CONDITION

MPS

MPS is a pain condition involving sensitive areas in muscles and surrounding connective tissue.

WHAT IT IS
Muscle and connective-tissue pain with sensitive trigger points

BODY SYSTEM
Muscles and surrounding connective tissue

MAIN SYMPTOMS
Deep muscle pain, tender knots, stiffness, referred pain

WHAT CAUSES IT
Muscle overload, injury, stress, and other triggers

HOW IT IS DIAGNOSED
Symptom history and physical examination

MAIN TREATMENT
Movement, physical therapy, pain relief, trigger-point treatments

CAN IT BE CURED?
Sometimes - symptoms resolve when triggers are treated

IS IT AN EMERGENCY?
No - emergency warning signs suggest another cause

LONG-TERM OUTLOOK
Often manageable, but pain can recur or become chronic

Overview

MPS stands for myofascial pain syndrome. It is a condition that causes pain in muscles and the thin connective tissue around them, called fascia.

The pain is linked to sensitive areas commonly called trigger points. These may feel like tender knots or tight bands within a muscle. Pressing a trigger point can cause pain at that spot or somewhere else. Pain felt away from the trigger point is called referred pain. For example, a trigger point in the shoulder may produce pain in the neck or head.

MPS can affect one area, such as the neck, jaw, shoulder, back, or hip. It may also involve several muscle groups. Some people develop symptoms after an injury or repeated strain. In others, there is no single clear starting event.

The condition matters because persistent pain can interfere with movement, work, sleep, and everyday activities. MPS is not usually dangerous and does not damage internal organs. However, other medical problems can cause similar pain, so a careful assessment is important.

Symptoms

MPS usually causes a deep, aching pain in a muscle or nearby tissue. The pain may be present most of the time or may become worse with movement, pressure, stress, or repeated use of the affected muscle.

Possible symptoms include:

A muscle affected by pain may feel weak, but this can happen because using it hurts rather than because its nerves are damaged. True or worsening weakness needs medical assessment.

MPS is not the same as ordinary muscle soreness after exercise. Exercise soreness usually settles within several days. MPS tends to last longer, return repeatedly, or limit normal activity.

It is also different from fibromyalgia. MPS often affects particular muscles and produces local or referred pain from trigger points. Fibromyalgia usually causes more widespread pain along with symptoms such as fatigue, unrefreshing sleep, and difficulty concentrating. A person can have features of both conditions.

- A deep ache, burning sensation, or tightness in a muscle
- A tender knot or tight band that can be felt under the skin
- Pain that spreads to another area when the tender spot is pressed
- Reduced movement, stiffness, or a feeling of muscle weakness
- Headache when neck, shoulder, or jaw muscles are involved
- Sleep problems caused by pain or difficulty finding a comfortable position

Causes and risk factors

The exact biological process behind MPS is not fully settled. Trigger points may develop where muscle fibres remain unusually tight or irritated. Changes in local blood flow, pain signalling, and muscle activity may all contribute.

Symptoms may begin or worsen after:

These factors do not always cause MPS on their own. Posture is also only one part of the

picture. There is no single "perfect" posture that prevents pain, but spending long periods without changing position may aggravate symptoms.

Joint problems, arthritis, nerve irritation, and previous surgery can change how the body moves and place extra demand on certain muscles. Health conditions that affect sleep, energy, or pain processing may also make persistent muscle pain more likely.

MPS is not contagious. It is not caused by an infection, and it is not generally considered an inherited condition.

- A muscle injury or sudden awkward movement
- Repeated lifting, reaching, typing, gripping, or other movements
- Holding one position for a long time
- Increasing exercise or physical work too quickly
- Protecting one painful area by overusing another muscle
- Poor sleep or ongoing emotional stress

Diagnosis

There is no blood test, scan, or single physical finding that confirms MPS. Diagnosis is based mainly on your symptoms and a physical examination.

A healthcare professional may ask where the pain began, what makes it better or worse, and how it affects movement and sleep. They may examine your posture, joints, strength, reflexes, and range of movement.

The muscles may be gently pressed to look for tight bands or unusually sensitive spots. A finding is more useful when pressure reproduces the pain you recognise, including pain that travels to another area. Experts do not completely agree on one set of diagnostic criteria, so the whole clinical picture matters more than one tender point.

Blood tests, X-rays, ultrasound, or MRI scans may be used when another condition is possible. These tests can look for problems such as arthritis, a fracture, inflammation, or nerve compression. They do not normally show myofascial trigger points clearly enough to confirm MPS.

Persistent pain may have more than one cause. For example, a joint problem and muscle pain can occur together.

Treatment and management

Treatment aims to reduce pain, restore movement, and address activities or health problems that keep overloading the muscle. More than one approach may be needed.

Gentle movement is usually an important part of care. A physical therapist may help you gradually stretch and strengthen affected muscles, improve movement patterns, and return to usual activities. The plan should be paced so that exercise is manageable rather than causing repeated major flare-ups.

Heat, massage, or other hands-on treatments may give short-term relief for some people. Changing position regularly and taking brief movement breaks can help when symptoms are linked to prolonged sitting or repetitive work. These measures are generally used to support active rehabilitation, not replace it.

Non-prescription pain medicines may help some people. Options can include acetaminophen or anti-inflammatory medicines. These are not suitable for everyone, particularly people with certain stomach, kidney, liver, bleeding, or heart problems. A pharmacist or healthcare professional can help you check whether a medicine is appropriate.

If pain remains focused around a trigger point, options may include dry needling or a trigger-point injection. Dry needling involves placing a fine needle into the sensitive area without injecting medicine. A trigger-point injection places a needle into the area and may include a local anaesthetic.

These procedures can cause temporary soreness, and their benefits are not consistent for everyone. Evidence does not support using injections routinely before less invasive treatments have been tried. They should form part of a broader plan that includes movement and rehabilitation.

Sleep problems, anxiety, or low mood may increase pain sensitivity and make recovery harder. Treating these concerns does not mean the pain is imagined. It can reduce factors that keep the nervous system and muscles under strain.

Complications

MPS does not normally damage bones, joints, or internal organs. Its main complications come from persistent pain and reduced activity.

Pain can make you avoid movement, causing stiffness and loss of fitness. Other muscles may then take on extra work and become painful. Interrupted sleep can increase fatigue and sensitivity to pain, creating a cycle that is difficult to break.

Long-lasting symptoms can affect work, relationships, mood, and confidence in movement. Some people become worried that activity will cause damage even when gradual movement is safe.

A new symptom should not automatically be blamed on MPS. Numbness, true weakness, fever, unexplained weight loss, swollen joints, or pain that repeatedly wakes you may point to another problem that needs assessment.

Prevention

MPS cannot always be prevented. It may follow an unavoidable injury, and some people develop it without a clear cause.

You may be able to reduce flare-ups by changing muscle load gradually. Build up new exercise or physical work over time rather than making a sudden large increase. During repetitive tasks, change position and take short movement breaks when possible.

Regular activity, adequate recovery, and attention to sleep can help muscles tolerate everyday demands. Workstation changes or equipment adjustments may be useful when one task repeatedly triggers symptoms. There is no need to hold a rigid posture all day; regular movement is usually more practical.

Early care for an injury or joint problem may prevent prolonged guarding and overuse of nearby muscles. If symptoms keep returning, a physical therapist or other qualified professional may help identify specific movements or tasks that contribute.

Living with it and what to expect

The course of MPS is different from person to person. A recent, localised episode may settle over days or weeks when the muscle load is reduced and movement returns. Symptoms that have lasted for months may take longer to improve.

Some people have long periods with little or no pain. Others experience flare-ups after heavy activity, poor sleep, illness, or stress. A flare-up does not necessarily mean the muscle has been newly damaged.

Recovery is not always a straight line. Pain may improve before strength and confidence return, or symptoms may temporarily increase as activity is rebuilt. A paced plan can help you find a level of movement that is challenging but sustainable.

When symptoms are chronic, the goal may shift from removing every tender point to

improving sleep, mobility, work, and valued activities while reducing pain. Many people can remain active and continue their usual roles, although adjustments may be needed during flare-ups.

Routine follow-up is appropriate if pain is not improving, keeps returning, disrupts sleep, or limits work and daily activities. Follow-up is also useful if treatment causes side effects or if you are uncertain how quickly to increase activity.

When to get medical help

Arrange a routine medical appointment if muscle pain lasts more than a few weeks, repeatedly returns, or is becoming harder to manage. You should also seek assessment if you have a new lump, persistent swelling, unexplained weight loss, night sweats, fever, numbness, or worsening weakness.

Seek urgent medical care for severe pain after a significant injury, especially if you cannot use the affected limb or it looks deformed. A hot, red, swollen area with fever also needs prompt assessment.

Call emergency services for:

These are not typical signs of MPS. They may indicate another condition that needs immediate care.

- Chest pressure or pain with breathlessness, sweating, nausea, or arm or jaw pain
- Sudden facial drooping, speech difficulty, confusion, or one-sided weakness
- Sudden loss of bladder or bowel control with groin numbness
- Severe breathing difficulty, fainting, or rapidly worsening weakness

Common questions

Is MPS a permanent condition?

Not necessarily. Some episodes resolve after the contributing strain or injury is addressed. Symptoms can also persist or return, particularly when pain has been present for a long time. Management can still improve comfort and function even when the condition is chronic.

What does an MPS trigger point feel like?

It may feel like a tender knot or tight band in a muscle. Pressing it may reproduce your usual pain or send pain to another area. Not every tender spot is a trigger point, and finding a knot

does not by itself confirm MPS.

Will MPS show up on an MRI?

Usually not. MRI scans can help find other causes of pain, such as certain joint, disc, or soft-tissue problems, but they do not reliably confirm MPS. Diagnosis is mainly based on symptoms and examination.

Is exercise safe when I have MPS?

Movement is often part of treatment, but the amount and type may need to be adjusted. Gentle activity and gradual strengthening are usually better tolerated than either complete rest or a sudden return to intense exercise. Severe or unfamiliar pain should be assessed before you continue.

Are trigger-point injections a cure?

No procedure is a guaranteed cure. Injections or dry needling may reduce local pain for some people, often for a limited period. They are generally considered alongside exercise, rehabilitation, and changes to activities that aggravate the muscle.

Can stress cause MPS?

Stress may contribute by increasing muscle tension, disturbing sleep, and making pain signals feel stronger. It is rarely the only cause. Stress-related worsening does not mean that the pain is imaginary or "all in your head."

Sources

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