ORTHOTICS

STANDARD OF PRACTICE FOR PODIATRISTS

I. Introduction

Orthotic devices are an integral part of patient care in the management of pedal pathologies and are used to improve gait and to alleviate pain and discomfort from abnormal foot function or structure.

These Standards of Practice reflect what should be done by podiatrists with respect to the manufacturing and dispensing of orthotic devices. However, this treatment therapy is dependent on many variables including the patient’s medical history, footwear, activities and work environment. As a result of the personalized treatment plan and this multi-factorial and complex process, deviations may be unavoidable in certain circumstances. In these situations, the patient’s chart should clearly document the revised treatment process and the justification for any deviations from these Standards of Practice.

The College of Podiatric Surgeons of British Columbia (CPS-BC) has developed its orthotics standard to meet the needs of the profession and to ensure that the public of British Columbia has safe and effective foot care.

II. Background to Orthotics

Podiatrists have extensive knowledge of lower limb biomechanics and uphold standards of practice to ensure that they are providing the most functional devices possible, along with comprehensive orthotic case management. The desired effect is to control and/or improve the function or stability of the foot by preventing or encouraging motion of the foot joints thereby restoring equilibrium between the foot and lower body kinetic chain.

Over-the-counter prefabricated devices are available. Although prefabricated devices can be helpful on their own or can be modified to accommodate the patient’s foot or condition when appropriate, these must not be conveyed to the public as a custom-made/custom-molded device.

III. Custom –Made Orthotics

A functional device that is custom-made/custom molded is generally the prescription of choice for patient treatment. However, an accommodative device may be prescribed for patients for whom a functional device is not appropriate.
A. Functional Device

Objectives for Functional Orthotics
- To control and/or improve the function of the foot to a specific degree as determined by a thorough biomechanical evaluation in order to alleviate pedal and lower extremity musculoskeletal symptomatology.
- To prevent or slow down the development of abnormal forces and subsequent deformities by mechanical control.

Indications for the need of Functional Orthotics
- Structural weaknesses or deformities, congenital, inherited or acquired, may contribute to abnormalities such as imbalances of bone and/or soft tissue structures. This may result in compensatory changes in other parts of the body.
- Overuse symptom.

Prescription of a Functional Orthotic should include:
- A thorough biomechanical examination with appropriate measurements taken and recorded.
- A stance and gait analysis.
- Non weight-bearing plaster of paris casts, non weight-bearing STS slipper casts or equivalent, or three-dimensional, non weight-bearing laser scanning of the feet.
- It is important to remember that the quality and efficacy of the orthotic device is dependent upon the accuracy and precision of the negative cast or scan.

Construction of Functional Orthotic Devices

The orthotic devices must be constructed from the prescription and fabricated from appropriate materials in consideration of the patient’s diagnosis, footwear and activities.

B. Accommodative Device

An accommodative device is prescribed for patients for whom a functional device is not appropriate.

Objectives for Accommodative Orthotics
a. To provide a measure of control to the function of the foot in order to alleviate pedal and lower extremity musculoskeletal symptomatology.
b. To prevent the worsening of pedal deformities by mechanical control.
c. Deflect pressure from ulcers, hyperkeratoses and areas of excessive pressure which permits forces to be evenly distributed to the foot.
d. Increase cushioning of the foot.
Indications for the need of Accommodative Orthotics may include:

a. Structural weaknesses or deformities, congenital, inherited or acquired.

b. A high-risk foot with a potential for soft tissue breakdown.

Prescription of an accommodative orthotic should include:

a. A thorough biomechanical examination with appropriate measurements taken and recorded.

b. A stance and gait analysis.

c. Plaster of Paris casts, non-weight bearing STS slipper casts or equivalent, or three dimensional non-weight, or semi-weight bearing laser scanning of the feet.

Construction of Accommodative Orthotic Devices

The orthotic devices must be constructed from the prescription and fabricated from appropriate materials in consideration of the patient’s diagnosis, footwear and activities.

III. Delivering the Devices to the Patient (Functional and Accommodative Devices)

1. New orthotics should be dispensed by the practitioner to ensure that the fit of the device meets the prescription and the contours of the patient’s foot.

2. The practitioner should provide the following advice/guidelines to the patient in a manner that can be understood by the patient:
   - Guidelines for developing tolerance and acceptance of the devices.
   - Time frames to achieve potential results.
   - Appropriate footwear for the patient’s:
     a. Condition.
     b. Activities.
     c. Orthotic devices.

3. The requirements for follow-up to the dispensing of orthotic devices should include:
   - Providing short term instructions for usage of the devices.
   - Offering a follow-up appointment within a reasonable period of time after dispensing of orthotic devices (such as 3-4 weeks). This should be documented in the patient’s chart. A telephone follow-up would suffice if the patient does not require or attend a follow-up visit.
   - Advice to the patient regarding the need for periodic long-term checkups.
4. The practitioner should address what the patient may expect regarding the outcomes from the treatment. Although the practitioner cannot guarantee the success of any treatment a reasonable level of patient satisfaction should explain these expectations in advance, both at the time of obtaining consent (prior to casting for the orthotics), and at delivery of the orthotics.

5. Each practitioner should have an office policy to deal with patient dissatisfaction. This policy should be communicated to the patient before initiating treatment. While patient non-compliance may contribute to lack of success with orthotics, it is the responsibility of the practitioner to attempt to work with the patient to achieve positive results and compliance.

V. Conclusions

The CPS-BC has developed its Orthotic Standards of Practice to reflect current knowledge of orthotic management. Within the context of the constantly evolving information base practitioners are encouraged to continually evaluate their orthotic prescription strategies and procedures. In this way the profession can ensure that patients are achieving the most positive health outcomes possible and that podiatrists are competent providers of orthoses.

Custom-made orthotic devices may also be a combination of functional and accommodative devices and not always one or the other.

The CPS-BC recognizes that there can be exceptions to these standards where all of the above conditions cannot be met (i.e. physical and/or psychological limitations of the patient or uncooperative patients such as young children). In these situations an explanation should be given to the patient, parent or guardian as to why all the criteria were not met in prescribing the orthotic devices and this explanation should be noted in the chart.

VI. Glossary

**Accommodative foot Orthoses**

A device designed with a primary goal of conforming to and re-balancing the individual’s foot allowing plantar-grade floor contact permitting forces to be evenly distributed to the foot.

**Custom-made/Custom-molded foot Orthoses**

Any foot appliance or device molded to a positive model of the individual’s foot and also made of suitable materials with regard to the individual’s condition. It is either accommodative or functional and is removable from the patient’s footwear. A device shaped via a self-molding (self-contouring) process or a modified, prefabricated one is not considered a custom-made/custom-molded foot orthosis.
Customized foot Orthoses

Any prefabricated appliance or device that requires modification or assembly to accommodate a condition or alter lower extremity biomechanical function and is removable from the individual’s shoe. Cutting a prefabricated inlay to an indicated trimline does not constitute customizing a foot orthosis. A customized prefabricated device is not a custom-made/custom-molded foot orthosis.

Functional foot orthosis

A device designed to control an individual’s lower-extremity biomechanical function by providing support or stability.

Orthotics

Means Orthotic Devices or Orthoses

Prefabricated foot care products

Any mass-produced pre-made foot care item, appliance or device that is sold over the counter and is readily available, including prepackaged and non-packaged products.

STS Slipper Cast

A casting product with a fast setting resin used to obtain a quicker, accurate mold of the foot without the mess of plaster.