# Chorea and Athetosis

Chorea is a movement disorder that causes sudden, jerky movements. They are usually purposeless, arrhythmic, and mostly affect the distal extremities. Athetosis is a similar disorder that looks like slow, snake-like writhing movements. Lesions in the basal ganglia motor loops are responsible for most choreiform and athetotic pathology. Choreoathetosis is classically associated with Huntington disease and rheumatic fever. The diagnosis is clinical but genetic analysis may be helpful. Treatment is aimed at the underlying cause but symptomatic cases may benefit from dopamine blocking or depleting agents such as tetrabenazine.



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## Characteristics

**Sudden Jerky Movements**
Choreographed Dancers
Chorea is a movement disorder that causes sudden jerky, random, and purposeless movements. It comes from the Greek word for "dance”.

**Athetosis**
Athlete-tossing
Athetosis means “without position or place". The most common underlying cause of athetosis is Huntington's disease. In children, athetosis is commonly associated with dyskinetic cerebral palsy caused by kernicterus, hypoxic-ischemic injury at term birth or prematurity with associated brain injury.

**Snake-like, Writhing Movements**
Snake-dancer
Athetosis most commonly involves the distal extremities: fingers (hand or feet). It can occur because of damage to the corpus striatum (caudate and putamen) in the basal ganglia.

**Basal Ganglia Lesions**
Broken Bass-guitar
Lesions in basal ganglia motor loops are responsible for loss of coordination of movements. These may include structures such as the caudate nucleus, putamen, and globus pallidus.

## Associations

**Huntington's Disease**
Hunters
Huntington’s disease is the most common cause of chorea in adults. Activation of the nigrostriatal dopamine pathway is believed to induce chorea.

**Acute Rheumatic Fever**
Roman Fever-beaver
Sydenham's chorea is a milder form of chorea and is listed as one of the five major manifestations of rheumatic fever (Jones criteria). Sydenham's chorea is believed to occur as a result of an autoimmune reaction towards basal ganglia circuitry.

## Management

**Treat Underlying Disorder**
Treating Disorders Under the Table
The treatment of chorea depends on the underlying disease. If Huntington is the cause, tetrabenazine is effective. Patients with Sydenham chorea can be treated with antibiotics to handle the infection. If chorea is occurring as a side effect of a medication, stopping the agent will help to reduce the symptoms.

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**Tetrabenazine**

Tetris on Benz

Treatment of chorea depends on the etiology. A common medication is tetrabenazine, which works by inhibiting vesicular monoamine transporter (VMAT) thereby reducing dopamine exocytosis from presynaptic neurons.

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