

Tarsal Coalition Treatment Guidelines

Tarsal coalition refers to an abnormal connection of fibrous tissue between the tarsal bones of the feet. The condition is associated with pain, a rigid flat foot, and reduced mobility in the feet. Most tarsal coalitions are due to a genetic condition in which two or more bones fuse together during fetal development. Most children with a tarsal coalition will never develop symptoms or require treatment.

The right treatment options for your child will depend on:

- The extent or severity of the condition
- The child's age and overall health
- The child's individual treatment goals (e.g. how important are sports to them?)
- Their tolerance for different procedures and therapies
- Whether the condition exists in one or both feet. Different feet may require different treatments.

Seventy-five percent of children with tarsal coalition who are treated will no longer experience pain.

Conservative management

Most children will respond well to conservative treatments and not require surgical intervention.

Rest	Mild cases	Ceasing or limiting high-impact physical activity (e.g. running) for 3-6 weeks may help with pain relief and reduce stress on the tarsal bones
Pain relief medication	Mild cases	Over-the-counter prescription pain relief medication such as ibuprofen can help reduce swelling and provide temporary pain relief.
Orthotics	All cases	<p>Orthotic treatments can work to relieve pain and improve physical functioning and range of motion. They need to be custom fit for your child by a specialist.</p> <ul style="list-style-type: none">• Arch supports (help correct for flat feet)• Shoe inserts<ul style="list-style-type: none">• heel cups (provide greater control over the heel and ankle)• wedges• Temporary boot to immobilize the affected joint and relieve stress on the tarsals• Ankle-foot orthotics (these compress the ankle) <p>Orthotics can also be useful in recovery from surgery.</p>
Steroid injections	Moderate to severe cases	Steroid injections may provide temporary pain relief for the child.
Weight loss	Severe cases	If a child's symptoms worsen with weight gain, their doctor may recommend a weight loss program to help manage symptoms and pain. Weight loss programs should never be implemented without a doctor's recommendation and guidance.

Physical therapy	All cases	<p>All children with tarsal coalition may benefit from physical therapy, though the specific duration, intensity, and type may vary depending on the severity of the condition and the child's age. E.g.</p> <ul style="list-style-type: none"> • For a limited period during recovery from surgery • For a limited period following diagnosis or as the child matures • Ongoing physical therapy to manage symptoms and maintain strength <p>Physical therapy involves a series of exercises designed to rebuild strength, flexibility, and range of motion. A physical therapist will determine what kind of physical therapy your child needs.</p>
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Surgical intervention

Surgery	Severe cases	<p>The best results for surgical intervention are seen in young children. In progressed cases of tarsal coalition, the tissue often becomes rigid, which limits the success of surgery.</p> <p>The type of surgery needed depends on the location and severity of the coalition. Common surgeries include:</p> <ul style="list-style-type: none"> • Coalition resection - outpatient procedure associated with fast recovery timeframes. The connective tissue can only be resected if it is not arthritic • Joint fusion - in more severe cases/older children. The bones are surgically held together to help correct their placement and to limit the movement that causes pain
Post-surgical	All cases	<p>There are several important things your child should do post-surgery to aid recovery and increase the success of the procedure</p> <ul style="list-style-type: none"> • Pain relief - in the days and weeks following the surgery • Temporary boot or cast - worn to limit the mobility of the joint while it heals • Rest - overuse of the recovering joint may cause pain and reduce the effectiveness of the surgery

American Academy of Orthopedic Surgeons. (n.d.). *Tarsal coalition* - orthoinfo - AAOS. <https://orthoinfo.aaos.org/en/diseases--conditions/tarsal-coalition/>

Boston Children's Hospital. (n.d.). *Tarsal coalition*. <https://www.childrenshospital.org/conditions/tarsal-coalition>

Kothari, A., & Masquijo, J. (2020). Surgical treatment of tarsal coalitions in children and adolescents. *EFORT Open Reviews*, 5(2), 80–89. <https://doi.org/10.1302/2058-5241.5.180106>