



This fact sheet was prepared by the Carilion Medical Center under award NA22SEC0080001 from the Environmental Literacy Program of the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce.

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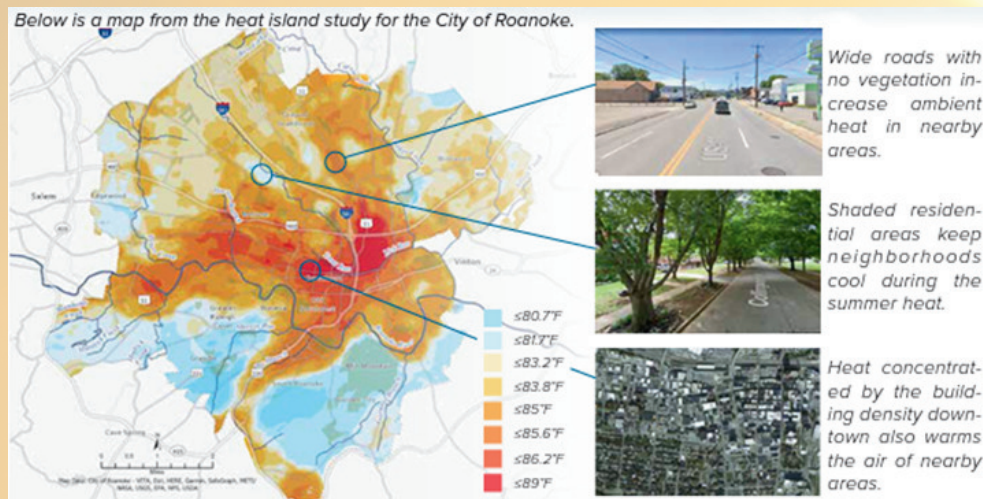
Heat Illness in Roanoke

Fact Sheet

For more information, please visit:
<https://planroanoke.org/heat-ready-roanoke/>

Where people live affects their exposure to heat.

More asphalt and concrete, and fewer trees and vegetation, make communities hotter. Some areas of Roanoke are much hotter than others, particularly neighborhoods that have been targeted by redlining and urban renewal. These actions have led to long-term government disinvestment in communities with low-income and minority residents, and the development of large infrastructure projects like highways.



Within the City of Roanoke, previously redlined areas are **7-10°F hotter** than non-redlined areas.

Source: <https://www.roanokeva.gov/2720/Urban-Heat-Island-Effect>

Roanoke's summer heat can be dangerous.

Extreme heat can push the human body beyond its coping capacity, making it hard to maintain a normal body temperature. This can lead to mild to severe heat illness. Heat is especially dangerous for certain populations due to increased exposure and/or existing vulnerabilities.

Greater exposure:

Relevant for workers in hot environments, athletes, people living in homes without air conditioning, and/or individuals experiencing homelessness.



Greater vulnerability:

Relevant for seniors or young children, those who are pregnant, people with chronic health conditions, and/or those who are taking certain medications.



People at Risk and Chronic Diseases in Roanoke City vs. Virginia

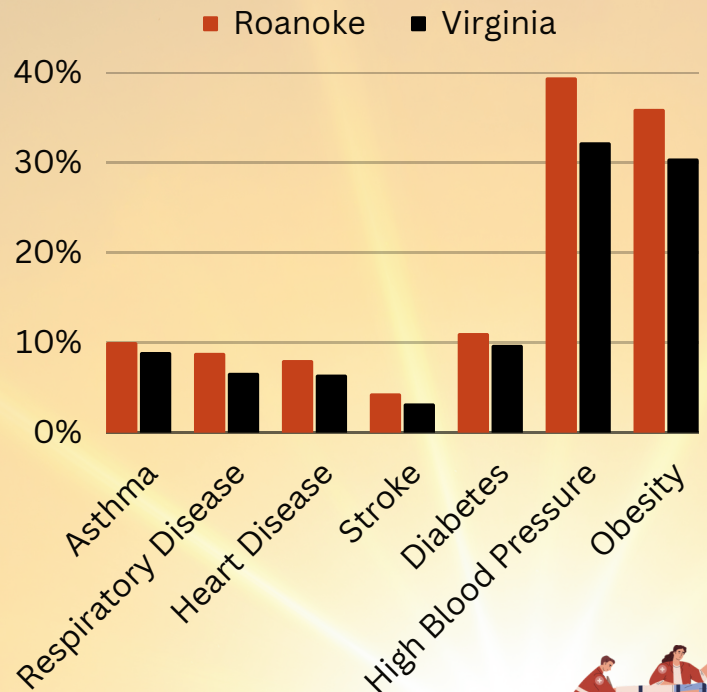
City of Roanoke residents have **higher percentages of pre-existing health conditions** than the Virginia state average, which predisposes them to heat-related illness.

Census Tract 26 in Southeast Roanoke City has the **lowest life expectancy in the Roanoke Valley at 68.4 years**, compared to 81 years in other counties.

21% of City adults live in poverty, twice the state average, and 32% of children live in poverty in Roanoke City. Low-income households may not be able to afford air conditioning or comprehensive healthcare.

Source:

https://issuu.com/carilionclinic/docs/2021_cmc_cha_report_final



Heat Days Increase Use of Medical Services in Virginia Each Year

The average heat event day in Virginia between 2016-2020 was associated with approximately 5 additional ambulatory care visits, 25 additional hospitalizations, and 59 additional emergency department visits for heat-related and/or heat-adjacent illnesses. Multiplying these additional visits by the average 80 heat event days per summer in Virginia in this time period suggests that **heat events across the state resulted in nearly:**



Source: <https://www.americanprogress.org/article/the-health-care-costs-of-extreme-heat/>



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people in Roanoke City, Roanoke County, and Salem went to an Urgent Care or Emergency Department for heat illness in the summer of 2023.

Source: <https://www.vdh.virginia.gov/surveillance-and-investigation/syndromic-surveillance/hri-surveillance/>



During heat waves in Roanoke...

Emergency Department visits increase by 6% to 7%. **For Carilion Clinic, this translates to an additional 10 to 12 patients per day.**

Source: <https://onlinelibrary.wiley.com/doi/10.1111/acem.13919>