

## What is heart and blood vessel disease?

- Heart and blood vessel disease is a term used to describe all the abnormal conditions that affect the heart and blood vessels. This includes conditions such as coronary artery disease (CAD), myocardial infarction (commonly known as heart attack), heart failure, angina, aortic aneurysm, arrhythmias (including atrial fibrillation), congenital heart defects, cardiomyopathy, peripheral artery disease (PAD) and rheumatic heart disease among many other conditions.
- Coronary artery disease is the most common type of heart disease and occurs when a substance called plaque builds up in the coronary arteries, blood vessels that carry blood to the heart muscle.
  - A heart attack occurs when plaque completely blocks one or more coronary arteries.
  - A heart attack is a medical emergency.
- Heart failure is another common type of heart disease that occurs when the heart muscle is weakened and cannot pump oxygen-rich blood with enough force to reach all the organs of the body.

## How many people are affected by heart disease?

- Heart disease is the leading cause of death in the United States and the second leading cause of death in North Carolina (NC).<sup>1,2</sup> In 2015, heart disease caused 18,467 deaths in NC. That's the equivalent of two heart disease deaths every hour and 21% of all deaths.<sup>2</sup>
- About 540,000 North Carolinians (7% of NC adults) have had a heart attack, angina or coronary heart disease in their lifetime.<sup>3</sup> This estimate excludes people living in long-term care facilities, as well as several other conditions classified as heart disease, and is therefore probably an underestimate of those who have had heart disease in their lifetime.
- Heart disease led to 100,123 hospital admissions (11% of all admissions) and \$4.5 billion in hospital charges in

North Carolina in 2014.<sup>4</sup> That equates to one heart disease hospitalization every five minutes and over \$12.5 million in hospital charges for heart disease each day in the state.

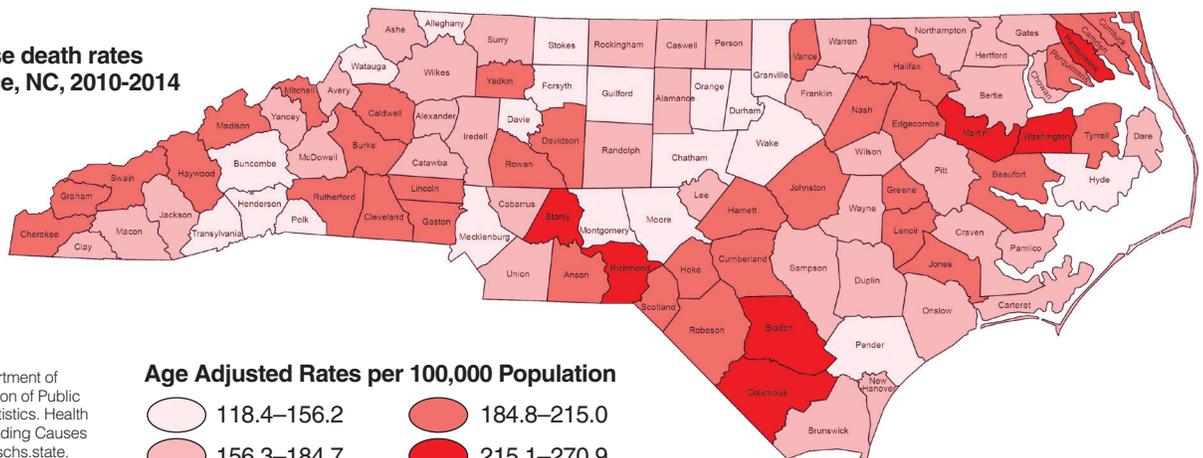
## Disparities, inequality and inequity in the burden of heart disease

- North Carolina has the 27th highest age-adjusted heart disease death rate among the 50 states and Washington, D.C.<sup>5</sup>
- The eastern counties of NC tend to have a higher burden of heart disease (e.g., death and hospitalization rates), when compared to the rest of the state (Figure 1).
- Non-Hispanic African-American North Carolinians have higher heart disease death rates compared to all other racial/ethnic sub-groups.
- African-American North Carolinians are also more likely to die from heart disease and at a younger age compared to white non-Hispanic North Carolinians. In 2015, the proportion of heart disease deaths occurring before age 65 by race/ethnicity and gender were as follows:
  - 42% among African-American men
  - 25% among white men
  - 27% among African-American women
  - 12% among white women<sup>6</sup>

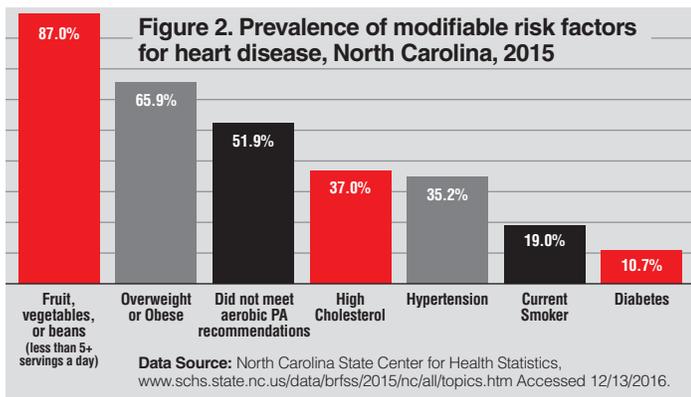
## What are the risk factors for heart disease?

- Non-modifiable risk factors for heart disease include age, gender, race/ethnicity, genetics and family history.
- The major modifiable risk factors for heart disease include high blood pressure, high blood lipids (mainly LDL cholesterol) and smoking.
- Other important modifiable risk factors for heart disease include diabetes, overweight and obesity, unhealthy diet and physical inactivity (Figure 2).

**Figure 1. Heart disease death rates by county of residence, NC, 2010-2014**



**Data Source:**  
Data Source: North Carolina Department of Health and Human Services, Division of Public Health, State Center for Health Statistics. Health Atlas, Vital Statistics, Volume 2: Leading Causes of Death. Accessed at <http://www.schs.state.nc.us/data/hsa/vital.htm> on December 13, 2016.



## How can heart disease be prevented?

- Adopting a healthy lifestyle and managing risk factors can reduce the risk of developing heart disease. Visit [preventchronicdiseasenc.com](http://preventchronicdiseasenc.com) to learn more about key behaviors.
- Healthy lifestyle practices that help reduce the risk of heart disease include:
  - Maintaining a healthy weight or losing weight (for those who are overweight or obese). For information on achieving a healthy weight, please visit [esmmweighless.com](http://esmmweighless.com).
  - Regular physical activity and healthy eating (including reducing sodium intake). For general information on physical activity and healthy eating please visit [myeatSMARTmove.com](http://myeatSMARTmove.com).
  - 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](http://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](http://cdc.gov/alcohol).
- A combination of lifestyle measures and medications may be necessary to control medical conditions that increase the risk of heart disease, such as high blood pressure, diabetes and high blood cholesterol. For fact sheets about hypertension, diabetes and obesity in North Carolina visit [communityclinicalconnections.com](http://communityclinicalconnections.com).

## REFERENCES

- Centers for Disease Control and Prevention, National Center for Health Statistics. Leading causes of death. Accessed at [www.cdc.gov/nchs/fastats/leading-causes-of-death.htm](http://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm) on December 12, 2016.
- North Carolina Department of Health and Human Services, Division of Public Health, State Center for Health Statistics. North Carolina Vital Statistics 2015 – Volume 2, Leading Causes of Death. Accessed at [www.schs.state.nc.us/data/vital/lcd/2015/pdf/TblsA-F.pdf](http://www.schs.state.nc.us/data/vital/lcd/2015/pdf/TblsA-F.pdf) on December 12, 2016.
- North Carolina Department of Health and Human Services, Division of Public Health, State Center for Health Statistics. Behavioral Risk Factor Surveillance System (BRFSS). Data produced upon request, 12-19-2016. The 2015 estimates of the NC population were obtained from: [www.schs.state.nc.us/interactive/query/population/nchspop.cfm](http://www.schs.state.nc.us/interactive/query/population/nchspop.cfm).
- North Carolina Department of Health and Human Services, Division of Public Health, State Center for Health Statistics. *Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence, North Carolina, 2014*. Third report listed under Morbidity section. Accessed at [www.schs.state.nc.us/data/databook/](http://www.schs.state.nc.us/data/databook/) on August 17, 2016.

## What are the symptoms of heart disease?

- The symptoms of heart disease vary and depend on the specific condition.
- For heart attack, the major symptoms include:
  - Chest pain or discomfort.
  - Pain or discomfort in the arms, shoulder, jaw, neck or back.
  - Shortness of breath.
  - Feeling weak, light-headed or faint.

Over half of individuals who die suddenly from coronary heart disease, including heart attack, have had no previous symptoms. Absence of the above symptoms does not necessarily mean absence of risk for heart attack. To learn more about the signs and symptoms of heart attack visit [startwithyourheart.com/Heart\\_Healthy/Heart\\_Disease.php](http://startwithyourheart.com/Heart_Healthy/Heart_Disease.php).

- Common symptoms of heart failure include:
  - Shortness of breath during daily activities.
  - Having trouble breathing when lying down.
  - Weight gain with swelling in the feet, legs, ankles or stomach.
  - Generally feeling tired or weak.

## What are the treatment options for heart disease?

- Treatment for heart disease depends on the specific condition.
- Regarding heart attack:
  - It is important to know the symptoms of heart attack and to immediately call 911 if you think you or someone else may be having a heart attack. The chance of survival, chance of recovery and degree of lasting disability are affected by the time lapse between the onset of heart attack symptoms and the start of treatment.
  - Although 90% of North Carolina adults say the first thing they would do if they thought someone was having a heart attack is to call 911, only 13% actually know all the signs and symptoms of a heart attack.<sup>7,8</sup> This means a majority of North Carolinians may not be able to identify a heart attack when it occurs. To learn more about the signs and symptoms of a heart attack, visit [startwithyourheart.com](http://startwithyourheart.com).
  - Treatment for a heart attack generally involves advanced medical and surgical procedures to restore blood flow to the heart muscle.
- For heart failure, medications and sodium reduction are the cornerstones of treatment.
- In addition to specific treatment procedures for a given condition, lifestyle changes and medical treatment of risk factors are major components of the treatment of heart disease.

5. Heart disease and stroke statistics—2016 update: A Report from the American Heart Association. *Circulation*. 2015; Dec 16.

6. North Carolina Department of Health and Human Services, Division of Public Health, State Center for Health Statistics. Leading Causes of Death in North Carolina. Accessed at [www.schs.state.nc.us/interactive/query/lcd/lcd.cfm](http://www.schs.state.nc.us/interactive/query/lcd/lcd.cfm) on December 13, 2016.

7. North Carolina Department of Health and Human Services, Division of Public Health, State Center for Health Statistics. Behavioral Risk Factor Surveillance System (BRFSS). Accessed at [www.schs.state.nc.us/schs/brfss/2011/nc/all/hattack.html](http://www.schs.state.nc.us/schs/brfss/2011/nc/all/hattack.html) on June 12, 2015.

8. North Carolina Department of Health and Human Services, Division of Public Health, State Center for Health Statistics. Behavioral Risk Factor Surveillance System (BRFSS). Accessed at [www.schs.state.nc.us/schs/brfss/2011/nc/all/aid.html](http://www.schs.state.nc.us/schs/brfss/2011/nc/all/aid.html) on June 12, 2015.

In addition to the above references, this fact sheet was developed with heavy reliance on information from the Centers for Disease Control and Prevention website: [cdc.gov/heartdisease](http://cdc.gov/heartdisease).