Athletes and the Arts®

Focal Dystonia

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What is Focal Dystonia?

Focal dystonia is an abnormal movement disorder that develops when a person is attempting to perform a specific task such as playing a musical instrument. It shows in the loss of voluntary muscle control while playing an instrument. Focal dystonia can affect any group of muscles in the body including the face, lips, tongue, neck, arms or legs.

What Are the Symptoms?

Symptoms can include imprecise finger placement or a mild loss of control when playing quickly, but can advance to uncontrolled contraction of the hand or facial muscles, which impairs the musician's ability to play. These abnormal movements may or may not be painful.

Who Develops Focal Dystonia?

Males develop focal dystonia more frequently than females. The symptoms usually begin between the ages of 30 yrs. and 50 yrs., but the onset has been reported as early as 18 yrs. and as late as 60+ yrs. A family history of dystonia may be present, but often the onset is spontaneous. Classical musicians are more likely to develop focal dystonia than are jazz or pop performers. It is estimated that 1% of professional musicians are affected.

What Causes Focal Dystonia?

Initially, it was thought to be a psychiatric syndrome. However, research has confirmed a number of abnormalities in the sensorimotor cortex and in the area of the brain called the basal ganglia that help process messages related to motor control. For instance, the area of the brain concerned with control of specific portions of the hand is distorted in the dystonic brain, but, the exact cause of this dysfunction is not yet known.

How is Focal Dystonia Diagnosed?

There is no specific test to identify focal dystonia. It is diagnosed by ruling out other causes of weakness, loss of control, drooping of fingers, involuntary movement, difficulty relaxing, and difficulty with rapid alternating, ascending or descending patterns of movement. Difficulties with embouchure may reflect facial involvement. Focal dystonia should be considered when anyone engaged in repetitive fine-movement activities involving groups of small muscles is impaired in performing.

How is Focal Dystonia Treated?

A variety of methods have been used to treat focal dystonia, including medications, biofeedback, manipulative and movement therapies, relaxation techniques, stretching and strengthening programs, splinting, Botox® injections, pedagogical retraining and surgery. No single approach has proven to be statistically superior, so a combination of medication and physical and pedagogic measures is generally employed.

Preventing Focal Dystonia

The disease of focal dystonia results from a complex interaction of genetic, extrinsic, and intrinsic factors. Several recommendations may reduce the potential for developing this condition:

1. Stop rehearsing or performing when fatigued or injured.
2. Increase performance and rehearsal times gradually without abrupt increases over short periods of time.
3. Make a gradual rather than abrupt transition when adding a new repertoire or instrument.
4. Add technique changes gradually.
5. Reduce or avoid highly skilled or repetitive non-performance tasks (e.g., knitting, keyboarding, texting).
6. Participate regularly in a wellness program designed to optimize musculoskeletal efficiency.

References

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