Congenital Vertical Talus (CVT) Fact Sheet

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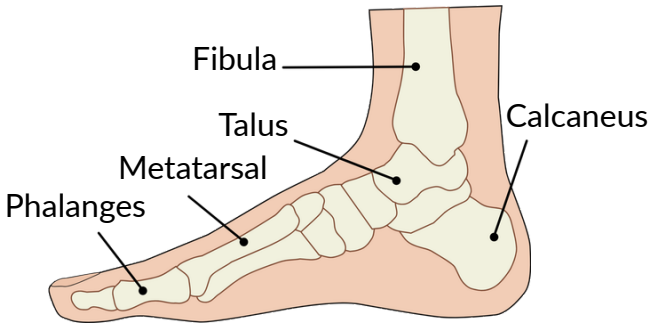
Steps is the leading charity working for all those whose lives are affected by childhood lower limb conditions

What is congenital vertical talus?

The talus is a bone in the foot, located between the heel bone (calcaneus) and the two long bones of the lower leg (tibia/fibula). The talus has an important function as it helps to transfer weight across the ankle joint. It usually sits at a 45-degree angle, in vertical talus it points straight down. The back of the foot is often affected, with the heel bone lifting and the Achilles tendon tightening. The foot will point up and out, with the heel of the foot pointing outwards and raised, usually curving outward like the bottom of a rocker. For this reason, this condition is often called rocker-bottom foot.



Vertical talus is a rigid deformity (the foot cannot be moved out of this position), it may be diagnosed soon after birth, and requires X-ray to confirm the diagnosis. The condition is rare, occurring in only one in 10,000 children. In more than half of cases it is related to an underlying condition affecting the nerves, it occurs in both girls and boys and can affect one or both feet.

The word 'congenital' means present at birth, so the condition can sometimes be called congenital vertical talus (CVT) and it can occur at random without any obvious cause.

Why does it happen?

The cause of vertical talus is not known. It is often part of a wider problem affecting the bones and muscles (neuromuscular condition) or a genetic condition. Because of this, your doctor may decide to do some more tests to find out if there is any underlying condition which is present but not obvious at the time of birth. Although it can occur on its own, there are a few conditions that are linked to vertical talus. Your doctor will be able to check for linked conditions.

Diagnosis

Cases are unlikely to be detected before birth. As vertical talus is quite rare, initially, a misdiagnosis with the more common foot condition calcaneo-valgus deformity may arise. It is important that a baby with suspected vertical talus is seen by a paediatric orthopaedic specialist in order to be diagnosed accurately.

Healthcare professionals typically look at a family's medical history, symptoms, and physical examination to make a diagnosis. X-rays are often used to confirm diagnosis. While vertical talus is not painful in very early childhood, if left untreated it can lead to pain and disability later in life. If a child learns to walk and the deformity is allowed to progress, calluses and painful skin problems may develop. It may become hard to find comfortable footwear and walking may be affected. In some cases, CVT may be diagnosed in older children when they are at a walking age or even older. Signs of CVT are usually present in the form of one or both feet appearing very flat when standing.

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Treatment

Ideally, the foot should be treated before your child starts to walk, although timings for treatment may vary due to other considerations.
All cases of CVT will require some form of surgical intervention.

Non-invasive (closed) or invasive (open) surgery may be used, depending on the severity of the condition. A common form of treatment is the reverse Ponseti technique. This involves a series of casts to realign the bones in the mid part of the foot. The casting phase is followed by surgery on the foot. A pin, or pins, may be temporarily inserted to hold the bones in proper alignment; at the same time, a cut of the tendon (tenotomy), may be performed to release the tight Achilles tendon allowing the heel bone to sit in its correct position.

Following the surgery, the foot is placed in a cast for several weeks. The pin will be removed at the hospital when the cast comes off and then overnight bracing (boots and bars) and daytime orthotics are used. The wearing of a pre-fitted brace or orthotic will usually be required so as to prevent the condition from recurring. Very occasionally the foot will not fully correct with this technique and will require more extensive open surgery which can vary in nature depending on the severity.

When will treatment start?

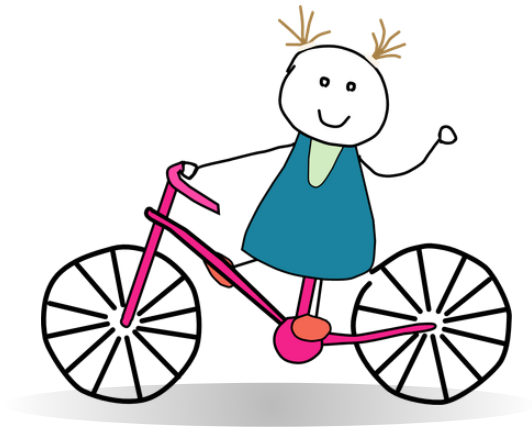
This is very much tailored to each individual and decided upon after thorough examination and discussion with the medical team. The type and timing of surgical and non-surgical procedures will depend on many factors. The ideal time for treatment is after six months but before the age of two.

Depending on the severity of the condition it will take a number of weeks in a cast and up to two years in a brace. With every treatment and diagnosis, daily exercises will be required, including stretches which parents will be taught to do by the medical team.

How will this affect my child?

The condition is not painful, but it usually needs treatment when a child is young as it can cause pain and problems walking if left untreated.

Most children who are surgically treated for congenital vertical talus have good outcomes; some children may need an orthotic to ensure proper foot alignment during critical growth and development periods; this could be an insole or an orthotic splint (an Ankle Foot Orthotic or AFO).



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Support

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Contact Steps: +44 (0) 1925 750271 to answer any practical questions you have.

Email: info@steps-charity.org.uk with questions.

Family Contact Service: If you want to talk to someone who has been through a similar situation, one on one.

Facebook Group: A closed group where you can talk about your worries, share helpful tips, and find emotional support.

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