

CLINICAL GUIDELINES

The current orthotic guideline for managing talipes equinovarus (clubfoot) is to index the lower limb using a spreader bar assembly to maintain the feet shoulder width apart. Using custom AFOs, the involved foot or feet should be set at 70° of external rotation using the longitudinal axis of the foot plate as the reference line. If the child has only one affected foot, the unaffected extremity should be maintained at 40° of external rotation also with the longitudinal axis of the foot plate.

FABRICATION INSTRUCTIONS

1. Custom polymer AFOs should be created using standard evaluation, impression taking, and fitting practices. Care should be taken to ensure that wall thickness is adequate for fixating to the AFO sections. Reinforcement materials may be used, but should not extend into the supramalleolar area (see fig. 1). An external copolymer frame and inner flexible polyethylene bootie may be used for maximum suspension, flexibility, and adjustability. A heel counter should be placed in the AFOs proximal to the calcaneus to prevent the rearfoot from migrating.
2. The AFOs are riveted to the EZ-Crawl disconnect attachment pin by placing the included #8 rivets. The attachment is placed above the proximal border of the malleolus to avoid any impingement. The involved foot or feet should be positioned with 70° of external rotation (see fig. 2) and an uninvolved foot should be positioned with 40° of external rotation (see fig. 3). A tracing can be used on a work surface to achieve proper foot positioning. Mark and verify foot position before attaching the AFO sections.
3. After marking proper position on both of the AFO sections at the proximal border of the malleolus, remove inner bootie and drill an attachment hole using a #8 or 13/64" drill bit. Push the included #8 X 3/4" copper rivet through the hole with the flat side toward the inside of the AFO. Bevel and round the rivet to prevent any sharp transitions on the interior surface. Peen the rivet tail down to the lateral level of the attachment plate. Do NOT use a copper burr. Do not leave any jagged surfaces and lightly sand and smooth any sharp edges.
4. Attach to EZ-Crawl bar by pulling disconnect attachment device ring backward, inserting the disconnect attachment pin, and releasing the disconnect ring. Make sure that ring is secure and returns to original position. Pull on the AFO Section to make sure that AFO is secure. If not, repeat the attachment process. Verify rivet is not blocking the insertion of the pin and preventing the locking of the device. AFO should be able to rotate in place with minimal resistance.
5. Don the AFO sections to the patient. Loosen the black clamp set screws, then slide the green spreader bars over one another at a distance shoulder width apart. Use Thread Loc to prevent the screws from loosening. Attach the EZ-Crawl Bar to the AFOs and ensure the locking devices are properly engaged (see fig. 4).
6. Check overall positioning of the AFO sections, and check to make sure patient can move freely. Using goniometer, measure external rotation of the AFO section. The foot may have moved within the AFO. If the fitting is loose, it may be necessary to reposition and reattach the AFO to achieve optimal positioning. Check all surfaces for smoothness and security.
7. Instruct caregiver how to disconnect the AFO sections by pulling backward on disconnect attachment device ring. Also demonstrate proper positioning of the AFO section and how to attach by first pulling back the disconnect attachment device ring and releasing. AFO must be secure before attaching to patient.

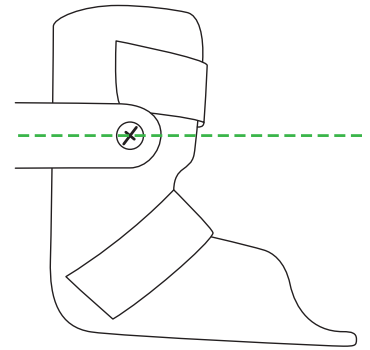


Figure 1: Attach above malleoli

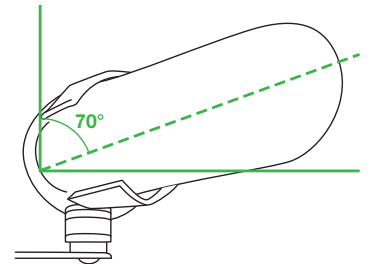


Figure 2: Affected side(s) should be set at 70° of external rotation

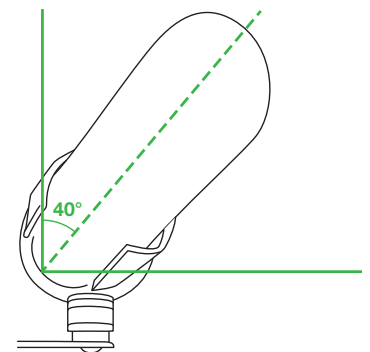


Figure 3: Non affected side should be set at 40° of external rotation

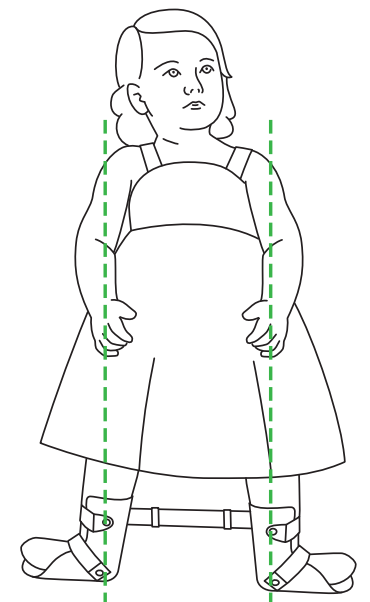


Figure 4: Feet are positioned shoulder width apart

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