Hypertonia

National Institute of Neurological Disorders and Stroke (NINDS)

Source

National Institute of Neurological Disorders and Stroke (NINDS). Hypertonia Information Page.

Hypertonia is a condition in which there is too much muscle tone so that arms or legs, for example, are stiff and difficult to move. Muscle tone is regulated by signals that travel from the brain to the nerves and tell the muscle to contract. Hypertonia happens when the regions of the brain or spinal cord that control these signals are damaged. This can occur for many reasons, such as a blow to the head, stroke, brain tumors, toxins that affect the brain, neurodegenerative processes such as in multiple sclerosis or Parkinson's disease, or neurodevelopmental abnormalities such as in cerebral palsy.

Hypertonia often limits how easily the joints can move. If it affects the legs, walking can become stiff and people may fall because it is difficult for the body to react quickly enough to regain balance. If hypertonia is severe, it can cause a joint to become "frozen," which doctors call a joint contracture.

Spasticity is a term that is often used interchangeably with hypertonia. Spasticity, however, is a particular type of hypertonia in which the muscles' spasms are increased by movement. In this type, patients usually have exaggerated reflex responses.

Rigidity is another type of hypertonia in which the muscles have the same amount of stiffness independent of the degree of movement. Rigidity usually occurs in diseases such as Parkinson's disease, that involve the basal ganglia (a deep region of the brain). To distinguish these types of hypertonia, a doctor will as the patient to relax and then will move the arm or leg at different speeds and in a variety of directions.