



# Macroductyly

## What is macroductyly?

Macroductyly is a rare congenital difference that causes a baby's fingers to be much larger than normal. Although the fingers grow abnormally, macroductyly is a benign (non- cancerous) condition.

Most of the time, only 1 hand is affected, but usually more than 1 digit (finger) on that hand is involved.

Sometimes children with macroductyly also have syndactyly. This is when 2 fingers are fused together.

Although it is benign (not cancerous), children with macroductyly can have difficulty with the larger finger or fingers getting in the way of using that hand for activities. The affected fingers can also be stiff and/or curved.

There are two types of macroductyly:

### Static

This is the more common type of macroductyly. Static means that the larger fingers grow at the same rate as the child's normal fingers.

### Progressive

This means that the larger fingers grow faster than the others

## What causes macroductyly?

Researchers do not know why macroductyly happens, but they believe that it is not the result from anything the mother did (or did not do) during her pregnancy. Although babies are born with the condition, macroductyly is not inherited.

It can happen along with neurofibromatosis and vascular malformations. Children with multiple enchondromatosis, Maffuci syndrome and tuberous sclerosis can also have larger fingers.

## How is macroductyly diagnosed?

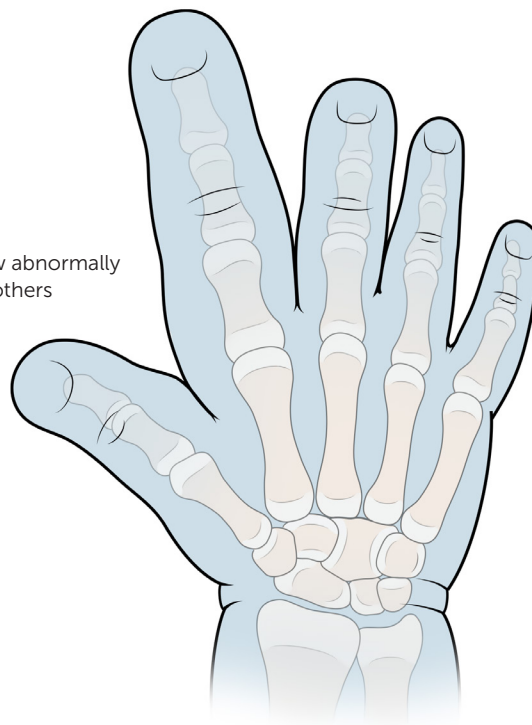
Your child's doctor probably will see the condition soon after birth. But the progressive kind may not be seen until an infant is older. Your child will have an X-ray and may have an Magnetic Resonance Imaging (MRI) of the affected area to look at the tissues that are enlarged.

## How is macroductyly treated?

Your child's physician will discuss specific treatment options with you. The goal is to have the best function and appearance of the hand. Many times, the hand can still work well with a finger that is a little wider and/or longer than normal.

In mild cases, treatment may just mean careful watching. In other cases, surgery is recommended. Unfortunately, there is no simple procedure for thinning and shortening the affected finger, since all parts of the finger (bones, tendons, nerves, blood vessels, etc) are larger than normal. So no one thing can be done to make all the affected tissues smaller. Because of this, macroductyly surgery often takes a lot of planning. Doctors need to be able to predict the rate that your child's normal fingers are growing, as well as rate the large fingers are growing.

Fingers grow abnormally larger than others



**What are the kinds of surgery?**

Your child’s doctor may recommend a combination of these procedures:

**Epiphysiodesis**

This procedure stops the growth plate at each individual finger bone from continuing to grow. This can stop the finger from getting any longer, but it cannot prevent the finger from getting wider. Epiphysiodesis must be timed appropriately depending on the growth of the normal fingers.

**Soft tissue debulking**

Soft tissue debulking is done to help fix the width of fingers. This procedure involves taking away some of the thick layers of skin and fat and replacing skin with skin grafts taken from healthy nearby skin. It is usually done in stages, around 3 months apart.

It is more often used to treat the milder forms of macrodactyly or as a part of the treatment of the progressive kind.

**Ray resection**

Ray resection is removing the entire finger. It may be done if the macrodactyly is progressive so that the affected finger is interfering with the function of the rest of the child’s hand.

**What is the long-term outlook?**

The long-term outlook for a child treated for macrodactyly is different for everyone and depends on how serious the condition is. With therapy and/or surgery, most children show an overall improvement in the way their finger look and move.

But it is rare for the affected fingers to become the perfect size and move perfectly.

**Notes**

Multiple horizontal lines for note-taking.

