### High Blood Pressure (Hypertension) in North Carolina

**FACT SHEET** 

Community & Clinical Connections for Prevention & Health Branch | North Carolina DHHS | Division of Public Health

### What is high blood pressure?

Blood pressure is the force of blood pushing against the walls of the arteries, which are vessels that carry blood from the heart to other parts of the body. Blood pressure normally rises and falls throughout the day based on the kind of activity in which an individual is engaged. High blood pressure, also known as hypertension, is a disease that occurs when blood pressure stays above normal. 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 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.
- High blood pressure can have 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 quickly rise above 180 for the systolic pressure or 120 for the diastolic pressure. Call 911 if you are having a hypertensive emergency.1

### How many people are affected by high blood pressure?

High blood pressure is the 14th leading cause of death in the US.2

In NC in 2022 high blood pressure was the underlying cause of

and a contributing cause to

stroke deaths.3

That means high blood pressure caused or contributed to 1 in 5 NC deaths in 2022.

**US adults (nearly 1/2 or 48.1%)** have hypertension defined as blood pressure greater than 130/80 or are taking medication for hypertension.4

In 2022, high blood pressure led to

hospital

\$1.8 billion in nospital charges in NC

in hospital

Or \$48,028 per discharge<sup>5</sup>

In 2023, an estimated **3.2** million

NC adults (over 1/3 or 37.5%) reported having been diagnosed with high blood pressure by a health care professional.4

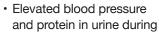
In 2023 NC Medicaid spent

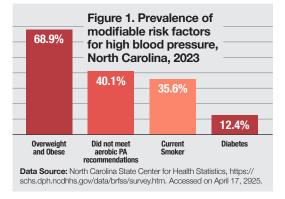
high blood pressure.4

That's about \$2,437 per beneficiary.6

### What are the risk factors for high blood pressure?

- Risk factors that cannot be controlled include: advanced age, gender (men aged 45-64 years and women 65 years and older), race/ethnicity, and heredity.
- Risk factors that can be controlled include: overweight/obesity, physical inactivity, smoking and secondhand smoke. diabetes, excessive alcohol consumption and an unhealthy diet of processed foods high in sodium (Figure 1).





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.

## 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 120 or higher) do obvious symptoms occur, such as severe headaches, severe anxiety, shortness of breath and nosebleeds. This is known as a hypertensive crisis and is a medical emergency.

## How is high blood pressure diagnosed?

- A trained health professional uses blood pressure measurement devices to diagnose high blood pressure, as shown in Table 1.
- Your doctor may recommend monitoring your blood pressure at home in addition to your healthcare visits. For recommendations on selecting a blood pressure monitor and instructions for taking accurate blood pressure measurements at home, please visit the American Heart Association website — Home Blood Pressure Monitoring (heart.org/en/health-topics/high-blood-pressure/ understanding-blood-pressure-readings/monitoringyour-blood-pressure-at-home).

Table 1: The Definition of Hypertension

Blood Pressure Category	Systolic mmHg		Diastolic mmHg
Normal	Less than 120	And	Less than 80
Elevated	120-129	And	Less than 80
High Blood Pressure (Hypertension) Stage 1	130–139	Or	80-89
High Blood Pressure (Hypertension) Stage 2	140 or higher	Or	90 or higher

Source: https://www.heart.org/en/health-topics/high-blood-pressure/understanding-blood-pressure-readings

# What are the complications of high blood pressure?

- For years, blood pressure above 140/90 mmHg was said to be uncontrolled high blood pressure and could lead to serious complications. Blood pressure below 140/90 mmHg was said to be controlled high blood pressure and would likely not lead to serious complications. The current chart, above, classifies elevated blood pressure as a systolic pressure 120-129 mmHg and a diastolic pressure less than 80mmHg.
- More than 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.<sup>6</sup>
- 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—involving the patient, his or her social support system (family, friends and/or support groups), the health care provider team (doctors, nurses and allied health personnel), community

health workers and pharmacists—is an effective way to achieve blood pressure control in patients.

The main options for controlling high blood pressure include healthy lifestyle practices and blood pressure lowering medications. For more information on how to manage high blood pressure visit cdc.gov/high-blood-pressure/living-with/index.html.

### 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 esmmweighless.



Engaging in regular physical activity. See eatsmartmove morenc.com.



Maintaining a healthy
diet (including reducing
sodium intake). For
general information on
physical activity and
healthy eating, visit:
eatsmartmove
more.com
medinsteadof
meds.com
cdc.gov/salt/reducesodium-intake/
index.html



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.



Getting adequate sleep helps keep heart and blood vessels healthy. For more information on adequate sleep visit cdc.gov/sleep/about/ index.html.

## In many cases, one or more blood pressure lowering medications may be needed along 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 very important 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 readings can vary, 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. This is called self-measured blood pressure (SBMP) monitoring.

 Visit targetbp.org/tools\_downloads/how-to-accuratelymeasure-blood-pressure-2 for information on how to monitor blood pressure.

Patients can also work with their pharmacists to measure blood pressure and monitor blood pressure medication adherence.

## How can high blood pressure be prevented?

- The development of high blood pressure can be prevented or delayed by adopting a healthy lifestyle and managing other medical conditions that increase the risk of high blood pressure.
- The healthy lifestyle practices that are beneficial in controlling high blood pressure are also beneficial in preventing high blood pressure. (Refer back to the treatment section.)
- In some cases, medications may be needed to control other medical conditions that increase the risk of high blood pressure, such as diabetes.
- For fact sheets about diabetes and obesity in North Carolina, visit communityclinical connections.com.

### High blood pressure age-adjusted prevalence (%)

27.6-30.5

33

33.9–36.7 36.8–43.1

30.6–31.9 32.0–33.8

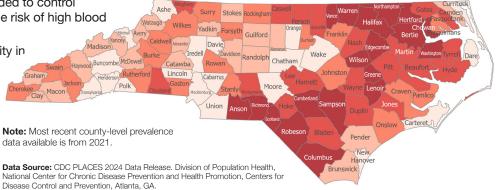
## How can the complications of high blood pressure be prevented?

 The primary way to prevent or delay complications of high blood pressure is to maintain blood pressure control. (Refer back to the treatment section.)

## What are the disparities in the burden of high blood pressure?

- North Carolina has the 11th highest rate of high blood pressure among adults out of all fifty states.<sup>7</sup>
- Non-Hispanic Black adults are more likely to have been diagnosed with high blood pressure compared to non-Hispanic Whites in North Carolina (51.7% of non-Hispanic Black adults vs 37.9% of non-Hispanic White adults).<sup>8</sup> In addition, there are about twice as many deaths due to high blood pressure among non-Hispanic Black people (ageadjusted death rate = 45.2 per 100,000) compared to non-Hispanic White people (age-adjusted death rate = 23.0 per 100,000) in North Carolina.<sup>9</sup>
- There is considerable geographic variation in the prevalence of high blood pressure and death and hospitalization rates due to high blood pressure, with the eastern part of the state generally having a higher burden (Figure 2).

### Figure 2. High Blood Pressure among Adults 18+ in North Carolina, by County, 2021



#### REFERENCES

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In addition to the above references this fact sheet was developed with heavy reliance on information from the American Heart Association website: heart.org/HEARTORG/Conditions/HighBloodPressure-High-Blood-Pressure-or-Hypertension\_UCM\_002020\_SubHomePage.jsp and the Centers for Disease Control and Prevention website: https://www.cdc.gov/high-blood-pressure/index.html.



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 heart and blood vessel disease 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.