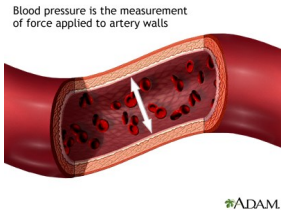
milestone
HCQU Northwest

Hypertension

September 2016, ½ hour

The National Institute of Health (NIH) estimates that about two-thirds of people in the United States over the age of 65 have high blood pressure, also known as hypertension. According to the National Heart Lung and Blood Institute, approximately 72 million people in the United States have high blood pressure.

Blood Pressure is the measurement of the amount of pressure inside the arteries when the heart is contracting and relaxing. High blood pressure or hypertension is when the force against your arteries is too strong. This causes the heart to work harder to pump blood to the body. The systolic (top) pressure is the measurement of the pressure inside the arteries when the heart is beating or pumping blood, and the diastolic (bottom) pressure is the measurement of the pressure inside the arteries when the heart is at rest or relaxing. Throughout the day your blood pressure normally rises and falls. If your blood pressure stays high too long it can cause damage to your heart and other organs, and lead to problems such as heart disease, kidney disease, stroke, and other disorders. Normal blood pressure for adults is defined as being below 120/80 mmHg (millimeters of mercury). High blood pressure for adults is defined as a sustained or persistent systolic pressure of 140 mm/Hg or higher and a diastolic pressure of 90 mmHg or higher.



People with heart disease, peripheral artery disease, diabetes, or chronic kidney disease should aim for a BP of 130/80 or less.

Risk Factors

Hypertension has many risk factors, including:

Age. The risk of high blood pressure increases as you age. Through about age 45, high blood pressure is more common in men. Women are more likely to develop high blood pressure after age 65.

Race. High blood pressure is particularly common among blacks, who often develop hypertension at an earlier age than whites. Serious complications, such as stroke, heart attack and kidney failure are also more common in blacks.

Family history. High blood pressure tends to run in families.

Being overweight or obese. The more you weigh the more blood you need to supply oxygen and nutrients to your tissues. As the volume of blood circulated through your blood vessels increases, so does the pressure on your artery walls.

Not being physically active. People who are inactive tend to have higher heart rates. The higher your heart rate, the harder your heart must work with each contraction and the stronger the force on your arteries. Lack of physical activity also increases the risk of being overweight.

Using tobacco. Not only does smoking or chewing tobacco immediately raise your blood pressure temporarily, but the chemicals in tobacco can damage the lining of your artery walls. This can cause your arteries to narrow, increasing your blood pressure. Secondhand smoke also can increase your blood pressure.

Too much salt (sodium) in your diet can cause your body to retain fluid, increasing blood pressure.

Risk Factors *(...continued from Page 1)*

Too little potassium in your diet. Potassium helps balance the amount of sodium in your cells. If you don't get enough potassium in your diet or retain enough potassium, you may accumulate too much sodium in your blood.

Too little vitamin D in your diet. It's uncertain if having too little vitamin D in your diet can lead to high blood pressure. Vitamin D may affect an enzyme produced by your kidneys that affects your blood pressure.

Drinking too much alcohol. Over time, heavy drinking can damage your heart. Having more than two drinks a day for men and more than one drink a day for women may affect your blood pressure.

High levels of stress can lead to a temporary increase in blood pressure. If you try to relax by eating more, using tobacco or drinking alcohol, you may only increase problems with high blood pressure.

Certain chronic conditions also may increase your risk of high blood pressure, such as kidney disease, diabetes and sleep apnea.

http://www.mayoclinic.org/diseases-conditions/high-blood-pressure/basics/risk-factors/con-20019580

Types of High Blood Pressure

Primary or essential hypertension tends to develop gradually over many years and no cause is identified.

Secondary high blood pressure is caused by an underlying condition such as kidney disease, or can be caused by a medication. Secondary hypertension tends to appear suddenly and causes higher blood pressure than primary hypertension.

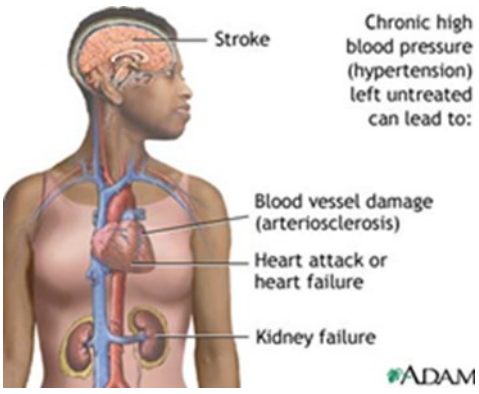
Isolated Systolic Hypertension occurs when systolic pressure is over 140 mm Hg while diastolic pressure remains under 90 mm Hg. This is the more common form of hypertension in people over 50, and is related to arteriosclerosis.

Diastolic Hypertension refers to a diastolic pressure over 89 mm Hg and is more commonly seen among people 30 -50 years old.

Effects of High Blood Pressure

High blood pressure can damage your health in many ways. It can seriously hurt important organs like your heart and brain.

Decreased Blood Flow to the Heart. High blood pressure can harden your arteries, which decreases the flow of blood and oxygen to your heart and leads to heart disease. In addition, decreased blood flow to the heart can cause:



Chest pain, also called angina. Heart failure, a condition when your heart can't pump enough blood and oxygen to your other organs.

Heart attack, which occurs when the blood supply to your heart is blocked and the heart muscle begins to die without enough oxygen. The longer the blood flow is blocked, the greater the damage to the heart.

The Brain. High blood pressure can burst or block arteries that supply blood and oxygen to the brain, causing a stroke. Brain cells die during a stroke because they do not get enough oxygen. Stroke can cause serious disabilities in speech, movement, and other basic activities, and a stroke can kill you.

The Kidneys. Adults with diabetes, high blood pressure, or both have a higher risk of developing chronic kidney disease than those without these diseases. Approximately 1 of 3 adults with diabetes and 1 of 5 adults with high blood pressure have chronic kidney disease.

Benefits of Lowering Blood Pressure

According to the U.S. Department of Health and Human Services, "in clinical trials, antihypertensive therapy has been associated with reductions in stroke incidence averaging 35-40 percent; myocardial infarction, 20-25 percent; and heart failure, more than 50 percent." Maintaining a blood pressure at or below 120/80 also helps prevent cardiac issues, such as heart attacks, angina, hardening of the arteries, peripheral artery disease, and heart failure. It can also help improve your vision by reducing pressure on your optic nerve, and prevent damage to your kidneys, which in turn, helps keep your blood pressure regulated, since kidneys produce a hormone that helps keep our blood pressure in check.

Symptoms

There are usually no symptoms associated with high blood pressure unless the person's blood pressure is severely elevated. This condition is called hypertensive crisis and the person's blood pressure is 180/110 mmHg or higher. Symptoms may include a headache that last for a few days, nausea, vomiting, dizziness, blurred or double vision, nosebleeds, heart palpitations, and shortness of breath. If these symptoms are experienced by anyone they should seek medical attention immediately!

Diagnosis

Diagnosis of hypertension is generally not limited to a one time reading of a person's blood pressure. Usually several readings are taken over a period of time before the diagnosis is made. This chart shows the generally accepted ranges for the average adult.

Blood Pressure	Systolic	Diastolic
Normal	under 120	and under 80
Pre-hypertension	120 to 139	or 80 to 89
Stage 1 hypertension	140 to 159	or 90 to 99
Stage 2 hypertension	160 or over	or 100 or over

Treatment

Treatment for high blood pressure depends on the severity and the associated risks of developing other medical disorders. The physician may suggest lifestyle changes such as diet and exercise if the person's blood pressure is only slightly elevated and the risk of developing cardiovascular disease is considered to be small. If the person's blood pressure is moderately high and the physician thinks the risk of developing cardiovascular disease in the next ten years is above 20%, the physician may prescribe medication and advise lifestyle changes.

Controlling Hypertension

High blood pressure (hypertension) is called the silent killer. This is because many people who have it don't know it. High blood pressure is 140/90 or higher. Know your blood pressure and remember to check it regularly. Doing so can save your life. Here are some things you can do to help control your blood pressure.

Choose heart-healthy food

- Select low-salt, low-fat foods.
- Limit canned, dried, cured, packaged, and fast foods, which can contain a lot of salt.
- Eat eight to ten servings of fruits and vegetables every day.
- Choose lean meats, fish, or chicken.
- Eat whole-grain pasta, brown rice, and beans.
- Eat two to three servings of dairy products.
- Ask your doctor about the DASH eating plan. This plan can help reduce blood pressure.

Maintain a healthy weight

- Ask your health care provider what weight range is healthiest for you. If you are overweight, a weight loss of only 3% to 5% of your body weight can help lower blood pressure.
- Limit snacks and sweets.
- Get regular exercise.

Get up and get active

- Choose activities you enjoy. Find ones you can do with friends or family.
- Park farther away from building entrances.
- Use stairs instead of the elevator.
- When you can, walk or bike instead of driving.
- Rake leaves, garden, or do household repairs.
- Be active at a moderate to vigorous level of physical activity for at least 40 minutes for a minimum of 3 to 4 days a week.

Manage stress

- Make time to relax and enjoy life. Find time to laugh. Meditate.
- Visit with family and friends, and keep up with hobbies.

Limit alcohol and quit smoking

- Men should have no more than two drinks per day.
- Women should have no more than one drink per day.
- Talk with your health care provider about quitting smoking. Smoking increases your risk for heart disease and stroke. Ask about local or community programs that can help.

Hypertension Test

Name: _____ Role/Title: _____

Agency: _____ Date: _____

Please provide contact information (email address, fax number, or mailing address) where you would like your certificate to be sent:

_____

_____

You must submit your completed test, with at least a score of 80%, to receive ½ **hour** of training credit for this course.

* To submit via fax, please fax the test and evaluation to 814-728-8887.
* To submit via email, please send an email to HCQUNW@MilestonePA.org. Please put "Hypertension Test" in the subject line, and the numbers 1— 10, along with your answers, in the body of the email, OR scan the test and evaluations pages and email as attachments.
* To submit via mail, send the test and evaluation pages to Milestone HCQU NW, 247 Hospital Drive, Warren PA 16365.

Knowledge Assessment: (true or false)

1. As we age the risk for high blood pressure increase? **True** **False**
2. Diagnosis of hypertension or high blood pressure is generally not limited to a one time reading of a person's blood pressure? **True** **False**
3. Blood Pressure is the measurement of the amount of _____ inside the arteries when the heart is contracting and relaxing?
4. High blood pressure can harden your _____?
5. High blood pressure is 130/80? **True** **False**
6. Your blood pressure normally rises and falls throughout the day? **True** **False**
7. High blood pressure is called the _____killer?
8. Cured and fast foods are heart healthy foods? **True** **False**
9. There are usually no symptoms associated with high blood pressure unless the person's blood pressure is severely elevated? **True** **False**
10. A weight loss of only 3% to 5% of your body weight can help lower blood pressure. **True** **False**

References: http://www.cdc.gov/bloodpressure/about.htm

http://www.mayoclinic.org/diseases-conditions/high-blood-pressure/basics/risk-factors/con-20019580

http://www.upmc.com/patients-visitors/education/cardiology/Pages/blood-pressure.aspx

Home Study Evaluation

Training Title: Hypertension Date: _____

Please circle your PRIMARY reason for completing this home-study training:

☐ It's mandatory ☐ interested in subject matter ☐ need training hours ☐ convenience

Please circle the best response to each question.

5 = Strongly Agree 4 = Agree 3 = Undecided 2 = Disagree **1 = Strongly Disagree**

1.	As a result of this training, I have increased my knowledge.	5	4	3	2	1
2.	I learned something I can use in my own situation.	5	4	3	2	1
3.	This training provided needed information.	5	4	3	2	1
4.	The training material was helpful and effective.	5	4	3	2	1
5.	Overall, I am satisfied with this training.	5	4	3	2	1

Suggestions for improvement: _____

Additional information I feel should have been included in this training: _____

I would like to see these topics/conditions developed into home-study trainings: _____