Overview

1. Heart Facts
2. Nutrition Recommendations
1. Heart Facts
What is Heart Disease?

Atherosclerosis = narrowing due to plaque buildup in the walls of the arteries

- Coronary Artery Disease
- Heart Attack
- Stroke
- Heart Failure

Source: AHA
Know Your Numbers

Blood Pressure
Cholesterol
Blood Glucose
Weight/BMI

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Blood Pressure

Blood pressure is the measurement of force applied to artery walls.

Systolic / Diastolic
(Beating / Resting)

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Cholesterol

HDL
Good cholesterol

LDL
Bad cholesterol

LDL deposits cholesterol in the artery wall.

HDL removes cholesterol from plaque and from the bloodstream.

Source: AHA
HDL “Good” cholesterol + LDL “Bad” cholesterol + Triglycerides = Total cholesterol score
**Desired Lipid Values**

**TOTAL CHOLESTEROL**
- <180

**HDL**
- >40 Optimal

**LDL**
- <70 Optimal for those at risk
- <100 Optimal for most

**TRIGLYCERIDES**
- < 150

*Baptist Health South Florida*
Body Mass Index (BMI)

- Indicator of body fat
- BMI of 25 or more is classified as an unhealthy weight

*Exception: athletes and the elderly*
## Benefits of 10% Weight Loss

<table>
<thead>
<tr>
<th>DECREASE</th>
<th>INCREASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Blood pressure</td>
<td>• Self-esteem</td>
</tr>
<tr>
<td>• Lipid levels</td>
<td>• Physical activity</td>
</tr>
<tr>
<td>• Blood Glucose</td>
<td>• Sex drive</td>
</tr>
<tr>
<td>• Breathing problems</td>
<td>• Sexual satisfaction</td>
</tr>
<tr>
<td>• Risk for certain cancers</td>
<td>• Confidence</td>
</tr>
<tr>
<td><strong>Risk for stroke</strong></td>
<td>• Social life</td>
</tr>
<tr>
<td>• Risk for heart attack</td>
<td>• Work productivity</td>
</tr>
<tr>
<td>• Risk for Gallbladder disease/stones</td>
<td></td>
</tr>
</tbody>
</table>
Risk Factors

• **Non-Modifiable Major Risk Factors**
  – Age, gender, heredity, and family history

• **Modifiable Major Risk Factors**
  – High blood cholesterol, high blood pressure, excess weight and obesity, diabetes, physical inactivity
    • through lifestyle changes and/or medications
  – Stress, Alcohol, Diet

Source: AHA
2. Nutrition Recommendations

- Foods
- Portions
General Recommendations
Meet the Fats

- **Saturated fats**
  - Animal fats, butter, lard

- **Unsaturated fats**
  - Polyunsaturated fats
    - **Omega 3 fatty acids**
      - Eicosapentanoic acid: fish, shellfish
      - Docosahexanoic acid: fish, shellfish
      - $\alpha$ linolenic acid: flaxseed, soybean, walnut, rapeseed oils
  - **Omega 6 fatty acids**
    - Corn oil
    - Safflower oil
    - Sunflower oil
  - **Omega 9 fatty acids**
    - Olive oil
    - Avocados
    - Peanuts
    - Almonds
Saturated Fat

Higher intake of saturated fat is associated with:

- Total cholesterol
- LDL cholesterol
Saturated Fats & Cholesterol

If it walks, crawls, swims, or breaths, it has saturated fat and cholesterol.
Cholesterol comes from two sources:

- **Your Body**
  - Your liver and other cells in your body make about 75% of blood cholesterol

- **Dietary/ Food**
  - The other 25% comes from the foods you eat
  - Cholesterol is *only* found in animal products
What’s the deal with EGGS?

• Recommendations
  – 1 per day for healthy individuals
  – 3/week for high CVD risk or Diabetics
Trans Fats

- Oil + Hydrogen = solid at room temperature
- Longer shelf-life
- Raises LDL and lowers HDL
Trans Fats
### Reading Labels

#### Nutrition Facts

<table>
<thead>
<tr>
<th>Amount/Serving</th>
<th>%DV</th>
<th>Amount/Serving</th>
<th>%DV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fat</td>
<td>7g</td>
<td>11%</td>
<td>Total Carb.</td>
</tr>
<tr>
<td>Sat. Fat</td>
<td>4.5g</td>
<td>23%</td>
<td>Dietary Fiber</td>
</tr>
<tr>
<td>Trans Fat</td>
<td>0g</td>
<td></td>
<td>Sugars</td>
</tr>
<tr>
<td>Cholest.</td>
<td>0mg</td>
<td>0%</td>
<td>Protein</td>
</tr>
<tr>
<td>Sodium</td>
<td>115mg</td>
<td>5%</td>
<td></td>
</tr>
</tbody>
</table>

**INGREDIENTS:** Enriched flour, riboflavin, sugar, *partially hydrogenated vegetable oil*, cocoa, cornstarch, *hydrogenated oils*, soy lecithin, salt, caramel color, artificial flavors.
Meet the Fats

Fats and fatty acids
- Saturated fats
  - Animal fats, butter, lard
- Unsaturated fats
- Polyunsaturated fats
  - Omega 3 fatty acids: Eicosapentanoic acid: fish, shellfish, Docosahexanoic acid: fish, shellfish, α linolenic acid: flaxseed, soybean, walnut, rapeseed oils
- Omega 6 fatty acids: Corn oil, Safflower oil, Sunflower oil
- Monounsaturated fats
  - Omega 9 fatty acids: Olive oil, Avocados, Peanuts, Almonds
Monounsaturated Fats

• Improves cholesterol when replacing Saturated and Trans fats
• Plant oils
• Best cooking oils
  – Canola, Peanut, Safflower*, Sunflower
  – High smoke point
  – Neutral flavor
Omega 3 Fatty Acids
Anti-inflammatory

Fish Sources
(DHA + EPA)
Salmon, Sardines, Anchovies, Halibut, Herring, Mackerel, Squid, Sea Bass, Trout, Tuna (Albacore & Blue Fin), Whitefish.

Plant Sources
(ALA)
Walnuts, Soybeans, Ground flaxseed, Dark green veggies.

Mercury – the benefits of consuming fish far outweighs any risks.
Just avoid large predator fish like swordfish and shark.
Omega 3 Fatty Acids
Anti-inflammatory

American Heart Association

– Fish (preferably oily fish): At least two, 3.5 ounce servings a week
Triglycerides = stored fat

High levels increases risk of heart disease.

- Moderate whole grains
- Reduce added sugars
- Smaller portions
- Physical activity
- 5-10% weight loss
Fiber

- Fiber is the indigestible part of plant foods.
- Adults: aim to eat >25 grams of fiber each day from food.
- Increase your fiber intake *gradually*; along with water.
Fiber

Soluble
• Oat bran, oatmeal, beans, peas, rice bran, barley, citrus fruits, strawberries, peach, banana and apple

Insoluble
• Whole-wheat breads, wheat cereals, wheat bran, rye, rice, barley, most other grains, cabbage, beets, carrots, Brussels sprouts, turnips, cauliflower and apple

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The American Heart Association recommends 1500mg of salt per day.

Tip! 1 teaspoon of salt has 2,000 mg of sodium
Tips to Reduce Sodium Intake

• Pass the salt when cooking.
• Use herbs and spices (Mrs. Dash)
• **Limit** your intake of processed foods high in added sodium like:
  – Canned Products
  – Ketchup and mustard
  – Salty snack foods
  – Olives and pickles
  – Luncheon meats and cold cuts
  – Bacon and other cured meats
  – Cheeses
  – Restaurant and carry-out foods
Reducing Sodium

- Look for "unsalted", "no salt", or "without added salt" varieties for canned and snack foods
- Read the nutrition labels.
Sodium

The Average American Eats ~3400 mg of sodium per day

TV Dinner = 787 mg sodium
Breakfast Cereals = 250 mg per cup
Veggie Juice = 479 mg per cup
Soup = 744 mg sodium per cup
Condiments/sauces = 690-1024 mg per TABLESPOON
Egg McMuffin = 820 mg

Source: WebMD

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General Recommendations

- Avoid trans fatty acids (processed foods)
- Replace saturated fats with unsaturated fats
- Increase intake of **omega-3 fatty acids**
- Reduce refined carbs
- Decrease sodium intake to 1500mg/day
- Include at least >25g/day of fiber from food
Exercise and Heart Disease

- **Decreases** LDL cholesterol and triglycerides (TG)
- **Increases** HDL cholesterol

Aerobic exercise:

- **Decreases** resting heart rate, systolic and diastolic blood pressures

*Consult with your Physician before starting any new exercise*
Exercise and Heart Disease

Aim for:

- At least **30 minutes** of moderate intensity physical activity for most (if not all) days of the week

- Resistance exercise for a minimum of 2 days per week

**Tip!** Start slow and gradually increase to goals
Thank you
Set Goals

Studies have shown setting goals aids success

Goals should be:

- Specific
- Measurable
- Achievable
- Rewarding
- Trackable
Goal Setting Example: Fruit

Get rid of:
I will eat more fruits

Replace with:
I will eat [2] servings of fruit per day, at least 5 times a week by next month.

RD Tip: Instead of dessert, have [fresh, grilled, baked, canned, frozen] fruit!
KEEP CALM AND ASK A REGISTERED DIETITIAN
Lab Values

Blood Pressure
Lipids
BMI
# Hypertension (High Blood Pressure)

<table>
<thead>
<tr>
<th>Blood Pressure Category</th>
<th>Systolic mmHg</th>
<th>Diastolic mmHg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>&lt; 120</td>
<td>And &lt; 80</td>
</tr>
<tr>
<td>Pre-hypertension</td>
<td>120 - 139</td>
<td>Or 80 - 89</td>
</tr>
<tr>
<td>Stage 1</td>
<td>140 – 159</td>
<td>Or 90 - 99</td>
</tr>
<tr>
<td>Stage 2</td>
<td>160 or higher</td>
<td>Or 100 or higher</td>
</tr>
<tr>
<td>Crisis</td>
<td>&gt; 180</td>
<td>Or &gt; 110</td>
</tr>
</tbody>
</table>
Desired Lipid Values

TOTAL CHOLESTEROL
- <200

HDL
- >40 Optimal

LDL
- <70 Optimal for those at risk
- <100 Optimal for most
- 100-129 Near Optimal
- 130-159 Borderline High
- 160-189 High
- 190 Very High

TRIGLYCERIDES
- < 150

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## BMI

<table>
<thead>
<tr>
<th>BMI</th>
<th>Weight Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 18.5</td>
<td>Underweight</td>
</tr>
<tr>
<td><strong>18.5 – 24.9</strong></td>
<td>Normal</td>
</tr>
<tr>
<td>25.0 – 29.9</td>
<td>Overweight</td>
</tr>
<tr>
<td>30.0 and Above</td>
<td>Obese</td>
</tr>
</tbody>
</table>

* For Adults, ages >19 years old

Maintaining a healthy weight may **reduce** the risk of chronic diseases associated with being overweight and obese.