



DEFINING THE CERTIFIED ORTHOTIST

ABSTRACT:

THE DIFFICULTY OF OBTAINING AN ORTHOTIC PROVIDER IS IDENTIFYING WHO IS THE BEST QUALIFIED

CERTIFIED ORTHOTISTS STAND ALONE AS A RESULT OF THE SPECIFIC TRAINING AND SPECIALIZED KNOWLEDGE IN THIS SCOPE OF PRACTICE

THE USE OF AN ORTHOTISTS' HANDS BOTH IN ASSESSING THE PATIENT AND FABRICATING A CUSTOM FITTED DEVICE FOR TREATMENT SEPARATES THIS FIELD FROM ANY OTHER

For many physicians and allied health professionals, orthotics and prosthetics have been somewhat of a **mystery** in regards to who provides them and what **qualifications** one would possess to do so. In a community, orthotics and prosthetics are an important medical resource; thus, knowledge of the field and its qualified providers is invaluable to patients and practitioners alike.

Before delving into this topic, it is perhaps worth explaining the definition of "orthotics" by first differentiating it from "prosthetics". A **prosthesis**, (singular) is an external **artificial limb** designed to replace a limb lost from amputation or congenital defect

An **orthosis** tends to stir up more confusion largely due to the numerous "orthotic" providers in this country. An **orthosis is an external appliance** that supports, corrects, stabilizes, or immobilizes a joint, or limb, or motion of a joint. This includes **foot orthoses that are often coined as "orthotics"**, but also includes the **vast number of custom and off-the-shelf braces** that involve joints and body segments from head to toe. For example, commonly seen devices are **braces** for the knee or ankle. Orthosis is Greek for "to make straight", and a brace is sometimes referred to as a splint.

In Canada, *many allied health providers sell orthotics for the feet*, but there is **only one field with specific training and resulting specialized knowledge in the field of orthotics as a whole**. Enter the **CERTIFIED ORTHOTIST (C.O.)**. There are two main schools in Canada that yield orthotists. George Brown College (GBC) in Toronto, and BCIT in Burnaby. Both programs are two years in length and require a prior undergraduate degree in a related field such as kinesiology, or physiology. GBC accepts 8 students per year, while BCIT accepts 12 every second year, thus acceptance is difficult on statistics alone. Entrance exams along with interviews and CV's are used to screen approximately 100 candidates for final enrollment.

Each program is both lecture and hands on clinical/technical in nature. Students learn both prosthetics and orthotics. Relevant topics to each field are learned thoroughly and are very much related. They are anatomy, physiology, pathology, biomechanics/pathomechanics, materials science, and clinical assessment applications to both prosthetics and

orthotics. Orthotically, this includes **clinical presentations and pathologies** of the feet, ankles, knees, hips, spine, and upper limbs. Being a clinically oriented program, there is a **strong focus on performing a detailed neuro-musculo-skeletal assessment, gait analysis, and subsequent orthotic treatment**. This also involves taking an accurate cast and/or a measurement of the relevant body segment, and followed with skilled training in the sculpture of the patient plaster model. Fabrication, mechanics, and proper fit of each brace are not ignored as it becomes critical to its function and outcome to the patient. As a result, **the use of an orthotists' hands both in assessing the patient and fabricating a custom fitted device for treatment separates this field from any other**. The spectrum of brace designs are many but generally include foot orthoses, ankle braces, ankle-foot-orthoses (AFO), knee braces, knee-ankle-foot-orthoses (KAFO), spinal braces, and upper extremity braces.

Upon graduation, the clinician begins a residency in either prosthetics or orthotics that is 23 months in length. This terminates with the board certification exams: three days of immeasurable stress. Day one: 6 hours of written exams. Day two and three: verbal and practical exams. If one succeeds in passing, a certified orthotist, C.O.(c) (or prosthetist, C.P.(c)) is borne. The entire 4--year process ensures that the certifee is well prepared for real life clinical situations. In fact, **Canada's prosthetists and orthotists are of the highest international standards and thus are often sought after in global work abroad situations**.

Typically, a patient is seen in an orthotic clinic upon referral from a physician for a particular patho-mechanical problem. An orthotist will assess the patient physically and obtain subjective and objective data (which may include a gait analysis). An orthotic treatment is then determined and an accurate patient model is created for **in-house fabrication of the appliance**. A second appointment is used to fit the device and analyze its outcome. **Follow-up appointments are standard practice** and are made to ensure patient care and compliance.

The difficulty for the patient and referring physician is the plethora of *foot orthotic* providers to choose from in the market place. Orthotic costs – though often covered by 3rd party payers in the end – are large enough to raise questions about choosing a provider that will guarantee value, service, and outcome. Here are some key points to investigate upon seeking orthotic service to ensure the patient is in good hands: **1. The clinician is Canadian Certified. 2. The facility accredited. 3. A thorough physical assessment and gait analysis (if needed) is conducted. 4. The clinician uses a method to obtain a 3-dimensional model or hand cast of the body segment. 5. Follow up appointments are encouraged to ensure a mutually desired outcome**. Perhaps paramount to the above suggestions is **assurance that there is recourse in place** for the patient should something fail in the orthotic treatment.

Orthotics and bracing are effective treatments for many medical conditions. It is the authors hope from this edition that the physician and patient better understand the available care from a certified orthotist within any community and the differentiation between other allied health members as orthotic providers. Links to our governing bodies: www.opcanada.ca and www.poabc.ca.