NEW-LIFESTYLES STEPS TO A HEALTHIER YOU℠

BLOOD PRESSURE FACTS

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High blood pressure is a pervasive problem among Americans, with approximately 65 million persons diagnosed with the condition. That's one out of every three adults! Once high blood pressure develops, it tends to stay with a person for the rest of their lifetime. Fortunately, high blood pressure can be treated and controlled. It's a condition with a learning process like any other.

What is blood pressure?

A vital part of the body's circulatory system, the heart pumps blood to all parts of the body in vessels called arteries. Each time the heart beats, blood pumps through the arteries exerting force against the wall of the arteries measured as blood pressure. Blood pressure is highest when the heart beats, creating a surge of blood through the arteries. This is called systolic pressure. When the heart rests between beats, the blood pressure in the arteries falls. This is called diastolic pressure.

Blood pressure is always measured taking into account both pressure conditions in the arteries - when the heart beats and relaxes. This is why blood pressure is given in two equally important numbers - the systolic pressure over the diastolic pressure. For example, if the systolic pressure measurement is 120 and the diastolic pressure is 80, the blood pressure measurement would be referred to and written down as 120/80 ("120 over 80").

It is normal for blood pressure to change over the course of the day. It is usually lowest when a person is sleeping or at rest and rises when a person is active, nervous or anxious. For the most part, blood pressure stays the same during the day when a person is sitting or standing in one place. A blood pressure reading of 120/80 or below is considered normal. Generally, the lower the blood pressure is the better; however, very low blood pressure can also be of concern and should be checked out by a physician.

How is blood pressure checked?

Individuals should have their blood pressure checked regularly during a routine visit to the doctor's office. Blood pressure readings are usually taken sitting or lying down so that the patient is relaxed. When checking blood pressure, the doctor or nurse will use a stethoscope, a gauge and blood pressure cuff (also called a sphygmomanometer -- sfig-mo-ma-NOM-e-ter). Now, that's a mouthful! For an accurate reading, it is best to not drink coffee or other caffeinated beverages 30 minutes before having blood pressure checked.

Some drugstores and community centers/YMCAs have blood pressure machines that the general public can use to check their blood pressure quickly and easily. Blood pressure monitors can also be purchased at pharmacies for home use. Another way to check blood pressure away from the doctor's office is by using an ambulatory blood pressure monitor. This device is worn for 24 hours at a time and can take blood pressure every 30 minutes.

What is "white coat" hypertension?

Some people have a tendency to become anxious or nervous when they visit the doctor, resulting in high blood pressure readings only when they visit the doctor's office. This condition is called "white coat" hypertension. These individuals should mention to the doctor if they are feeling this way. If the doctor suspects this is the underlying reason for a high blood pressure reading, the patient may be asked to check their blood pressure at home with a home monitor.

What is considered high blood pressure?

High blood pressure, or hypertension, is when a person's level stays consistently high at 140/90 or higher. Only a

The good news is high blood pressure is highly treatable and controllable.

doctor can determine if someone has high blood pressure. Most doctors will check blood pressure several times on different days before deciding that the person definitively has a problem with high blood pressure.

What are the risks associated with high blood pressure?

Often known as the "silent killer," high blood pressure is usually without symptoms until it leads to heart, brain or kidney problems. High blood pressure indicates that the heart is working harder than it needs to, causing extra strain on both the arteries and the heart and increasing a person's risk of a heart attack or stroke. Since the heart is a muscle like any other muscle in the body, it grows larger in size as it is exerting force and straining. If someone has high blood pressure, their heart can get larger, and this enlarged heart condition can lead to heart failure.

Without treatment, high blood pressure can specifically cause small bulges (called aneurysms) to form in blood vessels, blood vessels in the kidney to narrow (causing kidney failure) and arteries throughout the body to become more susceptible to hardening (causing a heart attack, stroke, kidney failure or amputation). The good news is high blood pressure as a condition is highly treatable with lifestyle changes (such as diet and exercise) and, in some cases - medication.

Who gets high blood pressure?

The risk of developing high blood pressure increases if the person is overweight, has a family history of high blood pressure, is a man over the age of 45, is a woman over the age of 55, eats too much salt, drinks too much alcohol, is not exercising or is under constant stress.

What can a person do to lower their blood pressure?

One of the best ways to control high blood pressure is by making a few key lifestyle changes. These include losing excess weight and maintaining a healthy weight through adequate physical activity and a well-balanced diet rich in fruits, vegetables and low-fat dairy products (like the DASH eating plan). Other healthy habits include reducing dietary sodium, increasing dietary potassium, reducing saturated fats and moderating alcohol intake.

Sometimes blood pressure stays too high even when a person makes these kinds of healthy changes. In that case, a doctor may deem it necessary to add medicine to the treatment regimen to help lower blood pressure. Blood pressure medicines work in different ways to lower blood pressure. Often, two or more drugs work better than one. Some drugs lower blood pressure by removing extra fluid and salt from your body. Others affect blood pressure by slowing down the heartbeat, or by relaxing and widening blood vessels.

What is the DASH eating plan?

"DASH" stands for "Dietary Approaches to Stop Hypertension," a clinical study that tested the effects of nutrients in food on blood pressure. Study results indicate that the best diet for reducing elevated blood pressures is one that includes whole grains, poultry, fish and nuts and has reduced amounts of fats, red meats, sweets and sugared beverages. DASH promotes healthy amounts of fruits, vegetables and low-fat dairy foods along with reduced amounts of sodium. It's a great diet for anyone who wants to improve their health and nutrition.

How do I lower sodium in my diet?

If you are someone who reaches for the salt shaker at the start of each meal, the first step in reducing sodium intake in your diet is to banish the salt shaker to the back of the pantry, or throw it out altogether. Next, look for fragrant, tasty spices to add flavor to food without using salt. There are many spices to choose from to enhance the flavor of any food—experiment and find your favorite. Many pre-packaged "convenience" foods like snack foods, lunchmeats and meals that come in a box have high sodium content. Be sure to check the nutritional label on the package to locate products lower in sodium.

There are many spices and herbs that taste wonderful when paired with certain foods. Here are some examples of spices and herbs and the foods they compliment.

Chicken -- Ginger, marjoram, oregano, paprika, rosemary, sage, tarragon, thyme
Beef -- Bay leaf, marjoram, nutmeg, onion, pepper, sage, thyme
Pork -- Garlic, onion, sage, pepper, oregano
Fish -- Curry powder, dill, dry mustard, lemon juice, marjoram, paprika, pepper
Potatoes -- Dill, garlic, onion, paprika, parsley, sage
Green Beans -- Dill, curry powder, lemon juice, marjoram, oregano, tarragon, thyme
Carrots -- Cinnamon, cloves, marjoram, nutmeg, rosemary, sage
Tomatoes -- Basil, bay leaf, dill, marjoram, onion, oregano, parsley, pepper

What is the difference between salt and sodium?

The chemical name for salt is sodium chloride (NaCl), so salt is partly sodium. However, when it comes to choosing a diet that helps lower blood pressure, there really isn't any difference between salt and sodium.

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CHOLESTEROL FACTS

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In recent years there has been lots of talk about cholesterol. Food products advertised on television market their cholesterol-reducing qualities or cholesterol-free content. Other commercials urge watchers to ask their doctor about a certain drug manufactured to reduce blood cholesterol. The nightly news reports ground-breaking, less-invasive medical procedures to unblock arteries previous clogged by cholesterol, now routine in hospitals across the country. The nation seems to be abuzz about cholesterol—good cholesterol versus bad cholesterol, total cholesterol and medicines to reduce cholesterol. What is it all about?

What is cholesterol?

Cholesterol is a fat-like substance found in the cells that travels through the bloodstream in packages called lipoproteins. Lipoproteins are essentially small bundles consisting of fat on the inside and covered by proteins on the outside. Since blood is a watery substance and cholesterol is fatty, the two (like oil and water) do not mix. The lipoproteins are carried through the arteries via the bloodstream like inflatable rafts floating down a river.

Making its own sufficient supply of cholesterol, the body needs and uses some cholesterol in order to function properly. The body uses cholesterol to make hormones, Vitamin D and digestive enzymes. In order to do these things, the body needs healthy levels of two kinds of lipoproteins to carry cholesterol throughout the body—LDL (low density lipoprotein) and HDL (high density lipoprotein).

LDL (low density lipoprotein) cholesterol is also known as "bad" cholesterol. It earns its bad reputation by causing a buildup of cholesterol in the arteries and, as a result, increasing the chance of heart disease. As its name indicates, LDL particles tend to be small—so instead of flowing through the arteries with the blood, they want to cling to the walls of the arteries. The higher the LDL level in the blood, the more likely LDL particles are to build up in the arteries, leading to blockages of the blood flow to the heart and other serious problems.

Specialized cholesterol screening tests can now determine not only the level of LDL and HDL in the blood, but they can also tell the size of the LDL and HDL particles. This is important because a person may have a higher-than-desired level of LDL, but the LDL particles may be of larger size, which would flow through the bloodstream more easily and thus decrease the chance of blockage.

HDL (high density lipoprotein) cholesterol is known conversely as "good" cholesterol. Its role is a positive one—it carries cholesterol from other parts of the body back to the liver which then removes the cholesterol from the body. A high HDL level will also lower the risk of heart disease.

What is high blood cholesterol?

High blood cholesterol is a serious condition because of its role in increasing the risk of heart disease. Too much cholesterol in the blood can cause the arteries to narrow as the cholesterol builds up as plaque on the arterial walls. The buildup of plaque causes a condition called atherosclerosis or hardening of the arteries.

If the coronary arteries narrow and harden (due to the plaque build up), the blood flow essential in bringing oxygenated blood to the heart is compromised causing coronary artery disease and resulting chest pain called angina. Plaque buildup can also cause blood clots in the arteries which also block the flow of blood, resulting in heart attack.

Lowering cholesterol starts with making healthy lifestyle changes.

What causes high blood cholesterol?

High blood cholesterol can be the result of a variety of both controllable and uncontrollable factors. Controllable factors which elevate blood cholesterol include: certain foods found to raise cholesterol levels (foods high in saturated fat, trans fatty acids and foods from animal sources), being overweight and living a sedentary lifestyle (not getting enough exercise or physical activity). Uncontrollable factors include heredity, age and gender. High cholesterol can run in families as a genetic trait passed on from generation to generation. Generally, men, once they reach puberty, have lower levels of HDL than women. As women and men age, their LDL cholesterol levels naturally rise. After age 55, women typically have higher LDL levels than men.

How do I know if I have high blood cholesterol?

Cholesterol levels can only be measured by taking a blood test. It is best to not eat or drink anything 9 to 12 hours before having the test in order to have an accurate fasting blood cholesterol reading. The cholesterol test will measure the amount of LDL "bad" cholesterol, HDL "good" cholesterol, total cholesterol and triglycerides in the blood. Cholesterol levels are measured in milligrams (mg) of cholesterol per deciliter (dL) of blood. For total cholesterol, a level of less than 200 mg/dL is considered desirable. The results of a blood cholesterol test should be gone over with a health professional, as it is important for the patient to be informed of what these numbers mean.

How can I lower my cholesterol?

Taking the necessary steps to lowering blood cholesterol is extremely important in order to decrease the risk of heart disease. Lowering blood cholesterol starts with making healthy lifestyle changes—maintaining a healthy weight, eating a low-fat/high-fiber diet and getting regular physical activity.

Eating a healthy diet

Eating the right foods can help to lower cholesterol. First, limit foods that are high in saturated fats, trans fats and cholesterol. Choose non-fat or low-fat dairy products over full-fat ones. Use healthy oils like canola or olive oil instead of butter, shortening or margarine. Add soluble fiber by eating whole grain breads, cereals, pastas and brown rice. Eat a variety of fruits and vegetables for fiber and important vitamins and nutrients. Cut down on red meat and choose lean sources of protein like fish, turkey, and chicken.

Physical Activity

Regular physical activity helps to raise HDL "good" cholesterol and lower LDL "bad" cholesterol. To maintain a healthy weight, the CDC recommends that adults engage in moderate-intensity physical activities for at least 30 minutes on 5 or more days of the week. Children and adolescents can choose any type of moderate or higher intensity physical activity, such as brisk walking, playing tag, jumping rope, or swimming, as long as it is adds up to at least one hour a day.

Medication

There are a number of medications that help to lower blood cholesterol. If necessary, these medicines must be prescribed by a physician.

Why are so many people talking about omega-3 fatty acids and soy protein products? Do they help to reduce cholesterol?

Recently, the FDA has approved qualified health claims for both soy protein products and foods containing omega-3 fatty acids, allowing such products to market their heart-healthy benefits. Ongoing research is being conducted to examine exactly how omega-3 fatty acids and soy protein impact our health, as they may prove to provide a range of benefits from improved heart health to protection against some types of cancers.

Currently, some experts say there is a positive link between daily consumption of 25 grams of soy protein (or isoflavones from soy products) and lower blood cholesterol in individuals with high blood cholesterol. Soy proteins are found in tofu, soybeans and soymilk.

Omega-3 fatty acids are a form of polyunsaturated fat found in fatty, cold water fish like salmon, tuna, herring, mackerel, sardines and swordfish. Walnuts and flaxseed oil are also good sources of omega-3 fatty acids. Current research has found that omega-3 reduces the risk of heart disease and contributes to lower blood cholesterol and blood pressure as evidenced in Eskimo and Japanese populations—both of which consume traditional diets rich in omega-3 fatty acids from cold water fish.

Experts recommend eating 1-2 servings of fish each week for good health. Omega-3 can also be consumed as a fish oil supplement that is packaged in a capsule and available at health food and drug stores. Remember to always ask for a physician's professional opinion before taking dietary supplements.

FDA Office of Women's Health

Cholesterol

Did you know...?

- Women over age 20 should have their cholesterol checked by their doctor.
- Women over the age of 55 tend to have higher cholesterol levels than men.
- High cholesterol can increase your chance of having heart disease.

What is cholesterol?

- Cholesterol is a fat-like material in your blood. Your body makes its own cholesterol. When you eat foods that have lots of fat or cholesterol, you can have too much cholesterol in your blood.
- Cholesterol can build up on the inside of the blood vessels of your heart. If too much cholesterol builds up, then the blood cannot flow through to your heart. This can cause a heart attack.

Good vs. bad cholesterol

Not all cholesterol in your blood is bad for you. There are three kinds of blood cholesterol that you should know about: HDL (good cholesterol), LDL (bad cholesterol), and triglycerides.

Good cholesterol

- Is called HDL.
- Helps to keep the arteries from clogging up.
- Protects against heart disease.
- A good level is 60mg/dL or more.

Bad cholesterol

- Is called LDL.
- Causes the build up in your arteries and causes blockages of your arteries.
- Causes heart disease.
- A good level is under 100 mg/dL.

Triglycerides

- Are another form of fat in your blood.
- Can also raise your risk for heart disease.
- Borderline high (150-199 mg/dL) or high (200 mg/dL or more) may need treatment.

What are the warning signs of high blood cholesterol?

- Most people do not have any signs.
- Sometimes cholesterol can build up in the blood vessels of your heart and cause chest pains.

How do you find out if you have high cholesterol?

- Go to the doctor and ask for a cholesterol test. The test will let you know how much good and bad cholesterol you have.
- The doctor will tell you the number for your total cholesterol level.
- Your total cholesterol number should be under 200.

OVER

2007

Cholesterol

What can you do?

There are things that you can do to lower your cholesterol:

- Cut back on foods with lots of fat such as fatty meats, fried foods, whole milk, fatty cheeses, butter, margarine, oils, lard, and creams.
- Cut back on food with lots of cholesterol, such as egg yokes and whole eggs.
- Eat more fruits and vegetables.
- Cut back on fatty snacks and desserts, such as candy, cookies, doughnuts, muffins, pastries, and pies.
- Exercise at least 30 minutes most days.
- If you are overweight, try to lose weight. Try to lose weight by cutting back on the amount that you eat. Even a small amount of weight loss can help lower your bad cholesterol, and you will also help your health in other ways.
- Ask your doctor if you need to take medicine to help lower your cholesterol.

To Learn More:

National Heart, Lung, and Blood Institute Health Information Center
Phone: 301-592-8573
http://www.nhlbi.nih.gov/health/index.htm

The National Women's Health Information Center
Phone: 1-800-994-WOMAN (1-800-994-9662)
TTY/TDD: 1-888-220-5446
http://www.womenshealth.gov/faq/heartdis.htm

High Blood Pressure (Hypertension)

FDA Office of Women's Health

High blood pressure (also called **hypertension**) is a serious illness that affects nearly 65 million adults in the United States. High blood pressure is often called a "silent killer" because many people have it but don't know it. Over time, people who do not get treated for high blood pressure can get very sick or even die.

What does high blood pressure do to your body?

High blood pressure can cause life-threatening illnesses like kidney problems, stroke, heart failure, blindness, and heart attacks.

Who is at risk?

Anyone can have high blood pressure. Some people are more likely to have high blood pressure including:

- African Americans
- People over age 55
- People with a family history of high blood pressure

Your chances of having high blood pressure are higher if you:

- Are overweight
- Eat foods high in salt
- Do not get regular exercise
- Smoke
- Drink alcohol heavily

What are the signs of high blood pressure?

Many people with high blood pressure do not feel sick at first. The only way to know for sure is to get your blood pressure checked by a doctor or other health professional.

Understanding your blood pressure: What do the numbers mean?

- When you have your blood pressure taken by your doctor, you are told two numbers, such as **120/80**. Both numbers are important.
- The first number is your pressure when your heart beats (**systolic pressure**). The second number is your pressure when your heart relaxes (**diastolic pressure**).
- Your blood pressure goes up and down during the day, depending on what you are doing. Brief rises in blood pressure are normal, but the higher your blood pressure stays, the more at risk you are.
- If your blood pressure is often greater than **140/90**, you may need treatment.
- If your blood pressure is greater than **120/80**, and you have other **risk factors**, **such as diabetes**, you may need treatment.

OVER

2007

High Blood Pressure (Hypertension)

FDA Office of Women's Health

How is high blood pressure treated?

There are medicines people can take every day to control their high blood pressure. Only your doctor can tell if you need to take medicines.

How does high blood pressure affect pregnant women?

A few women will get high blood pressure when they are pregnant. When pregnant women get high blood pressure, it is called preeclampsia or toxemia.

How do I control my high blood pressure?

- Check your blood pressure.
- Take your high blood pressure medicine every day if needed.
- Exercise often.
- Eat foods low in salt.
- Lose weight or keep weight at a healthy level.
- Do not smoke.
- Limit alcohol.
- Talk to your doctor regularly about your pressure.

FDA Office of Women's Health http://www.fda.gov/womens

To Learn More:

National Heart, Lung, and Blood Institute
Health Information Center
Phone: 301-592-8573
TTY/TDD: 240-629-3255
http://www.nhlbi.nih.gov/health/pubs/pub_gen.htm