NSCISC
National Spinal Cord Injury Statistical Center
Spinal Cord Injury Model System

Traumatic Spinal Cord Injury Facts and Figures at a Glance

2025 SCI Data Sheet

The Spinal Cord Injury Model Systems was created in 1970 as a prospective longitudinal multicenter study on demographics and the use of services by people with traumatic spinal cord injury (tSCI) in the United States.

This data sheet is a quick reference on demographic and condition status for 37,866 people with tSCI collected through 2024 by 31 federally funded SCI Model Systems and 4 Form II (follow up) centers and entered into the National SCI Database. This data sheet does not include the 16,175 people who were added to the SCI Database registry due to not fully qualifying for follow-up.

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Incidence

The 2024 population size in the United States was estimated to be about 341 million people. The most recent estimate of the annual incidence of traumatic spinal cord injury (tSCI) is approximately 54 cases per one million people in the United States, which equals about 18,421 new tSCI cases each year. New tSCI cases do not include those who die at the location of the incident that caused the tSCI.

- **Data Source:** Jain NB, Ayers GD, Peterson EN, et al. Traumatic spinal cord injury in the United States, 1993-2012. JAMA. 2015;313(22):2236-2243.

Prevalence

The estimated number of people with tSCI living in the United States is approximately 308,620 persons, with a range from 259,374 to 393,913 persons.

- **Data Source:** Lasfargues JE, Custis D, Morrone F, Carswell J, Nguyen T. A model for estimating spinal cord injury prevalence in the United States. Paraplegia. 1995;33(2):62-68.

Age at Injury

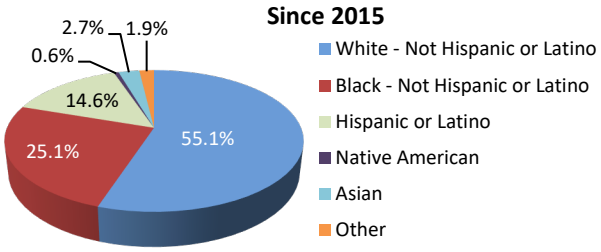
The average age at injury has increased from 29 years during the 1970s to 44 years since 2015.

Sex

About 78% of new tSCI cases since 2015 are male.

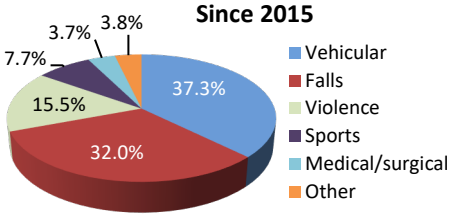
Race/Ethnicity

About 25% of recent injuries have occurred among the Black – Not Hispanic or Latino population. Yet, about 12% of the U.S. population is Black – Not Hispanic or Latino.



Cause

Vehicle crashes and falls account for almost 70% of recent injuries. Acts of violence (mostly gunshot wounds) and sports/recreation injuries account for about 23%.



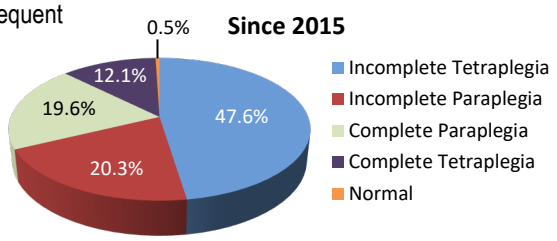
Lengths of Stay

The average lengths of stay in the hospital acute care unit have declined from about 30 days in the 1970s to about 19 days since 2015. The average rehabilitation lengths of stay have also declined from about 110 days in the 1970s to about 37 days since 2015.

- **Note:** Lengths of stay have been shown on this data sheet in averages since 2024. Lengths of stay in previous years were shown in median.

Neurological Level and Extent of Lesion

Recently, incomplete tetraplegia is the most frequent neurological category. The frequency of incomplete and complete paraplegia is almost the same. Less than 1% of persons experienced complete neurological recovery by the time of hospital discharge.



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Education

Since 2015, 24% of persons with tSCI have a college degree at the time of their injury, compared with 44% of people who survived 40 years of injury.

Education (%)	At Injury	Year 1	Year 10	Year 20	Year 30	Year 40
High School Only	52.3	52.8	49.1	45.8	41.7	35.6
College or Higher	23.6	25.8	29.0	28.8	34.3	44.2

Employment Status

Since 2015, 18% of persons with tSCI are employed at year 1 post-injury. The employment rate increases over time before peaking at 30 years post injury.

Status (%)	At Injury	Year 1	Year 10	Year 20	Year 30	Year 40
Employed	65.0	17.8	25.6	29.0	30.3	27.0
Student	6.7	5.4	2.4	0.7	0.3	0.1

Marital Status

Since 2015, the percentage of people who are married is relatively consistent up to year 30 post-injury, with single/never married status slowly decreasing and divorce status slowly increasing.

Status (%)	At Injury	Year 1	Year 10	Year 20	Year 30	Year 40
Single	44.7	43.5	38.2	36.1	34.3	24.8
Married	36.9	36.3	34.1	35.1	35.1	44.1
Divorced	8.8	10.3	18.4	19.8	22.4	21.7

Re-Hospitalization

Since 2015, about 29% of persons with tSCI are re-hospitalized at least once during any given year following injury. About 18 days is the average length of stay when re-hospitalized. Diseases of the genitourinary system are the leading cause of re-hospitalization, followed by disease of the skin. Respiratory, digestive, circulatory, and musculoskeletal diseases are also common causes.

Historical Lifetime Costs

The average yearly expenses (health care costs and living expenses) and the estimated lifetime costs that are directly attributable to tSCI vary greatly based on education, neurological impairment, and pre-injury employment history. The below estimates do not include any indirect costs such as losses in wages, fringe benefits, and productivity (indirect costs averaged $95,309 per year in 2024 dollars).

Severity of Injury	Average Yearly Expenses (in 2024 dollars)		Estimated Lifetime Costs by Age at Injury (discounted at 2%)	
	First Year	Each Subsequent Year	25 years old	50 years old
High Tetraplegia (C1–C4) AIS ABC	$1,410,163	$244,879	$6,256,937	$3,438,706
Low Tetraplegia (C5–C8) AIS ABC	$1,018,966	$150,222	$4,571,708	$2,812,009
Paraplegia AIS ABC	$687,262	$91,042	$3,059,615	$2,007,933
Motor Functional at Any Level AIS D	$460,224	$55,900	$2,090,344	$1,475,423

Data Source: Economic Impact of SCI published in the journal Topics in Spinal Cord Injury Rehabilitation, Volume 16, Number 4, in 2011.
American Spinal Injury Association Impairment Scale (AIS) is used to grade the severity of a person's neurological impairment following tSCI.

Historical Life Expectancy

Since the 1970s, life expectancies have increased steadily for people with tSCI during their first year of injury. However, life expectancies after their first year have not changed since the early 1980s and remain substantially below the life expectancies of the general population. An individualized Life Expectancy Calculator is available at uab.edu/nscisc/life-expectancy-calculator.

Age at Injury	No tSCI	Life Expectancy (years) for Post-Injury by Severity of Injury and Age at Injury									
		For Persons Surviving the First 24 Hours					For Persons Surviving at Least 1 Year Post-Injury				
		High Tetraplegia (C1–C4) AIS ABC	Low Tetraplegia (C5–C8) AIS ABC	Paraplegia AIS ABC	Motor Functional AIS D (Any Level)	Ventilator Dependent (Any Level)	High Tetraplegia (C1–C4) AIS ABC	Low Tetraplegia (C5–C8) AIS ABC	Paraplegia AIS ABC	Motor Functional AIS D (Any Level)	Ventilator Dependent (Any Level)
20	57.1	28.0	34.9	40.3	48.4	8.2	28.7	35.5	40.7	48.7	14.2
40	38.8	17.5	21.6	26.4	32.1	6.7	18.2	22.1	26.7	32.3	10.5
60	22.1	10.0	11.6	14.5	17.8	3.3	10.9	12.0	14.8	18.0	7.0

Historical Causes of Death

During the first year of injury, the three leading causes of death among people with tSCI were respiratory diseases (mostly pneumonia and influenza), other heart diseases (often unexplained heart attacks that usually do not represent a true underlying cause of death), and infective and parasitic diseases (mostly septicemia secondary to urinary or pressure injury infections). Among people surviving the first year after injury, respiratory diseases were the leading cause of death (19.6%), followed by infective and parasitic diseases (13.1%), cancer (12.1%), hypertensive and ischemic heart diseases (11.0%), and other heart diseases (7.2%).

- **Data Source:** National Spinal Cord Injury Statistical Center. 2024 Annual Statistical Report for the Spinal Cord Injury Model Systems. University of Alabama at Birmingham: Birmingham, Alabama.

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