## MEDICAL NEWS TODAY

# Arachnoiditis: Symptoms, diagnosis, and outlook

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Overview Symptoms Types Causes Treatment Outlook

Arachnoiditis is a neurological condition that causes pain in the back, perineum (the space between the genitals and the rectum), legs, arms, and feet. Arachnoiditis can also affect a person's vision, sight, and mobility.

Arachnoiditis develops when the tissues that protect the brain, the nerves, and the spinal cord are damaged, usually by a traumatic injury.

In this article, we look at the causes and types of arachnoiditis, as well as how to manage the pain and other symptoms.

## What is arachnoiditis?

Arachnoiditis occurs when the arachnoid is



damaged.

The arachnoid is part of a group of membranes that cushion the brain and spinal cord nerves. When this cushioning is damaged, nerves may not function correctly.

The nerves in the spinal cord are surrounded by several thin tissues, called meninges, which provide cushioning and protection. The arachnoid mater is the middle tissue of the meninges.



Arachnoiditis is a progressive neurological disorder.

Damage to the arachnoid mater can cause swelling and inflammation. This swelling can cause nerves in the spine to stick together, altering nerve function and triggering intense pain.

Arachnoiditis is almost always caused by an injury. There are some reports of hereditary arachnoiditis, but most people with arachnoiditis develop the condition because of an injury to the spine.

Arachnoiditis is a progressive disorder, which means that it tends to get worse over time if not treated. In some people, it can be debilitating.

## **Symptoms**

The symptoms of arachnoiditis vary from person to person and can change over time. In the early stages of the disease, some people with arachnoiditis mistakenly believe they have a muscle or joint injury.

While muscles and joints might hurt, the source of the pain is neurological, so massage and similar strategies will not relieve the symptoms.

The most common symptoms of arachnoiditis include:

- changes in vision
- joint or muscle pain
- nerve pain
- unusual sensations, such as burning or tingling

- ringing in the ears
- muscle weakness
- · changes in hearing
- meningitis, or swelling of the meninges

Less frequently, people with arachnoiditis may experience these symptoms:

- swelling of the brain (hydrocephalus)
- inability to sweat
- unusual or uncontrollable body movements
- · urinary problems
- · chronic fatigue
- migraines

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## **Types**

Doctors classify arachnoiditis into several subtypes. Knowing the type of arachnoiditis a person has can aid in predicting symptoms. Types of arachnoiditis include:

- Adhesive arachnoiditis: The most severe and progressive type, this occurs when the spinal nerves stick together due to arachnoid inflammation.
- Arachnoiditis ossificans: This occurs when the arachnoid turns to bone.
- **Cerebral arachnoiditis**: Cerebral arachnoiditis affects the membrane surrounding the brain, and often causes intense headaches.

- Hereditary arachnoiditis: A rare form of arachnoiditis, this is due to genetic defects in the meninges.
- Neoplastic arachnoiditis: A form of arachnoiditis caused by cancer.
- **Optochiasmatic arachnoiditis**: This is arachnoiditis behind the optic nerve. It can cause severe or complete vision loss.

## **Causes**

The cause of arachnoiditis may influence the type a person develops, as well as the outlook and treatment Having an epidural can sometimes lead to arachnoiditis. plan. The most common causes include:

- an injury during spinal surgery, which accounts for about 60 percent of cases
- myelography, when a dye is injected into the spinal column
- exposure to chemicals that damage the meninges
- injections into the spine, such as following an epidural
- lumbar puncture
- viral and bacterial infections of the spine
- physical trauma to the spine, such as from a car accident
- cancer in or around the spine

A very small number of arachnoiditis cases are genetic.

## **Treatment and diagnosis**

Arachnoiditis is rare, so it may require many tests and take some time to diagnose. There is no standard test for arachnoiditis, but imaging tests may be used. These include:

Pain management therapy may be useful for those with arachnoiditis.

- magnetic resonance imaging (MRI)
- computerized axial tomography (CAT) scan

An electromyogram (EMG) may also be used to determine the severity of the damage. This test uses electrical impulses to check how well the nerves are functioning.

Treating arachnoiditis can be difficult. The area around the spinal cord is delicate, and even minor damage can have severe consequences.

Surgery is possible but not always recommended. Surgery is not always effective and exposes the spine to potential further damage. Even when surgery is effective, the benefits are usually temporary.

Most doctors choose instead to manage symptoms using a variety of techniques. These include:

### **Physical therapy**

A range of physical therapy techniques may help ease pain and prevent further damage. Exercise therapy can strengthen the muscles and help a person manage the pain.

Massage may reduce muscle tension due to pain, while water therapy can temporarily help nerve pain.

Some people find that hot or cold packs applied to the spinal cord or painful area of the body can temporarily relieve inflammation.

#### **Pain medications**

Pain medications include non-steroidal anti-inflammatory drugs (NSAID), steroid drugs, and narcotic pain medications, such as opioids.

The correct drug depends on a range of factors, including which other medications a person is taking, and whether they experience any side effects.

#### **Nerve stimulation**

Treatments that stimulate the nerves or spinal cord may offer relief without medication. Two promising options are:

- **Spinal cord stimulation**: This uses a device to send an electrical signal directly to the spinal cord, which can offer ongoing pain relief.
- Transcutaneous electrical nerve stimulation (TENS): Similar to a spinal cord stimulator, a TENS unit sends electricity into a painful area to relieve pain and improve movement.

#### **Psychological support**

Living with chronic pain can be difficult. Therapy can help some people cope by changing the way they think about the pain and offering emotional support.

Some people also find help from support groups for people with chronic pain or rare diseases. These groups may help people in pain find new resources, share effective lifestyle remedies, and feel less alone.

#### Alternative remedies

Some people find relief with alternative remedies including acupuncture, diet and lifestyle changes, or homeopathic medicine.

More studies are needed to determine how effective alternative remedies are for treating the symptoms of arachnoiditis.

## **Outlook**

Arachnoiditis can be managed, not cured. With appropriate treatment, it is possible to lead a normal life. However, people with this condition may need to change their treatment approach as symptoms change.

Many find that their symptoms get worse even with excellent medical care. Talking to a doctor about any and all symptoms offers the best chance of relieving those symptoms.

There is no way to predict how arachnoiditis will progress in any individual case. Knowing the type of arachnoiditis may help, although there is significant variability even among people with the same type of arachnoiditis.

Arachnoiditis is a frustrating and potentially disabling medical condition. While it is not curable, a variety of treatments can help. People with arachnoiditis deserve to live their lives as comfortably as possible and should ask their doctor plenty of questions. Doing so can help them find the best possible treatment.

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