

A new approach to untreated clubfoot

Sep 23, 2019 · By CURE International · [Access to Essential Surgery](#)



A photo of Israel from Ethiopia. Learn more at <https://cure.org/curekids/ethiopia/2018/09/israel/>

The scourge of clubfoot in a child or adolescent that has never had treatment is something that we experience daily here at CURE Ethiopia. There are an estimated 40,000 children in the country with clubfoot. Clubfoot is a condition that can be easily treated in infancy, however, if it is left untreated, it will often develop into a very serious impairment that can make walking very difficult for the patient.

There are good treatment options for clubfoot, but in many rural areas in Ethiopia, access to healthcare (even for a free treatment service) is limited. Additionally, many families are unaware of the different treatment options available for their children and, in some cases, do not even know that clubfoot is a condition that can be treated. We make great efforts to educate the public and raise awareness on this issue, but for many patients and their families, the most convincing evidence is the testimonies of other patients who have successfully undergone treatment. They are able to see first-hand what a difference the treatment can make; they are encouraged and have hope, sometimes for the first time.

For a child growing up with untreated clubfoot, life opportunities are limited. In many cultures, having a child born with clubfoot is seen as shameful, and as a result, many of these children are unable to attend school. They are excluded from society and often end up in a cycle of poverty, hunger, and destitution.

In order to treat infant clubfoot, CURE Ethiopia works with our [Hope Walks](#) partners, who run 35 clubfoot clinics throughout the country. Their work is vitally important; treating clubfoot in infancy means the child will have straight feet by the time they learn to walk. They will have no long-term memories of having a disability. However, this does not address the problem of patients whose clubfoot went untreated when they were infants—patients which I encounter daily in clinic. Therefore, CURE Ethiopia has heavily invested in finding the best treatment for the older children and young adults that suffer from clubfoot.

Our treatment protocol has undergone a radical change in the last five years. We have adopted a manipulation and casting method to treat all clubfeet that are not fully grown. This technique, developed by [Dr. Ponseti](#) in Iowa, is already the gold-standard treatment of clubfoot in infants. It is the same basic method used by Hope Walks to treat infants with clubfoot.

In an immature foot (up to the age of 10), the bones and joints are made up of malleable cartilage and stretchy ligaments and can adapt to a new position if gently manipulated and held in a stretched position by casting. Following the casting, limited surgery can be performed such as tendon lengthening and tendon transfer which allows the foot to be the best it can be, not only in terms of position but also in terms of function and suppleness.

Historically, once a patient was past infancy, they would no longer be treated with the Ponseti method and

would require extensive orthopedic surgery, where the foot would be repositioned in one surgical episode. This surgery is called a postero-medial release. This typically leaves limited flexibility and range of motion. In our experience, there was also a high relapse rate, the majority needing further bony surgery later in childhood. By contrast, our results have shown that the Ponseti casting principles are effective even with patients up to the age of ten. This was true in 90% of cases we studied, and there were very few treatment complications or relapses in the four years we have been following these children up. The casting protocol is continued for up to a total of nine outpatient casts, which is many more than the infant requires to achieve correction. The casting protocol requires patience and a commitment to rehabilitation which begins with exercises even while the casts are on. Following the limited surgical treatment and final cast, exercises aimed at rehabilitating the ankle are started. Splinting is not required.

Patients treated with Ponseti casts and limited surgery were able to gain a level of flexibility and functionality that previously would not have been possible.



[Israel](#) at a follow-up appointment

Encouraged by the results achieved through the casting and limited surgical technique, as well as the overall simplicity of the method, we have started developing a training course to teach these techniques at our hospital. The method is very teachable and well within the reach of an interested casting and physiotherapy team, led by a trained surgeon. I believe this will likely be of interest to other healthcare practitioners who deal with clubfoot in low- and middle-income countries where untreated clubfoot remains a common presentation.

The treatment for clubfoot does get more complex in adolescents. We are also developing an evidence-based approach that focuses on their treatment as well. Our goal is to achieve the best functional outcomes for all of our patients, and ultimately, to see the scourge of untreated clubfoot eliminated. It is a moral imperative for us to try, and we hope the work and research that is done at our hospital in Ethiopia will benefit patients the world over.

For more information on our treatment protocol for delayed presenting clubfoot, do contact me at tim.nunn@cure.org

Learn more about our commitment to essential surgery at cure.org/uhc