What is high blood pressure?

- High blood pressure, also known as hypertension, is a disease that occurs when blood pressure stays above normal for a long time. As a result, the walls of arteries get stretched beyond their healthy limit, and damage occurs creating a variety of other health problems.
- Blood pressure is the force of blood pushing against the walls of the arteries, vessels that carry blood from the heart to other parts of the body.
- Blood pressure is measured in millimeters of mercury (mmHg) using two numbers. The first/top number, systolic blood pressure, represents the pressure in blood vessels when the heart contracts. The second/bottom number, diastolic blood pressure, represents the pressure in blood vessels when the heart relaxes between beats.
- Blood pressure normally rises and falls throughout the day based on the kind of activity in which an individual is engaged.
- High blood pressure usually has no warning signs or symptoms, so many people do not know that they have it. The only way to know whether you have high blood pressure is to have your blood pressure accurately measured.
- High blood pressure can lead to serious complications, including death, if not treated. However, controlling blood pressure through healthy lifestyle practices and/or medications could prevent or delay the development of complications.
- A hypertensive crisis is a medical emergency and occurs when blood pressure numbers rise above 180 for the systolic pressure or 110 for the diastolic pressure.

How many people are affected by high blood pressure?

- High blood pressure is the 13th leading cause of death in the United States.¹
- In North Carolina in 2015, high blood pressure was the primary cause of 942 deaths (about 1% of all deaths) and a contributing cause to 23,495 heart disease and stroke deaths.² That means high blood pressure causes or contributes to at least 26% of all deaths in N.C. each year.
- Almost one out of every three adults in the United States (29% or about 75 million people) has been diagnosed with high blood pressure.³ In addition, almost one out of three adults has prehypertension—the condition of having blood pressure higher than normal but not yet in the high blood pressure range.³
- About 2.7 million North Carolina adults (35%) have been diagnosed with high blood pressure by a health care professional.⁴ Assuming that national prehypertension rates also apply to North Carolina, up to an additional 2.5 million adults in North Carolina are at risk of high blood pressure.
- The North Carolina Medicaid program spent $775 million on 398,305 beneficiaries with high blood pressure in 2015.⁵ That’s about $1,946 per beneficiary with high blood pressure.

What are the symptoms of high blood pressure?

- High blood pressure is sometimes referred to as the silent killer because it usually has no warning signs or symptoms, so many people don’t realize they have it.
- Only when blood pressure readings soar to very high levels (systolic of 180 or higher OR diastolic of 110 or higher) many obvious symptoms such as severe headaches, severe anxiety, shortness of breath and nosebleeds occur. This is known as a hypertensive crisis, and it is a medical emergency.

What are the risk factors for high blood pressure?

- Non-modifiable risk factors for high blood pressure include advanced age, gender (men between 45-64 years and women 65 years and older), race/ethnicity (non-Hispanic blacks or African Americans) and heredity.
- Modifiable risk factors include unhealthy diet (eating foods high in sodium and low in potassium), physical inactivity, overweight/obesity, excessive alcohol consumption, diabetes, smoking and secondhand smoke (Figure 1).
- Elevated blood pressure and protein in urine during pregnancy is known as preeclampsia and usually resolves within six weeks after delivery. Having preeclampsia during more than one pregnancy is a risk factor for high blood pressure later in life.

How is high blood pressure diagnosed?

- High blood pressure is diagnosed using blood pressure measurement devices.
- Measuring blood pressure is quick and painless. This can be done by a trained health professional or other individual (provided an appropriate device is used and measurement instructions are correctly followed). For recommendations for selecting an accurate blood pressure monitor and instructions for taking accurate blood pressure measurements at home, please visit the American Heart Association website—Symptoms, Diagnosis & Monitoring of High Blood Pressure page.
- Normal blood pressure values vary with age and other factors, but a blood pressure of 140/90 mmHg or higher is generally considered too high.

What are the complications of high blood pressure?

- In general, people whose blood pressure numbers remain above 140/90 mmHg (140 systolic or above OR 90 diastolic or above) are said to have uncontrolled high blood pressure and often develop serious complications. High blood pressure patients who maintain blood pressure numbers below 140/90 mmHg are said to have controlled high blood pressure and are less likely to develop complications.
- Individuals with uncontrolled high blood pressure are four times more likely to die from a stroke and three times more likely to die from heart disease compared to individuals without high blood pressure.
- Over two out of every three people (69%) who have a first heart attack, three out of every four (77%) who have a first stroke and three out of every four (74%) who have chronic heart failure also have high blood pressure.
- Other complications of high blood pressure include kidney damage, vision loss, erectile dysfunction, memory loss, fluid in the lungs, angina and peripheral artery disease.

What are the treatment options for high blood pressure?

- The goal of treating high blood pressure is to maintain blood pressure control in order to prevent or delay the development of complications.
- Research shows that a team-based approach to treatment—including the patient, his or her social support system (family, friends and/or support groups), the health care provider team (doctors, nurses and allied health
Healthy lifestyle practices that are beneficial in controlling high blood pressure include:

— Maintaining a healthy weight or losing weight (for those who are overweight or obese). See esmweigless.com.
— Maintaining a healthy diet (including reducing sodium intake). For general information on physical activity and healthy eating, please visit myeatsmartmoveore.com.
— medinsteofmeds.com.
— cdc.gov/dhisp/data_statistics/fact_sheets/fs_sodium.htm.
— cdc.gov/salt/pdfs/Reducing_Sodium_Diet_BP_Control.pdf.
— Avoiding tobacco products and secondhand smoke for non-smokers and quitting for current smokers. For general information about smoking and how to get help quitting, please visit quitlinenc.com or call 1-800-QUIT-NOW (1-800-784-8669).
— Limiting alcohol consumption. Men should have no more than two drinks per day, and women should have no more than one. For more information, visit cdc.gov/alcohol.

In many circumstances, one or more blood pressure lowering medications may be needed in combination with healthy lifestyle practices to maintain blood pressure control.

— If blood pressure-lowering medications are recommended by a health care provider, taking them every day as prescribed is vital to help control high blood pressure. Patients should never stop taking their medications without first talking to their health care provider or pharmacist.

Because blood pressure can fluctuate, home monitoring and recording of blood pressure readings can provide health care providers with valuable information to determine whether a given treatment plan is working. Visit preventchronicdiseasenc.com for information on how to monitor blood pressure.

Figure 2. Diagnosed High Blood Pressure Prevalence by Area Health Education Centers (AHEC) Regions, NC, 2013

Hypertension Prevalence, 2013

<table>
<thead>
<tr>
<th>Percentage</th>
<th>24.9</th>
<th>34.2 - 36.4</th>
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<td>25.0 - 31.3</td>
<td>36.5 - 39.5</td>
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<tr>
<td></td>
<td>31.4 - 34.1</td>
<td>AHEC Region Boundary</td>
</tr>
</tbody>
</table>

DATA SOURCE: North Carolina State Center for Health Statistics.
www.schs.state.nc.us/data/brfss/2013/nchccc/HP16G4.htm

REFERENCES


In addition to the above references this fact sheet was developed with heavy reliance on information from:

— The American Heart Association website: www.heart.org/HEARTORG/Conditions/HighBloodPressure/High-Blood-Pressure-or-Hypertension_UCM_002020_SubHomePage.jsp.
— The Centers for Disease Control and Prevention website: www.cdc.gov/bloodpressure/about.htm
— The American Heart Association website: www.heart.org/HEARTORG/Conditions/HighBloodPressure/High-Blood-Pressure-or-Hypertension_UCM_002020_SubHomePage.jsp.
— The Centers for Disease Control and Prevention website: www.cdc.gov/bloodpressure/about.htm

This fact sheet was produced by the Community and Clinical Connections for Prevention and Health Branch, Chronic Disease and Injury Section, Division of Public Health, N.C. Department of Health and Human Services. If you have any questions about data used in this fact sheet or about high blood pressure prevention and management efforts in North Carolina, please email contact@communityclinicalconnections.com.

For more information on the Community and Clinical Connections for Prevention and Health Branch, please visit communityclinicalconnections.com.