

## Treatment of MSA

**Parkinson Symptoms:** Drugs used for Parkinson's disease may provide relief of muscle rigidity, slowness and other motor symptoms for some MSA patients, though only in the earlier stages and with less effectiveness.

**Autonomic Symptoms:** To manage autonomic symptoms, patients may consider options such as increasing salt intake or taking steroid hormones or other drugs that raise blood pressure. Sleep apnea devices known as CPAP, or Continuous Positive Airway Pressure machines can help with breathing difficulties.

**Non-Drug Therapies:** Physical, speech and occupational therapies offer drug-free tools for keeping muscles strong and flexible, helping prevent falls and other incidents that hasten disability.

### Prognosis and Outlook

There is currently no cure for MSA; however, there are medications that can help alleviate symptoms and improve quality of life. While patients have been known to live up to 18 years with MSA, most succumb to the disorder or its complications within 9 years of diagnosis. As research continues and expands, there is hope that an effective therapy will be found.

## About The MS Coalition

The Multiple System Atrophy (MSA) Coalition is a 501(c)3 charitable organization dedicated to uniting the MSA community to defeat this rare and terminal neurodegenerative disorder.

The MSA Coalition mission includes the following four pillars:

**Supporting** patients and caregivers affected by multiple system atrophy

**Educating** patients, caregivers and healthcare professionals

**Financing and encouraging meaningful research** toward identifying a cause and finding a cure for MSA

**Advocating** for issues important to the MSA community, including creating greater awareness

For more information or to donate please visit **The MSA Coalition website at:**

[www.MultipleSystemAtrophy.org](http://www.MultipleSystemAtrophy.org)



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## What is Multiple System Atrophy?



[www.MultipleSystemAtrophy.org](http://www.MultipleSystemAtrophy.org)

## What is Multiple System Atrophy?

Multiple system atrophy, or MSA, is a rare, degenerative neurologic condition that affects both men and women, usually starting in the 50's or early 60's. MSA is considered a type of Parkinsonism, but with more widespread effects on the brain and body. The condition was first identified in 1962 and named Shy-Drager syndrome for two physicians who reported patients who showed a combination of Parkinson-like movement disorders and problems with the autonomic, or body-regulating division of the nervous system.

### Similarities Between Parkinson's and MSA

Both Parkinson's disease and MSA are characterized by deposits of a type of protein known as alpha-synuclein in the nervous system.

Both conditions also specifically affect cells that produce dopamine, a neurotransmitter that controls motor commands. As a result, many of the same motor dysfunctions occur in the two conditions.



## Types and Symptoms of MSA

**MSA-Parkinsonian** or MSA-P produces Parkinson-like symptoms, including a slow, shuffling gait, rigid muscles, slurred speech and lack of facial expression. Patients with MSA-P may also develop a form of tremor known as resting tremor.

**MSA-Cerebellar** or MSA-C is characterized by progressive loss of coordination and balance; functions controlled by the area of the brain known as the cerebellum. Muscle weakness associated with MSA-C can lead to slurred speech and problems swallowing. This form of MSA can appear as early as the 20's or not until the 60's.

**Dysautonomia** in MSA leads to problems regulating heart rate, blood pressure, breathing, digestion and other internal organ functions. Patients may become dizzy or faint when they sit up or stand up; a condition known as neurogenic orthostatic hypotension. Loss of bladder or bowel control, abnormal sweating, sexual impotence in men and sleep disturbances, including sleep apnea, and flailing movements during sleep also occur.

### Diagnosis of MSA

At this time there are no specific symptoms, blood tests or imaging studies that distinguish MSA. Instead, doctors rely on a combination of symptom history, physical examination and lab tests to evaluate the motor system, coordination and autonomic function to arrive at a probable diagnosis.

Despite the diagnostic challenge MSA poses, recent research has yielded promising results in ways that may help unravel the causes and detection of this disease. Medical science is getting better at distinguishing the early signs of MSA from Parkinson's disease and other neurologic conditions.

**Unique Features:** Important differences distinguish the symptoms and course of MSA from Parkinson's disease and other conditions of the nervous system, such as cerebellar ataxia or pure autonomic failure (PAF).

Notably, MSA affects several areas of the brain, including the cerebellum, your brain's balance and coordination centers, and the autonomic nervous system, which controls your body's automatic, or regulating functions, such as blood pressure, digestion and temperature.

Another distinguishing feature of MSA is the types of cells involved. While Parkinson's disease affects the dopamine-producing neurons of a motor-controlling portion of the brain known as the nigro-striatal area, MSA affects both neurons and glial cells -- support cells that maintain the health of neurons and which outnumber neurons by 10:1. Additionally, some of the glial cells affected in MSA produce myelin, the fatty substance that insulates neurons.