
<td>Dietary Fiber</td>
<td>0g</td>
<td>0%</td>
</tr>
<tr>
<td>Sugars</td>
<td>5g</td>
<td></td>
</tr>
<tr>
<td>Protein</td>
<td>4g</td>
<td></td>
</tr>
</tbody>
</table>

*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 per gram**  
- Fat: 9  
- Carbohydrate: 4  
- Protein: 4

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**Start Here** - In this label, one serving equals one cup. If you ate the whole package you would eat two cups. That would be double the calories and other nutrients.

**Check Calories** - This part of the nutrition facts tells us how many calories are in one serving of this food and how many of those calories are from fat.

**Limit these nutrients** - Eating too much fat, cholesterol, or sodium may increase your risk for certain chronic diseases.

**Get enough of these nutrients** - Eating enough of these nutrients can improve your overall health.

**Quick guide to % daily value**  
- If the Daily Value is 5% or less that means this food is low in that nutrient. If the value is 20% or more then the food is a high source of that nutrient.

Try to get 100% calcium (1,300 mg) each day. When reading the label it is easy to find out how much calcium is in the food: drop the percent sign and add a zero, this is how many milligrams there are!

**Footnote** -  
This guide shows recommendations for a 2,000 calorie diet and a 2,500 calorie diet. This guide, or footnote will always be the same. It doesn’t change from product to product, because it shows the recommended dietary advice for everyone, it is not about a specific food product. This table is intended for use for adults.
PRINCIPLES THAT GOVERN MEAL PLANNING

- Nutrient Adequacy
- Nutrient Density
- Variety and Balance
- Individuality
- Flexibility
Let Sisserou Guide Your Meals

- Start the day with breakfast.
- Always try to eat a variety of foods everyday.
- Eat more vegetables and fruits everyday.
- Reduce fat and oil intake.
- Choose less sweet foods and drinks.
- Use less salt, salted foods, seasonings and salty snacks.
- Make physical activity a part of your daily life.
- Drink water several times per day.
- If you use alcohol, do so in moderation.
Breakfast is the first meal of the day and the most important! It helps the body’s metabolism to “wake up” and it provides energy until the next mealtime. Your breakfast foods don’t have to be a typical breakfast meal, such as, grits or cornmeal. Remember, breakfast is whenever you first eat, whether that’s in the morning, afternoon, or at night. You may even choose to have leftover dinner, soups, stews, rice dishes, seafood, etc. for breakfast. The main focus of breakfast is to provide calories and nutrients at the start of your day.

Here are a couple questions to ask yourself:

1. Do you eat breakfast?
2. What foods do you enjoy eating for breakfast or at any meal?
3. What stops you from eating breakfast if you do not?

Now take these questions and use them to help you understand why you may not eat breakfast. Also use them to assist you in including breakfast into your day.
Fruit, Oats, and Yogurt  Serves 4
This recipe can be prepared the night before and put in the fridge for an easy, quick breakfast on the go.

2 cups vanilla (fat-free) yogurt
1 cup oats
1 can crushed pineapple, undrained
½ cup slivered almonds (toasting almonds is optional)
2 bananas

1. Combine yogurt, oats, pineapple, and almonds.
2. Cover and refrigerate overnight.
3. Serve with banana.

Nutrition Facts: ¾ cup = 1 serving, 370 calories, 10g Fat, 1g Saturated fat, 5g Fiber, 2mg Chol., 85mg Sodium, 58g Carbohydrates, 13g Protein

Fruit Smoothie Serves 1
This recipe can also be prepared ahead if you need. Just place all of the ingredients in the blender and put the blender in the fridge. When you wake up all you have to do is blend and pour for another quick breakfast idea.

1 banana, fresh or frozen
1/3 cup frozen mixed berries
½ – 1 cup lower fat milk (2%, 1%, skim) or low-fat vanilla yogurt
Ice cubes – start with a handful

1. Blend all ingredients together in the blender.
Variety is a collection. When referring to food, variety can include different colors, shapes, textures, and tastes. Variety prevents boredom at meal times with bright colors and enticing flavors. Utilizing variety in meal planning can aid in consuming health promoting nutrients such as vitamins, minerals, and fiber throughout the day.

ACTIVITY - What does a meal with variety look like?

Directions:
Using the color pencils provided, draw a picture of the menu on the plate below. Add as much detail as you can and answer the questions.

Menu 1: Plain baked chicken, mashed potatoes, and bread with butter.

Look at your drawing. Would this meal have a variety of shapes, colors, textures, and tastes? Why or why not?
Always try to eat a variety of foods every day

When arranging food on your plate: half of the plate should be filled with fruits and vegetables, a quarter of the plate grains or starches, and the last quarter protein or meat.

Activity - Rate Your Plate

What could you change to add more variety to your plate using the Rate your Plate Activity?

Draw another picture with the changes. See the difference?
<table>
<thead>
<tr>
<th>Topic</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Red Meat</strong></td>
<td>Usually eat 3 times per week or more</td>
<td>Usually eat 2 times per week</td>
<td>Usually eat 1 time per week or less</td>
</tr>
<tr>
<td>beef, hamburger, pork, lamb, veal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Red Meat Choices</strong></td>
<td>Usually eat high fat cuts, ribs, brisket, T-bone, prime rib, sausage</td>
<td>Sometimes eat high fat cuts, ribs, brisket, T-bone, prime rib, sausage</td>
<td>Usually eat lean cuts such as round, loin, flank; veal, or, I rarely eat meat</td>
</tr>
<tr>
<td>beef, pork, lamb, veal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ground Meat, Burgers</strong></td>
<td>Usually eat regular, chuck or lean ground beef with more than 15% fat</td>
<td>Usually eat ground sirloin or round, ground turkey or ground beef with 10-15% fat.</td>
<td>Usually eat ground turkey breast or vegetable patties, or I rarely eat ground meat or burgers</td>
</tr>
<tr>
<td><strong>Chicken, Turkey, Etc.</strong></td>
<td>Usually eat chicken, turkey and other poultry with skin</td>
<td>Sometimes eat chicken, turkey and other poultry without skin</td>
<td>Usually eat chicken, turkey and other poultry without skin</td>
</tr>
<tr>
<td><strong>Fish</strong></td>
<td>Usually eat fish less than once per week</td>
<td>Usually eat fish once per week</td>
<td>Usually eat fish twice per week or more</td>
</tr>
<tr>
<td><strong>Chicken and Fish Choices</strong></td>
<td>Usually eat fried chicken and/or fried fish and shellfish</td>
<td>Sometimes eat fried chicken and/or fried fish and shellfish</td>
<td>Usually eat chicken and fish that is baked, broiled, grilled, poached, etc.</td>
</tr>
<tr>
<td><strong>Cold Cuts, Hot Dogs, Breakfast Meats</strong></td>
<td>Usually eat salami, bologna, other cold cuts, hot dogs, bacon, sausage</td>
<td>Sometimes eat salami, bologna, other cold cuts, hot dogs, bacon, sausage</td>
<td>Usually eat turkey breast, low fat options or rarely eat processed meats</td>
</tr>
<tr>
<td>Topic</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>----------------------------------------</td>
<td>----------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Serving Sizes of Meats (Cooked)</td>
<td>Usually eat large portions (7 oz or more)</td>
<td>Usually eat medium portions (4-6 oz)</td>
<td>Usually eat small portions (3 oz or less)</td>
</tr>
<tr>
<td>Meatless Main Dishes all bean chili, bean burrito, lentil soup, etc.</td>
<td>Rarely eat meatless main dishes</td>
<td>Usually eat less than twice per week</td>
<td>Usually eat twice per week or more</td>
</tr>
<tr>
<td>Eating Out in restaurants or buying take out</td>
<td>Usually eat twice per week or more</td>
<td>Usually eat once per week</td>
<td>Usually eat less than once per week or eat low-fat restaurant meals</td>
</tr>
<tr>
<td>Egg Yolks</td>
<td>Usually eat 6 or more per week</td>
<td>Usually eat 4-5 per week</td>
<td>Usually eat 3 or less per week, or I eat cholesterol-free egg substitutes</td>
</tr>
<tr>
<td>Milk</td>
<td>Usually eat whole milk or cream</td>
<td>Usually eat 2% reduced-fat milk</td>
<td>Usually eat 1% low-fat or skim milk</td>
</tr>
<tr>
<td>Cheese Include cheese on pizza, sandwiches, snacks and in mixed dishes</td>
<td>Usually eat regular cheese, such as cheddar, Swiss &amp; American</td>
<td>Sometimes eat regular cheese, such as cheddar, Swiss &amp; American</td>
<td>Usually eat reduced-fat or part-skim cheese or, I rarely eat cheese</td>
</tr>
<tr>
<td>Frozen Desserts Ice cream, etc.</td>
<td>Usually eat regular ice cream, ice cream bars/ sandwiches</td>
<td>Sometimes eat regular ice cream, ice cream bars/ sandwiches</td>
<td>Usually eat sherbet, sorbet, low-fat frozen yogurt or ice cream, or I rarely eat frozen desserts</td>
</tr>
<tr>
<td>Topic</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------------------------</td>
<td>----------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td><strong>Cooking Method</strong></td>
<td>Usualy add oil, butter or margarine to</td>
<td>Sometimes add oil, butter or</td>
<td>Usually broil, bake, or steam without</td>
</tr>
<tr>
<td></td>
<td>pan</td>
<td>margarine to pan</td>
<td>fats or oils or use cooking sprays</td>
</tr>
<tr>
<td><strong>Cooking Fats &amp; Oils</strong></td>
<td>Usualy use butter, stick margarine,</td>
<td>Usualy use liquid or tub margarine for</td>
<td>Usualy eat oils such as olive, corn,</td>
</tr>
<tr>
<td>Choices for</td>
<td>shortening, bacon drippings or lard</td>
<td>cooking and baking</td>
<td>and canola for cooking or cook without</td>
</tr>
<tr>
<td>cooking and baking</td>
<td></td>
<td></td>
<td>fat/oils</td>
</tr>
<tr>
<td><strong>Fried Foods</strong></td>
<td>Usualy eat fried foods</td>
<td>Sometimes eat fried foods</td>
<td>Rarely eat fried foods</td>
</tr>
<tr>
<td>French fries, egg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>rolls, etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Spreads</strong></td>
<td>Usualy use regular salad dressing or</td>
<td>Sometimes use regular salad dressing</td>
<td>Usualy use light or fat-free salad</td>
</tr>
<tr>
<td>Added at the Table</td>
<td>mayonnaise</td>
<td>or mayonnaise</td>
<td>dressing and mayonnaise</td>
</tr>
<tr>
<td>**Salad Dressing &amp;</td>
<td>Usualy eat whole milk or cream</td>
<td>Usualy eat 2% reduced-fat milk</td>
<td>Usualy eat 1% low-fat or skim milk</td>
</tr>
<tr>
<td>Mayonnaise**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Snacks</strong></td>
<td>Usualy eat regular chips, crackers and</td>
<td>Sometimes eat regular chips, crackers</td>
<td>Usualy eat fruit, pretzels, low-fat</td>
</tr>
<tr>
<td></td>
<td>nuts</td>
<td>and nuts</td>
<td>crackers and baked chips</td>
</tr>
<tr>
<td><strong>Desserts &amp; Sweets</strong></td>
<td>Usualy eat donuts, cookies, cake, pie,</td>
<td>Sometimes eat donuts, cookies, cake,</td>
<td>Usualy eat fruit, angel food cake, low-</td>
</tr>
<tr>
<td>Ice cream, etc.</td>
<td>or chocolate</td>
<td>pie, pastry or chocolate</td>
<td>fat or fat-free desserts and sweets</td>
</tr>
</tbody>
</table>
# Rate Your Plate

## Topic: Grains

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usually eat white bread; white rice, low fiber cereal: corn flakes, Rice Krispies, etc.</td>
<td>Sometimes eat white bread; white rice, low fiber cereal: corn flakes, Rice Krispies, etc.</td>
<td>Usually eat whole grain breads; brown rice; whole grain cereal: oatmeal, bran, wheat, etc.</td>
</tr>
</tbody>
</table>

## Topic: Fruits & Vegetables

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usually eat 1 serving or less per day</td>
<td>Usually eat 2-4 servings per day</td>
<td>Usually eat 5 or more servings per day</td>
</tr>
</tbody>
</table>

1 serving = 1/2 cup or 1 piece of fruit

### Find Your Rate Your Plate Score

Total checks in column A = ________ x 1 = ________

Total checks in column B = ________ x 2 = ________

Total checks in column C = ________ x 3 = ________

Total ________

### What Does Your Score Mean?

28-38 There are many ways you can make your eating habits healthier.

39-54 There are some ways you can make your eating habits healthier.

55-69 You are making many healthy choices.

### What’s Next?

Look back at your Rate Your Plate. Do you have any answers in Column C? If you do, great! You are already making some heart healthy choices. Can you improve? Look at your answers in Columns A and B. Where you checked Column A, can you start eating more like Column B? Over time, move toward Column C. Set goals. Write down eating changes you are ready to make now.
EAT MORE FRUITS AND VEGETABLES EVERY DAY

Often the addition of fruits and vegetables is an easy way to increase variety at a meal. Fruits and vegetables are full of vitamins and minerals your body needs to work to its fullest and keep your body running. Each vitamin and mineral contributes to keeping your body healthy and lowering your chances for disease (heart disease, stroke, diabetes, etc.).

TIPS FOR ADDING MORE FRUITS AND VEGETABLES TO YOUR DAY

1. Try to include at least one fruit and one vegetable at every meal.
2. Raw foods are a good, healthy option; try to eat fresh fruits and vegetables whenever possible.
3. When buying canned fruits, watch out for the heavy syrups and look for light syrup or natural juices. Drain and wash the fruit to remove added sugar.
4. When buying canned vegetables, look for no salt added or drain and rinse the canned vegetables to get rid of excess sodium.
5. Frozen fruits and vegetables are a great alternative to fresh because they are frozen at the point in which they have the most nutrients.
6. Add more fiber into your diet because it digests in your body at a slower rate creating the feeling of fullness for a longer period of time. Fiber can be found in whole grain products, as well as, all fruits and vegetables. Fiber is not found in fruit juices.
ACTIVITY

What are your favorite fruits and vegetables? Name one fruit and one vegetable that represent each color of the rainbow. Do you eat these foods often or are they foods you would like to try? If you have trouble thinking of fruits and vegetables for a specific color, refer to the below pages. Challenge: Pick a fruit or vegetable you have never eaten before and try it. You may end up liking it.

FOLLOW THE COLORS OF THE RAINBOW WITH FRUITS AND VEGETABLES

Purple/blue- Grapes, eggplant, figs, beets, plums, purple grapes, blackberries, blueberries

Red- Apples, strawberries, cherries, radishes, tomatoes, red peppers, cranberries, raspberries, red cabbage, watermelon, pomegranates

Orange- oranges, tangerines, orange peppers, carrots, sweet potatoes, papaya, pumpkin, butternut squash, cantaloupe

Yellow- bananas, yellow peppers, lemons, grapefruit, summer squash, mangoes, pineapple, peaches

Green- Lettuce, zucchini, cucumbers, broccoli, peas, okra, green peppers, green beans, asparagus, limes, kiwi, leafy greens (collard, mustard, spinach, etc.), green apples, brussel sprouts, honeydew melon, green grapes

White- cauliflower, mushrooms, onions, garlic, parsnips, shallots, turnips, ginger, jicama, pears
The body needs fat, although too much fat can lead to health problems.

WAYS TO REDUCE THE FAT AND OIL INTAKE

1. Trim the fat off meats
2. Measure instead of guessing
3. Use healthier methods of cooking
   (grilling, boiling, sautéing, steaming, baking, etc.)

It is important to read labels while shopping for food. Purchasing some of these types of food will help you to reduce your fat and oil intake every day. Reduced, Low, and Free products. These contain lower levels of fat, calories, salt or sugar than the originals.

- Foods that are considered “free” do not mean they are completely free of that ingredient
- Products with lower amounts of fat often contain higher amounts of sodium or sugar to keep the flavor

Note that these phrases may only be on American food labels and packaging that are imported.

MONOUNSATURATED AND POLYUNSATURATED FATS

The “good” fats are the unsaturated fats

- These fats come from plant foods like avocados, almonds, olive oil, canola oil and they also come from fish like salmon.
- They are called “good” fats because they help lower your bad cholesterol and reduce your risk of heart disease and stroke.
- Try to replace as many of the “bad” fats in your diet with the “good” fats.
SATURATED AND TRANS FATS

The “bad” fats are the saturated and trans fats
- These fats come from animal foods like full-fat dairy, animal meat, eggs, butter, and many processed foods.
- They are called “bad” fats because they increase your cholesterol and increase your risk for heart disease and stroke.
- Trans fats also have a higher risk in the development of type 2 diabetes
- Trans fats are actually created by an industrial process that adds hydrogen to liquid vegetable oils
- On a food label look for “partially hydrogenated oil” in the ingredients. This indicates that the product contains trans fat.

Limit these nutrients - Eating too much fat, cholesterol, or sodium may increase your risk for certain chronic diseases.

Product Ingredient list for Keebler Toasty Crackers with Peanut Butter
**Ingredients:** Enriched Flour [Wheat Flour, Niacin, Reduced Iron, Thiamin Mononitrate (Vitamin B1), Riboflavin (Vitamin B2), Folic Acid], Peanut Butter (Roasted Peanuts), Partially Hydrogenated Soybean and/or Cottonseed Oil, Sugar, High Fructose Corn Syrup, Dextrose, Salt, Contains Two Percent or Less of Malted Barley Flour, Leavening (Baking Soda, Monocalcium Phosphate, Sodium Acid Pyrophosphate), Soy Lecithin, Cornstarch, Sodium Sulfite, Cheddar Cheese (Milk, Cheese Cultures, Salt, Enzymes), Yellow No. 6, Red Pepper, Buttermilk, Whey, Disodium Phosphate.

**Nutrition Facts**

<table>
<thead>
<tr>
<th>Serving Size 1 package</th>
<th>Servings per container 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Amount Per Serving</strong></td>
<td></td>
</tr>
<tr>
<td>Calories 200 g</td>
<td>Calories from Fat 90%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% Daily Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fat 10g</td>
</tr>
<tr>
<td>15%</td>
</tr>
<tr>
<td>Saturated Fat 1.5g</td>
</tr>
<tr>
<td>7%</td>
</tr>
<tr>
<td>Trans Fat 2g</td>
</tr>
<tr>
<td>0%</td>
</tr>
<tr>
<td>Cholesterol 0mg</td>
</tr>
<tr>
<td>0%</td>
</tr>
<tr>
<td>Sodium 410mg</td>
</tr>
<tr>
<td>17%</td>
</tr>
<tr>
<td>Total Carbohydrate 23g</td>
</tr>
<tr>
<td>8%</td>
</tr>
<tr>
<td>Dietary Fiber 1g</td>
</tr>
<tr>
<td>4%</td>
</tr>
<tr>
<td>Sugars 4g</td>
</tr>
<tr>
<td>4%</td>
</tr>
<tr>
<td>Protein 4g</td>
</tr>
<tr>
<td>4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vitamin A 0% • Vitamin C 0%</th>
<th>Calcium 2% • Iron 6%</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>Calories</th>
<th>2,000</th>
<th>2,500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fat</td>
<td>Less than 65g</td>
<td>80g</td>
</tr>
<tr>
<td>Sat Fat</td>
<td>Less than 20g</td>
<td>25g</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>Less than 300mg</td>
<td>300mg</td>
</tr>
<tr>
<td>Sodium</td>
<td>Less than 2,400mg</td>
<td>2,400mg</td>
</tr>
<tr>
<td>Total Carbohydrate</td>
<td>300g</td>
<td>375g</td>
</tr>
<tr>
<td>Fiber</td>
<td>25g</td>
<td>30g</td>
</tr>
</tbody>
</table>

Calories per gram
- Fat 9 g
- Carbohydrate 4 g
- Protein 4 g
This is a formula that helps to determine the health value of a product in a fun and easy way. This rule is a great way to compare food labels. The more fingers you have up when you finish, the better the product is for you. If there are two different types of items and you are not sure which one to go with, do the Fantastically Fun Fast Five Finger Food Formula. It can also be fun for children and a way for them to learn how to choose snacks.

The Results of this example would be NEGATIVE 2 FINGERS! You start with zero fingers for fiber, 1 finger for protein, 1 finger for Calcium, then take away a finger for calories, take one away for saturated fat, take one away for cholesterol, take one away for sodium, you are left with negative 2.
Below are two food labels. One is for oatmeal and one is for grits. Without using the Fantastically Five Finger Formula, which one do you think is the better choice?

### OATMEAL

<table>
<thead>
<tr>
<th>Nutrition Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serving Size</td>
</tr>
<tr>
<td>Servings per container</td>
</tr>
<tr>
<td>Amount Per Serving</td>
</tr>
<tr>
<td>Calories</td>
</tr>
<tr>
<td>Calories from Fat</td>
</tr>
<tr>
<td>% Daily Value*</td>
</tr>
<tr>
<td>Total Fat</td>
</tr>
<tr>
<td>Saturated Fat</td>
</tr>
<tr>
<td>Trans Fat</td>
</tr>
<tr>
<td>Cholesterol</td>
</tr>
<tr>
<td>Sodium</td>
</tr>
<tr>
<td>Total Carbohydrate</td>
</tr>
<tr>
<td>Dietary Fiber</td>
</tr>
<tr>
<td>Sugars</td>
</tr>
<tr>
<td>Protein</td>
</tr>
<tr>
<td>Vitamin A</td>
</tr>
<tr>
<td>Vitamin C</td>
</tr>
<tr>
<td>Calcium</td>
</tr>
<tr>
<td>Iron</td>
</tr>
</tbody>
</table>

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

### GRITS

<table>
<thead>
<tr>
<th>Nutrition Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serving Size</td>
</tr>
<tr>
<td>Servings per container</td>
</tr>
<tr>
<td>Amount Per Serving</td>
</tr>
<tr>
<td>Calories</td>
</tr>
<tr>
<td>Calories from Fat</td>
</tr>
<tr>
<td>% Daily Value*</td>
</tr>
<tr>
<td>Total Fat</td>
</tr>
<tr>
<td>Saturated Fat</td>
</tr>
<tr>
<td>Trans Fat</td>
</tr>
<tr>
<td>Cholesterol</td>
</tr>
<tr>
<td>Sodium</td>
</tr>
<tr>
<td>Total Carbohydrate</td>
</tr>
<tr>
<td>Dietary Fiber</td>
</tr>
<tr>
<td>Sugars</td>
</tr>
<tr>
<td>Protein</td>
</tr>
<tr>
<td>Vitamin A</td>
</tr>
<tr>
<td>Vitamin C</td>
</tr>
<tr>
<td>Calcium</td>
</tr>
<tr>
<td>Iron</td>
</tr>
</tbody>
</table>

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

Now use the Fantastically Five Finger Formula. Which one has more fingers left standing? Were you right?

Answers: Oatmeal = 5 fingers; Grits = -1 fingers
Avoid or limit these foods whenever possible: sugary drinks such as soda and juices (Busta and Chubby). Try to avoid candy bars and biscuits. Sugar substitutes can be used in place of sugar for coffee, tea, and lemonade but try to limit the use of sugar substitutes due to side effects and unknown long-term effects. Also, try to get your sugar from natural sources, like fruit.

When fresh fruit is not available choose options with a lower amount of sugar per serving. Canned fruit contains the most amount of sugar per serving, 18g, canned fruit in light syrup contains less sugar, 13g, and frozen fruit contains less sugar than both at 12g.

<table>
<thead>
<tr>
<th>EAT MORE</th>
<th>EAT LESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruit (fresh or dried)</td>
<td>Soda and juices</td>
</tr>
<tr>
<td>Yogurt (low or non-fat)</td>
<td>Candy bars, candy, biscuits, cake, brownies, and honey</td>
</tr>
<tr>
<td>Peanut butter and almond butter</td>
<td>Sugary cereals, doughnuts, and pastries</td>
</tr>
</tbody>
</table>
Using the sugar and plastic spoon provided, guess how many teaspoons of sugar are in each of the candy bars and sodas. Spoon the sugar into the Dixie cup or on paper towel. Demonstration: Candy wrappers and soda bottles filled with the amount of sugar in each product.

**SNICKERS**

<table>
<thead>
<tr>
<th>Nutrition Facts</th>
<th>Serving Size 1 bar (113g)</th>
<th>Servings per container 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount Per Serving</td>
<td>Calories 537</td>
<td>Calories from Fat 243</td>
</tr>
<tr>
<td>% Daily Value*</td>
<td>Total Fat 27g</td>
<td>41%</td>
</tr>
<tr>
<td></td>
<td>Saturated Fat 10g</td>
<td>51%</td>
</tr>
<tr>
<td></td>
<td>Trans Fat 0g</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Cholesterol 15mg</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>Sodium 278mg</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>Total Carbohydrate 68g</td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td>Dietary Fiber 3g</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Sugars 57g</td>
<td></td>
</tr>
<tr>
<td>Protein 9g</td>
<td>Vitamin A 4% • Vitamin C 1%</td>
<td></td>
</tr>
<tr>
<td>Calcium 11% • Iron 5%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**BABY RUTH**

<table>
<thead>
<tr>
<th>Nutrition Facts</th>
<th>Serving Size 1 bar (60g)</th>
<th>Servings per container 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount Per Serving</td>
<td>Calories 275</td>
<td>Calories from Fat 117</td>
</tr>
<tr>
<td>% Daily Value*</td>
<td>Total Fat 13g</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Saturated Fat 7g</td>
<td>36%</td>
</tr>
<tr>
<td></td>
<td>Trans Fat 0g</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Cholesterol 0mg</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Sodium 138mg</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Total Carbohydrate 39g</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>Dietary Fiber 1g</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>Sugars 32g</td>
<td></td>
</tr>
<tr>
<td>Protein 3g</td>
<td>Vitamin A 0% • Vitamin C 0%</td>
<td></td>
</tr>
<tr>
<td>Calcium 3% • Iron 2%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

To figure out how many teaspoons to measure, divide the total amount of sugar in grams by 4. This is how many teaspoons. If this number is high, divide it by 3 and you will get the number of tablespoons of sugar. Snickers = 57/4 = 14.25 teaspoons / 3 = 4.75 tablespoons. Baby Ruth = 32/4 = 8 teaspoons = 2.67 tablespoons.
USE LESS SALT, SALTED FOODS, SEASONINGS AND SALTY SNACKS

Try to limit your sodium intake to stay below 2300mg per day which equals about 1 teaspoon of table salt. Table salt is different than sodium because it contains both sodium and chloride. It is actually only 40% sodium.

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>mg Na/SERVING</th>
<th>% Daily Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lentil soup</td>
<td>870mg</td>
<td>39%</td>
</tr>
<tr>
<td>Tomato sauce</td>
<td>740mg</td>
<td>32%</td>
</tr>
<tr>
<td>Frozen cheese pizza</td>
<td>830mg</td>
<td>35%</td>
</tr>
<tr>
<td>Doritos</td>
<td>200mg</td>
<td>8%</td>
</tr>
</tbody>
</table>

Make sure to read labels when buying foods. Be careful with foods that are low-fat products, they often substitute salt to maintain flavor.

WAYS TO REDUCE YOUR SODIUM INTAKE

Use less salt when cooking
Remove the salt shaker from the table
Use no salt added or frozen vegetables if you cannot find fresh
Drain and rinse canned vegetables before heating
Use herbs and spices instead of salt to flavor foods (garlic, basil, rosemary, chili pepper)
Avoid processed foods
Cook with fresh ingredients
Avoid salty snacks like chips, Doritos, crackers, etc.
USE LESS SALT, SALTED FOODS, SEASONINGS AND SALTY SNACKS

BETTER SNACK IDEAS

Trail mix (made with nuts and dried fruit)
Yogurt and fresh fruit (strawberries, bananas, pineapple, kiwi, etc.)
Non-buttered popcorn
An apple and a tablespoon of peanut butter (or almond butter)
Raw veggies with ¼ cup salad dressing (if possible low fat)
Baked tortilla chips with ¼ cup salsa
String cheese and a piece of fruit (orange, apricot, mango, etc.)

ACTIVITY

Underline the one you believe has less sodium.

House side salad with Ranch dressing or Regular hamburger (1 patty, no cheese)
Large French fries or 6" veggie delight sub (Subway)
1 slice of cheese pizza or 6" turkey sub (Subway)
Fried chicken breast (KFC) or potato wedges and macaroni and cheese (KFC)

Sometimes, what you think would be the better option, sometimes is not. Don’t be fooled by the name of items. Make sure to be aware of food labels and ask for nutrition facts of the menu at fast food restaurants.
Physical activity strengthens your muscles and heart. It boosts your mood and the way you feel about yourself. Aim for 30-60 minutes of physical activity every day.

WAYS TO ADD MORE ACTIVITY TO YOUR DAY

Walk wherever you go
Dance to music
Clean the house
Play cricket
Play with your kids
Anything that gets you on your feet and moving!

The following chart shows calories burned for a 140 pound woman. Those who weigh more would burn more calories and those who weigh less will burn fewer calories doing the same activities for the same times.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>DURATION</th>
<th>CALORIES BURNED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ride a bike (12mph)</td>
<td>29 minutes</td>
<td>247 calories</td>
</tr>
<tr>
<td>Shopping</td>
<td>1 hour 38 minutes</td>
<td>241 calories</td>
</tr>
<tr>
<td>Rollerblading</td>
<td>18 minutes</td>
<td>243 calories</td>
</tr>
<tr>
<td>Go hiking</td>
<td>38 minutes</td>
<td>243 calories</td>
</tr>
<tr>
<td>Run 2.3 miles</td>
<td>23 minutes</td>
<td>264 calories</td>
</tr>
<tr>
<td>Jump rope</td>
<td>12 minutes</td>
<td>128 calories</td>
</tr>
<tr>
<td>Walk holding a baby</td>
<td>1 hr 5 minutes</td>
<td>243 calories</td>
</tr>
<tr>
<td>Yoga</td>
<td>45 minutes</td>
<td>120 calories</td>
</tr>
<tr>
<td>Playing with your kids</td>
<td>28 minutes</td>
<td>120 calories</td>
</tr>
<tr>
<td>Dancing</td>
<td>53 minutes</td>
<td>272 calories</td>
</tr>
<tr>
<td>Cook</td>
<td>1 hour</td>
<td>128 calories</td>
</tr>
</tbody>
</table>
HELPFUL WAYS TO BURN CALORIES WHILE SEATED AT WORK OR AT HOME

1. Keep good posture. Don’t use the back of the chair when sitting. Sit up straight, shoulders back, and tighten your abs. Lean forward slightly to feel a tighter squeeze. This works the abs and strengthens your back muscles.

2. Knee raises. Sit up straight. Bring your left knee towards your chest and then switch and bring your right knee towards your chest. Alternate knees 10 times. This is works abs, legs, and back.

3. Arm circles. Sit up straight. Extend both arms to the side. Make little circles with your arms. Then, make big circles with your arms. You can hold cans of food to increase resistance. This works the arms.

4. Reverse flies. Lean over so your chest is resting on your thighs. Swing arms out to the side. Hold cans of food for more resistance. Do 3 sets of 10. This works arms and back.
Water is the number one nutrient your body needs. The human body is between 55 and 60% water. It is natural and should be used in place of other drinks like soda and juices as much as possible.

All fruits and vegetables have very high water content and can add to your water intake - for example, a carrot is 88% water, a tomato is 95% water, and a pineapple is 80% water.

WAYS TO DRINK MORE WATER

Keep water handy
If you do not like plain water, drink coconut water or add only a little bit of fruit juice or sports drink to flavor it
Add slices of cucumber, lemon, lime, strawberries, etc. to flavor as well

ACTIVITY - DRY SPONGE/WET SPONGE

Get a dry sponge. What do you see? What does it feel like? A sponge is like our bodies. Without water a sponge is brittle and does not clean food off of dishes very well. When wet, a sponge is soft and easily gets rid of food particles. It transports an important agent to the dishes (soap) and gets rid of waste (food). Our bodies are the same way. We need water to lubricate our joints so we can easily move. It transports important things like nutrients to parts of our body and harmful wastes away from it.
Alcohol has no nutrients and is high in calories. It also lowers your ability to make healthy decisions.

WAYS TO MODERATE YOUR ALCOHOL

Only have one or two if it is a special occasion
Drink a glass of water between drinks
Replace at least one alcoholic drink with a non-alcoholic drink
Drink with food

Recommendations are no more than 2 drinks per day for men and 1 drink per day for women

SERVING SIZES OF ALCOHOLIC DRINKS

Beer = 12 oz  
Wine = 4-5 oz  
Dessert wine = 3 oz  
80-proof Liquor = 1.5 oz  
Liqueurs = 2-3 oz
The calories can really add up when you consume alcohol. The formula below is an estimation of the amount of calories that one person needs in a day. Calculate your estimated calorie needs.

Equations to estimate your calorie needs

**Harris Benedict Equation**

Metric BMR Formula

**Women:** BMR = 655 + (9.6 x weight in kilos) + (1.8 x height in cm) - (4.7 x age in years)

**Men:** BMR = 66 + (13.7 x weight in kilos) + (5 x height in cm) - (6.8 x age in years)

**Mifflin-St Jeor Equations**


Women: RMR = (9.99 X weight) + (6.25 X height) – (4.92 X age) – 161

To determine your total daily calorie needs, the RMR has to be multiplied by the appropriate activity factor, as follows:

- 1.200 = sedentary (little or no exercise)
- 1.375 = lightly active (light exercise/sports 1-3 days/week)
- 1.550 = moderately active (moderate exercise/sports 3-5 days/week)
- 1.725 = very active (hard exercise/sports 6-7 days a week)
- 1.900 = extra active (very hard exercise/sports and physical job)

How many calories does your body need per day?
Below is a table of the amount of calories in the given amount of alcohol.

<table>
<thead>
<tr>
<th>Alcoholic Drink</th>
<th>Serving Size</th>
<th>Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beer</td>
<td>12 oz.</td>
<td>150</td>
</tr>
<tr>
<td>Wine</td>
<td>5 oz.</td>
<td>100</td>
</tr>
<tr>
<td>Liquor</td>
<td>1.5 oz.</td>
<td>97*</td>
</tr>
</tbody>
</table>

*Does not include the calories contained if a mixer is added to the liquor.

Joe drinks two beers every night of the week. How much weight will he gain in one year if those extra calories were after he gets his entire daily allowance of calories through food?

2 beers x 7 days a week = 14 beers/week; 14 beers per week x 150 calories = 2100 cal./week; 2100 cal. per week x 52 weeks in a year = 109,200 cal./year
109,200 cal. per year /3,500 cal. = 32 pound weight gain in a year from alcohol.

That means Joe is taking in 300 more calories than he needs per day. That really adds up in one year.

Now determine how many alcoholic beverages you drink in a week. How much weight would you gain in the course of a year assuming these were extra calories?
DISEASES

Obesity
Cardiovascular Disease
Diabetes -- Type 1 & Type 2
Hypertension
Overweight and obesity are both defined as having abnormal or excessive fat accumulation. This accumulation may come from a person taking in more calories than what the body needs. When a person who is overweight does not manage their caloric intake and body weight properly, it can lead to obesity. Obesity can lead to serious health-related disease if not treated within a timely manner. Overweight and obesity can be manageable with the proper diet, physical activity and lifestyle changes.

**RISK FACTORS OF OBESITY**

- Poor Diet
- Sedentary Lifestyle
- Family History
- Race
- Age
- Stress Levels
- Unhealthy body weight

**HEALTH RISKS ASSOCIATED WITH OBESITY**

- Hypertension
- Type 2 Diabetes
- Atherosclerosis
- Cancer
- Gallbladder Disease
- Renal Failure
- Stroke
- Heart Failure

Obesity
FACTS ABOUT OBESITY

- Worldwide 400 million adults are obese and 1.6 billion are overweight.
- Worldwide, 155 million children are overweight including 30-45 million obese children.
- Obesity levels have risen sharply across the globe. Even in those countries that have historically had lower rates of obesity, there is now evidence of an increasing number of overweight individuals.
- People have become overweight or obese due to increase in caloric intake and decrease in physical activity.
- Most of today’s diets (worldwide) are high-fat, energy-dense, animal-based with less fruits and vegetables.

WORLDWIDE PERCENTAGES OF OBESITY

<table>
<thead>
<tr>
<th>Country</th>
<th>% Obese Men</th>
<th>% Obese Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finland</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>Russia</td>
<td>10.8</td>
<td>27.9</td>
</tr>
<tr>
<td>England</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>Germany</td>
<td>17.2</td>
<td>19.3</td>
</tr>
<tr>
<td>Czech</td>
<td>16.3</td>
<td>20.2</td>
</tr>
<tr>
<td>Scotland</td>
<td>15.9</td>
<td>17.3</td>
</tr>
<tr>
<td>Belgium</td>
<td>12.1</td>
<td>18.4</td>
</tr>
<tr>
<td>Spain</td>
<td>11.5</td>
<td>15.2</td>
</tr>
<tr>
<td>Sweden</td>
<td>10</td>
<td>11.9</td>
</tr>
<tr>
<td>France</td>
<td>9.6</td>
<td>10.5</td>
</tr>
<tr>
<td>Denmark</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Holland</td>
<td>8.4</td>
<td>8.3</td>
</tr>
<tr>
<td>Italy</td>
<td>6.5</td>
<td>6.3</td>
</tr>
<tr>
<td>Australia</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>United States</td>
<td>61.6</td>
<td>68.3</td>
</tr>
<tr>
<td>Caribbean</td>
<td>11.3</td>
<td>31</td>
</tr>
<tr>
<td>Canada</td>
<td>22.9</td>
<td>23.2</td>
</tr>
<tr>
<td>Latin America</td>
<td>11.3</td>
<td>31</td>
</tr>
</tbody>
</table>

Even though full-figured body types are symbols of beauty and wealth in some countries, they still have increased risk for health-related diseases.
Weight
Infants should be weighed in a pan-type pediatric electronic or balance-beam scale. The infant’s diaper can be removed or attached. If attached, make sure to weigh the diaper separately and to subtract the weight of the diaper from the infant’s weight.

Position the infant in the middle of scale in a supine position (lying on their back). Take 2 to 3 measurements and record the average to the nearest 10 grams. Next, plot the measurement on the appropriate growth chart.

Another option is to record an initial weight of an adult only, and then record another weight with the same adult holding an infant. The adult weight is subtracted from the weight of the adult with the infant. The result will be the infant’s weight.

Length
The length of an infant is measured in a recumbent (lying down) position. Length measurement requires a special measuring device with a stationary headboard and movable footboard. The footboard must be perpendicular to the backboard. The measuring scale should be at zero for the headboard and allows the length to be read by the footboard. This measurement requires assistance from two people. The infant should not have any socks or shoes on.

Using Measuring device
Have child in supine position (lying on back)
Person #1: Hold child’s head against backboard with the crown of head touching the headboard
Person #2: Keep the child’s legs straight and against backboard and slid footboard against bottom of feet with toes pointing upward and read measurements
Record measurements to the nearest 0.1 cm
**Weight:**
Children and adults should be weighed using a platform electronic or balance beam scale. The child and adult should be standing still in the middle of the scale’s platform with feet positioned slightly apart. Hands should be at the sides and the head positioned straight ahead. Weight should be evenly distributed on both feet. Two to three measurements should be recorded in succession. The weight should be read to the nearest 100 g (0.1 kg). Weight measurements are then plotted on the appropriate growth charts.

**Height:**
The height of a child and adult is measured in a standing upright position. Before taking any measurements, all shoes, socks and outer clothing (coat, heavy sweater) are removed. All weight should be evenly distributed on both feet. For a child, have a parent (caregiver) hold the child’s knees and ankles when positioning. The head should be positioned horizontal to the baseboard. The headboard should rest on top of head, compressing the hair. Read the measurement and record the height to the nearest 0.1 cm.

**Length vs. Height**
Length is measured when a child is 2 years old or less. The height is measured when a child is 2 years or more.

In general, standing height is about 0.7 cm less than the recumbent length measurement. This is a good rule of thumb, when the height is taken instead of the length and vice versa.

If a child who is less than 2 years will not lie down for the length measurement, take their height measurement and add 0.7 cm to the recorded number.

If a child who is 2 years or older and they are unable to stand, take their length measurement and subtract 0.7 cm from the recorded number.

If a child who is 2 years or older and they are unable to stand, take their length measurement and subtract 0.7 cm from the recorded number.
BMI is a tool used to determine if a person is obese based on a reference weight-to-height ratio.

Calculation of BMI is height (in kilograms) divided by weight (in meters) squared.

\[
\text{BMI} = \frac{\text{Weight (kg)}}{\text{Height (m) }^2}
\]

Example: Joe is a 23 year old male who is 5’11 and weighs 225 pounds. What is Joe’s BMI?

<table>
<thead>
<tr>
<th>CONVERSION TABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>lbs to kg</td>
</tr>
<tr>
<td>2.2 lbs = 1 kg</td>
</tr>
</tbody>
</table>

Calculation for weight: \((225\text{lbs} \times \frac{1\text{ kg}}{2.2\text{ lbs}}) = 102\text{ kg}\)

Calculation for height: \(5'11" = 71\text{ inches} \times \frac{2.54\text{ cm}}{1\text{ inch}} = 180\text{ cm}\)

\(180\text{ cm} \div 100\text{ cm} = 1.8\text{ m} \times 1.8\text{ m} = 3.24\text{ m}^2\)

Calculation for BMI: \(\frac{102\text{ kg}}{3.24\text{ m}^2} = 31.4\text{ kg/m}^2\)

Results - Joe has a BMI of 31.4, which makes him obese.
BMI CALCULATIONS

<table>
<thead>
<tr>
<th>Classification</th>
<th>BMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Range</td>
<td>18.5-24.9</td>
</tr>
<tr>
<td>Overweight</td>
<td>25.0-29.9</td>
</tr>
<tr>
<td>Obese Class I</td>
<td>30.0-34.9</td>
</tr>
<tr>
<td>Obese Class II</td>
<td>35.0-39.9</td>
</tr>
<tr>
<td>Obese Class III</td>
<td>&gt; 40.0</td>
</tr>
</tbody>
</table>

BMI Chart for Adults

WAIST CIRCUMFERENCE

Waist circumference is a tool used to determine if a person is obese based on their abdominal fat.

To measure waist circumference:
1. Place a tape measure around the lower abdomen, just above the navel.
2. Make sure the measuring tape is snug, but not too tight.
3. Remember to stay relaxed and breathe evenly when taking measurements.

<table>
<thead>
<tr>
<th>CLASSIFICATION</th>
<th>MEASUREMENT</th>
<th>RISK FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOMEN</td>
<td>&gt;35”</td>
<td>Type 2 Diabetes, High Cholesterol, Hypertension, Cardiovascular Disease</td>
</tr>
<tr>
<td>MEN</td>
<td>&gt;40”</td>
<td></td>
</tr>
</tbody>
</table>
MEASURING CHILDREN’S GROWTH

Understanding Growth Charts
Normal growth in individual children can vary. Measuring the growth of children is based on the child’s weight and length or height. Plotting a child’s measurements over time on growth charts can show whether a child is growing normally. A healthcare provider weighs and measures a child, and records the measurements. The child’s measurements are then plotted on growth charts. Measurements taken at later visits are also plotted, and the plots are joined by a line. This line is the child’s growth curve or trend.

THE FOUR TYPES OF GROWTH CHARTS INCLUDE

- Length/height-for-age
- Weight-for-age
- Weight-for-length/height
- BMI-for-age

INTERPRETING GROWTH CURVES

- The line labeled “0” on the growth chart is the median which is, generally speaking, the average. The other lines, called z-score lines, indicate distance from the average. A point or trend which is far from the median, such as 3 or –3, indicates a growth problem.
- The growth curve of a normally growing child will usually follow parallel to the median. The track may be above or below the median.
- Any quick change in trend (the child’s curve veers upward or downward from its normal track) should be investigated to determine its cause and remedy any problem.
- A flat line indicates that the child is not growing. This is called stagnation and may also need to be investigated.
- A growth curve that crosses a z-score line may indicate risk. A healthcare provider can interpret risk based on where (relative to the median) the change in trend began and the rate of change.

http://www.who.int/childgrowth/training/girls_growth_record.pdf
**Example 1:** Sam is a 4 year old boy who weighs 23 lbs. What range would he be classified as?

**Results:** Sam is ranged in between the 3 and 2 line on the chart, indicating that he is at a normal range with his weight and height.

![Weight-for-age BOYS 2 to 5 years (z-scores)](http://www.who.int/childgrowth/training/boys_growth_record.pdf)

**Example 2:** Maria is 2 year and 6 months old girl who height is 84cm. What does this information tell about Maria?

**Results:** Maria is stunted because her range is below -2.

![Weight-for-age GIRLS 2 to 5 years (z-scores)](http://www.who.int/childgrowth/training/girls_growth_record.pdf)
1. Nutritional Management
2. Physical activity
3. Lifestyle changes

**EFFECTIVE STRATEGIES FOR OVERWEIGHT/OBESITY**

**NUTRITIONAL MANAGEMENT**

- Estimating Total Energy Requirements
- Estimating Baseline Calories Needs (REE)
- Expressed as kilocalories per kilogram of body weight per hour
  - Men: 1.0 calories per kilogram of body weight per hour times 24 hours
  - Women: 0.9 calories per kilogram of body weight per hour times 24 hours
- Take the number that is calculated and add to the calories estimated for physical activity needs.

**ESTIMATE PHYSICAL ACTIVITY NEEDS**

Method 1

<table>
<thead>
<tr>
<th>Description</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sedentary</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Low Active</td>
<td>1.11</td>
<td>1.12</td>
</tr>
<tr>
<td>Active</td>
<td>1.25</td>
<td>1.27</td>
</tr>
<tr>
<td>Very Active</td>
<td>1.48</td>
<td>1.45</td>
</tr>
</tbody>
</table>
### ESTIMATE PHYSICAL ACTIVITY NEEDS

**Method 2**

<table>
<thead>
<tr>
<th>Activity Level</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Light (sedentary)</td>
<td>25 to 40 %</td>
<td>25 to 35 %</td>
</tr>
<tr>
<td>Mostly resting with little or no activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light</td>
<td>50 to 70 %</td>
<td>40 to 60 %</td>
</tr>
<tr>
<td>Occasional unplanned activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>65 to 80 %</td>
<td>50 to 70 %</td>
</tr>
<tr>
<td>Daily planned activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heavy (vigorous)</td>
<td>90 to 120 %</td>
<td>80 to 100 %</td>
</tr>
<tr>
<td>Daily workout routine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;1 hour exercise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extremely (strenuous)</td>
<td>130 to 145 %</td>
<td>110 to 130 %</td>
</tr>
<tr>
<td>Daily vigorous workouts for extended hours</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Method 3**

<table>
<thead>
<tr>
<th>Activity Level</th>
<th>Calories/min/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sedentary</td>
<td>0.01</td>
</tr>
<tr>
<td>Light</td>
<td>0.02</td>
</tr>
<tr>
<td>Moderate</td>
<td>0.03</td>
</tr>
<tr>
<td>Vigorous</td>
<td>0.06</td>
</tr>
<tr>
<td>Strenuous</td>
<td>0.10</td>
</tr>
</tbody>
</table>
Calculation:
Total Energy Requirements =
(Estimated Calories Needed) + (Estimated Physical Activity Calories)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Age (years)</th>
<th>Activity Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Sedentary</td>
</tr>
<tr>
<td>Children</td>
<td>2-3</td>
<td>1000</td>
</tr>
<tr>
<td>Female</td>
<td>4-8</td>
<td>1200</td>
</tr>
<tr>
<td></td>
<td>9-13</td>
<td>1600</td>
</tr>
<tr>
<td></td>
<td>14-18</td>
<td>1800</td>
</tr>
<tr>
<td></td>
<td>19-30</td>
<td>2000</td>
</tr>
<tr>
<td></td>
<td>31-50</td>
<td>1800</td>
</tr>
<tr>
<td></td>
<td>51+</td>
<td>1600</td>
</tr>
<tr>
<td>Male</td>
<td>4-8</td>
<td>1400</td>
</tr>
<tr>
<td></td>
<td>9-13</td>
<td>1800</td>
</tr>
<tr>
<td></td>
<td>14-18</td>
<td>2200</td>
</tr>
<tr>
<td></td>
<td>19-30</td>
<td>2400</td>
</tr>
<tr>
<td></td>
<td>31-50</td>
<td>2200</td>
</tr>
<tr>
<td></td>
<td>51+</td>
<td>2000</td>
</tr>
</tbody>
</table>
Portion Size

Portion is defined as the amount of food that you choose to eat. Worldwide, most people eat more than the recommended portion size of their favorite meals and snacks.

When most people eat large portioned meals, they fail to realize the correct serving sizes. Serving size represents a standard amount determined by calorie amount and nutrients contained in a food item.

### HOW TO CALCULATE PORTION AND SERVING SIZES

<table>
<thead>
<tr>
<th>Meals</th>
<th>Portion Size</th>
<th>Serving Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast</td>
<td>½ cup oatmeal</td>
<td>1</td>
</tr>
<tr>
<td>Lunch</td>
<td>1 cup rice</td>
<td>2</td>
</tr>
<tr>
<td>Snack</td>
<td>6 biscuits (crackers)</td>
<td>1</td>
</tr>
<tr>
<td>Dinner</td>
<td>1 hamburger bun</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>4 portion</td>
<td>6 servings</td>
</tr>
</tbody>
</table>
# Helpful Hints for Determining Portion Sizes

<table>
<thead>
<tr>
<th>Hand Symbol</th>
<th>Equivalent</th>
<th>Foods</th>
<th>Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fist</td>
<td>1 cup</td>
<td>Rice, pasta, Fruit, Veggies</td>
<td>200 75 40</td>
</tr>
<tr>
<td>Palm</td>
<td>3 ounces</td>
<td>Meat, Fish, Poultry</td>
<td>160 160 160</td>
</tr>
<tr>
<td>Handful</td>
<td>1 ounce</td>
<td>Nuts, Raisins</td>
<td>170 85</td>
</tr>
<tr>
<td>2 Handfuls</td>
<td>1 ounce</td>
<td>Chips, Popcorn, Pretzels</td>
<td>150 120 100</td>
</tr>
<tr>
<td>Thumb</td>
<td>1 ounce</td>
<td>Peanut butter, Hard cheese</td>
<td>170 100</td>
</tr>
<tr>
<td>Thumb tip</td>
<td>1 teaspoon</td>
<td>Cooking oil, Mayonnaise, butter, Sugar</td>
<td>40 35 15</td>
</tr>
<tr>
<td>Food Group</td>
<td>One Serving</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staples -</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bread</td>
<td>1 slice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Banana</td>
<td>1 medium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yams</td>
<td>1 slice or 60 grams</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rice</td>
<td>½ cup cooked</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pasta</td>
<td>½ cup cooked</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dumpling</td>
<td>2 tbsp flour/cornmeal</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Legumes/ Nuts:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peanuts</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dried peas and bean</td>
<td>¼ cup</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fruit:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange</td>
<td>1 small or medium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange Juice</td>
<td>½ cup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guava</td>
<td>1 medium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watermelon</td>
<td>1 cup cubes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apples</td>
<td>1 medium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raisins</td>
<td>¼ cup</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Foods from Animals:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>½ cup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>1 small drumstick</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beef-trimmed &amp; sliced thin</td>
<td>6 ½ cm x 7 ½ cm (30 grams)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>1 small piece (6.5 cm x 5 cm x 1 ½ cm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Egg</td>
<td>1 medium (whole)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goat-boneless</td>
<td>4 small cubes/1 tbsp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheese-Cheddar &amp; American</td>
<td>2 ½ cm cube</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fats:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Margarine</td>
<td>1 teaspoon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butter</td>
<td>1 teaspoon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mayonnaise</td>
<td>1 teaspoon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salad Dressing</td>
<td>1 Tablespoon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salad Dressing-reduced-fat</td>
<td>2 Tablespoons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coconut</td>
<td>2 Tablespoons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avocado</td>
<td>1 Tablespoon</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
EFFECTIVE STRATEGIES FOR OVERWEIGHT/OBESITY

- Adopt a healthy diet plan
  - Less fat intake, especially saturated and trans fats
  - More fruits and vegetables
  - Less processed or packaged food items
  - Less fast food items
  - More fresh food items
  - Drink water frequently

- Keep a food diary
  - Include all food items and nutritional facts

- Reduce portion size of meals
  - Eat ½ half instead of one small mastif
  - Eat ½ instead of one whole leg
  - Drink 4oz of beverage instead of 8oz

- Eat lower calorie alternatives instead of high calorie foods

- Read food labels before purchasing food items

- Make a list of your favorite foods and beverages, and include the nutrition information so you know how much to eat per day

- Choose healthier cooking methods
  - Bake, Boil, Steam, Roast, Grill, Sauté, Stew

- Wait 15-20 minutes after eating a meal, to see if you are still hungry

- Drink a glass of water before eating your meal

- Choose food items with high amounts of fiber, so you stay full longer

### Foods Serving Size Total Fiber (g)

<table>
<thead>
<tr>
<th>Foods</th>
<th>Serving Size</th>
<th>Total Fiber (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fruits:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mango</td>
<td>1 medium</td>
<td>2-4</td>
</tr>
<tr>
<td>Grapefruit</td>
<td>½ medium</td>
<td>6.12</td>
</tr>
<tr>
<td>Banana</td>
<td>Large</td>
<td>2-4</td>
</tr>
<tr>
<td><strong>Vegetable:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kale (cooked)</td>
<td>1 cup</td>
<td>7.20</td>
</tr>
<tr>
<td>Peas (cooked)</td>
<td>1 cup</td>
<td>8.84</td>
</tr>
<tr>
<td><strong>Staples and Legumes:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bran Cereal</td>
<td>1 cup</td>
<td>19.94</td>
</tr>
<tr>
<td>Oats (rolled, dry)</td>
<td>1 cup</td>
<td>12</td>
</tr>
<tr>
<td>Sweet Potato</td>
<td>3 oz</td>
<td>3.3</td>
</tr>
<tr>
<td>Lentils (cooked)</td>
<td>3 oz</td>
<td>6.4</td>
</tr>
<tr>
<td>Kidney Beans (cooked)</td>
<td>1 cup</td>
<td>13.33</td>
</tr>
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</table>
### CHOOSE FOOD ALTERNATIVES

<table>
<thead>
<tr>
<th>INSTEAD OF</th>
<th>CHOOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potato Chips</td>
<td>Popcorn</td>
</tr>
<tr>
<td>French Fries</td>
<td>Side Salad</td>
</tr>
<tr>
<td>Whole Milk</td>
<td>1% or Skim Milk</td>
</tr>
<tr>
<td>White Bread, Rice or Pasta</td>
<td>Whole Wheat Bread, Rice Pasta, Ground provisions</td>
</tr>
<tr>
<td>Fried Meats, Poultry and Fish</td>
<td>Baked or Grilled Meats, Poultry and Fish</td>
</tr>
<tr>
<td>Fried Meats, Poultry, Fish</td>
<td>Baked or Grilled Meats, Poultry, Fish</td>
</tr>
<tr>
<td>Regular Salad Dressing</td>
<td>Reduced-Fat, Fat-free or Light Salad Dressings</td>
</tr>
<tr>
<td>High Sugar Cereals</td>
<td>High Fiber, Low Sugar Cereals</td>
</tr>
</tbody>
</table>

### PREPARE HEALTHY MEALS

<table>
<thead>
<tr>
<th>Breakfast</th>
<th>Snack</th>
<th>Lunch</th>
<th>Dinner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast Muffin</td>
<td>Fruit Balls</td>
<td>Caribbean Chicken with -Mango –Kiwi Salsa</td>
<td>Aloo Gobi</td>
</tr>
<tr>
<td>- 2 cups bran flake cereal</td>
<td>- 1 lb. pitted dates</td>
<td>- 1 tsp. dry Caribbean Jerk seasoning</td>
<td>- 3 tsp. vegetable oil</td>
</tr>
<tr>
<td>- 1-cup raisins</td>
<td>- 1 ½ cup crushed vanilla wafers</td>
<td>- Boneless chicken</td>
<td>- ½ tsp. cumin seed</td>
</tr>
<tr>
<td>- 1 egg, slightly beaten</td>
<td>- ½ cup chopped dried cranberries</td>
<td>- 1 tsp. fresh lime juice</td>
<td>- 1 small onion, sliced</td>
</tr>
<tr>
<td>- ½ cup skim milk</td>
<td>- ½ cup chopped walnuts</td>
<td>- 1 med. ripe mango peeled, pitted &amp; chopped</td>
<td>- 2 serrano chile peppers, minced</td>
</tr>
<tr>
<td>- ½ cup orange juice</td>
<td>- 6 Tbsp. orange juice</td>
<td>- 1 med. ripe kiwi</td>
<td>- 2 tsp. ground coriander</td>
</tr>
<tr>
<td>- ¼ cup vegetable oil</td>
<td>- 2 Tbsp. powder or granulated sugar</td>
<td>- 2 tsp. gingerroot</td>
<td>- ¼ tsp. paprika</td>
</tr>
<tr>
<td>- 1-cup all-purpose flour</td>
<td></td>
<td>- 2 Tbsp. Fresh cilantro or parsley leaves</td>
<td>- ½ tsp. turmeric powder</td>
</tr>
<tr>
<td>- 1/3 cup sugar</td>
<td></td>
<td></td>
<td>- ½ tsp. garam masala</td>
</tr>
<tr>
<td>- 1 Tbsp. Baking powder</td>
<td></td>
<td></td>
<td>- 2 med. baking potatoes, peeled &amp; cut</td>
</tr>
<tr>
<td>- ½ tsp. salt</td>
<td></td>
<td></td>
<td>- 1 tsp. salt</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- ½ head cauliflower</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- 2 tsp. lemon juice</td>
</tr>
</tbody>
</table>
Make physical activity a part of daily routine

Children
- Play outside
- Take physical activity class at school
- Join after-school or community active programs
- Ride a bike
- Participate in a sport

Young Adults
- Join a school sports team or dance team
- Exercise with friends
- Be active in gym class

Adults
- Take the stairs instead of elevator
- Walk or ride bike instead of driving
- Clean the house or work in the garden
- Join an aerobic class
- Workout with a friend

Older Adults
- Walk around the neighborhood
- Work in the lawn/garden
- Engage in activities that strengthen muscles and flexibility

**Recommendations**

- **Toddlers** (≥ 1½ hours)
- **Preschooler (2-5yrs)** (2 hours)
- **School age (5+ yrs)** (≥ 1 hour)

- **Young Adults** (5-18 yrs.)
  - 60 minutes of moderate- to vigorous-intensity physical activity each day

- **Adults (18- 65 yrs)**
  - 30 minutes of moderate intensity physical activity 5 days per week
  - 20 minutes of vigorous-intensity physical activity 3 days per week
  - 8-10 muscular strengthening exercises (8-12 repetitions) at least 2 days per week.

- **Older Adults (65+ yrs.)**
  - 30-60 minutes of light/ moderate physical activity 5 days per week
Cardiovascular disease or heart disease is a term that refers to problems of the heart due to narrowed or blocked blood vessels. Most blockages are due to large amounts of fat and cholesterol that has built up around blood vessels.

When blood vessels are blocked, organs in the body (such as the brain and heart) may not be able to function properly because of insufficient blood flow. This can lead to heart attacks, chest pains, strokes or even death. As cardiovascular disease is the cause of death for both men and women, it is important to encourage healthier lifestyles to reduce risk.

FACTS ABOUT THE HEART

• The heart beats about 72 times each minute and about 100,000 times a day.
• Laughing helps the heart by increasing the blood flow up to 45 minutes
• The heart weighs less than one pound
• The heart can create enough pressure to where it can squirts up blood at a distance of thirty feet
• In a lifetime, the heart pumps about one million barrels of blood
• Most heart attacks occur between the hours of 8 and 9 AM
• Cardiovascular disease is the leading cause of death worldwide

TYPES OF CARDIOVASCULAR DISEASE

1. Coronary Heart Diseases
2. Stroke
3. Heart Failure
4. Hypertension (High Blood Pressure)
RISK FACTORS FOR CARDIOVASCULAR DISEASE

- Age (65 years or older)
- Smoking
- Family History
- Diabetes
- Gender (males have greater risk than females)
- Artery Diseases
- Obesity
- Lack of exercise
- High Blood Pressure
- Alcohol abuse
- High Cholesterol
- Stress Levels

CORONARY HEART DISEASE

1. Heart Attacks: occurs when part of the heart’s blood supply has been cut off permanently
2. Angina Pectoris or (Chest Pain): occurs when part of the heart’s blood supply has been cut off temporarily

WARNING SIGNS AND SYMPTOMS FOR CORONARY HEART DISEASE

- Chest discomfort
- Pain and discomfort in arms, back, neck, jaw or stomach
- Shortness of Breath
- Cold Sweat, Nausea or Dizziness
STROKE
Blockage of the blood supply to the brain

RISK FACTORS FOR STROKE

• Age (65 years or older)
• Smoking
• Family History
• Diabetes
• Artery Diseases
• Lack of exercise
• Drug Abuse
• Alcohol abuse
• Obesity
• High Blood Pressure
• High Cholesterol
• Gender--strokes are more common in men, but stroke death is more common in women

WARNING SIGNS AND SYMPTOMS OF STROKE

• Sudden numbness or weakness in the face, arm or leg on one side of the body
• Sudden confusion, trouble speaking or understanding
• Sudden trouble seeing in one or both eyes
• Sudden trouble walking, dizziness, loss of balance or coordination
• Sudden, severe headache with no unknown cause
When the heart continues to work, but the body doesn’t get all the blood and oxygen that it should. If not treated immediately, the body can begin to shut down.

**RISK FACTORS FOR HEART FAILURE**

- High blood pressure
- Heart attack
- Irregular heartbeats
- Diabetes
- Problems breathing when sleeping (sleep apnea)
- Congenital heart defects
- Viruses
- Alcohol uses
- Kidney conditions

**WARNING SIGNS AND SYMPTOMS OF HEART FAILURE**

- Shortness of breath
- Swelling of the ankles, legs, feet, abdomen or lower back
- Weakness
- Coughing when lying down
- Sudden increase or decrease of weight
- Difficulty concentrating or impaired thinking
- Changes in eating habits
Cholesterol is a soft, waxy substance that is located on fats that are found in the bloodstream and in all the body’s cells. Its purpose in the body is to help make cell membranes and hormones. When there is too much cholesterol present in the body, it builds up on the walls of blood vessels. This affects the body’s blood flow and can lead to coronary heart disease if not treated. Like fat particles in the body, cholesterol does not dissolve in blood. Instead it is moved in and out of cells by a special carrier called lipoproteins. Two types of these special carries are called HDL’s and LDL’s.

**THE GOOD VS. THE BAD**

**HDLs (High- Density Proteins) are known as the “GOOD” cholesterol.**

- High HDL levels helps lower your risk of developing cardiovascular diseases
- HDLs carry cholesterol away from arteries and send them back to the liver, where they pass from the body. **Remember: HDL numbers need to be high**

**LDLs (Low-Density Proteins) are known as the “BAD” cholesterol.**

- Having too much LDL in the body slows down the blood flow in arteries.
- Overtime, the LDLs along with other substances can cause thick, hard deposits called plaque to form. This plaque narrows the arteries and makes them less flexible. **Remember: LDSs numbers need to be low**
Triglycerides are the chemical form of fat that is connected with cholesterol. It can either be made by the body from other energy sources, (e.g. carbohydrates) or from the fat that is present in foods. After eating triglyceride levels typically increase significantly. When there is too much triglyceride present in the body, arteries and can become blocked. This blockage can lead to cardiovascular diseases if not treated.

### CHOLESTEROL CLASSIFICATION

<table>
<thead>
<tr>
<th>Classification</th>
<th>Normal Levels</th>
<th>Risk Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDL</td>
<td>&gt; 40mg/dL in male</td>
<td>&lt; 40mg/dL in males</td>
</tr>
<tr>
<td></td>
<td>&gt; 50mg/dL in females</td>
<td>&lt; 50 mg/dL in females</td>
</tr>
<tr>
<td>LDL</td>
<td>&lt; 100mg/dL</td>
<td>130-159mg/dL (Borderline high)</td>
</tr>
<tr>
<td></td>
<td>100-129mg/dL (near normal)</td>
<td>160 to 189mg/dL (High)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>190mg/dL or higher (Very high)</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>&lt; 150mg/dL</td>
<td>150-199mg/dL (Borderline high)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>200-499 (High)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500mg/dL (Very high)</td>
</tr>
</tbody>
</table>
HOW TO REDUCE RISK OF CARDIOVASCULAR DISEASE

- Quit Smoking
- Lower high blood pressure
- Have total fat between 25-30%, saturated fat less than 7% and trans fats less than 1% of daily intake
- Eat at least 25-30 grams of dietary fiber daily
- Limit salt intake by 2,300mg per day
- Exercise more
- Aim for a healthy weight
- Manage diabetes
- Reduce stress
- Limit Alcohol

THE ABC’S OF PREVENTING HEART ATTACK, STROKE, AND HEART DISEASE
Blood pressure is made up of two number readings. The top number is the one that tells a person their systolic pressure. Systolic pressure is how powerfully your heart is pumping blood. When the number is too high, this means that the heart is working too hard. The bottom number is the one that tells you the diastolic pressure. Diastolic pressure tells you how the blood is flowing through your arteries or vessels (what gives all body parts their blood supply. See Picture to below).

Hypertension, also called high blood pressure, is a serious problem that can increase a person’s chance of having heart disease or stroke. If hypertension is not treated it can lead to an early death. There are no warning signs or symptoms that tell a person whether or not they have hypertension. That is why it is important to have your blood person checked regularly.

RISK FACTORS OF HYPERTENSION

- High sodium (salt) diet
- Too much dietary fat
- Living a stressful life
- Lack of physical activity
- Smoking
- Age
- Family history
- Being overweight
- Drinking too much alcohol

BLOOD PRESSURE

Blood pressure is made up of two number readings. The top number is the one that tells a person their systolic pressure. Systolic pressure is how powerfully your heart is pumping blood. When the number is too high, this means that the heart is working too hard. The bottom number is the one that tells you the diastolic pressure. Diastolic pressure tells you how the blood is flowing through your arteries or vessels (what gives all body parts their blood supply. See Picture to below).
When this number is high, means that there is something present in the artery that is blocking the flow of blood. This blockage could be a result of a fat deposits present that comes from eating a high fat diet.

**CLASSIFICATIONS OF BLOOD PRESSURE (SYSTOLIC /DIASTOLIC)**

- Normal: <120/<80
- Pre-hypertension: 120-139/80-89
- Stage 1 Hypertension: 140-159/90-99
- Stage 2 Hypertension: >160/>100
- Stage 3 Hypertension: >180/>110

**WHAT HYPERTENSION DAMAGES**

Brain
Arteries
Heart
Eyes
Kidneys
Blood Vessels

HOW TO PREVENT AND MANAGE HYPERTENSION

- Say NO to added salt and excess processed foods
  - Maximum of 2,400 mg per day = 1 teaspoon of salt
- Eat more fruits and vegetables
- Live stress-free
- Keep a healthy weight
- Exercise more
- Lower alcoholic drinks
- Stop smoking
- Know family health history
- Check cholesterol once a year
- Keep a journal of cholesterol, blood pressure and pulse

**EAT MORE**

- Fat Free or Low Fat Milk or Yogurt
- Reduced-Fat Cheese
- Fresh Fruits
- Fresh Vegetables
- Whole Grains (Bread, Cereal, Pasta)
- Lean Cut Meats
- Fresh Fish

**EAT LESS**

- Whole Fat Milk or Yogurt
- High Fat Cheese
- High Sodium (Salt) Foods
- Saturated or Trans Fats
- Enriched Grains
- High Fat Meats
Weight management
Achieve and maintain healthy body mass index between 18.5 – 24.9

Limit dietary intake of sodium
Recommended intake

World Health Organization
6 grams from mixed foods daily

Dietary Reference Intakes (DRIs)
1500 mg sodium for healthy people ages 19 – 50
1300 mg sodium for ages 51 – 70
1200 mg sodium for the elderly
Tolerable Upper Limit – 2300 mg sodium per day

Dietary Guidelines for Americans
2300 mg sodium per day

• Look for low, light, reduced, less, free or no added claims on food labels
• Lower dietary intake of total fat, saturated fat, trans fat and cholesterol
• Limit alcohol consumption to 2 drinks per day for men and 1 drink per day for women
  One drink = 12 ounces beer or 5 ounces wine or 1.5 ounce spirits
• Adopt the Dietary Approaches to Stop Hypertension (DASH) plan
DASH DIET - Dietary Approach to Stop Hypertension

- Diet recommended for people with hypertension (high blood pressure)
- Lowers blood pressure and the bad cholesterol called LDL’s
- Rich in calcium, potassium, fiber and magnesium

<table>
<thead>
<tr>
<th>FOOD GROUPS</th>
<th>DAILY SERVINGS</th>
<th>ONE SERVING EQUALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MILK AND DAIRY</td>
<td>2-3</td>
<td>8oz Low-Fat Milk&lt;br&gt;1 cup Low-Fat Yogurt&lt;br&gt;1 ½ oz Low-Fat cheese</td>
</tr>
<tr>
<td>FRUITS</td>
<td>4-5</td>
<td>1 medium orange&lt;br&gt;¼ cup dried fruit&lt;br&gt;½ cup frozen or canned fruit&lt;br&gt;6 oz fruit juice</td>
</tr>
<tr>
<td>Vegetables</td>
<td>4-5</td>
<td>1 cup raw leafy vegetables&lt;br&gt;½ cup cooked vegetables&lt;br&gt;6 oz vegetable juice</td>
</tr>
<tr>
<td>GRAINS</td>
<td>7-8</td>
<td>1 slice bread&lt;br&gt;½ cup dry or hot cereal&lt;br&gt;½ cup cooked rice or pasta</td>
</tr>
<tr>
<td>MEAT, FISH, POULTRY</td>
<td>2 or less</td>
<td>3 oz cooked meat, poultry or fish&lt;br&gt;Nuts, Seeds, Dried Beans&lt;br&gt;1/3 cup nuts&lt;br&gt;2 Tablespoon seeds&lt;br&gt;¼ cup cooked dried beans</td>
</tr>
</tbody>
</table>
WHAT IS TYPE 2 DIABETES?

Type 2 diabetes is the most common type of diabetes. When you eat, the body breaks down the energy in foods into glucose which is the body’s fuel. Insulin is needed to move the glucose from the blood into the cells. In type 2 diabetes, the body does not make enough insulin or the cells are not able to use the insulin efficiently. Insulin is necessary for the body to be able to use glucose or energy. When glucose builds up in the blood instead of going into cells, it can cause diabetes. Over time this can cause damage to the eyes, kidneys, heart, circulation, nerves and gastrointestinal system.

WHAT ARE THE RISK FACTORS?

Certain individuals have a higher risk of developing diabetes.

These risk factors include:

- Obesity
- Hypertension
- Heart disease
- Gestational diabetes
- Prediabetes
- Family history (genetics)
- Age (risk increases with age)
- Ethnicity  (African Americans, Latinos, Native Americans, and Asian Americans and Pacific Islanders)
Could you have diabetes and not know it?

To find out if you are at risk, write in the points next to each statement that is true for you. If a statement is not true, write a zero. Then add all the points to get your total score.

1. My weight is equal to or above that listed in the chart below? 5pts 0pts
2. I am under 65 years of age and I get little or no exercise during a usual day? 5pts 0pts
3. I am between 45 and 64 years of age? 5pts 0pts
4. I am 65 years old or older? 9pts 0pts
5. I am a woman who has had a baby weighing more than nine pounds at birth? 1pts 0pts
6. I have a sister or brother with diabetes? 1pts 0pts
7. I have a parent with diabetes? 1pts 0pts

Scoring 3-9 points
You are probably at low risk for having diabetes now. But don’t just forget about it -- especially if you are Hispanic/Latino, African American, American Indian, Asian American, or Pacific Islander. You may be at higher risk in the future.

Scoring 10 or more points
You are at greater risk for having diabetes. Only your health care provider can determine if you have diabetes. At your next office visit, find out for sure.

At-Risk Weight Chart Body Mass Index

<table>
<thead>
<tr>
<th>Height in feet and inches without shoes</th>
<th>Weight in pounds without clothing</th>
</tr>
</thead>
<tbody>
<tr>
<td>4'10&quot;</td>
<td>129</td>
</tr>
<tr>
<td>4'11&quot;</td>
<td>133</td>
</tr>
<tr>
<td>5'0&quot;</td>
<td>138</td>
</tr>
<tr>
<td>5'1&quot;</td>
<td>143</td>
</tr>
<tr>
<td>5'2&quot;</td>
<td>147</td>
</tr>
<tr>
<td>5'3&quot;</td>
<td>152</td>
</tr>
<tr>
<td>5'4&quot;</td>
<td>157</td>
</tr>
<tr>
<td>5'5&quot;</td>
<td>162</td>
</tr>
<tr>
<td>5'6&quot;</td>
<td>167</td>
</tr>
<tr>
<td>5'7&quot;</td>
<td>172</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Height in feet and inches without shoes</th>
<th>Weight in pounds without clothing</th>
</tr>
</thead>
<tbody>
<tr>
<td>5'8&quot;</td>
<td>177</td>
</tr>
<tr>
<td>5'9&quot;</td>
<td>182</td>
</tr>
<tr>
<td>5'10&quot;</td>
<td>188</td>
</tr>
<tr>
<td>5'11&quot;</td>
<td>193</td>
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<tr>
<td>6'0&quot;</td>
<td>199</td>
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<td>6'1&quot;</td>
<td>204</td>
</tr>
<tr>
<td>6'2&quot;</td>
<td>210</td>
</tr>
<tr>
<td>6'3&quot;</td>
<td>216</td>
</tr>
<tr>
<td>6'4&quot;</td>
<td>221</td>
</tr>
</tbody>
</table>

If you weigh the same or more than the amount listed for your height, you may be at risk for diabetes.
**SYMPTOMS OF TYPE 1 DIABETES**

- Frequent Urination
- Increased Thirst
- Increased Hunger
- Unexplained Weight Loss

**SYMPTOMS OF TYPE 2 DIABETES**

- Tired
- Blurred Vision
- Frequent Infections
- Poor Healing
- Numbness and Tingling in Hands, Legs, or Feet
- Frequent Urination
- Increased Thirst
- Increased Hunger
- Irritability
- Dry, Itchy Skin
DIAGNOSIS OF DIABETES

<table>
<thead>
<tr>
<th>Description</th>
<th>Fasting* Plasma Glucose Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Glucose</td>
<td>&lt;100 mg/dL or 5.6 mmol/L</td>
</tr>
<tr>
<td>Impaired Glucose</td>
<td>100-125 mg/dL or 5.6-6.9 mmol/L</td>
</tr>
<tr>
<td>Provisional Diagnosis of Diabetes</td>
<td>&gt;126 mg/dL or 7.0 mmol/L</td>
</tr>
</tbody>
</table>

*Fasting defined as no calorie intake for at least 8 hours.
Reference: Diabetes Care, Volume 31, supplement 1, January 2008

COMPLICATIONS OF DIABETES

Heart and Blood Vessels
Eyes
Kidneys
Feet
Nerves
Sexual Function
Emotional Health
High Blood Pressure
There is no cure for type 2 diabetes, but one can do a lot to prevent the disease and to manage the disease once it has developed. You have the power to improve your life and protect your health. Although a family history of diseases plays a large part in your overall health and risk for certain medical conditions, you can take control of your health. With nutritious dietary habits, regular physical activity and by making good lifestyle choices (like not smoking) you can feel better, be healthier and can lower your risk of diseases such as diabetes, heart disease, stroke, hypertension, kidney failure, osteoporosis, and cancer.

Start by eating healthy foods, including physical activity in your daily routine and maintaining a healthy weight. If diet and physical activity are not enough, you may need diabetes medications or insulin therapy to manage your blood sugar.

Being overweight or obese is a leading risk factor for developing type 2 diabetes and also complicates management of the disease. You can help improve both prevent and manage ment of type 2 diabetes by losing some weight and making lifestyle changes such as becoming more physically active. Studies demonstrated that people who lost as little as 10-15 pounds and included 30 minutes daily of some type of physical activity five times per week reduced their risk of developing diabetes by almost 60%.
HOW TO CALCULATE BODY MASS INDEX (BMI)

Body mass index is calculated the same way for children and adults.

**Metric**

weight in kilograms divided by height in meters squared

Example: weight = 68 kg and height =165 cm (1.65 meters)
Calculation: 68 / (1.65 ) squared = 24.98

**English**

weight in pounds divided by height in inches squared then multiply by 703

Example: weight = 150 pounds and height = 5 feet 5 inches (65 inches)
Calculation: [150 / (65 squared)] X 703 = 24.96

WHAT IS A HEALTHY WEIGHT?

<table>
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<tr>
<th>CLASSIFICATION</th>
<th>BODY MASS INDEX (BMI)</th>
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<tbody>
<tr>
<td>Underweight</td>
<td>less than 18.5</td>
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<td>Healthy weight</td>
<td>18.5 - 24.9</td>
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<td>Overweight</td>
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<td>Class I Obesity</td>
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<td>Class III or Extreme Obesity</td>
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**Body Mass Index Table - Table 1**

To use the table, find the appropriate height in the left-hand column labeled Height. Move across to a given weight (in pounds). The number at the top of the column is the BMI at that height and weight. Pounds have been rounded off. For a BMI greater than 35 see next page, table 2

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**Body Mass Index Table - Table 2**

To use the table, find the appropriate height in the left-hand column labeled Height. Move across to a given weight. The number at the top of the column is the BMI at that height and weight. Pounds have been rounded off.

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A healthy diet and regular physical activity are even more important if you have diabetes. Well-balanced meals can help keep glucose (sugar) levels closer to normal. Being active also helps lower your blood glucose and control your weight. If you increase your amount of physical activity, you may be able to manage your diabetes with less insulin or diabetes pills. If you are have been inactive and want to increase your activity, it is safer if you check with your health care provider first.
Try a quick tool to help you make sure you are eating a variety of healthy foods at each meal. Draw an imaginary line through the center of your dinner plate. Then draw another make-believe line through one of the halves.

Then create your plate:

• About one-fourth of your plate should be filled with grains (preferably whole grains) or starchy foods like rice, pasta, potatoes, corn, or peas.

• Another fourth should be protein rich foods including lean meats, eggs, fish, poultry, legumes or tofu.

• The remaining half of your plate should consist of non-starchy vegetables such as broccoli, carrots, cucumbers, salad, tomatoes, and cauliflower.

• Now add a glass of low fat or non-fat milk and a whole grain roll or piece of fruit, and you have a healthy, well-balanced meal.

Eat Less......
Sweetened Beverages
Simple Sugars
Salt and Sodium
High Fat
Fried Foods
Trans Fats
Saturated Animal Fats
Cholesterol
Alcohol
High Calorie Meats

Eat More...
Legumes
High Fiber Foods
Fruits
Low Carb Veggies
Low fat or Fat Free Dairy
Moderate Portions
Whole Grains
Reduced Calorie Sweetener
Calorie Free choices
Lean meats (poultry and fish)
READ LABELS

The front of the label may say “Light” or “Lower in Calories,” but to really make wise food choices, read the nutrition facts panel and list of ingredients.

The nutrition facts panel tells you the serving size and the amount of various nutrients per serving.

The list of ingredients shows the ingredients in descending order by weight. For example, if sugar is one of the first ingredients listed, then sugar is a main ingredient in the product.

As a general rule, choose foods and beverages that are lower in calories, cholesterol, saturated fats, trans fats, simple sugars and sodium and higher in dietary fiber.

If coconut oil, palm oil or hydrogenated oils are listed early in the ingredient list, these products are high in saturated fats and trans fats.

If soybean, olive, canola or peanut oils or whole grains like whole wheat flour and oats are listed early in the ingredient list, these products are better choices.

You may be surprised to see how much sodium is in many foods. Adults should limit sodium to less than 2400 milligrams (mg) per day. If you have high blood pressure, you need even less. Using herbs and spices rather than salt to prepare foods can lower sodium intake.

Fat free may not really be a better choice. Fat free foods can be higher in carbohydrates than their regular food products and may have as many total calories.
**Start Here** - In this label, one serving equals one cup. If you ate the whole package you would eat two cups. That would be double the calories and other nutrients.

**Check Calories** - This part of the nutrition facts tells us how many calories are in one serving of this food and how many of those calories are from fat.

**Limit these nutrients** - Eating too much fat, cholesterol, or sodium may increase your risk for certain chronic diseases.

**Total Carbohydrate** - Look at the grams of total carbohydrate. Total carbohydrate on the label includes, sugar, starch, and fiber.

**Get enough of these nutrients** - Eating enough of these nutrients can improve your overall health.

**Quick guide to % daily value** - If the Daily Value is 5% or less that means this food is low in that nutrient. If the value is 20% or more then the food is a high source of that nutrient. Try to get 100% calcium (1,300 mg) each day. When reading the label it is easy to find out how much calcium is in the food: drop the percent sign and add a zero, this is how many milligrams there are!
ADVANTAGES OF PHYSICAL ACTIVITY

Reduce risk of developing type 2 diabetes

Reduce risk of heart disease and stroke

Lower blood pressure

Lower cholesterol

Lower blood glucose (sugar) levels in the blood

Reduce complications associated with diabetes

Relieve stress

Improve weight management

Reduce stored body fat

Increase energy

Improve sleep

Strengthen bones and muscles

SAFETY AND SANITATION

WHAT ARE BACTERIA?
Bacteria are microorganisms too small to be seen. They cause food to spoil and develop unpleasant odors, tastes, and textures. Bacteria can cause fruits and vegetables to get mushy or slimy, or meat to develop a bad odor. They are harmful to your health.

HOW CAN BACTERIA SPOIL FOOD?
Unsafe handling
Unsafe temperatures
Unsafe storage
Poor personal hygiene

WHAT CAN HAPPEN IF I EAT UNSAFE FOOD?
Stomach ache
Diarrhea
Vomiting
Dehydration
Fever
Headache
Chills

WHO IS AT HIGHER RISK OF GETTING SICK?
Babies
Pregnant women
Young children
Older adults
Sick people
WHAT ARE SOME COMMON BACTERIA THAT MAY CAUSE ILLNESS?

**Bacillus Ceres**
Sources: cooked vegetables, meat products, milk

**Shigella**
Sources: food easily contaminated by hands like potato salad, tuna salad, shrimp, macaroni, and chicken

**Ciguatoxin (Tropical fish)**
Sources: barracuda, grouper, jacks, snapper

**Campylobacter**
Sources: unpasteurized milk, water, meat

**Salmonella**
Sources: raw or under cooked foods like meat or animal products (eggs), unpasteurized dairy product

**E. Coli**
Sources: commonly found in raw meat, meat products, and water contaminated by animal and human wastes such as feces (stools). E. Coli can be transferred to foods when hands are unclean.

**Botulism**
Sources: canned products.
Avoid eating canned food from containers that leak, are cracked, bulging, rusted or severely dented.
HOW CAN I PROTECT AGAINST BACTERIA?

Wash Foods
Wash fresh fruits and vegetables thoroughly with clean running water.

Avoid cross-contamination
Use different preparation surfaces for foods that will be cooked and foods that will be eaten raw. Be especially careful when working with raw meats.

Sanitize surfaces
Just because a surface looks clean (free from dirt and stains), it may not be sanitized (free from bacteria). A sanitizing solution can kill bacteria.

RECIPE FOR SANITIZING SOLUTION

¾ cup of chlorine bleach
1 gallon of water

TWO HOUR RULE

Refrigerate foods within 2 hours if the room temperature is 20-25º C (68-77º F). If the room temperature is 32º C (90º F) or higher, refrigerate foods within one hour.
Just because a food may look done, it may not be. It is very important to cook meats to a safe internal temperature.

<table>
<thead>
<tr>
<th>MEATS</th>
<th>INTERNAL TEMPERATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Poultry</td>
<td>82°C (180°F)</td>
</tr>
<tr>
<td>Poultry breast</td>
<td>78°C (170°F)</td>
</tr>
<tr>
<td>Stuffing, ground poultry</td>
<td>74°C (165°F)</td>
</tr>
<tr>
<td>Meats, egg dishes, pork, &amp; ground meats</td>
<td>71°C (160°F)</td>
</tr>
<tr>
<td>Beef steaks, roasts, veal, lamb</td>
<td>63°C (145°F)</td>
</tr>
<tr>
<td>Reheat leftovers</td>
<td>74°C (165°F)</td>
</tr>
</tbody>
</table>
1. **Oven proof thermometer** - These thermometers go into dishes such as roasts, casseroles, and soups at the beginning of the cooking time and stay there the whole cooking time until the desired temperature has been reached. They are to be placed in the thickest portion of the food.

2. **Instant-read and digital thermometers** - These are not intended to go into the food while it cooks. They give you a quick reading when inserted into the hot food for just a few seconds.

3. **Dial instant read** - These thermometers are not intended to go into the food while it cooks. Towards the end of cooking time, insert the thermometer and it will take 15-20 seconds to get the reading.

**WHERE TO INSERT THE THERMOMETER**

The thermometer should be inserted into the center of the thickest part of the food. Insert it away from bone, fat and gristle. For thinner foods like chicken breast, meat patties, or pork chops, insert the thermometer at an angle or in the side of the food. For irregularly shaped foods like roasts, insert the thermometer in several places for a more accurate reading.
**SAFETY AND SANITATION**

### STORE

Store raw meats on lower shelves in the refrigerator to avoid blood or other juices from contacting other foods.

Foods that spoil easily should not be left out at room temperature. Examples: milk or milk products, eggs, beef, pork, lamb, poultry, fish, shell fish, shrimp, lobster, crab, mixed salads, soy protein foods, tofu, cooked rice, cooked beans, cooked potatoes, and gravy.

**Refrigerator temperature:** 0°C (32°F) or below  
**Freezer temperature:** -17°C (0°F)

### KEEP FOODS COVERED AND DATED IN THE REFRIGERATOR

Dairy: 7 days  
- Uncooked Meat: 1-2 days  
- Cooked Meat: 3-4 days  
- Uncooked Seafood: 2-3 days  
- Cooked Seafood: 3-4 days  
- Fruits and Vegetables: 1 week  
- Bread products: 1 week

Refrigerate or freeze cooked food or leftovers within two hours of being prepared. Divide unused portions into smaller quantities and cool quickly.

Store canned goods in a cool, dry place at room temperature 20-25°C (68-77°F)

Watch expiration dates on foods and date canned foods when there is no expiration date. Canned foods should be eaten within two years of the purchase date.

Rotate your food stores so that you use the older foods first.
Wash your hands for at least 20 seconds with soap and hot water when preparing foods as well as before and after cooking. You can time yourself by singing the alphabet (ABC) song (one time) or Happy Birthday (two times).

**HAPPY BIRTHDAY TO YOU,**

**HAPPY BIRTHDAY TO YOU,**

**HAPPY BIRTHDAY DEAR FRIEND.**

**HAPPY BIRTHDAY TO YOU!**

Now I know my abc’s next time won’t you sing with me?
Make sure to wash your hands after using the bathroom, playing with animals, sneezing, blowing your nose, coughing, touching an open cut or sore, and handling food.
Five keys to safer food

Keep clean
- Wash your hands before handling food and often during food preparation
- Wash your hands after going to the toilet
- Wash and sanitize all surfaces and equipment used for food preparation
- Protect kitchen areas and food from insects, pests and other animals

Why?
While most microorganisms do not cause disease, dangerous microorganisms are widely found in soil, water, animals and people. These microorganisms are carried on hands, wiping cloths and utensils, especially cutting boards and the slightest contact can transfer them to food and cause foodborne diseases.

Separate raw and cooked
- Separate raw meat, poultry and seafood from other foods
- Use separate equipment and utensils such as knives and cutting boards for handling raw foods
- Store food in containers to avoid contact between raw and prepared foods

Why?
Raw food, especially meat, poultry and seafood, and their juices, can carry dangerous microorganisms which may be transferred onto other foods during food preparation and storage.

Cook thoroughly
- Cook food thoroughly, especially meat, poultry, eggs and seafood
- Bring foods like soups and stews to boiling to make sure that they have reached 70°C. For meat and poultry, make sure that juices are clear, not pink. Ideally, use a thermometer
- Reheat cooked food thoroughly

Why?
Proper cooking kills almost all dangerous microorganisms. Studies have shown that cooking food to a temperature of 70°C can help ensure it is safe for consumption. Foods that require special attention include meats, poultry, large joints of meat and whole poultry.

Keep food at safe temperatures
- Do not leave cooked food at room temperature for more than 2 hours
- Refrigerate promptly all cooked and perishable food (preferably below 5°C)
- Keep cooked food piping hot (more than 60°C) prior to serving
- Do not store food too long even in the refrigerator
- Do not thaw frozen food at room temperature

Why?
Microorganisms can multiply very quickly if food is stored at room temperature. By holding at temperatures below 5°C or above 60°C, the growth of microorganisms is slowed down or stopped. Some dangerous microorganisms still grow below 5°C.

Use safe water and raw materials
- Use safe water or treat it to make it safe
- Select fresh and wholesome foods
- Choose foods processed for safety, such as pasteurized milk
- Wash fruits and vegetables, especially if eaten raw
- Do not use food beyond its expiry date

Why?
Raw materials, including water and ice, may be contaminated with dangerous microorganisms and chemicals. Toxic chemicals may be formed in damaged and mouldy foods. Care in selection of raw materials and simple measures such as washing and peeling may reduce the risk.

Knowledge = Prevention
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