Healthy Heart Nutrition

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Risk Factors for heart disease

- Obesity
- Elevated blood cholesterol
- Elevated blood pressure
- Obesity
- Diabetes
- Inactive lifestyle
- Premature heart disease
- Age
- Stress

Can control

Nutrition related
Body weight: “You are what you eat”

- High blood pressure
- High cholesterol
- Diabetes
- Stress
Environmental problem part one
Environmental problem part two
Assessing weight: BMI

- BMI 19-24: Healthy
- BMI 25-29: Overweight
- BMI 30 or greater:
  Substantial increase risk for heart disease
Assessing body weight

Increased Waist circumference
Men > 40”
Women > 35”
The magic of long term weight management...
Total Cholesterol

- Total cholesterol—the lower the better
- Under 200 mg/dl is recommended
- Over 240 mg/dl-risk for heart disease doubles
- For every point your cholesterol drops the risk of heart disease drops by 2%
LDL Cholesterol

- A package of cholesterol that contains more fat than protein
- Falls apart easier—more unstable
- Adheres to artery walls
- Recommended levels are
  - 120 mg/dL with no risk factors
  - below 100 gm/dl with any other risk factor
HDL cholesterol

- Stable cholesterol
- Helps carry cholesterol away from the artery walls
- The higher the better—recommendations are
  - >50 mg/dl for men
  - >60 mg/dl for women

Happy Cholesterol
Triglycerides

- Primary storage form of fat in the body
- Function is to provide energy
- Too many in circulation may be caused by insulin resistance and break HDL lipoprotein

- Recommendations for Triglycerides
  - <150 mg/dl
Summary-Lipid profile

- Total cholesterol < 200 mg/dl
- LDL cholesterol
  - No risk factors < 120 mg/dl
  - Risk factors < 100 mg/dl
- HDL cholesterol
  - Men > 50 mg/dl
  - Women > 60 mg/dl
- Triglyceride levels < 150 mg/dl
What harms your cholesterol profile

☐ Genetic predisposition
☐ High intake of saturated fats
☐ Sedentary life
☐ Smoking
☐ Obesity
☐ Low fiber diet
What improves your cholesterol profile...

- Replace saturated fats with mono and poly unsaturated fats
- Reducing cholesterol intake to <300 gms
- Eat foods that contain antioxidants
- Add high fiber foods in moderation
- Adding soy to diet
- Use alcohol in moderation
- Lose weight if needed
- Exercise regularly
- Medication if necessary
Fats that harm

- Saturated fats: animal fats, cocoa butter, palm oil, and coconut oil
- Trans fats-hydrogenated fats (unsaturated fats that are turned into solid forms, such as margarine)
- Promotes increased LDL cholesterol
Fats that help

- Monounsaturated fat, olive, canola and peanut oil.—may significantly lower the risk of heart disease by raising HDL levels
- Polyunsaturated fats-sunflower, corn, sunflower oils—may lower VLDL cholesterol—another harmful cholesterol
Good fats

- Omega 3 fatty acids-type of oil that comes in cold water fish. Omega-3’s reduce heart disease by lowering VLDL cholesterol, lowering blood pressure and reducing the stickiness of platelets
**Omega 3 fatty acids**

- **Recommendations:**
  - Mackerel, lake trout, herring, sardines, albacore tuna, and salmon
  - Three meals per week recommended
  - Flax seeds (2 ½ tsp) 2-3 times each day
  - Flax seed oil 1T. 1-3 times daily
  - Walnuts
Fish oil Capsules

Too high of a dose can elevate LDL level
Benecal

- Like a cholesterol medication
- Made from pine tree sap (sterol ester)
- Helps to reduce absorption of cholesterol from the gut
- Three servings a day for 2 weeks may reduce LDL cholesterol up to 14 percent
- Can be used in cooking, baking and frying

www.benecol.com
Take Control margarine

- Contains soybean extract
- Inhibits cholesterol absorption
- Two servings a day for three weeks may lower LDL levels up to 10 percent
- Can be used in cooking or baking

www.takecontrol.com
Cholesterol in the diet

- Plants do not make cholesterol
- Anything that flies, walks, or swims has cholesterol
What about eggs?

- Overall egg consumption is not related to elevated cholesterol and cardiovascular risk.
- Consuming one egg a day poses no increased risk for cardiovascular disease.
- Exception: cholesterol level is affected by greater than 4 egg yolks a week with people who have diabetes.
- Exception: people with known coronary artery disease.
Limit cholesterol intake by:

- Limit intake of all animal meats to 6 ounces per day
  - 1 ounce salami = 17 mg cholesterol
  - 1 oz chicken = 25 mg cholesterol
- Use liquid oil or soft tub margarine instead of butter or lard
- Choose non fat or low fat dairy products
Free radicals

- Many reactions in the body that require oxygen create substances called free radicals.
- Free radicals are also found in cigarette smoking and polluted air.
- Whenever an artery is damaged by a free radical, LDL cholesterol will collect in the artery and start causing blockages.
Antioxidants

- Substances that combat the negative effects of free radicals
- A diet rich in antioxidants is the best defense against free radical damage
- The major antioxidant nutrients are Vitamin A, (also known as Beta Carotene), Vitamin C and Vitamin E
Food sources of Antioxidants

Vitamin C

Vitamin A or Beta Carotene

Vitamin E
Phytochemicals

- Substances created by plants to protect themselves from bacteria, viruses, fungi, and insects
- Phytochemicals may help protect against heart disease
- Many phytochemicals act as antioxidants
Sources of Phytochemicals

- Berries, citrus fruits, orange and yellow fruits and vegetables (mango, apricot, carrot, sweet potato)
- Soy beans and foods made with soy beans, nuts, legumes
- Black or green tea, red grapes, red wine
- Whole grains, including whole wheat, oats, barley
- Vegetables such as broccoli, cabbage, cauliflower onions, garlic, fresh herbs
Are supplements a replacement for a healthy diet?---NO!

- Multivitamin/mineral supplement insurance policy
- Calcium with Vitamin D (1500 mg) for post-menopausal women not on hormone replacement therapy
- Vitamin E (200-400 IU)-if over 50 and have a family history of heart disease
- Folate or folic acid-400 mcg to help lower the build up of homocysteine levels
Fiber-plants only

- Fiber is not digested or absorbed by the blood stream
- Helps with digestion and offers protection against heart disease
- Recommendations are 25-30 grams of fiber per day (presently Americans are consuming less than 10 gms/day)
Insoluble fiber - Nature’s scrub brush

- Cellulose, hemicellulose, lignon
- “Rougage”
- Found in whole wheat products, corn bran and in vegetables such as green beans and potatoes
  - Helps to make you feel full
  - Natural laxative
  - Helps with digestive disorders
  - Moves wastes quickly, so harmful substances don’t stay long in your GI tract
Soluble fiber

- Gums, mucilages, pectins
- Binds and adheres to fatty substances, and prevents absorption by the body, and promotes their excretion
- Regulates body’s use of sugar
- Forms a gel and makes you feel full
- Sources - oat bran, barley, fruits, legumes
Alcohol

- Moderate amounts can reduce stress, reduce risk of stroke, and reduce heart disease by increasing HDL levels
Alcohol

- Too much may raise triglyceride levels, may lead to high calorie intake, high blood pressure, and heart failure
- Excessive drinking and binge drinking can lead to stroke
Alcohol

Recommendations:
- No more than 1-2 drinks per day for men
- No more than 1 drink per day for women

One drink =
- 12 oz beer
- 4 oz wine
- 1.5 oz 80 proof spirits
- 1 oz 100 proof spirits
Soy and Heart Disease

- Most studies done with soy show a decrease in LDL and triglycerides

- Average soy intake 47 grams/day ranging from 17-124 grams/day
## Soy for Healthy Heart

<table>
<thead>
<tr>
<th>Soyfood</th>
<th>Protein (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybeans ½ c. cooked</td>
<td>14</td>
</tr>
<tr>
<td>Soy milk 1 c</td>
<td>7</td>
</tr>
<tr>
<td>Roasted soy nuts ½ c</td>
<td>34</td>
</tr>
<tr>
<td>Soy flour ¼ c.</td>
<td>8</td>
</tr>
<tr>
<td>Tempeh ½ c.</td>
<td>16</td>
</tr>
<tr>
<td>Textured soy protein ½ c prepared</td>
<td>11</td>
</tr>
<tr>
<td>Tofu ½ c</td>
<td>10</td>
</tr>
</tbody>
</table>
Blood Pressure

- Uncontrolled blood pressure plays a key role in coronary artery disease and end stage renal disease.
- High blood pressure is
  - > 140/90
  - > 130/85 with diabetes
Lifestyle changes for high blood pressure

- Weight loss
- Reduce sodium intake
  - $<2400$ mg/day
- Increase fruits and vegetables (8-10 servings/day)
- Include 2-3 servings low fat dairy foods
- Limit alcohol intake
- Exercise
- Stress management
Check for diabetes

- At risk people
  - Overweight BMI > 25
  - Family history of diabetes
  - Gestational diabetes or >9 pound babies
  - Certain racial groups
  - Low HDL and/or high triglycerides
  - Irregular or no exercise program
Diabetes and Heart Disease

- Men with uncontrolled blood sugar have 2X the risk of heart disease
- Women with uncontrolled blood sugar have 4X the risk of heart disease
Symptoms of diabetes

- Increased Thirst
- Fatigue
- Increased Urination
Diagnosis of diabetes

Normal fasting blood sugar 70-109 mg/dl

Diagnosis of diabetes
  Fasting blood sugar >126 mg/dl
  Random blood sugar > 200 mg/dl with symptoms

Impaired fasting glucose
  Fasting blood sugar 110-125 mg/dl

Impaired glucose tolerance
  Random blood sugar >126-199 mg/dl
Numbers to know

- Lipid profile
  - Cholesterol
  - LDL level
  - HDL level
  - Triglyceride level
- Blood Pressure
- Blood Sugar
Now comes life...
Healthy eating guidelines

- Step 1: Eat small meals every 4-5 hours while awake
- Step 2: Balance your diet
- Step 3: Consume nutrient rich foods within each food group
Eating every 4-5 hours while awake

- Helps regulate your appetite
- Increases metabolism
- Helps utilize calories
- Less likely to store calories into cholesterol and fat
BALANCE YOUR MEALS

Meat

Vegetables

Starch

Milk

Fruit
Balancing your diet

☐ 6-11 servings/day of bread, rice, pasta, dry cereal
☐ 3-5 servings of vegetables/day
☐ 2-4 servings of fruit/day
☐ 2-3 servings of dairy/day
☐ Up to 8 servings of fat/day
☐ Water- at least 8oz of fluids/day
☐ Sweets-no more than 200 calories each day
☐ No more than 2 drinks of alcohol each day
Increase nutrient rich foods

- Breads-whole wheat, high fiber
- Vegetables-bright green, yellow, orange, red vegetables, and any legumes
- Milk, yogurt, cheese-low fat or non fat products, or fortified soy milk
- Meat, poultry, fish, eggs-cold water fish, lean cuts of beef, pork, poultry, and soy
- Fats and oils-olive, canola, peanut oils, nuts and flax seeds
Food Label

☐ Ignore the front of the label
☐ Fat – 3 gms fat/100 calories
☐ Sodium < 400 mgs/side dish
    < 800 mgs/main dish
☐ Fiber over 5 gms/main dish

HEART-WINNING FOODS
Healthy Breakfast Idea #1

- Oatmeal mixed with flax seed and oat bran
- 2 T. raisins
- 1 piece of whole wheat toast
- 2 tsp peanut butter
- 1 c. skim milk
Healthy Breakfast Idea #2

- ½ c orange juice
- ¾ c. high fiber cereal
- 1 c. blueberries
- 1 c. skim milk
Healthy Breakfast Idea #3

☑️ 1 c. yogurt
☑️ 3 T grape nuts
☑️ 1 slice whole wheat toast
☑️ 1 tsp margarine
☑️ ½ grapefruit
Healthy Lunch #1

☐ Turkey Sandwich w/
  ■ 2 oz turkey
  ■ 1 oz low fat cheddar cheese
  ■ 1 tsp mayonnaise
  ■ Lettuce
  ■ Tomato

☐ Apple with skin
☐ Carrot sticks
Healthy Lunch #2

- 1 c. cantaloupe pieces
- 1 c. soy milk
- Bean and cheese burrito
  - 1 oz white cheese
  - Lettuce
  - Chopped tomato
  - ½ c. black beans
  - 1/3 c. brown rice
Healthy Lunch #3

- McDonalds Chunky Chicken Salad w/ low fat dressing
- 1 % milk
- Apple bran muffin
- 1 Fresh Pear
Healthy Dinner #1

- Broiled Salmon
- Steamed Broccoli
- Baked Yam w/1 tsp soft margarine
- 1 c. 1% milk
- 1 c. strawberries
Healthy Dinner #2

- 4 ounces BBQ chicken
- Baked potato with low fat sour cream
- 1 c. brussel sprouts or cauliflower
- Salad:
  - Romaine Lettuce
  - Tomato
  - Cucumber
  - Chopped carrot
  - Flax oil dressing
Healthy Dinner #3

- Mango
- Rice and Beans w/ saute’ed vegetables
  - 2/3 c. brown rice
  - 1/3 c. rice
  - ½ c. chopped onion
  - 1 clove garlic
  - ½ c. yellow squash
  - ½ c. zucchini
  - 1 T. olive oil
Snack Ideas

☐ Chocolate soy milk
☐ Low fat popcorn
☐ Low fat or non fat yogurt
☐ Any kind of fruit
☐ Dried Fruit & nuts
☐ Whole grain crackers
☐ Granola bars, cereal bars
☐ Any food less than 3 gms/100 calories and more than 5 grams of fiber