



# Syringomyelia

Post-traumatic syringomyelia and tethered spinal cord can occur following spinal cord injury. It can occur from two months to many decades after injury. The results can be devastating, causing new levels of disability long after a person has had a successful rehabilitation. The clinical symptoms for syringomyelia and tethered spinal cord are the same and can include progressive deterioration of the spinal cord, progressive loss of sensation or strength, profuse sweating, spasticity, pain and autonomic dysreflexia (AD).

In post-traumatic syringomyelia (sear-IN-go-my-EE-lia) a cyst or fluid-filled cavity forms within the cord. This cavity can expand over time, extending two or more spinal segments from the level of SCI.

Tethered spinal cord is a condition where scar tissue forms and tethers, or holds, the spinal cord to the dura, the soft tissue membrane that surrounds it. This scar tissue prevents the normal flow of spinal fluid around the spinal cord and impedes the normal motion of the spinal cord within the membrane. Tethering causes cyst formation. Tethered cord can occur without evidence of syringomyelia, but post-traumatic cystic formation does not occur without some degree of cord tethering.

Magnetic resonance imaging (MRI) easily detects cysts in the spinal cord, unless rods, plates or bullet fragments are present.

Post-traumatic tethered cords and syringomyelia are treated surgically. Untethering involves a delicate surgery to release the scar tissue around the spinal cord to restore spinal-fluid flow and the motion of the spinal cord. In addition, a small graft is placed at the tethering site to fortify the dural space and decrease the risk of re-scarring. If a cyst is present, a tube, or shunt, is placed inside the cavity to drain the fluid from the cyst. Surgery usually leads to improved strength and reduced pain; it does not always bring back lost sensory function.

In experiments at the University of Florida, people with spinal cord cysts were treated with injections of fetal tissue. It is unlikely this technique will find its way to the clinic any time soon, but the tissue grew, filled the cavities and prevented further loss of function.

Syringomyelia also occurs in people who have congenital abnormality of the brain called a Chiari malformation – during development of the fetus the lower part of the cerebellum

protrudes from the back of the head into the cervical portion of the spinal canal. Symptoms usually include vomiting, muscle weakness in the head and face, difficulty swallowing, and varying degrees of mental impairment. Paralysis of the arms and legs may also occur. Adults and adolescents with Chiari malformation who previously showed no symptoms may show signs of progressive impairment, such as involuntary, rapid, downward eye movements. Other symptoms may include dizziness, headache, double vision, deafness, an impaired ability to coordinate movement and episodes of acute pain in and around the eyes.

Syringomyelia can also be associated with spina bifida, spinal cord tumors, arachnoiditis and idiopathic (cause unknown) syringomyelia. MRI has significantly increased the number of diagnoses in the beginning stages of syringomyelia. Signs of disorder tend to develop slowly, although sudden onset may occur with coughing or straining.

Surgery results in stabilization or modest improvement in symptoms for most people. Delay in treatment may result in irreversible spinal cord injury. Recurrence of syringomyelia after surgery may make additional operations necessary; these operations may not be completely successful over the long-term. Up to one half of those treated for syringomyelia have symptoms return within five years.

Source National Institute of Neurological Disorders and Stroke, American Syringomyelia Alliance Project

The above excerpt is from the Christopher & Dana Reeve Foundation Paralysis Resource Center website.

<https://www.christopherreeve.org/living-with-paralysis/health/causes-of-paralysis/syringomyelia-tethered-cord>

## Web Sites

### **American Syringomyelia & Chiari Alliance Project (ASAP)**

<http://www.asap.org/>

PO Box 1586

Longview, TX 75606-1586

Phone: 903-236-7079, 800-ASAP-282 (Toll Free)

E-mail: [info@asap.org](mailto:info@asap.org)

ASAP provides information regarding Chiari (CM) and syringomyelia (SM) and related disorders and support for people with these disorders and their families and caregivers. The organization also funds research and sponsors an annual medical conference.

### **Bobby Jones Chiari & Syringomyelia Foundation (CSF)**

<https://bobbyjonescsf.org/>

29 Crest Loop

Staten Island, NY 10312

Phone: 718-966-2593

Bobby Jones CSF is an education and advocacy organization.

### **Chiari & Syringomyelia News**

<http://www.conquerchiari.org/>

A newsletter published by the C&S Patient Education Foundation, known informally as Conquer Chiari. The website also includes general information on Chiari, updates on the latest research, and links to support groups.

### **Worldwide Syringomyelia & Chiari Task Force Inc.**

<http://www.wstfcure.org/>

PO Box 491975

Lawrenceville, GA 30049

Phone: 914-510-2873

Email: [wstfcure@wstfcure.org](mailto:wstfcure@wstfcure.org)

The Worldwide Syringomyelia & Chiari Task Force Inc.'s mission is to educate the world about Syringomyelia. They are a 501 c 3 organization led by nurses, physicians, and veterinarians focused on answering the problems associated with Syringomyelia as well as focused on advocating for the rights of the individual and canines bravely battling it with or without chiari. They provide direct assistance with prescriptions and durable medical equipment and offer continuous educational credits to medical professionals to learn about Syringomyelia and worldwide broadcasting through UStream.

### **eMedicine: Syringomyelia**

<http://www.emedicine.com/NEURO/topic359.htm>

eMedicine presents clinical information on syringomyelia presentation and treatment.

### **Medline Plus: Syringomyelia**

<http://www.nlm.nih.gov/medlineplus/syringomyelia.html>

This site offers an overview of syringomyelia, including information on disease management and clinical trials.

### **National Institute of Neurological Disorders and Stroke: Syringomyelia Fact Sheet** **NINDS presents information on syringomyelia, including causes and treatment, current research and links to other organizations.**

<https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Fact-Sheets/Syringomyelia-Fact-Sheet>

### **National Institute of Neurological Disorders and Stroke: Syringomyelia Information Page**

<https://www.ninds.nih.gov/Disorders/All-Disorders/Syringomyelia-Information-Page>

NINDS presents a condensed version of its Syringomyelia Fact Sheet.

### **National Institute of Neurological Disorders and Stroke (NINDS): Syringomyelia booklet**

<https://catalog.ninds.nih.gov/pubstatic//09-3780/09-3780.pdf>

### **Syringomyelia Facts**

<http://www.syringo.org/>

This site offers information on symptoms, causes, and diagnosis of syringomyelia, as well as links to other resources and information on a Duke University research study.

## **Craig Hospital: Tethered Spinal Cord & Syringomyelia**

<https://craighospital.org/resources/tethered-spinal-cord-syringomyelia>

## **Spinal Cord Injury Information Network: Syringomyelia Fact Sheet**

<http://www.uab.edu/medicine/sci/daily-living/managing-personal-health/secondary-medical-conditions/syringomyelia-syrinx>

This page offers information on symptoms, diagnosis and treatment of syringomyelia.

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