Spasticity

Spasticity is a condition in which certain muscles contract continuously. This causes stiffness or tightness of the muscles. It may interfere with movement, speech, and manner of walking.

CAUSES

This condition is usually caused by damage to the portion of the brain or spinal cord that controls voluntary movement. It may occur in association with:

- Spinal cord injury.
- Multiple sclerosis.
- Cerebral palsy.
- Brain damage due to lack of oxygen.
- Brain trauma.
- Severe head injury.
- Metabolic diseases such as:
  - Adrenoleukodystrophy.
  - ALS (Lou Gehrig's disease).
  - Phenylketonuria.

SYMPTOMS

Symptoms may include:

- Increased muscle tone (*hypertonicity*).
- A series of rapid muscle contractions (*clonus*).
- Exaggerated deep tendon reflexes.
- Muscle spasms.
- Involuntary crossing of the legs (*scissoring*).
- Fixed joints.

The degree of spasticity varies. It ranges from mild muscle stiffness to severe, painful, and uncontrollable muscle spasms. It can interfere with rehabilitation in patients with certain disorders. It often interferes with daily activities.

TREATMENT

Treatment may include:

- Medications.
- Physical therapy regimens. They may include muscle stretching and range of motion exercises. These help prevent shrinkage or shortening of muscles. They also help reduce the severity of symptoms.
- Surgery. This may be recommended for tendon release or to sever the nerve-muscle pathway.

The outcome for those with spasticity depends on:

- Severity of the spasticity.
- Associated disorder(s).

RESEARCH 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.
- To find ways to prevent, treat, and cure them.

Research is continually being done to learn more about this problem.

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