Welcome to Super youUniversity! For six weeks we will be exploring ways to empower our bodies and minds with super skills that will enable us to fight the “villains” that undermine our health. Each week you will receive a packet of information that focuses on a different “villain.” The first page of your packet has seven tickets with activities based on the information in the rest of the packet. Complete as many of these activities as you like. Then fill out the tickets, cut them apart and submit them in the box located at our Information Desk. Alternatively, you can fill out an online version of the tickets by visiting our web page: [www.jesspublib.org](http://www.jesspublib.org). A PDF version of the packet is available on our web page as well. For every ticket you submit, you will receive an entry into our drawing to win a **$250 gift card to Hibbett Sports** in Nicholasville. Good luck in becoming a more super you!

<table>
<thead>
<tr>
<th>Fight Against Heart Disease</th>
<th><strong>Read the entire Fight Against Heart Disease packet.</strong></th>
</tr>
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<tbody>
<tr>
<td>(June 8 – June 14)</td>
<td>Name: ___________________ Phone Number: ____________</td>
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<tr>
<th>Fight Against Heart Disease</th>
<th><strong>Walk OR jog OR run OR bicycle OR swim OR do an exercise video OR dance for at least 20 minutes every day for the entire week.</strong></th>
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<tr>
<th>Fight Against Heart Disease</th>
<th><strong>Eat 10 of the foods on the heart-healthy food allies list throughout the week.</strong></th>
</tr>
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<tr>
<th>Fight Against Heart Disease</th>
<th><strong>Avoid eating processed food and restaurant food for the entire week.</strong></th>
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<tr>
<th>Fight Against Heart Disease</th>
<th><strong>Eat the one-day heart healthy menu one day of the week.</strong></th>
</tr>
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<tr>
<th>Fight Against Heart Disease</th>
<th><strong>Get your blood pressure checked and monitor your calorie and sodium intake for entire the week.</strong></th>
</tr>
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<tr>
<th>Fight Against Heart Disease</th>
<th><strong>Floss your teeth every day for the entire week.</strong></th>
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Meet the Villain: Heart Disease

Diseases under the heart disease umbrella include blood vessel diseases, such as coronary artery disease; heart rhythm problems (arrhythmias); and heart defects you’re born with (congenital heart defects), among others. The term “heart disease" is often used interchangeably with the term "cardiovascular disease." "Cardiovascular disease" generally refers to conditions that involve narrowed or blocked blood vessels that can lead to a heart attack, chest pain (angina) or stroke. Other heart conditions, such as those that affect your heart’s muscle, valves or rhythm, also are considered forms of heart disease. Most forms of heart disease can be prevented or treated with healthy lifestyle choices.

How It Happens

Research suggests that coronary heart disease (CHD) begins with damage to the lining and inner layers of the coronary (heart) arteries. Plaque may begin to build up where the arteries are damaged. The buildup of plaque in the coronary arteries may start in childhood. Over time, plaque can harden or rupture (break open). Hardened plaque narrows the coronary arteries and reduces the flow of oxygen-rich blood to the heart. This can cause chest pain or discomfort called angina. If the plaque ruptures, blood cell fragments called platelets (PLATE-lets) stick to the site of the injury. They may clump together to form blood clots. Blood clots can further narrow the coronary arteries and worsen angina. If a clot becomes large enough, it can mostly or completely block a coronary artery and cause a heart attack.
Heart Disease

Heart disease includes any disorder of the heart and affects millions of Americans every year, yet it is highly preventable by following a healthy lifestyle.

It is the number one cause of death in the U.S., accounting for 36% of deaths annually.

In 2010, heart disease will cost us an estimated $316.4 billion in health care, medicine and lost productivity.

COMMON RISK FACTORS FOR HEART DISEASE INCLUDE:
- Smoking
- High blood pressure
- High cholesterol
- Diabetes
- Physical inactivity
- Obesity

TO SCREEN FOR RISK FACTORS, HAVE YOUR DOCTOR:
- Test your blood pressure with a pressure cuff
- Test your blood cholesterol level
- Compute/discuss your Body Mass Index (BMI)

TYPES OF HEART DISEASE

- **Coronary heart disease**
  Blocked or clogged arteries limit blood flow to the heart and starving it of oxygen and nutrients.

- **Arrhythmia**
  The heart beats irregularly.

- **Heart failure**
  The heart can't pump as powerfully as it needs to in order to supply the body with oxygen and nutrients, causing the heart muscles to overwork and weaken.

- **Heart valve disease**
  One of more of the hearts' valves — which control blood flow into and out of the heart — doesn't work.

- **Cardiomyopathy**
  An enlarged or abnormally stiff or thick heart, causing the heart to pump weaker than normal and sometimes leading to heart failure or arrhythmia.

- **Pericarditis**
  An inflammation of one or more layers of the pericardium, a thin membrane that lines the heart.

- **Aortic disease**
  A portion of the aortic wall weakens and balloons out, forming an aneurysm.

- **Vascular disease**
  Heart disease is often related to diseases of the circulatory system, including arteries, veins and lymph vessels, or blood disorders.
Kentucky has the 9th highest death rate from cardiovascular disease in the country.

- Heart disease is the No. 2 killer in Kentucky
- 9,662 people in Kentucky died of heart disease in 2010
- Stroke is the No. 5 killer in Kentucky
- 1,992 people in Kentucky died of stroke in 2010

Heart Disease and Stroke Risk Factors in Kentucky

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Kentucky</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults who are current smokers</td>
<td>29%</td>
<td>21.1%</td>
</tr>
<tr>
<td>Adults who participate in 150+ min of aerobic physical activity per week</td>
<td>46.8%</td>
<td>51.6%</td>
</tr>
<tr>
<td>Adults who are overweight or obese</td>
<td>66.5%</td>
<td>63.5%</td>
</tr>
<tr>
<td>Adults who have been told that they have had a heart attack</td>
<td>6.1%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Adults who have been told that they have had a stroke</td>
<td>3.9%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Adults who have been told that they have angina or coronary heart disease</td>
<td>5.9%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Population of adults (18-64) who have some kind of health care coverage</td>
<td>77.7%</td>
<td>78.9%</td>
</tr>
<tr>
<td>High school Students who are obese</td>
<td>16.5%</td>
<td>13%</td>
</tr>
</tbody>
</table>
### Contributing Factors

Factors like **age** (aging increases your risk of damaged and narrowed arteries and weakened or thickened heart muscle), **gender** (men are generally at greater risk of heart disease) and **family history** (a family history of heart disease increases your risk of coronary artery disease) can’t be changed, but they can be mitigated by choosing a healthy lifestyle. The following table shows the controllable risk factors for heart disease.

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Smoking</strong></td>
<td><strong>Stop smoking</strong></td>
</tr>
<tr>
<td>Nicotine constricts your blood vessels, and carbon monoxide can damage their inner lining, making them more susceptible to atherosclerosis. Heart attacks are more common in smokers than in nonsmokers.</td>
<td>Smoking is a major risk factor for heart disease, especially atherosclerosis. Quitting is the best way to reduce your risk of heart disease and its complications.</td>
</tr>
<tr>
<td><strong>High blood pressure</strong></td>
<td><strong>Control your blood pressure</strong></td>
</tr>
<tr>
<td>Uncontrolled high blood pressure can result in hardening and thickening of your arteries, narrowing the vessels through which blood flows.</td>
<td>Ask your doctor for a blood pressure measurement at least every two years. He or she may recommend more frequent measurements if your blood pressure is higher than normal or you have a history of heart disease.</td>
</tr>
<tr>
<td><strong>Poor diet</strong></td>
<td><strong>Eat healthy foods</strong></td>
</tr>
<tr>
<td>A diet that’s high in trans fats, salt, sugar and refined carbohydrates can contribute to the development of heart disease.</td>
<td>A heart-healthy diet based on fruits, vegetables and whole grains and low in saturated fat, cholesterol, sodium and added sugar, can help you control your weight, blood pressure and cholesterol.</td>
</tr>
<tr>
<td><strong>Diabetes</strong></td>
<td><strong>Keep diabetes under control</strong></td>
</tr>
<tr>
<td>Diabetes increases your risk of heart disease. Both conditions share similar risk factors, such as obesity and high blood pressure.</td>
<td>If you have diabetes, tight blood sugar control can help reduce the risk of heart disease.</td>
</tr>
<tr>
<td><strong>Obesity</strong></td>
<td><strong>Maintain a healthy weight</strong></td>
</tr>
<tr>
<td>Excess weight typically worsens other risk factors.</td>
<td>Being overweight increases your risk of heart disease. A BMI of less than 25 and a waist circumference of 35 inches (88.9 centimeters) or less is the goal for preventing and treating heart disease.</td>
</tr>
<tr>
<td><strong>Stress</strong></td>
<td><strong>Manage stress</strong></td>
</tr>
<tr>
<td>Unrelieved stress may damage your arteries and worsen other risk factors for heart disease.</td>
<td>Reduce stress as much as possible. Practice techniques for managing stress, such as muscle relaxation and deep breathing.</td>
</tr>
<tr>
<td><strong>Physical inactivity</strong></td>
<td><strong>Move</strong></td>
</tr>
<tr>
<td>Lack of exercise also is associated with many forms of heart disease and some of its other risk factors, as well.</td>
<td>Exercise helps you achieve and maintain a healthy weight and control diabetes, elevated cholesterol and high blood pressure. With your doctor’s OK, aim for 30 to 60 minutes of physical activity most days of the week.</td>
</tr>
<tr>
<td><strong>Poor hygiene</strong></td>
<td><strong>Practice good hygiene</strong></td>
</tr>
<tr>
<td>Not regularly washing your hands and not establishing other habits that can help prevent viral or bacterial infections can put you at risk of heart infections, especially if you already have an underlying heart condition. Poor dental health also may contribute to heart disease.</td>
<td>Stay away from people with infectious diseases such as colds, get vaccinated against the flu, regularly wash your hands, and brush and floss your teeth regularly to keep yourself well.</td>
</tr>
<tr>
<td><strong>High blood cholesterol levels</strong></td>
<td><strong>Check your cholesterol</strong></td>
</tr>
<tr>
<td>High levels of cholesterol in your blood can increase the risk of formation of plaques and atherosclerosis</td>
<td>Ask your doctor for a baseline cholesterol test when you’re in your 20s and then at least every five years. You may need to start testing earlier if high cholesterol is in your family. If your test results aren’t within desirable ranges, your doctor may recommend more frequent measurements.</td>
</tr>
</tbody>
</table>
How Much Exercise Do You Need to Prevent Heart Disease?

Find this article at:
http://www.health.com/health/condition-article/0,,20188246,00.html

Experts say exercise flushes cholesterol from your arteries. The old thought was that vigorous exercise could be dangerous to people at risk for heart disease. Emerging evidence suggests that the more vigorous the workout, the more value to your heart—though short, 15-minute spurts of exercise may be as beneficial as one marathon session. One cardiovascular death per year may be preventable for every 145 people with diabetes who are persuaded to walk at least two hours a week, according to researchers at the Centers for Disease Control and Prevention in Atlanta.

Exercise keeps you ticking
David Cullen’s brother Steve died of a heart attack in 1995 at age 40. In 2002 two more of his brothers died of the same fate, one day apart. Cullen, a state representative from Milwaukee, doesn’t expect to die young. At 5’11”, he weighs only 165 pounds and has low cholesterol. He credits his good health to running six to eight miles each day.

How exercise clears arteries
Exercise helps dilate the body’s blood vessels and enables blood to circulate more freely, said Byung-il William Choi, MD, a professor of cardiovascular medicine at the Medical College of Wisconsin in Milwaukee. In one study Harvard researchers found up to a 20% reduction of heart-disease risk for those who most frequently got vigorous exercise. This category included running or jogging, swimming laps, playing tennis, or doing aerobics. Walking three miles or more a week resulted in a 10% reduction in risk. Other moderate exercises include walking, golf, and yard work. “The benefits of physical activity seem to be independent of other coronary factors,” Howard D. Sesso, ScD, of the department of epidemiology at the Harvard School of Public Health, said when the study was published.

How much exercise is enough?
The amount of exercise it takes to help prevent heart disease is a matter of debate. Some experts urge people to exercise more frequently and moderately; others push for longer, more vigorous workouts. “The sad fact is, most Americans are sedentary,” says Matthew Sorrentino, MD, a cardiologist at the University of Chicago. “One-quarter don’t exercise at all. So getting them to move at all is an improvement.” Some studies show that regular exercise—30 to 60 minutes a day—lowers blood sugar and blood pressure, boosts HDL (good cholesterol), and can reduce the protein that contributes to blood clots.

A study of more than 44,000 men found that even moderate exercise can shield against heart disease. Compared with men who got little or no exercise, those who walked briskly for at least 30 minutes each day were about 20% less likely to develop heart disease. Lifting weights—a type of exercise once dismissed by cardiologists for people with high blood pressure—also reduced risk by about 25%. Running at least an hour each week cut the risk by 40%.

Exercise helps people lose weight, though a surprising study by researchers at the Cooper Institute for Aerobics Research in Dallas found it is better for your heart for you to be fit than thin. Unfit, lean men had a higher risk of death from cardiovascular disease than men who were fit and obese. Exercise is also associated with other healthy behaviors, like not overeating and not smoking, Dr. Choi says. David Cullen, 47, has found that his choice to exercise prompts him to make other healthy choices. “The more I run, the less likely I am to want junk food,” he says.

Never too late to start
A German study found that people who exercised regularly during their lifetimes were 60% less likely to be diagnosed with coronary heart disease than sedentary people. But those who became physically active only after the age of 40 were around 55% less likely to be diagnosed with heart disease than those who had been inactive all their lives.
For Overall Cardiovascular Health:

At least 30 minutes of moderate-intensity aerobic activity per week for a total of 150 minutes.

OR

At least 25 minutes of vigorous aerobic activity per week for a total of 75 minutes.

or a combination of the two

AND

Moderate to High Intensity muscle-strengthening activity at least 2 days per week for additional health benefits.

For Lowering Blood Pressure and Cholesterol:

An average of 40 minutes of moderate-to-vigorous-intensity aerobic activity per week 3 or 4 days.
Omega 3 Fatty Acids & Unsaturated Fats

How They Work

Unsaturated fatty acids when substituted for saturated fatty acids may lower your cholesterol. Omega-3 fatty acids are a type of unsaturated fatty acid that may reduce inflammation throughout the body. Inflammation in the body can damage your blood vessels and lead to heart disease. Omega-3 fatty acids may decrease triglycerides, lower blood pressure, reduce blood clotting, decrease stroke and heart failure risk, reduce irregular heartbeats, and may improve learning ability in children.

What to Eat: flax seeds, flax seed oil, chia seeds, sardines, cod liver oil, salmon, butternuts, walnuts, herring, mackerel, basil & oregano (fresh leaves), grape leaves, olive oil, avocados, tofu

Fiber

How It Works

One of the ways soluble fiber may lower blood cholesterol is through its ability to reduce the amount of bile reabsorbed in the intestines. When fiber interferes with absorption of bile in the intestines, the bile is excreted in the feces. To make up for this loss of bile, the liver makes more bile salts. The body uses cholesterol to make bile salts. So in order to obtain the cholesterol necessary to make more bile salts, the liver increases its production of LDL receptors. These receptors are responsible for pulling cholesterol out of LDL molecules in the bloodstream. Therefore, the more bile salts are made from the liver, the more LDL cholesterol is pulled from the blood. Fiber also helps regulate glucose, also known as blood sugar, by causing food to stay in your stomach longer increasing the time it takes for your blood sugar to rise after you eat and reducing the risk of diabetes. According to the American Diabetes Association, people with diabetes have double the risk of non-diabetics of suffering a heart attack.

What to Eat: oat bran, wheat bran, flax seeds, rye flours, barley, dried herbs & spices, beans, peas, lentils, cocoa powder, peppers, dried cloud-ear fungi, popcorn

Potassium

How It Works

Potassium is a chemical which helps to lower blood pressure by balancing out the negative effects of salt. Your kidneys help to control your blood pressure by controlling the amount of fluid stored in your body. The more fluid, the higher your blood pressure. Your kidneys do this by filtering your blood and sucking out any extra fluid, which it then stores in your bladder as urine. This process uses a delicate balance of sodium and potassium to pull the water across a wall of cells from the bloodstream into a collecting channel that leads to the bladder. Eating salt raises the amount of sodium in your bloodstream, wrecks the balance and reduces your kidneys’ ability to remove the water. By eating more fruit and vegetables, you will increase your potassium levels and help to restore the balance.

What to Eat: sun-dried tomatoes, tomato paste, peppers, beans, dried apricots, plantains, beet greens, yams, potatoes, palm hearts, shitake mushrooms, orange juice, carrot juice, prunes, soybeans, yogurt, dried herbs & spices

Antioxidants

How They Work

Antioxidants are natural substances that exist as vitamins, minerals and other compounds in foods. They are believed to help prevent disease by fighting free radicals, substances that harm the body when left unchecked. Free radicals are formed by normal bodily processes such as breathing, and by environmental contaminants like cigarette smoke. Without adequate amounts of antioxidants, these free radicals travel throughout the body, damaging cells. Part of this cellular damage leads to one of the major known factors in the development of heart disease, oxidation of cholesterol. Oxidation, meaning the addition of oxygen to low-density lipoproteins (LDL or “bad” cholesterol), contributes to the build up of fatty plaque on artery walls (atherosclerosis), which can eventually slow or block blood flow to the heart.

What to Eat: blackberries, strawberries, cranberries, blueberries, raspberries, kidney beans, pinto beans, apples, artichokes, plums, prunes, pecans, russet potatoes, dark chocolate, green tea, coffee, pomegranates, popcorn, dried herbs & spices
### Breakfast

**Oatmeal-Rhubarb Porridge**

**Ingredients**
- 1 1/2 cups non-dairy milk, such as soymilk or almond milk
- 1/2 cup orange juice
- 1 cup rolled oats
- 1 cup 1/2-inch pieces rhubarb, fresh or frozen
- 1/2 teaspoon ground cinnamon
- 2-3 tablespoons brown sugar, maple syrup or agave syrup
- 2 tablespoons chopped pecans or other nuts, toasted, if desired

**Directions**

Combine milk, juice, oats, rhubarb and cinnamon in a medium saucepan. Bring to a boil over medium-high heat. Reduce heat, cover and cook at a very gentle bubble, stirring frequently, until the oats and rhubarb are tender, about 5 minutes. Remove from the heat and let stand, covered, for 5 minutes. Stir in sweetener to taste. Top with nuts. **Tip:** To toast chopped nuts, place in a small dry skillet and cook over medium-low heat, stirring constantly, until fragrant and lightly browned, 2 to 4 minutes.

**Nutrition Facts**

Amount per serving:
- Calories 336
  - 8 g fat (1 g sat, 4 g mono)
  - 4 mg cholesterol
  - 56 g carbohydrates
  - 9 g added sugars
  - 13 g protein
  - 6 g fiber
  - 153 mg sodium
  - 772 mg potassium

**Nutrition Bonus:** Vitamin C (60% daily value), Magnesium (38% dv), Calcium (30% dv), Potassium (22% dv), Zinc (16% dv).

### Lunch

**Collard Green Wraps with Roasted Yams and Chipotle Black Beans**

**Ingredients**
- 4 large collard green leaves
- 1 large yam, peeled, diced, drizzled olive oil
- 1 cup baked tofu
- 1/4 teaspoon chipotle powder
- 1/2 teaspoon cinnamon
- 1/4 teaspoon salt
- 1/2 teaspoon maple syrup or agave or honey
- 1 1/2 cup cooked black beans
- 1 avocado, sliced
- Cilantro sprigs

For chipotle lime vinaigrette:
- 2 tablespoons lime juice
- 2 tablespoons olive oil
- 1 pinch salt
- 1/4 teaspoon chipotle powder

**Directions**

1. To prep collard greens, slice off stem and remove thickest part of the large vein with a sharp knife. Drop into a pot of boiling, generously salted water for about 45 seconds. Remove and place in a bowl of ice cold water. Blot dry.
2. Roast yam in a 425-degree oven until tender and a little crispy, about 25 minutes.
3. Season black beans with chipotle powder, cinnamon, salt, and maple syrup or agave.
4. Whisk together all ingredients for vinaigrette.
5. Place all ingredients for wrap at bottom end of collard green. Top with tofu, avocado, and cilantro springs. Roll up like a burrito. Cut in half and serve with vinaigrette.

**Nutrition Facts**

Amount per serving:
- Calories: 396
  - 553 mg Sodium
  - 40 g Carbs
  - 14 g Fiber
  - 21 g Fat
  - 3 g Saturated Fat
  - 18 g Protein
  - 150 mg Calcium
  - 3 mg Iron

Continued on back of page
**SNACK**

**Hummus Dip with Raw Veggies**

**Ingredients**
- 2 cans chickpeas, drained and rinsed
- 1/2 cup extra-virgin olive oil
- 1/2 lemon, juiced
- 2 tablespoons roughly chopped fresh parsley leaves
- 2 cloves garlic, peeled
- 1 1/2 teaspoon salt
- 1/2 teaspoon dark Asian sesame oil
- 1/2 to 1 teaspoon ground cumin
- 12 to 15 grinds black pepper
- 1/4 cup water
- Paprika, for garnish
- Cut veggies for dipping

**Directions**
In a blender combine all the ingredients except the parsley and paprika to be used for garnish. Blend on low speed until smooth. You’ll have to stop the blender often to push down the ingredients. If the mixture is too dry and you’re having trouble blending it, add a few more tablespoons of olive oil to help things along. Scrape the hummus onto a plate. Sprinkle the paprika over the top, drizzle lightly with olive oil, scatter some parsley on top, and serve. You can make the hummus up to a couple of hours before you serve it. Cover the top with plastic wrap and leave it at room temperature.

**Nutritional Facts (Hummus Dip)**
Amount per tablespoon serving:
- Calories: 57
- Total Fat: 4 grams
- Saturated Fat: 0.5 grams
- Protein: 1 gram
- Carbohydrates: 5 grams
- Sugar: 0 grams
- Fiber: 1 gram
- Cholesterol: 0 milligrams
- Sodium: 96 milligrams

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**DINNER**

**Quinoa-Stuffed Peppers**

**Ingredients**
- 1 onion, finely chopped (1 cup)
- 2 Tbs. olive oil
- 1/2 cup finely chopped celery
- 1 Tbs. ground cumin
- 2 cloves garlic, minced (2 tsp.)
- 1 cup spinach leaves
- 2 15-oz. cans diced tomatoes, drained, liquid reserved
- 1 15-oz. can black beans
- 1/4 cup quinoa
- 3 large carrots, grated (1 1/2 cups)
- 1 1/2 cups grated pepper Jack cheese
- 4 large red bell peppers, halved lengthwise

**Directions**
1. Heat oil in saucepan over medium heat. Add onion and celery, and cook 5 minutes, or until soft. Add cumin and garlic, and sauté for 1 minute. Stir in spinach and drained tomatoes. Cook 5 minutes, or until most of liquid has evaporated.
2. Stir in black beans, quinoa, carrots, and 2 cups water. Cover, and bring to a boil. Reduce heat to medium-low, and simmer 20 minutes, or until quinoa is tender. Stir in 1 cup cheese. Season with salt and pepper.
3. Preheat oven to 350°F. Pour liquid from tomatoes in bottom of baking dish.
4. Fill each bell pepper half with heaping ¾-cup quinoa mixture, and place in baking dish. Cover with foil, and bake 1 hour. Uncover, and sprinkle each pepper with 1 Tbs. remaining cheese. Bake 15 minutes more, or until tops of stuffed peppers are browned. Let stand 5 minutes.

**Nutritional Facts**
Amount per serving:
- Calories: 279
- Protein: 14 g
- Total Fat: 10 g
- Saturated Fat: 3 g
- Carbohydrates: 36 g
- Cholesterol: 15 mg
- Sodium: 518 mg
- Fiber: 10 g
- Sugar: 9 g
Trans Fats
How They Hurt
High levels of trans-fats cause atherosclerosis by reducing the responsiveness of a key protein, transforming growth factor (TGF)-beta, that controls growth and differentiation in cells. Trans-fat is also known to increase blood levels of low density lipoprotein (LDL), or "bad" cholesterol, while lowering levels of high density lipoprotein (HDL), or "good" cholesterol. Trans-fats even interfere with your body's use of beneficial omega-3 fats, and have been linked to an increase in asthma. The American Heart Association recommends limiting the amount of trans fat you eat daily to less than 1 percent of your total calories. If you eat 2,000 calories a day, that translates to about 2 (or fewer) grams.

What to Avoid: Foods that contain "hydrogenated oil" or "partially hydrogenated oil" in their ingredient lists, packaged snacks, crackers, bakery goods (cookies, pies, doughnuts, etc), margarines, shortening, fried / battered foods, cake mixes & canned frostings, non-dairy creamers, microwave popcorn, frozen ice cream beverages, meat sticks, processed meats, frozen dinners, packaged pudding, canned chili, fast food

Refined Carbohydrates & Sugars
How They Hurt
Both good carbs and bad carbs turn into sugar, but their nutritional value and how fast they digest in the body is what makes them different. Your body breaks down all carbohydrates into sugar. The outcome is glucose, and this is what gives your body energy. Food with complex, good carbohydrates, such as quinoa and oatmeal, contain a lot of fiber so your body breaks them down slowly. This keeps you feeling full and stabilizes your blood sugar levels. Your body digests simple, refined carbohydrates very quickly. This causes increased inflammation in the body and raises your blood sugar levels. In addition to inflammation, too much sugar in your bloodstream can damage your artery walls, which leads to added inflammation. Your arteries carry oxygen-rich blood to your heart. Inflammation is a risk factor for coronary artery narrowing, which makes it difficult for blood to make it to your heart. Having high blood sugar levels increases your risk for heart disease.

What to Avoid: sugars, sweeteners, candy, sweetened cereals, baked goods (cookies, pies, pastries, breads, muffins, cakes etc.) fast foods, packaged snacks (chips, pretzels, cheese curls, etc.), ice cream, sweetened drinks (sodas, juices, sweet tea, specialty coffee drinks, energy drinks), pasta, white rice, some energy bars

Salt / Sodium
How It Hurts
Americans on average take in 3,400 milligrams of sodium each day. That’s a third more than the daily recommended limit of 2,300 mg (about 1 teaspoon salt) and more than double the 1,500 mg suggestion for adults age 51 and older and for anyone who is salt-sensitive (e.g., people who are African-American, those with high blood pressure, diabetes or chronic kidney disease)—about half the U.S. population. Cutting your sodium intake can help lower high blood pressure and also reduce your risk of developing high blood pressure.

What to Avoid: lunch meats, hot dogs, ham, fast food, pizza (except homemade with homemade crust), packaged snacks (chips, pretzels, cheese curls, etc.), some breads, processed foods (frozen dinners, boxed dinners), packaged macaroni & cheese, processed cheeses, canned soups & vegetables, canned / jarred sauces, instant soups & sauces, salad dressings
What Is Trans Fat?

Consumption of trans fat raises low-density lipoprotein (LDL), or bad cholesterol, increasing the risk of coronary heart disease. Most authorities say the safe amount to eat is 0.

Industrial Trans Fatty Acids are synthetic. They are created by a process that adds hydrogen to liquid vegetable oils to make them more solid.

Trans fat in food:
- Cake frosting: 2 g
- Chicken pot pie: 2 g
- Graham crust: 2.5 g
- Stick margarine: 1-3 g
- Kettle popcorn: 6 g

Source: manufacturer’s data

Consumption of trans fat from products containing partially hydrogenated oils has declined dramatically from 4.6 grams per day in 2003 to about 1 gram per day in 2012, according to FDA estimates.

How to Find Trans Fat:

Nutrition Facts Label on Food Packages

<table>
<thead>
<tr>
<th>Nutrition Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Serving Size</strong> 1 CUP</td>
</tr>
<tr>
<td><strong>Servings Per Container</strong> 3</td>
</tr>
<tr>
<td>Amount Per Serving</td>
</tr>
<tr>
<td>Calories: 160</td>
</tr>
<tr>
<td>Calories from Fat: 110</td>
</tr>
<tr>
<td><strong>Total Fat</strong> 13g</td>
</tr>
<tr>
<td><strong>Saturated Fat</strong> 3g</td>
</tr>
<tr>
<td><strong>Trans Fat</strong> 5g</td>
</tr>
<tr>
<td><strong>Cholesterol</strong> 0mg</td>
</tr>
<tr>
<td><strong>Sodium</strong> 0mg</td>
</tr>
<tr>
<td><strong>Potassium</strong> 0mg</td>
</tr>
<tr>
<td><strong>Total Carbohydrate</strong> 15g</td>
</tr>
<tr>
<td><strong>Dietary Fiber</strong> 3g</td>
</tr>
<tr>
<td><strong>Protein</strong> 2g</td>
</tr>
<tr>
<td><strong>Vitamin A</strong> 0%</td>
</tr>
<tr>
<td><strong>Vitamin C</strong> 0%</td>
</tr>
<tr>
<td><strong>Calcium</strong> 0%</td>
</tr>
<tr>
<td><strong>Iron</strong> 4%</td>
</tr>
</tbody>
</table>

Internet Research for Restaurants

rTFAs are found naturally in ruminant animal products. Ruminants include: cows, sheep and goats. rTFA is found in the meat and butterfat of dairy products from these animals. --nel.gov

“In meat and dairy from ruminant animals, the impact of the these naturally occurring TFAs are likely to be modest compared with the far larger amount of saturated fat they often contain.” --James Kenney, PhD, FACN.
Did You Know?

• Growing scientific evidence shows that eating too much added sugar over time is linked to health problems, including serious diseases such as heart disease, diabetes and liver disease.

• Every day, the average American consumes almost three times more sugar than is recommended. That adds up to an average of 66 pounds of added sugar each year.

• Added sugar is hiding in 74% of packaged foods, including foods that many of us think are healthy, like yogurt and energy bars, and even in savory foods, like pasta sauce, breads, salad dressing and ketchup.

• In an effort to make foods “low-fat,” many food companies replaced added fat with added sugar.

• There are at least 61 names for added sugar on food labels.

• Liquid sugar, like that in soda and sports drinks, is the largest source of added sugar in the American diet (36%).

• Too much added sugar from soda and sports drinks can overload critical organs over time, leading to serious diseases.

• When you consume sugar as a beverage, you don’t feel as full. It’s easy to down 9 teaspoons of sugar in a single 12-oz. soda. The American Heart Association recommends no more than 6 teaspoons of added sugar per day for women and 9 teaspoons per day for men.

• Drinking just one 12-oz. soda every day, or 7 sodas per week, can increase your risk of dying from heart disease by almost 1/3. Heart disease is the leading cause of death in the U.S.

• Fructose is a common type of sugar found in soda, sports drinks and many packaged foods. Too much fructose can damage your liver, just like too much alcohol.
FACE FEEL PUFFY?
JEANS FIT TIGHTER?
In 3 weeks you can:
• Change your sodium palate &
• Start enjoying foods with less sodium
• Reduce bloating

CHANGE your SALT
WAYS
IN ONLY
21 DAYS

Learning to read & understand food labels can help you make healthier choices.

WEEK ONE
Breads & Rolls
Cold Cuts & Cured Meats
• Look for lower sodium items
• Track your sodium consumption
• Log how much sodium you’ve shaved out of your diet

WEEK TWO
Pizza
Poultry
• If you do eat pizza, make it one with less cheese & meats
• Add veggies to your pizza instead
• Use fresh poultry rather than fried, canned or processed

WEEK THREE
Soups
Sandwiches
• One cup of chicken noodle soup can have up to 940 mg of sodium
• Check labels & try lower sodium varieties
• Use lower sodium meats, cheeses & condiments & plenty of vegetables to build healthier sandwiches

heartcheckmark.org
Look for the Heart-Check mark to find products that can help you make smarter choices about the foods you eat.

KNOW THE SALTY 6
Common foods that may be loaded with excess sodium:
1 Breads & Rolls
2 Cold Cuts & Cured Meats
3 Pizza
4 Poultry
5 Soup
6 Sandwiches

Choose wisely, read nutrition labels & watch portion control.

On average, American adults eat more than 3,400 milligrams of sodium daily – more than double the American Heart Association’s recommended limit.

3,400 mg
average sodium intake
1,500 mg
recommended sodium intake

American Heart Association | American Stroke Association
life is why™
How Does Smoking Cause Heart Disease?

The nicotine in smoke:

- Reduces how much oxygen your heart gets
- Raises your blood pressure
- Speeds up your heart rate
- Makes blood clots more likely, which can lead to heart attacks or strokes
- Harms the insides of your blood vessels, including those in your heart
- Robs you of some of your good cholesterol
- Makes it more difficult to exercise
- Increases likelihood of blood clots

How Can Quitting Smoking Help My Heart and Lifestyle?

If you quit smoking, you will:

- Prolong your life
- Reduce your risk of disease (including heart disease, heart attack, high blood pressure, lung cancer, throat cancer, emphysema, ulcers, gum disease, and other conditions)
- Feel healthier; after quitting, you won’t cough as much, you’ll have fewer sore throats, and you will increase your stamina.
- Look better; quitting can help you prevent face wrinkles, get rid of stained teeth, & improve your skin.
- Improve your sense of taste and smell
- Save money
- Reduce the risk of second-hand smoke to your loved ones and pets

Smoking and Your Heart and Blood Vessels

The chemicals in tobacco smoke harm your blood cells. They also can damage the function of your heart and the structure and function of your blood vessels. This damage increases your risk of atherosclerosis (ath-er-o-skler-O-sis).

Atherosclerosis is a disease in which a waxy substance called plaque (plak) builds up in the arteries. Over time, plaque hardens and narrows your arteries. This limits the flow of oxygen-rich blood to your organs and other parts of your body.

Coronary heart disease (CHD) occurs if plaque builds up in the coronary (heart) arteries. Over time, CHD can lead to chest pain, heart attack, heart failure, arrhythmias (ah-RITH-me-ahs), or even death.

Smoking is a major risk factor for heart disease. When combined with other risk factors—such as unhealthy blood cholesterol levels, high blood pressure, and overweight or obesity—smoking further raises the risk of heart disease.

Smoking also is a major risk factor for peripheral arterial disease (P.A.D.). P.A.D. is a condition in which plaque builds up in the arteries that carry blood to the head, organs, and limbs. People who have P.A.D. are at increased risk for heart disease, heart attack, and stroke.

Peripheral Artery Disease

Peripheral artery disease (PAD) is a narrowing or blockage of the arteries, which reduces the flow of oxygen-rich blood to your limbs. PAD typically affects the pelvis and legs, and is most commonly caused by atherosclerosis, a buildup of fat and cholesterol deposits (plaques) that harden over time.
Quit Smoking Timeline

Chemicals in a Cigarette
Cigarette smoke contains a huge number and range of organic compounds—as many as 7360 different chemicals! Of this massive number of compounds, 70 have confirmed carcinogenic activity in humans, and many more are suspected carcinogens.

Web Sites with Tips on Quitting Smoking

SmokeFree.gov
http://smokefree.gov/

HelpGuide.org: A trusted non-profit guide to mental health and well-being
http://www.helpguide.org/articles/addiction/how-to-quit-smoking.htm

American Lung Association: How to Quit Smoking
http://www.lung.org/stop-smoking/how-to-quit/

Guide to Quit Smoking: American Cancer Society
http://www.cancer.org/healthy/stayawayfromtobacco/guidetoquittingsmoking/index

Web MD 13 Best Quit Smoking Tips Ever
**Understanding Your Blood Pressure**

Blood pressure is written as two numbers, such as 112/78 mm Hg. The top, systolic, number is the pressure when the heart beats. The bottom, diastolic, number is the pressure when the heart rests between beats. Normal blood pressure is below 120/80 mm Hg. If you’re an adult and your systolic pressure is 120 to 139, or your diastolic pressure is 80 to 89 (or both), you have “prehypertension.” High blood pressure is a pressure of 140 systolic or higher and/or 90 diastolic or higher that stays high over time. No one knows exactly what causes most cases of high blood pressure. It can’t be cured, but it can be managed. High blood pressure usually has no signs or symptoms. That’s why it is so dangerous. About 76.4 million Americans over age 20, 1 in 3 adults, have it, and many don’t even know they have it. Not treating high blood pressure is dangerous. High blood pressure increases the risk of heart attack and stroke. You can live a healthier life if you treat and manage it! Make sure you get your blood pressure checked regularly and treat it the way your doctor advises.

**Who is at higher risk?**
- People with close blood relatives who have HBP
- African Americans
- People over age 35
- Overweight people
- People who aren’t physically active
- People who consume too much salt
- People who drink too much alcohol
- People with diabetes, gout or kidney disease
- Pregnant women
- Women who take birth control pills, have had HBP during pregnancy, have a family history of HBP or have mild kidney disease

**How can I tell I have it?**
You usually can’t tell! Many people have it and don’t know it. The only way to know if your blood pressure is high is to get it checked regularly by your doctor. Blood pressure is the force of blood pushing against blood vessel walls. High blood pressure (HBP) means the pressure in your arteries is higher than it should be. Another name for high blood pressure is hypertension (hi-per-TEN-shun).
**Understanding Cholesterol**

**Cholesterol** is a waxy substance produced and released into the bloodstream by cells in the liver. The body uses cholesterol to form cell membranes, aid in digestion, convert Vitamin D in the skin and develop hormones. Cholesterol is stored inside a waterproof envelope of lipids (fat), along with specific proteins that weave in and out of the envelope’s outer shell. These particles are called lipoproteins. While there are several types of lipoproteins, your cholesterol score measures just Low Density Lipoproteins and High Density Lipoproteins.

**Low density lipoproteins (LDL)** are considered “bad” cholesterol. While they carry needed cholesterol to all parts of the body, too much LDL in the system can lead to coronary artery disease, due to the buildup of LDL deposits in the artery walls.

**High density lipoproteins (HDL)** are called “good” cholesterol because they remove cholesterol from the bloodstream and the artery walls. A higher HDL score is desirable and will improve your overall cholesterol score.

**Triglycerides** are a type of fat that is packaged with cholesterol when the lipoproteins form in the liver cells. Triglycerides are stored in fat all over the body and can be an energy source, like carbohydrates.
## Low Density Lipoproteins (LDL) - Bad Cholesterol

<table>
<thead>
<tr>
<th>Optimal</th>
<th>Acceptable to</th>
<th>Borderline</th>
<th>High Risk</th>
<th>Extremely High</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 100 mg/dL (2.6 mmol/L)</td>
<td>between 100 – 129 mg/dL (2.6–3.34 mmol/L)</td>
<td>between 130 – 159 mg/dL (3.36–4.13 mmol/L)</td>
<td>between 160 – 189 mg/dL (4.14–4.90 mmol/L)</td>
<td>at or above 190 mg/dL (4.91 mmol/L)</td>
</tr>
</tbody>
</table>

## Triglyceride Levels

<table>
<thead>
<tr>
<th>Optimal</th>
<th>Borderline</th>
<th>High Risk</th>
<th>Extremely High</th>
</tr>
</thead>
<tbody>
<tr>
<td>below 150 mg/dL (1.69 mmol/L)</td>
<td>between 150 mg/dL (1.69 mmol/L) and 199 mg/dL (2.25 mmol/L)</td>
<td>between 200-499 mg/dL (2.26-5.63 mmol/L)</td>
<td>above 500 mg/dL (5.64 mmol/L)</td>
</tr>
</tbody>
</table>

## High Density Lipoproteins (HDL) - Good Cholesterol

<table>
<thead>
<tr>
<th>Optimal</th>
<th>Acceptable to</th>
<th>High Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>above 60 mg/dL (1.56 mmol/L)</td>
<td>between 40-60 mg/dL (1.04–1.56 mmol/L)</td>
<td>below 40 mg/dL (1.04 mmol/L)</td>
</tr>
</tbody>
</table>

## Total Cholesterol

<table>
<thead>
<tr>
<th>Optimal</th>
<th>Acceptable to</th>
<th>High Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 200 mg/dL (5.17)</td>
<td>between 200 mg/dL and 239 mg/dL (5.17–6.18)</td>
<td>at or above 240 mg/dL (6.21)</td>
</tr>
</tbody>
</table>
Books Available at JCPL
Look for these great books, and many more in our online catalog - or visit our Information Desk for help!

<table>
<thead>
<tr>
<th>Title</th>
<th>Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Prevent and Reverse Heart Disease Cookbook: Over 125 Delicious, Life-changing, Plant-based Recipes</td>
<td>by Ann Crile Esselstyn &amp; Jane Esselstyn</td>
</tr>
<tr>
<td>The 30-day Heart Tune-up: A Breakthrough Medical Plan to Prevent and Reverse Heart Disease</td>
<td>by Steven Masley, MD</td>
</tr>
<tr>
<td>Prevent, Halt &amp; Reverse Heart Disease: 109 Things You Can Do</td>
<td>by Joseph C. Piscatella &amp; Barry A. Franklin</td>
</tr>
<tr>
<td>The Heart of the Matter: A Revolutionary Program for Preventing Coronary Heart Disease</td>
<td>by Peter Salgo with Joe Layden</td>
</tr>
<tr>
<td>The Heart Disease Breakthrough: What Even Your Doctor Doesn’t Know about Preventing a Heart Attack</td>
<td>by Thomas Yannios</td>
</tr>
<tr>
<td>Best Practices for a Healthy Heart: How to Stop Heart Disease Before or After It Starts</td>
<td>by Sarah Samaan</td>
</tr>
<tr>
<td>The Expert Guide to Beating Heart Disease: What You Absolutely Must Know</td>
<td>by Harlan M. Krumholz</td>
</tr>
<tr>
<td>Outliving Heart Disease: The 10 New Rules for Prevention and Treatment</td>
<td>by Richard A. Stein</td>
</tr>
</tbody>
</table>

Web Sites

American Heart Association
https://www.heart.org/HEARTORG/

Mayo Clinic: Heart Disease Prevention

Medline Plus: Heart Disease Prevention

Healthline: Heart Disease
http://www.healthline.com/health/heart-disease

National Heart Lung & Blood Institute
http://www.nhlbi.nih.gov/health/health-topics/topics/cad/

Million Hearts
http://millionhearts.hhs.gov/index.html

HelpGuide.org
A trusted non-profit guide to mental health and well-being
http://www.helpguide.org/articles/diet-weight-loss/heart-healthy-diet-tips.htm#youcan

Natural News: Heart Disease Articles & News
http://www.naturalnews.com/heart_disease.html

Vegetarian Times: Heart-Felt Meals
http://www.vegetariantimes.com/article/heart-felt-meals/

Health: 17 Worst Habits for Your Heart
http://www.health.com/health/gallery/0,,20475961,00.html