



Weill Cornell Medical College

ClinicalKey®

Patient Education:

Bone and Joint Infections, Pediatric

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Bone and Joint Infections, Pediatric

Bone infections (*osteomyelitis*) and joint infections (*septic arthritis*) develop when bacteria or other germs get inside a child's bone or joint. Bacteria and other germs can get into the bone or a joint from an infection in another part of the child's body that spreads through the blood. Germs from the child's skin or from outside of the child's body can cause this type of infection if the child has a wound or a broken bone (*fracture*) that breaks the skin.

Any child can get a bone infection or joint infection. In children, the arms and legs are the bones that are most often affected. Bone and joint infections need to be treated quickly to prevent damage to the child's developing bones. These infections can cause the child's bones to develop an abnormal shape (*deformity*) or not work the way that they should (*disability*).

CAUSES

Most bone and joint infections in children are caused by bacteria, especially a type that is often found on children's skin (*staphylococcus*).

RISK FACTORS

This condition is more likely to develop in:

- Children who recently had surgery, especially bone or joint surgery.
- Children who have certain diseases, such as:
 - HIV (*human immunodeficiency virus*).
 - Diabetes.
 - Rheumatoid arthritis.
 - Sickle cell anemia.
 - Kidney disease that requires dialysis.
- Children who are 3 years of age or younger. Young children do not have a completely developed defense system (*immune system*) to fight infections. They are also more likely to fall and cut or scrape their skin.
- Children who have had a recent injury or illness.
- Children who have had trauma, such as stepping on a nail.

SYMPTOMS

Symptoms vary depending on the type and location of the child's infection. Common symptoms of bone and joint infections include:

- Fever and chills.
- Redness and warmth.
- Swelling.
- Pain and stiffness.
- Drainage of fluid or pus near the infection.
- A limp arm or leg.

- Refusing to walk or to use an arm.
- Loss of appetite.
- Vomiting.
- Irritability.

DIAGNOSIS

This condition may be diagnosed based on symptoms, medical history, a physical exam, and diagnostic tests. Tests can help to identify the cause of the infection. Your child may have various tests, such as:

- A sample of tissue, fluid, or blood taken to be examined under a microscope.
- A procedure to remove fluid from the infected joint with a needle (*joint aspiration*) for testing in a lab.
- Pus or discharge swabbed from a wound for testing to identify germs and to determine what type of medicine will kill them (*culture and sensitivity*).
- Blood tests to look for evidence of infection and inflammation (*biomarkers*).
- Imaging studies to determine how severe the bone or joint infection is. These may include:
 - X-rays.
 - CT scan.
 - MRI.
 - Bone scan.

TREATMENT

Treatment depends on the cause and type of infection. Antibiotic medicines are usually the first treatment for a bone or joint infection. Treatment with antibiotics may include:

- Getting IV antibiotics. This may be done in a hospital at first. Your child may have to continue IV antibiotics at home for several weeks. He or she may also have to take antibiotics by mouth for several weeks after that.
- Taking more than one kind of antibiotic. Treatment may start with a type of antibiotic that works against many different bacteria (*broad spectrum antibiotics*). IV antibiotics may be changed if tests show that another type may work better.

Other treatments may include:

- Draining fluid from the joint by placing a needle into it (*aspiration*).
- Surgery to remove dead or dying tissue from a bone or joint.

HOME CARE INSTRUCTIONS

- Give medicines only as directed by your child's health care provider.
- Give your child antibiotic medicine as directed by the health care provider. Have your child finish the antibiotic even if he or she starts to feel better.
- Follow instructions from your child's health care provider about how to give IV antibiotics at home.
- Ask your child's health care provider if there are any restrictions on your child's activities.

- Keep all follow-up visits as directed by your child's health care provider. This is important.

SEEK MEDICAL CARE IF:

- Your child has a fever or chills.
- Your child starts to limp or refuses to walk.
- Your child will not use an arm or a leg.
- Your child is not eating.
- Your child seems to have no energy (*lethargic*).
- Your child is very irritable.

SEEK IMMEDIATE MEDICAL CARE IF:

- Your child has redness, warmth, pain, or swelling that returns after treatment.
- Your child has rapid breathing or has trouble breathing.
- Your child cannot drink fluids or make urine.
- The affected arm or leg swells, changes color, or turns blue.

This information is not intended to replace advice given to you by your health care provider. Make sure you discuss any questions you have with your health care provider.

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