

## **DynaPro™ Ankle / Foot Orthosis**

### **TREATMENT RATIONALE:**

Orthotic therapy for mild to severe joint stiffness, contracture, or abnormal tone and spasticity of the ankle and foot. The orthotic device treats plantar flexion, inversion / eversion, and rotation of the foot and hip. A recumbent orthosis, the DynaPro™ AFO can facilitate muscle inhibition and provides a Low Load Prolonged Stretch to the affected joint(s).

### **FUNCTIONAL OBJECTIVES:**

Increase available range of motion, active and/or passive, at the ankle joint to:

- Improve / maintain functional alignment of the ankle / foot.
- Increase range of motion and mobility.
- Decrease risk of skin breakdown.
- Reduce / eliminate contracture related pain and discomfort.
- Prevent permanent deformity.

### **ORTHOTIC TREATMENT:**

1. Prepare the AFO for application by opening the closures so that the device is ready to apply after passive stretching of the ankle/foot.
2. Lower extremity tone may require the use of NeuroStretch™ or Passive Range of Motion to reduce tone and facilitate muscle inhibition. Begin stretching if necessary at the hip prior to passively stretching the knee and then the ankle/foot .
3. Passively stretch the ankle/foot. Avoid a stretch reflex while passively stretching the joint. Passive stretch must address the plantar flexion, inversion / eversion, and rotation of the foot. Slowly and gently, use sub-maximal passive stretching to point of noticeable resistance only (no discomfort). Hold for a minute to allow the extension release of the affected joint(s).
4. If necessary, heat-mold the semi-rigid insert if the plantar flexion or inversion / eversion is greater than 15° from neutral. Mold to apply 5° to 15° of additional stretch from the point of resistance to stretch as measured for plantar flexion and inversion / eversion. Accommodate any foot rotation by heat molding the insert to fit.
5. Place the patient's ankle/foot into the AFO, carefully aligning the apex of the heel with the right angle bend in the boot at the heel.
6. While maintaining proper alignment of the patient's heel in the heel of the boot, first secure the forefoot strap. Next secure the shin strap, which crosses over at the middle in an X pattern. The secured straps should be snug, but a finger should easily be able to be inserted under the strap at the top and bottom to ensure that the strap is not too tight.
7. Bring the instep strap over the dorsal aspect of the foot. Insert the strap through the buckle as shown. Tighten the strap to hold the ankle in the proper position in the AFO to ensure the ankle/foot will not slip out of proper alignment while the AFO is worn. Check the strap after application to ensure that the strap is not too tight and will not apply unnecessary pressure on the patient's foot.
8. Adjust the dorsi-flexion resistance pull straps. First secure the center of the pull strap on the bottom of the AFO at the ball of the patient's foot. Bring each side of the pull strap up through the slot on the top of the AFO pull strap extension as shown.
9. Using the resistance straps, correct any inversion/ eversion first by applying low load stretch to the lateral side of the boot for inversion and to the medial side of the boot for eversion of the foot. The remaining strap should be loose with no pressure applied to that strap.



10. When the ankle/foot has progressed to the point where the ankle / foot is in the neutral coronal position (no inversion/eversion or rotation) use both resistance straps to treat the plantar flexion contracture. The elastic strap support will flex, initiating muscle inhibition of the affected tendon(s), predisposing the joint to long effects stretch.
11. Move the hip control bar if needed to the left or right side to control or prevent internal or external rotation of the hip when the resident is in bed.
12. Determine wearing schedule per therapy evaluation and physician's order.
13. Use the device in the recumbent position only. ***This device is not an ambulating AFO.***
14. Adjust the device (strap tension) as necessary to maintain the therapeutic action of the device.
15. Prior to application, inspect the device. If there are no problems with the device, inspect the ankle/foot. Do not apply the device if there is significant redness on the skin that would come in contact with the device.
16. Upon device removal, closely inspect for skin integrity. Notify the appropriate staff member(s) immediately and document any significant redness or signs of adverse pressure or shear. Discontinue device use until the skin integrity issues are resolved, and the orthosis is adjusted or the wearing schedule is modified to eliminate potential skin integrity problems.
17. Always follow medical device protocols if the patient is transferred to acute care or another healthcare facility. Send the related orthotic care plan and any accessories along with the orthotic device(s) with the patient if the orthotic will be going with the patient.
18. A wearing time adjustment is necessary every time there is a significant disruption in wearing schedule. Device tolerance must be reintroduced gradually, and noted in the patient's care plan.
19. Check device settings for continued application of the desired amount of extension stretch at least once a month or whenever the patient is not experiencing a gentle stretch sensation post application. Re-adjust the orthosis to maintain 5° to 15° of dorsi-flexion beyond the point of resistance. No therapeutic value can be obtained by device use if the orthotic is not treating the affected joint with "NeuroFlex" therapy.

#### **LAUNDRY INSTRUCTIONS:**

1. Always remove soft cover from frame before washing.
2. Close all hook and loop attachments on soft cover and place in enclosed laundry bag.
3. Hand or machine wash, gentle cycle with mild detergent. **DO NOT USE COMMERCIAL WASHERS OR HOT WATER**
4. No bleach or fabric softener.
5. Air dry.

**WARNING:** The product requires a physician's order. The product is designed for single patient use only in order to avoid cross contamination. Any substitution or removal of the product's parts voids the manufacturer's warranty. OCSI Inc. will assume no liability if the above instructions are not followed.

#### **ONGOING CARE SOLUTIONS**

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