

A Tennessee Department of Health Fact Sheet  
**Life Expectancy in Tennessee: 2009-2011**

Division of Policy, Planning and Assessment

November 2013

**Key Points**

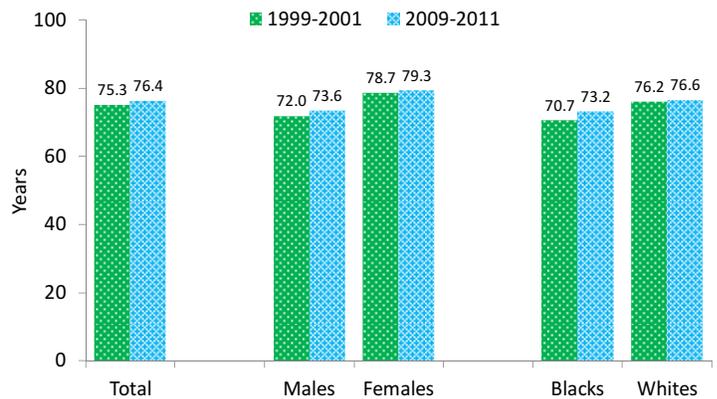
- The life expectancy for Tennesseans born between 2009 and 2011 is 76.4 years.
- In 2010, Tennessee had the 8th shortest life expectancy at birth among the 50 states and Washington DC.
- Males have shorter life expectancy than females.
- Blacks have shorter life expectancy than whites.
- Male-female and black-white gaps in life expectancy narrowed from 1999-2001 to 2009-2011.
- Life expectancy varies across TDH regions, and gender or race gaps exist in all regions with sufficient data for life expectancy estimation.

**Life expectancy is the average number of years of life remaining at a given age. This brief report includes life expectancy for Tennessee residents at birth and at 65 years of age in 2009-2011; changes in life expectancy since 1999-2001; life expectancy among certain subpopulations; and comparisons with U.S. data.**

**Life Expectancy at Birth**

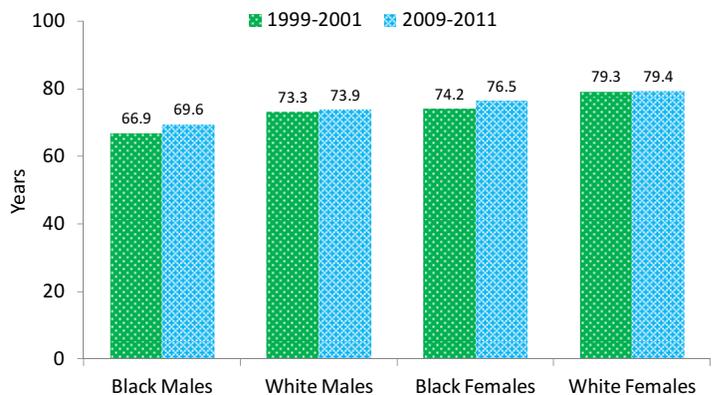
- ❖ The life expectancy for Tennesseans born between 2009 and 2011 is 76.4 years.
- ❖ The life expectancy at birth for Tennessee females (79.3 yrs) was 5.7 years longer than for males (73.6 yrs).
- ❖ The life expectancy at birth for Tennessee whites (76.6 yrs) was 3.4 years longer than for blacks (73.2 yrs).
- ❖ Life expectancy for Tennesseans increased from 1999-2001 to 2009-2011: by 1.1 years for the total population, by 1.6 years for males, by 0.6 years for females, by 2.5 years for blacks, and by 0.4 years for whites.
- ❖ Among the four gender-race groups, white females had the longest life expectancy in 2009-2011 (79.4 yrs), followed by black females (76.5 yrs), white males (73.9 yrs), and black males (69.6 yrs).
- ❖ Life expectancy for all four groups increased with the largest increase among black males (2.7 yrs) and the smallest among white females (0.1 yrs).

**Life Expectancy at Birth  
 Tennessee, 1999-2001 and 2009-2011**



Data source for 1999-2001: National vital statistics reports, Vol 60, No 9, Page 4  
 Data source for 2009-2011: Tennessee Department of Health; Division of Policy, Planning and Assessment

**Life Expectancy at Birth by Gender and Race  
 Tennessee, 1999-2001 and 2009-2011**



Data source: Tennessee Department of Health; Division of Policy, Planning and Assessment

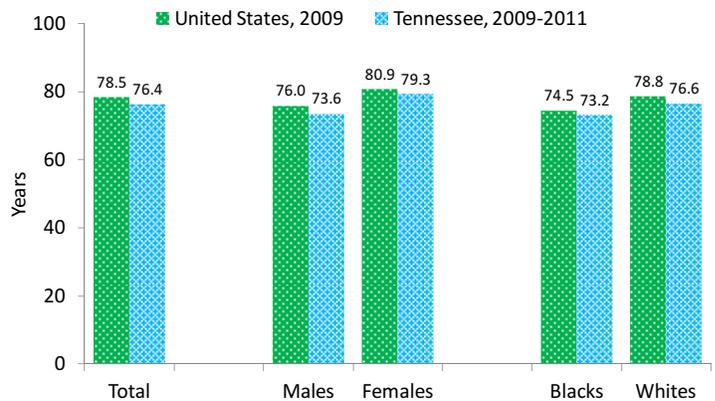
# Life Expectancy in Tennessee: 2009-2011

- ❖ When compared to average Americans born in 2009, Tennesseans born in 2009-2011 have a shorter life expectancy: 2.1 years shorter for the total population, 2.4 years shorter for males, 1.6 years shorter for females, 1.3 years shorter for blacks and 2.2 years shorter for whites.
- ❖ In 2010, Tennessee had the 8th shortest life expectancy at birth among the 50 states and Washington DC. This means that 43 states had longer life expectancies than Tennessee (Data source: The Kaiser Family Foundation at <http://kff.org/other/state-indicator/life-expectancy>).

## Life Expectancy at 65 Years of Age

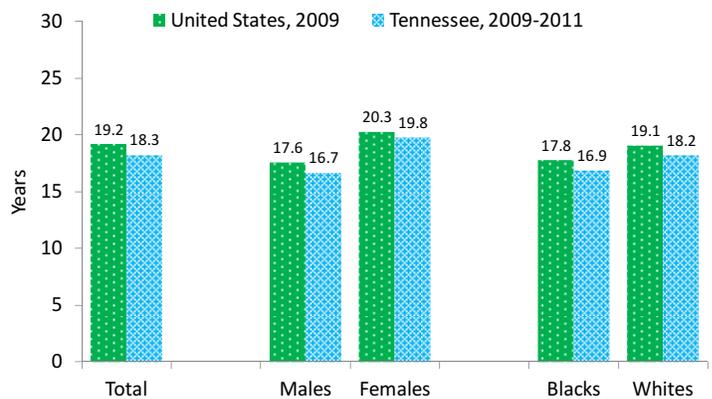
- ❖ On average, a Tennessean at the age of 65 in 2009-2011 is expected to live another 18.3 years.
- ❖ Females are expected to live longer than males: 19.8 years for females versus 16.7 for males.
- ❖ Whites are expected to live longer than blacks: 18.2 years for whites versus 16.9 for blacks.
- ❖ Tennesseans aged 65 years in 2009-2011 have a shorter life expectancy than average Americans at the age of 65 in 2009: 0.9 years shorter for the total population, males, blacks and whites, and 0.5 years shorter for females.
- ❖ Among the four gender-race groups, white females have the longest life expectancy at 65 in 2009-2011 (19.7 yrs), followed by black females (18.4 yrs), white males (16.7 yrs), and black males (14.9 yrs). These are in the same order as life expectancy at birth.
- ❖ Tennesseans in all four gender-race groups have a shorter life expectancy in 2009-2011 than average Americans in 2009.

**Life Expectancy at Birth  
United States and Tennessee**



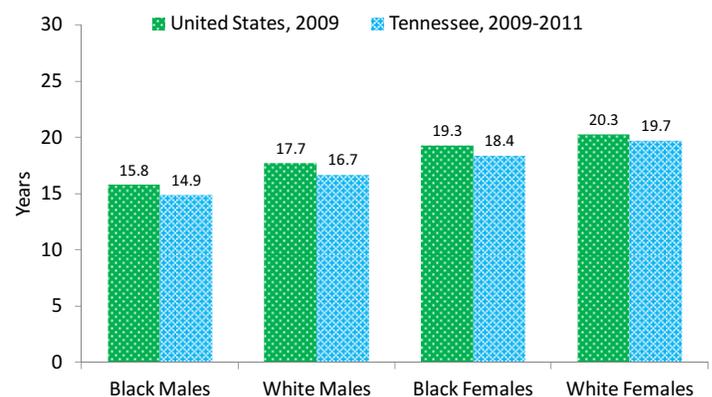
Tennessee data source: Tennessee Department of Health; Division of Policy, Planning and Assessment  
United States data source: National Vital Statistics Reports. Vol 60, No 3, Page 30

**Life Expectancy at 65 Years of Age  
United States and Tennessee**



Tennessee data source: Tennessee Department of Health; Division of Policy, Planning and Assessment  
United States data source: National Vital Statistics Reports. Vol 60, No 3, Page 30

**Life Expectancy at 65 Years of Age by Gender and Race  
United States and Tennessee**



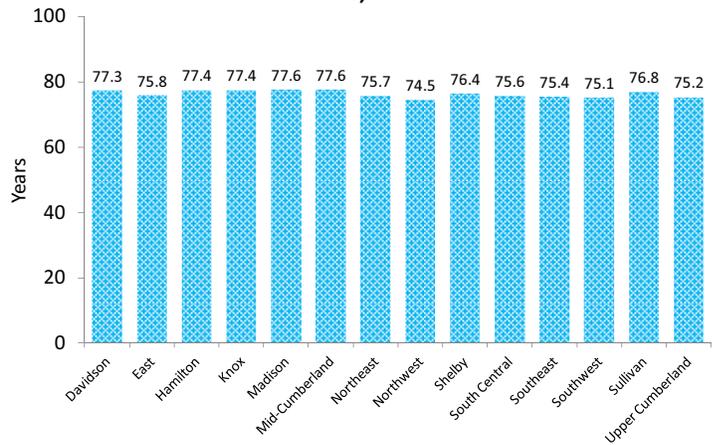
Tennessee data source: Tennessee Department of Health; Division of Policy, Planning and Assessment  
United States data source: National Vital Statistics Reports. Vol 60 No 3, Page 30

# Life Expectancy in Tennessee: 2009-2011

## Life Expectancy by Tennessee Department of Health Region

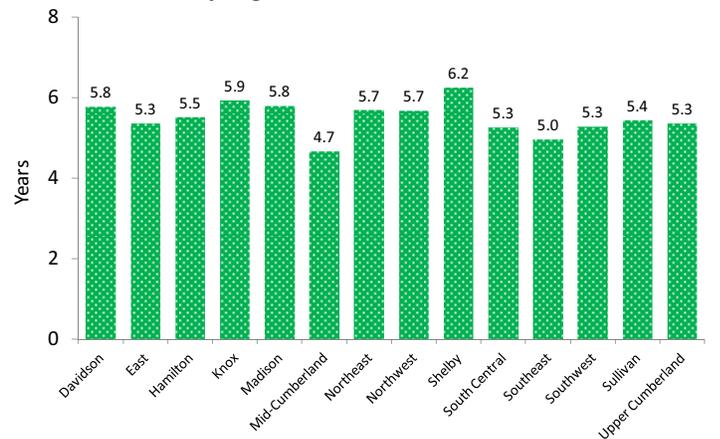
- ❖ Among the eight Tennessee Department of Health rural regions and six metropolitan counties, the life expectancy at birth in 2009-2011 ranges from 74.5 years in the Northwest Region to 77.6 years in the Mid-Cumberland Region and Madison County.
- ❖ Females have a longer life expectancy at birth than males in all regions, with female-male differences ranging from 4.7 years in the Mid-Cumberland Region to 6.2 years in Shelby County.
- ❖ Sufficient data were available to estimate life expectancy among blacks in three regions/counties: Davidson County (73.5 yrs), the Mid-Cumberland Region (74.1 yrs), and Shelby County (72.6 yrs).
- ❖ Whites have a longer life expectancy than blacks for all three of these regions: 4.5 years, 3.5 years and 5.7 years longer in Davidson, Mid-Cumberland and Shelby, respectively.

Life Expectancy at Birth by Region Tennessee, 2009-2011



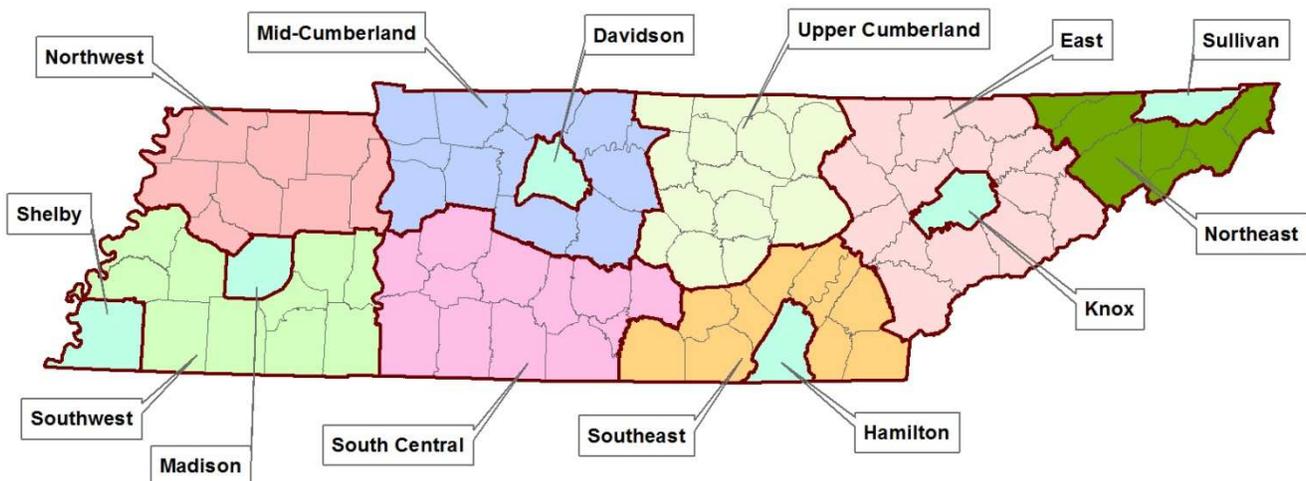
Data source: Tennessee Department of Health; Division of Policy, Planning and Assessment

Female-Male Difference in Life Expectancy at Birth By Region, Tennessee, 2009-2011



Data source: Tennessee Department of Health; Division of Policy, Planning and Assessment

## Tennessee Department of Health Regions



# Life Expectancy in Tennessee: 2009-2011

## Life Expectancy by Region, Gender and Race, Tennessee, 2009-2011

Region	Life Expectancy At Birth (Years)									Life Expectancy at 65 Years of Age (Years)								
	All Races*			White			Black**			All Races*			White			Black**		
	Both	Female	Male	Both	Female	Male	Both	Female	Male	Both	Female	Male	Both	Female	Male	Both	Female	Male
Davidson	77.3	80.1	74.3	78.0	80.7	75.2	73.5	77.0	69.7	18.7	20.1	17.0	19.1	20.4	17.6	16.8	18.8	14.5
East	75.8	78.5	73.1	75.5	78.3	72.8				18.1	19.4	16.7	18.0	19.4	16.6			
Hamilton	77.4	80.2	74.7	78.0	80.7	75.3				19.0	20.5	17.3	19.1	20.6	17.5			
Knox	77.4	80.4	74.4	77.1	79.6	74.6				18.7	20.4	16.9	18.3	19.6	16.9			
Madison	77.6	80.5	74.7	78.2	80.8	75.6				19.3	20.5	17.8	19.1	20.3	17.8			
Mid-Cumberland	77.6	80.0	75.3	77.6	80.0	76.2	74.1	76.9	71.1	18.0	19.2	16.7	18.0	19.3	17.7	16.4	17.6	14.9
Northeast	75.7	78.7	73.0	75.6	78.6	72.7				18.0	19.4	16.6	17.9	19.3	16.5			
Northwest	74.5	77.4	71.7	74.9	78.2	71.8				17.2	18.6	15.7	17.6	19.4	15.8			
Shelby	76.4	79.4	73.2	78.3	80.9	75.7	72.6	76.8	69.0	18.6	20.3	16.7	19.0	20.2	17.6	16.6	18.9	14.8
South Central	75.6	78.3	73.1	75.5	79.2	73.0				17.7	19.1	16.3	17.7	20.1	16.3			
Southeast	75.4	78.5	73.6	75.2	78.3	72.4				17.8	19.2	17.4	17.7	19.1	16.3			
Southwest	75.1	77.9	72.6	75.4	79.0	73.0				17.7	18.9	16.4	17.7	19.9	16.4			
Sullivan	76.8	79.5	74.1	76.7	79.3	74.0				18.6	19.7	17.3	18.5	19.7	17.2			
Upper Cumberland	75.2	78.0	72.6	74.9	77.7	72.4				18.0	19.4	16.7	18.0	19.3	16.6			
<b>Tennessee</b>	<b>76.4</b>	<b>79.3</b>	<b>73.6</b>	<b>76.6</b>	<b>79.4</b>	<b>73.9</b>	<b>73.2</b>	<b>76.5</b>	<b>69.6</b>	<b>18.3</b>	<b>19.8</b>	<b>16.7</b>	<b>18.2</b>	<b>19.7</b>	<b>16.7</b>	<b>16.9</b>	<b>18.4</b>	<b>14.9</b>

\*All races include white, black, and other races

\*\*Life expectancy for some regions are not reported due to insufficient data; cells for those regions are left blank

Data source: Tennessee Department of Health; Division of Policy, Planning and Assessment

Data sources: Life expectancy was calculated based on Tennessee's 2008-2011 birth data, 2009-2011 death data, and 2010 population data. Birth and death data were provided by the Office of Health Statistics; Division of Policy, Planning and Assessment; Tennessee Department of Health. Population data were obtained from the U.S. Census Bureau.

Calculation of life expectancy: Life expectancy was derived from the probability of dying for each age group in 5-year intervals and calculated using the current life table method. The probability of dying was based on the methodology used by the National Center for Health Statistics (Wei R, Anderson RN, Curtin LR, Arias E. U.S. decennial life tables for 1999-2001: State life tables. National Vital Statistics Reports 60(9). Hyattsville, MD: National Center for Health Statistics. 2012). Briefly, age-specific numbers of deaths, population counts and probability of dying were smoothed by Beer's graduation technique, Heligman-Pollard equation, and locally weighted smoothing. The best fit probability of dying was selected for specific age groups. The probability of dying at older ages (i.e., ages 85 and over), was extrapolated using the Heligman-Pollard equation. When the number of deaths in an age group was zero, one death was transferred from the adjacent age group. If two adjacent age groups for a certain subpopulation had no deaths, the life expectancy for that subpopulation is not reported.

Report prepared by: Fenggang Peng, MS, M. Appl. Stat., Yinmei Li, MD, PhD, Audrey M Bauer, DVM, MPH. Surveillance, Epidemiology and Evaluation; Division of Policy, Planning and Assessment; Tennessee Department of Health.

The mission of the Tennessee Department of Health is to protect, promote and improve the health and prosperity of people in Tennessee.



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