



# Osteochondroma

## What is osteochondroma?

Osteochondroma is the most common type of benign (non-cancer) bone tumor. It is sometimes called an exostosis.

An osteochondroma is a bony spur or outgrowth that generally appears near the growth plate (a layer of cartilage at the ends of long bones) on the thighbone, shinbone, upper arm or hip. Most children with an osteochondroma only have one tumor. Some children have a hereditary condition called multiple hereditary exostoses (MHE) or hereditary multiple osteochondromas (HMO), in which they can develop many osteochondromas in different locations. MHE affects approximately 1 in 50,000 individuals.

Osteochondroma is most common in children and adolescents ages 10–20, but can be found in very young children as well.

Although osteochondromas do not spread beyond the affected bone, they may grow as your child grows. It usually stops growing when a child reaches their full height (around age 14 in girls and 16 in boys).

## Can an osteochondroma become cancerous (malignant)?

Very rarely, an osteochondroma can transform into a cancerous condition later in adulthood.

Your child's doctor will probably want to keep an eye on the condition for this reason. It is extremely unusual and is therefore not a reason to remove the osteochondroma.

## What causes osteochondroma?

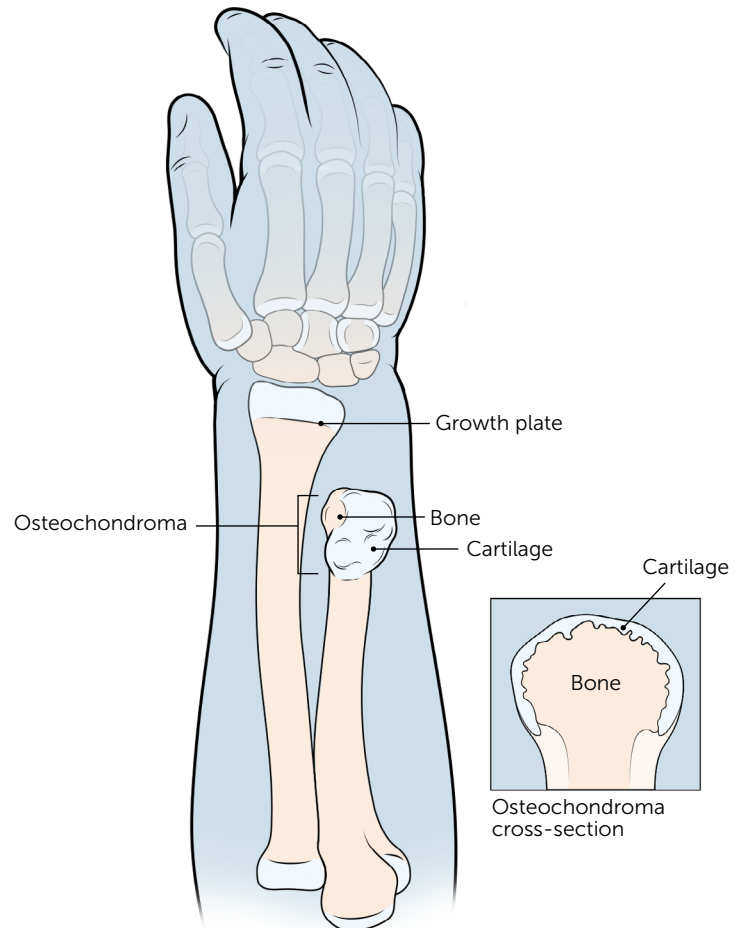
The exact cause is unknown. It is thought of as a piece of the growth plate that begins to grow away from the bone. The hereditary form of the condition (MHE) is related to two known genes: EXT1 or EXT2.

## What are the symptoms of osteochondroma?

The following are the most common symptoms. Keep in mind that each child can experience symptoms differently, depending on the size and location of the tumor or tumors:

- Hard, generally painless mass located near a joint
- Pain can occur when the mass is growing, or if the mass pushes on tendons/muscles or nerves
- Different limb lengths
- Shorter than average height for age
- Joint and muscle pains

The symptoms do resemble the symptoms of other conditions. Always consult your child's physician for a diagnosis.



## How is an osteochondroma diagnosed?

Your child's doctor will go over your child's medical history and perform a full physical exam. An x-ray is usually done at the first visit. After that, occasionally MRI and CT scans are needed for masses in certain locations. For children with multiple osteochondromas or if the diagnosis is unclear, other scans and blood tests may be done.

## How is an osteochondroma treated?

Most osteochondromas are monitored over time with physical exam and periodic x-rays. If the osteochondroma is causing pain, limitations in motion, or affecting the growth of the affected limb, surgery may be recommended. Surgery can be done to remove the osteochondroma. The risk of the osteochondroma growing back after it is removed is higher in younger children, so surgery is often delayed for masses in young children if they are not causing pain or dysfunction. In cases where the mass has affected the growth of the bone, surgery can also be done to correct the way the bone is growing.

