CONDITION

Multiple system atrophy - parkinsonian type

A progressive condition causing parkinsonian movement problems and loss of automatic body functions.

WHAT IT IS
Progressive condition affecting movement and automatic body functions

BODY SYSTEM
Nervous system

MAIN SYMPTOMS
Slowed movement, stiffness, balance problems, blood pressure drops

WHAT CAUSES IT
Cause unknown

HOW IT IS DIAGNOSED
Clinical criteria; definitive confirmation requires brain tissue examination after death

MAIN TREATMENT
Symptom management and rehabilitation

CAN IT BE CURED?
No - no treatment stops progression

IS IT AN EMERGENCY?
Sometimes - breathing difficulty or severe choking

LONG-TERM OUTLOOK
Progressive disability and shortened life expectancy

Overview

Multiple system atrophy, parkinsonian type, or MSA-P, is a progressive condition of the nervous system. It affects movement and the automatic functions that your body controls without conscious effort, such as blood pressure, bladder function, sweating, and digestion.

"Parkinsonian" means that MSA-P causes movement symptoms similar to Parkinson's, including slowness, stiffness, and problems with balance. However, MSA-P is not the same condition as Parkinson's. Automatic body functions often become affected earlier or more severely, and standard Parkinson's medicines may provide less benefit.

In MSA, a protein called alpha-synuclein builds up abnormally in cells that support nerve cells. Over time, several areas of the brain and spinal cord stop working normally. This is why symptoms can involve movement, blood pressure, urination, sleep, speech, swallowing, and

breathing.

MSA-P progresses over time. Treatment cannot currently stop or reverse it, but coordinated care can reduce symptoms, support mobility, and help you plan for changing needs.[1-4]

Symptoms

Symptoms differ from person to person and may not begin at the same time. Bladder problems, erection problems, or dizziness when standing can appear before clear movement changes.

Movement symptoms may include:

MSA-P can affect the autonomic nervous system, which controls automatic body functions. One common problem is neurogenic orthostatic hypotension. This means blood pressure falls because the nervous system does not adjust it properly when you stand. You may feel light-headed, weak, tired, confused, or close to fainting. Symptoms can be worse after meals, during hot weather, or after standing for a long time.

Bladder symptoms can include urgency, frequent urination, leaking, difficulty starting, or being unable to empty the bladder fully. Some people have erectile dysfunction. Constipation and reduced sweating may also occur.

Sleep problems can include acting out dreams, sleep apnoea, or noisy breathing. A harsh, high-pitched breathing sound called stridor may occur when the upper airway narrows, especially during sleep.

Speech may become quiet, strained, or unclear. Swallowing can become slower or less coordinated, causing coughing during meals or a feeling that food is sticking.

Emotional changes, anxiety, depression, and mild problems with attention or planning are possible. Severe dementia early in the condition is not typical and may suggest another diagnosis.[1-4]

- Slowness when walking, dressing, eating, or turning in bed
- Muscle stiffness and reduced arm movement
- Short, shuffling steps
- Increasing difficulty with balance and falls
- A quiet voice or reduced facial expression
- Tremor, although the typical resting tremor of Parkinson's is less common

- Abnormal postures, such as the head bending forward

Causes and risk factors

The exact cause of MSA-P is unknown. Researchers do not yet understand why alpha-synuclein builds up or why certain parts of the nervous system become damaged.

MSA is generally considered a sporadic condition, meaning it usually occurs without a clear inherited cause. It does not usually run in families. Researchers continue to study whether combinations of genetic and environmental factors may affect risk, but no single everyday exposure or behaviour is known to cause it.

MSA-P is not caused by something you did, by emotional stress, or by ordinary ageing. It is not contagious.

Diagnosis

There is no single blood test or scan that can confirm MSA-P during life. Diagnosis is based on the pattern of symptoms, examination findings, test results, and changes over time. A neurologist who specialises in movement conditions may be involved.

The assessment may include questions about movement, falls, fainting, bladder control, sexual function, swallowing, breathing, and sleep. Blood pressure is often measured while you are lying down and again after you stand.

A neurological examination checks muscle tone, speed of movement, coordination, walking, balance, eye movements, speech, and reflexes. Your clinician may also review how symptoms respond to levodopa, a medicine commonly used for Parkinson's.

Tests may include:

A dopamine transporter scan can show reduced dopamine activity, but it cannot reliably separate MSA-P from Parkinson's or some other movement conditions.

Doctors use published clinical criteria to describe a diagnosis as possible, clinically probable, or clinically established. The only definitive confirmation is examination of brain tissue after death, which is not needed for routine care.[1,2,5]

- Brain MRI to look for changes that support MSA and exclude other causes
- Autonomic testing to measure blood pressure, heart rate, and sweating responses
- Bladder tests, including measurement of urine left after urination

- Sleep testing if apnoea, dream enactment, or stridor is suspected
- Swallowing assessment if eating or drinking causes coughing or choking

Treatment and management

There is no cure or treatment proven to stop MSA-P from progressing. Management focuses on the symptoms that have the greatest effect on your safety, independence, and quality of life.

Levodopa may improve stiffness or slowness for some people. The benefit is often smaller or shorter-lasting than in Parkinson's, although individual responses differ. It can sometimes worsen low blood pressure, so benefits and side effects need regular review.

Management of blood pressure drops may involve rising slowly, avoiding long periods of standing, and changing meal size or timing. Compression garments, raising the head of the bed, or increasing fluid or salt intake may help selected people. Extra salt or fluid is not safe for everyone, particularly with some heart or kidney conditions, so these changes should be discussed with your clinical team. Medicines that raise blood pressure are also available.[6]

Bladder treatment depends on whether the main problem is urgency, leakage, or incomplete emptying. Options may include bladder training, medicines, or a catheter to drain urine. Measuring retained urine is important because treatment for urgency can sometimes make emptying more difficult.

Physiotherapy can help maintain movement, strength, posture, and safer transfers. A walking aid or wheelchair may reduce falls and conserve energy. Occupational therapy can suggest home changes and equipment for dressing, bathing, eating, or working.

Speech and language therapy can support clearer communication and assess swallowing. Changes to food texture, eating position, or meal pace may make swallowing safer. Some people later consider a feeding tube if eating becomes unsafe or cannot provide enough nutrition.

Sleep apnoea may be treated with assisted airflow through a mask. Stridor needs specialist assessment because treatment may include airway pressure support or, in selected cases, a procedure to protect the airway.

Palliative care can be involved alongside active treatment. It supports comfort, symptom control, decision-making, and family needs; it is not limited to the final stage of life.

Complications

Balance problems and sudden blood pressure drops can cause falls, fractures, or head injuries. Blood pressure may also become high while lying flat, which can complicate treatment for low standing blood pressure.

Incomplete bladder emptying can lead to discomfort, loss of bladder control, or urinary infections. Severe retention means the bladder cannot empty and requires prompt treatment.

Swallowing problems can cause weight loss, dehydration, or aspiration. Aspiration happens when food, liquid, or saliva enters the airway. This can lead to pneumonia.

Weak cough, sleep apnoea, or stridor can affect breathing, particularly during sleep. Speech changes may make communication harder even when thinking and understanding remain largely intact.

Reduced movement can also contribute to constipation, pressure injuries, blood clots, pain, and loss of independence. Rehabilitation, suitable equipment, skin care, and help with repositioning can reduce some of these risks.

Prevention

MSA-P cannot currently be prevented. There is no proven diet, supplement, exercise programme, or screening test that stops it from developing.

Once symptoms are present, some complications may be reduced. Fall prevention, swallowing assessments, bladder monitoring, treatment of blood pressure problems, and regular reviews of breathing and sleep can support safety.

Staying active within your abilities may help maintain strength and flexibility, but exercise does not stop the underlying condition.

Living with it and what to expect

MSA-P usually changes over years rather than remaining stable. Movement becomes slower, balance often worsens, and automatic body functions may become more difficult to manage. The speed and order of these changes cannot be predicted precisely for one person.

Many people eventually need increasing help with walking, personal care, meals, and communication. Mobility aids may progress from a walking stick or frame to a wheelchair. These changes are not signs of failure. Using equipment early can reduce falls and save energy for activities that matter to you.

Symptoms such as low blood pressure, bladder problems, swallowing difficulty, and sleep-related breathing issues may require repeated adjustment of treatment. Regular follow-up is useful even when symptoms seem unchanged because some complications, such as retained urine or nighttime breathing problems, are not always obvious.

MSA shortens life expectancy, although the course is not identical for everyone. Breathing and swallowing complications, infections, and injuries from falls can affect the outlook.[3,4]

Planning ahead can give you more control. This may include discussing future care preferences, appointing someone to speak for you if needed, reviewing work or driving, and considering home adaptations. Psychological support, social care, and condition-specific support organisations may also help you and the people close to you.

When to get medical help

Arrange routine follow-up if your movement, balance, blood pressure, bladder control, sleep, speech, or swallowing is changing. Report new falls, medication side effects, increasing care needs, or difficulty managing daily activities. These issues may not be emergencies, but earlier assessment can make them easier to manage.

Seek urgent medical advice for:

Call emergency services for severe breathing difficulty, blue or grey lips, choking that does not clear, loss of consciousness without quick recovery, or a serious injury.

Sudden facial weakness, one-sided weakness, trouble speaking, or a sudden severe headache may be signs of a stroke rather than MSA progression. These symptoms also require emergency care.

- New or worsening noisy breathing, especially during sleep
- Repeated fainting or a faint that causes injury
- Inability to pass urine or painful lower abdominal swelling
- Fever, confusion, or pain with possible urinary infection
- Frequent coughing during meals or signs of dehydration
- Rapidly worsening weakness or repeated falls

Common questions

Is MSA-P the same as Parkinson's?

No. Both can cause slowness, stiffness, and balance problems, but they are separate conditions. MSA-P often causes earlier problems with blood pressure, bladder control, swallowing, or breathing. Levodopa also tends to have a less reliable or less sustained effect.

Is MSA-P hereditary?

It is not usually inherited. Most people have no family history of MSA, and relatives are not generally considered to have a high risk simply because one family member is affected.

How quickly does MSA-P progress?

It is progressive, but there is no exact timetable. Changes occur over months and years, and the order and pace differ. Balance, walking, blood pressure control, bladder function, swallowing, and breathing are important areas to monitor.

Can I still walk after an MSA-P diagnosis?

Many people can walk at the time of diagnosis, although they may need support as balance and stiffness worsen. Physiotherapy and suitable mobility aids can help preserve safe movement. A wheelchair may later become useful for safety or longer distances.

Does MSA-P affect thinking?

Mild changes in attention, planning, mood, or emotional control can occur. Severe early dementia is unusual. New confusion should be assessed because infection, dehydration, low blood pressure, medication effects, or another condition may be responsible.

Can MSA-P be cured?

There is currently no cure and no proven treatment that stops progression. Treatment can still reduce specific symptoms, support communication and mobility, and help prevent or manage complications.

Sources

- Wenning GK, Stankovic I, Vignatelli L, et al. "The Movement Disorder Society Criteria for the Diagnosis of Multiple System Atrophy." Movement Disorders . 2022;37(6):1131-1148.
- National Institute of Neurological Disorders and Stroke. "Multiple System Atrophy." Neurological condition information from the US National Institutes of Health.
- Fanciulli A, Wenning GK. "Multiple-System Atrophy." New England Journal of Medicine . 2015;372:249-263.
- National Health Service. "Multiple system atrophy." NHS conditions information.



- Palma JA, Norcliffe-Kaufmann L, Kaufmann H. "Diagnosis of Multiple System Atrophy." Autonomic Neuroscience . 2018;211:15-25.
- Gibbons CH, Schmidt P, Biaggioni I, et al. "The Recommendations of a Consensus Panel for the Screening, Diagnosis, and Treatment of Neurogenic Orthostatic Hypotension and Associated Supine Hypertension." Journal of Neurology . 2017;264:1567-1582.