

Spasticity: The Basics

What is Spasticity?

Spasticity is a condition in which there is an abnormal increase in muscle tone or stiffness of muscle, which might interfere with movement, speech, or be associated with discomfort or pain. Spasticity is usually caused by damage to nerve pathways within the brain or spinal cord that control muscle movement. It may occur in association with spinal cord injury, multiple sclerosis, cerebral palsy, stroke, brain or head trauma, amyotrophic lateral sclerosis, hereditary spastic paraplegias, and metabolic diseases such as adrenoleukodystrophy, phenylketonuria, and Krabbe disease.

Symptoms may include hypertonicity (increased muscle tone), clonus (a series of rapid muscle contractions), exaggerated deep tendon reflexes, muscle spasms, scissoring (involuntary crossing of the legs), and fixed joints (contractures). The degree of spasticity varies from mild muscle stiffness to severe, painful, and uncontrollable muscle spasms. Spasticity can interfere with rehabilitation in patients with certain disorders, and often interferes with daily activities.

Is there any treatment?

Treatment may include such medications as baclofen, diazepam, tizanidine or clonazepam. Physical therapy regimens may include muscle stretching and range of motion exercises to help prevent shrinkage or shortening of muscles and to reduce the severity of symptoms. Targeted injection of botulinum toxin into muscles with the most tone can help to selectively weaken these muscles to improve range of motion and function. Surgery may be recommended for tendon release or to sever the nerve-muscle pathway.

What is the prognosis?

The prognosis for those with spasticity depends on the severity of the spasticity and the associated disorder(s).

What research is being done?

The NINDS supports research on brain and spinal cord disorders that can cause spasticity. The goals of this research are to increase scientific understanding about these disorders and to find ways to prevent, treat, and cure them.

Information from the National Library of Medicine's MedlinePlus --
[Neuromuscular Disorder](#)

Organizations

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