Prefabricated Foot Orthoses

Proper techniques in order to fit over-the-counter foot orthoses, including the following:

- Differences and benefits of 3/4 length vs. Full-length
- Differences and benefits among rigid, semi-rigid, accommodative.
- Selection and fitting of appropriate devices.
- Basic level of foot orthoses modifying techniques for better fit and comfort.

What are Prefabricated Foot Orthoses?

- Formed on a pre-constructed moldblock
- Sized to a patient's arch length and foot type
- Provide good arch support and comfort
- Can be fitted with additional modifications
- May be direct molded to the patient's foot with heat

Why are Prefabricated Foot Orthoses used?

- Widely used and shown effective
- Support in the foot arch area is all that is needed
- Quick & inexpensive to fabricate
- No casting or plaster work required
- Very little equipment needed
- Clean
Why aren’t more Prefabricated Foot Orthoses used?

- Less accurate when posting this type of foot orthosis
- Won’t work well with a foot that is out of the range of “norm”

Types of Prefabricated Foot Orthoses

A **functional orthosis** is generally more rigid and usually has an external heel device or “post” attached to the bottom of the orthotic for better foot control. This type of orthosis acts to change impaired foot motion and re-establish normal foot function.

An **accommodative orthosis**, on the other hand, is not designed specifically to change foot function, rather, it allows the patient to continue to function as usual but with greater comfort and support.
Length of Prefabricated Foot Orthoses

**Full Length Orthotic** will go from the heel to toe of the shoe. This type of orthotic is good when the shoe has ample room.
- Good for accommodating excavations under the digits or with a carbon fiber plate.
- Necessary when using a toe crest

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Length of Prefabricated Foot Orthoses

**3/4 Length Orthotic** will go from heel to just proximal to the metatarsal heads.
- All the control you need can be obtained in a ¾ length orthotic.
- Best selection for use in dress shoes where space is limited.

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Prefabricated Foot Orthoses Materials

- Rigid
- Semi-rigid
- Accommodative
Rigid Prefabricated Foot Orthoses

- Rigid materials are used to limit the range of motion of a foot with limited to no flexibility
- Carbon fiber composites and plastics
- Provides support
- Controls abnormal position of the foot
- Long length of service

Semi-rigid Prefabricated Foot Orthoses

- Semi-rigid materials are used to supplement and control foot function
- Carbon fiber composites and plastics
- Provides support while allowing flexibility
- Controls abnormal position of the foot
- Long length of service

Accommodative Prefabricated Foot Orthoses

- Accommodative materials are used to provide comfort, support and protection
- Urethane and Ethylene foams
- Provides limited support while allowing a high level of flexibility
- Protects foot & reduces pain
- Short length of service
- Commonly used with Diabetic Patients
Prefabricated Foot Orthoses Selection

- **Functional prefabs** alter the foot's mechanics, as do most custom orthoses. They help many patients suffering from plantar fasciitis.
- **Accommodative prefabs** are shaped to offload certain areas of the foot, and are used primarily for patients with arthritis or diabetes.

Prefabricated Foot Orthoses Fitting

- **Functional prefabs** are often sized by arch length and arch height / type
- Many types have some amount of adjustability via the application of heat or padding

- **Accommodative orthotics** are fit without modification in most cases where pain relief and comfort are the only issues
- In the case of Diabetic accommodative orthotics, the Direct Molding method must be used when supplying prefabs in order to maintain Medicare compliance
Prefabricated Foot Orthoses - Direct Molding

- Protect the patient's foot from the heat by placing an insulated sock or a few layers of stockinet.
- Place the patient's foot on top of a 2" layer of foam (required by Medicare) and align the foot into a subtalar neutral position with the leg at 90°.

Prefabricated Foot Orthoses - Direct Molding

- Heat a Medicare approved prefabricated orthosis for 30 seconds to 1 minute with a heat source of 230 degrees F or more. The heat source may include a convection oven or commercial heat gun.
- Place the orthosis under patient's foot either weight bearing or semi-weight bearing.

Prefabricated Foot Orthoses - Direct Molding

- Hold patient's foot in position until the orthosis is cooled.
- Trim the newly formed foot orthosis to fit in the shoe.
Prefabricated Foot Orthoses - Modification

- Posting or wedging may be added to aid in off loading the foot by controlling poor biomechanics.
- Padding may be added to provide additional comfort.
- Make sure the foot orthoses interfaces with the shoe well, is not too thick and does not crowd the toes.