

Facts about Stroke in Connecticut - 2011

What is stroke?

- Stroke refers to the damage in a group of nerve cells in the brain, often resulting from interrupted blood flow caused by a blood clot or a bursting blood vessel. A stroke can result in speech problems, paralysis, coma, and dementia depending on the area of the brain affected.
- Stroke is the most severe clinical manifestation of cerebrovascular disease, a variety of conditions affecting the arteries that supply blood to the brain.

How does stroke affect Connecticut residents?

- Stroke is the 4th leading cause of death in Connecticut, accounting for about 5% of all deaths (2008 data). More than 1,400 Connecticut residents die each year from stroke.
- Nearly 90% of all stroke deaths in Connecticut occur among persons 65 and over (2005-2007 data).
- About 62% of stroke deaths are among females (2006-2008 data). However, age-adjusted mortality rates for stroke do not differ significantly by gender.
- Connecticut compares favorably to the U.S. in overall stroke mortality. The age-adjusted stroke mortality rate for all Connecticut residents is 33.8 per 100,000 population (2006-2008 data) compared with 42.2 per 100,000 population in the U.S. (2007 data). *The Healthy People 2020* goal is 33.8 stroke deaths per 100,000 population.
- There are about 7,400 hospitalizations due to stroke every year in Connecticut. Males have a significantly higher rate of hospitalization for stroke than females (2008 data).

What are the trends among Connecticut ethnic subpopulations?

- Black males have significantly higher age-adjusted stroke mortality rates compared with White and Hispanic males in Connecticut (Age-adjusted rate per 100,000 population, 2006-2008: Black males – 49.2; White males – 33.4; Hispanic males – 27.8. The Hispanic and White male rates are not significantly different).
- The age-adjusted stroke mortality rates among White, Black, and Hispanic females in Connecticut are not significantly different (Age-adjusted rate per 100,000 population, 2006-2008: Black females – 37.4; White females – 32.2; Hispanic females – 28.7).
- Black males and Hispanic males have significantly higher premature mortality to age 75 compared with White males in Connecticut. (Age-adjusted Years of Potential Life Lost Rates per 100,000 population, 2006-2008: Black males – 336.6; White males – 100.3; Hispanic males – 193.7. The difference between the Hispanic and Black male rates did not reach statistical significance).
- Black females have significantly higher premature mortality to age 75 compared with White females in Connecticut. (Age-adjusted Years of Potential Life Lost Rates per 100,000 population, 2006-2008: Black females – 176.4, White females – 75.0, Hispanic females – 94.1. The differences in the rates of Hispanic vs. White as well as differences in the rates of Hispanic vs. Black females did not reach statistical significance).



What are the costs of stroke?

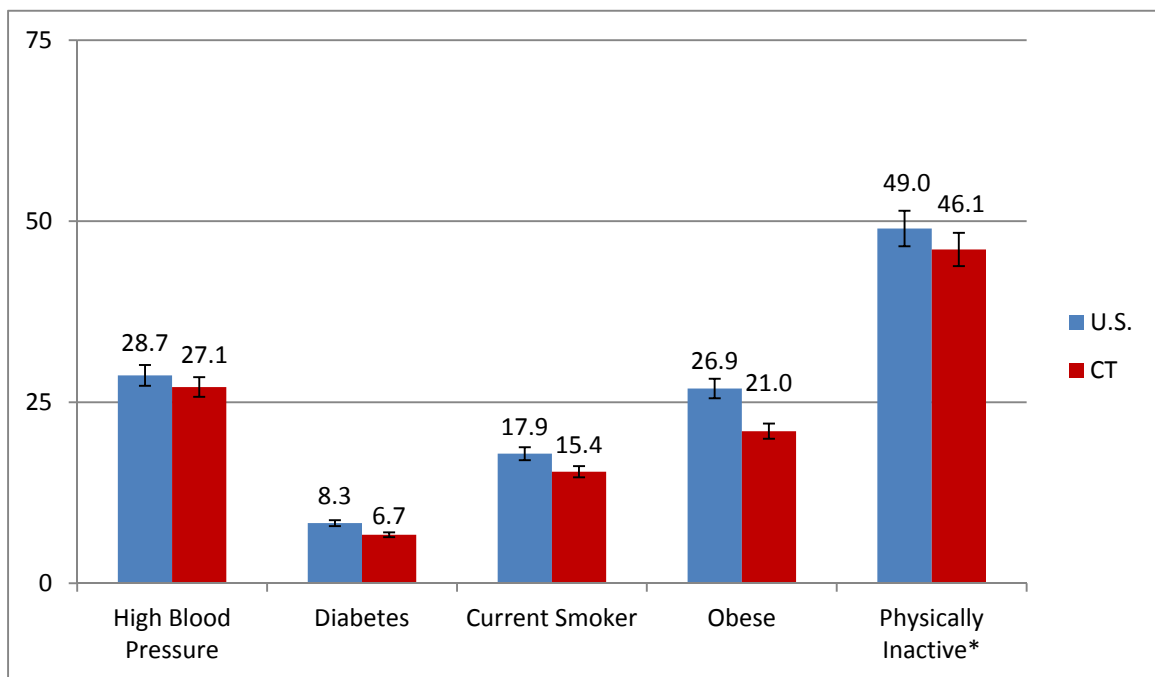
- The annual cost of stroke in the U.S.—including direct cost of medical care and indirect costs of lost productivity associated with premature morbidity and mortality—is estimated to be \$40.9 billion (2007 data).
- The total annual cost of stroke in the U.S. is projected to be \$140 billion in 2030.
- The median hospitalization charge for stroke in Connecticut is \$21,209. Total hospitalization charges for stroke in Connecticut are over \$250 million per year (2008 data).



What are the risk factors for stroke?

- Age is the overarching risk factor for stroke. Stroke risk doubles in every decade following age 55.
- Other key risk factors for stroke include a family history of stroke, high blood pressure, cigarette smoking, diabetes, elevated cholesterol, obesity, and physical inactivity. Lower socioeconomic status is also considered a risk factor for stroke.
- Connecticut (CT) compares similarly or favorably to the U.S. in terms of the prevalence of risk factors for stroke: 27.1% of CT compared with 28.7% of U.S. residents report high blood pressure; 15.4% of CT compared with 17.9% of U.S. residents are current smokers; 21.0% of CT compared with 26.9% of U.S. residents are obese; 6.7% of CT compared with 8.3% of U.S. residents are estimated to have diabetes; and 46.1% of CT compared with 49.0% of U.S. residents report insufficient moderate or vigorous physical activity (2009 data) (Figure 1).

Figure 1. Prevalence of Modifiable Risk Factors for Stroke among Adults (18+) in the U.S. and CT with 95% Confidence Intervals, 2009



*Physical inactivity = self-reported insufficient moderate or vigorous physical activity or no physical activity.
Source: Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System (BRFSS), 2009.

What are the key steps to prevention of stroke and its consequences?

- Primary prevention of stroke involves the identification and modification of risk factors for the disease including:
 - ◆ improved control of high blood pressure;
 - ◆ smoking cessation;
 - ◆ improved blood glucose control among persons with diabetes;
 - ◆ improved diet through increased amounts of fruits and vegetables daily;
 - ◆ moderate daily physical activity; and
 - ◆ moderating alcohol consumption.



- Public education campaigns and environmental and policy changes at the state and community level are key to widespread implementation of risk factor reduction efforts.
- Secondary prevention of stroke includes reducing disability and mortality due to stroke. Efforts include public education regarding the early warning signs of stroke and implementation of best practices related to stroke management in emergency departments and acute care hospitals.

What is the Connecticut Heart Disease and Stroke Prevention Program (CT HDSP) doing to reduce the burden of stroke in the state?

The CT HDSP works to reduce the burden of heart disease and stroke among Connecticut residents. To reduce the burden of stroke, the HDSP:

- Addresses the public health need for acute care hospitals to ensure rapid diagnostic evaluation and treatment of stroke patients through the Primary Stroke Center (PSC) Designation Program. To be designated a Primary Stroke Center a hospital must demonstrate capacity to meet criteria adapted from the American Stroke Association practice standards and recommendations from the Brain Attack Coalition. The goal of the program is to decrease premature deaths and disabilities associated with stroke.
- Emphasizes calling 9-1-1 and early access to emergency care. The HEARTSafe Communities and Workplaces Programs promote and recognize the efforts of local municipalities and businesses to educate Connecticut residents to recognize the signs and symptoms of sudden cardiac events, call 9-1-1, initiate cardiopulmonary resuscitation (CPR), and in the use automated external defibrillators (AEDs) in public locations.
- Works with partners to increase communications and develop community-based interventions that address risk factor reduction. For example, CT HDSP's Black Resident Program provides risk assessments, health screenings, education, and outreach to Black residents in Hartford, New Haven, Bloomfield, Windsor, Ledge Light Health District, and Uncas Health District. Also, the Women's Healthy Heart Initiative addresses risk factors for heart disease and stroke among women by developing and conducting healthy lifestyle programs for women in Hartford.
- Maintains a heart disease and stroke surveillance system to continuously assess the burden of heart disease and stroke in the state, monitor the residents' knowledge of the signs and symptoms of heart attack and stroke, and evaluate the effectiveness of program interventions.



Stroke Warning Signs

The American Stroke Association wants you to learn the warning signs of stroke:

- Sudden numbness or weakness of the face, arm or leg, especially on one side of the body
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance or coordination
- Sudden, severe headache with no known cause

If you notice one or more of these signs, don't wait.
Stroke is a medical emergency.
Call 9-1-1 or your emergency medical services.
Get to a hospital right away!

Be prepared for an emergency.

- Keep a list of emergency rescue service numbers next to the telephone and in your pocket, wallet or purse.
- Find out which area hospitals are primary stroke centers that have 24-hour emergency stroke care.
- Know (in advance) which hospital or medical facility is nearest your home or office.

Take action in an emergency.

- Not all the warning signs occur in every stroke. Don't ignore signs of stroke, even if they go away!
- Check the time. When did the first warning sign or symptom start? You'll be asked this important question later.
- If you have one or more stroke symptoms that last more than a few minutes, don't delay! Immediately call 9-1-1 or the emergency medical service (EMS) number so an ambulance (ideally with advanced life support) can quickly be sent for you.
- If you're with someone who may be having stroke symptoms, immediately call 9-1-1 or the EMS. Expect the person to protest — denial is common. Don't take "no" for an answer. Insist on taking prompt action.



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For more information...

Visit the Connecticut Heart Disease and Stroke Surveillance System website at <http://www.ct.gov/dph/heartstrokedata>

Visit the American Stroke Association website at <http://www.heart.org/>

Call the Cardiovascular Health Program at 860-509-8211

Call the American Stroke Association at 1-888-4-STROKE



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