



[Home](#) → [Medical Encyclopedia](#) → Epidural abscess

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## Epidural abscess

An epidural abscess is a collection of pus (infected material) and germs between the outer covering of the brain and spinal cord and the bones of the skull or spine. The abscess causes swelling in the area.

### Causes

Epidural abscess is a rare disorder caused by an infection in the area between the bones of the skull, or spine, and the membranes covering the brain and spinal cord (meninges). This infection is called an intracranial epidural abscess if it is inside the skull area. It is called a spinal epidural abscess if it is found in the spine area. Most are located in the spine.

The spinal infection is usually caused by bacteria but may be caused by a fungus. It can be due to other infections in the body (especially a urinary tract infection), or germs that spread through the blood. In some people, though, no other source of infection is found.

An abscess inside the skull is called an intracranial epidural abscess. The cause may be any of the following:

- Chronic ear infections
- Chronic sinusitis
- Head injury
- Mastoiditis
- Recent neurosurgery

An abscess in the spine is called a spinal epidural abscess. It may be seen in people with any of the following:

- Prior back surgery or another invasive procedure involving the spine
- Bloodstream infections
- Boils, especially on the back or scalp
- Bone infections of the spine (vertebral osteomyelitis)

People who inject illicit drugs are also at increased risk.

### Symptoms

Spinal epidural abscess may cause these symptoms:

- Bowel or bladder incontinence
- Difficulty urinating (urinary retention)
- Fever and back pain

Intracranial epidural abscess may cause these symptoms:

- Fever
- Headache
- Lethargy
- Nausea and vomiting
- Pain at the site of recent surgery that gets worse (especially if fever is present)

Nervous system symptoms depend on the location of the abscess and may include:

- Decreased ability to move any part of the body
- Loss of sensation in any area of the body, or abnormal changes in sensation
- Weakness

## Exams and Tests

Your health care provider will perform a physical exam to look for a loss of functions, such as movement or sensation.

Tests that may be done include:

- Blood culture to check for bacteria in the blood
- Complete blood count (CBC)
- CT scan of the head or spine
- Draining of abscess and examination of the material
- MRI of the head or spine
- Urine analysis and culture

## Treatment

The goal of treatment is to cure the infection and reduce the risk for permanent damage. Treatment usually includes antibiotics and surgery. In some cases, antibiotics alone are used.

Antibiotics are usually given through a vein (IV) for at least 4 to 6 weeks. Some people need to take them for a longer time, depending on the type of bacteria and how severe the disease is.

Surgery may be needed to drain or remove the abscess. Surgery is also often needed to reduce pressure on the spinal cord or brain, if there is weakness or damage to the nerves.

## Outlook (Prognosis)

Early diagnosis and treatment greatly improve the chance of a good outcome. Once weakness, paralysis, or sensation changes occur, the chance of recovering lost function is greatly reduced. Permanent nervous system damage or death may occur.

## Possible Complications

Complications may include:

- Brain abscess
- Brain damage
- Bone infection (osteomyelitis)
- Chronic back pain
- Meningitis (infection of the membranes covering the brain and spinal cord)
- Nerve damage
- Return of infection
- Spinal cord abscess

## When to Contact a Medical Professional

An epidural abscess is a medical emergency. Go to the emergency room or call 911 or the local emergency number if you have symptoms of a spinal cord abscess.

## Prevention

Treatment of certain infections, such as ear infections, sinusitis, and bloodstream infections, may decrease the risk for an epidural abscess. Early diagnosis and treatment are important to prevent complications.

## Alternative Names

Abscess - epidural; Spinal abscess

## References

Rajasekaran S, Viswanathan VK, Shetty AP. Primary infections of the spine. In: Steinmetz MP, Berven SH, Benzel EC, eds. *Benzel's Spine Surgery*. 5th ed. Philadelphia, PA: Elsevier; 2022:chap 44.

Tunkel AR. Subdural empyema, epidural abscess, and suppurative intracranial thrombophlebitis. In: Bennett JE, Dolin R, Blaser MJ, eds. *Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases*. 9th ed. Philadelphia, PA: Elsevier; 2020:chap 91.

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