

Hydrocephalus Fast Facts

What is Hydrocephalus?

Hydrocephalus is an abnormal accumulation of cerebrospinal fluid (CSF) within cavities in the brain called ventricles. As the CSF builds up, it causes the ventricles to enlarge and the pressure inside the head to increase.

- Hydrocephalus is a life-threatening chronic neurological condition that affects approximately 1 million Americans.
- Anyone can develop hydrocephalus as a result of a traumatic brain injury, including premature babies, active duty service members, and veterans. Individuals can also be born with it, develop it as part of the aging process, or acquire it as a result of infections or brain tumors, among other causes.
- 1 in 770 babies will develop hydrocephalus.
- Hydrocephalus is the number one reason for brain surgery in children.
- Hospitalization charges for pediatric hydrocephalus cases alone cost the U.S. health care system \$2 billion dollars per year. This does not include the significant costs to pay for services for secondary effects of hydrocephalus or co-morbidities that can require significant medical intervention, such as seizures, visual impairments, cerebral palsy, among others.
- An estimated 700,000 seniors in the U.S. are living with normal pressure hydrocephalus (NPH), which is undiagnosed or misdiagnosed as Alzheimer's, Parkinson's, or assumed as part of the aging process. With a growing baby boomer population, this number will only continue to rise.
- 1% – 5% of the diagnoses of dementia are estimated to actually be NPH. NPH has come to be known as “the treatable dementia”, as successful treatments reverse dementia symptoms.
- Every 15 minutes in the U.S., someone has a brain surgery because of hydrocephalus.

Hydrocephalus and the Military

- Since 2000, more than 370,000 U.S. service members have sustained a traumatic brain injury, one cause of hydrocephalus. It is estimated that 14% of those individuals that suffered a severe TBI could develop hydrocephalus. This does not include the aging Veteran population that will develop Normal Pressure Hydrocephalus. Approximately 180,000 Veterans currently have NPH, many of which are probably undiagnosed or misdiagnosed with Alzheimer's, Parkinson's, or another related dementia.
- The incidence of hydrocephalus within the military is understated because it is likely that the onset is delayed from the initial trauma or not readily identified.

Current Hydrocephalus Treatment

- There is no cure and the only treatment available involves brain surgery: primarily, the permanent implantation of a medical device called a shunt in the ventricles of the brain.
- Shunts have the highest failure rate of any implanted medical device.
- Fifty percent of all shunts implanted in the brains of children fail within two years.
- The core technology used to develop the shunt has not changed significantly since the 1950s.