



THERE ARE DIFFERENT TYPES OF STIFF MUSCLES

Hypertonia or “high muscle tone” are words that describe stiff muscles in the body caused by problems in the nervous system. Spasticity and dystonia are the two types of hypertonia usually seen in children. Many children have more than one type of hypertonia and need more than one type of treatment.

It is important to determine the type of hypertonia in a child so that the treatment addresses the cause of the stiffness. Children commonly have different types of treatments throughout childhood.

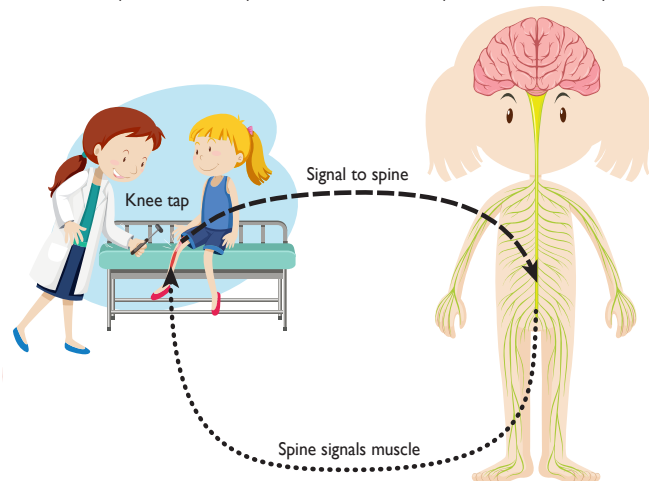
Spasticity is muscle stiffness that gets worse with certain movements. The muscles stay in their contracted or tightened positions.

Dystonia is muscle stiffness that twists a person's body into uncomfortable positions or triggers repetitive movements. Some people have dystonia symptoms from time to time, while the symptoms are more permanent for others.

Q: WHAT CAUSES SPASTICITY? A: THE REFLEX LOOP WORKING WITH THE BRAIN LOOP.

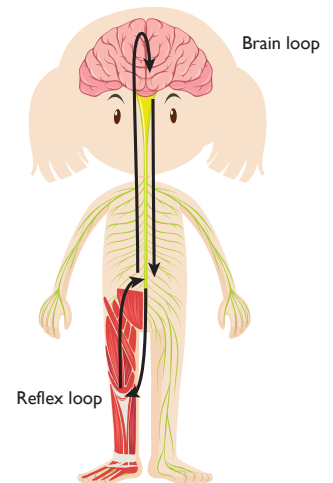
The Reflex Loop Tightens Muscles

Tap a tendon with a reflex hammer. It will stretch the tendon stimulating nerve connections that cause the muscle to tighten and move the limb. This is called a reflex loop. Your body reacts to the tap automatically.



The Brain Response Relaxes Muscles

When a reflex loop is stimulated, a brain response is triggered. The brain response is a second group of nerve connections that tells the muscles to relax. When working properly, the brain response is automatic and causes the reflex loop to calm down. If the brain or spinal cord are injured, the brain response can't calm the reflex properly and the muscle will be jumpy or stiff.



In a person with spasticity, the brain response continues to signal to the reflex loop to tighten the muscle. The muscle remains stiff and cannot relax.

HOW DO I KNOW IF HIGH MUSCLE TONE IS CAUSED BY SPASTICITY OR DYSTONIA?

The simple explanation is that a caregiver can feel spasticity, but can see dystonia. For example, if a caregiver tries to quickly bend a child's joint like an elbow or knee, the caregiver feels the joint resist movement. This is spasticity. The resistance to movement is always present.

With dystonia, a child isn't always able to control their muscles. The muscles tighten or relax on their own. A caregiver might see overly tight muscles arrange a child's hand or foot into awkward or uncomfortable positions. Dystonia can also cause a child's body to become relaxed or floppy.

It takes an experienced health care professional accurately diagnose spasticity or dystonia. A child's muscles can be affected by both types of hypertonia at the same time.

SPASTICITY VS. DYSTONIA – WHY DOES IT MATTER?

Knowing the cause of high muscle tone can be important in tailoring therapies specifically to each patient.