Choosing New Shoes

It is important when choosing new shoes that they feel comfortable and fit well the first time they are put on. Have your shoes fitted at the end of the day when your feet are at their largest. The shoes should be fitted while standing as the foot will spread when there is weight on it. It is therefore best if someone can check the fit ensuring there is a thumbs width from the end of your longest toe to the end of the toe box.

The Components Of A Shoe

- **Upper**: Should extend high over the instep of the foot to maintain a good fit. The higher the upper (eg a boot) the better the control of the foot.
- **Heel Counter**: is the firm cup that holds the heel in position. It needs to be stiff to control the heel and give you stability.
- **Heel Height**: should be no more than 1 inch, and be broad and flat. A higher heel can cause excessive pressure on the ball of the foot and ankle instability.
- **Toe Box**: is the stiff material covering the toes. It is important that there is adequate width and depth to avoid rubbing and blisters on the toes.
- **Closure**: is best as laces or Velcro to prevent the foot from moving in the shoe. Slip on shoes are not suitable as they rely on pressure on the ball of the foot, which is what we are trying to prevent.

Footwear And Orthoses

The type of footwear worn with an orthosis (caliper) is important. The shoe should be solid, preferably leather, with a high, firm heel counter and laces. Some people may need custom made shoes to cater for their foot deformity. There are many different options available including different depths of the shoe, claw toe accommodation, assorted sole types, removable inserts and split sizes. Make sure that you have the orthosis on when the shoes are being fitted, and where possible remove the inside liner of the shoe to allow more room for your foot and the orthosis inside. You may actually require a half size bigger than your usual size to allow the orthosis to fit comfortably. If you have a leg length discrepancy you may require a shoe build-up internally or externally. Other modifications to the shoe may be necessary to assist with the orthoses function. This may include shoe raises, flares to the sole, bolsters or rockersoles. All of these adjustments can be done in the orthotic department where the orthosis was made.
The Role Of The Foot

The foot is a very complex structure made up of 26 individual bones held together by very strong ligaments and many muscles that control its movement. The foot has two major roles. One is bearing weight, and the second is to assist with walking. In standing, body weight is normally transmitted through the ankle and distributed fairly evenly over the foot. When walking, this transmission of weight occurs in a recognizable pattern. Firstly, the heel contacts the ground and then the weight of the body is transmitted along the outer border of the foot and over the toes before the foot is lifted off the ground in preparation for the next step. As you can imagine, all 26 bones and their associated ligaments and muscles have to work in unison and function normally or else problems can arise. Any problem with the foot can be very disabling and will have a big impact on the person's mobility and independence.

Who Is At Risk Of Having A Foot Problem?

People who have had paralytic poliomyelitis often have residual weakness as well as some tightened muscles. When the weakness and tightness is in the lower limbs there is often associated foot problems. In addition to this, having had polio as a child, can result in the foot not fully developing as the skeleton is not yet mature. This may mean that you have one foot that is smaller than the other. Both these problems can have major implications for walking in terms of comfort, cosmesis, energy expenditure, balance and safety. While foot problems can be a difficult issue to resolve there are many things that can be done to footwear to help alleviate them.

Aims Of Footwear When Accommodating Foot Problems

There are numerous ways of alleviating foot problems. Common examples are: When the foot has tight muscles and joints and is very rigid (resists movement) extra cushioning can be added to the shoe to keep the foot comfortable as it takes weight. If the problem is profound, and involves the ankle as well, materials to assist in shock absorption may be added to the sole of the shoe. The opposite problem is also common with people who have had polio. If due to weakness the foot is very flexible, the shoe can be reinforced to provide some extra support and stability. Some people may have very curled toes described as hammer, claw or mallet toes. If this is the case the shoe can be made to be extra deep in the toe area to avoid excess pressure or rubbing over the involved joints. This principle can be applied to any part of the foot that is not typically shaped whereby the leatherwork of the shoe can be stretched or molded to accommodate the underlying anatomy. Ill-fitting footwear can cause falls. Make sure you prevent falls by maintaining your shoes. Extra stability can be gained from shoes that have a broad, flat sole with a non-slip tread. If the sole of the shoe wears away at a particular point (eg the outer border of the heel) or if the non-slip tread is wearing thin, have your shoes repaired by a local cobbler.