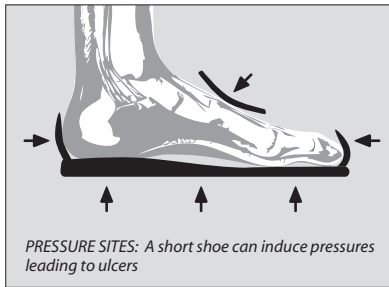


BioPed

the diabetic foot



Diabetic patients frequently develop an intermittent or permanent loss of sensation (neuropathy) in their feet. Without the warning from discomfort or pain, pressures developed from poor fitting footwear, particularly on the soles of the foot can result in an open ulcer. Such open wounds can allow direct entry of bacteria into the tissues resulting in infection and

possible gangrene. This brochure is designed to educate the diabetic patient on the types of feet at high risk and to give insight into Pedorthic treatments related to diabetic complications.

RISK FACTORS Three Common Types Of Feet At High Risk



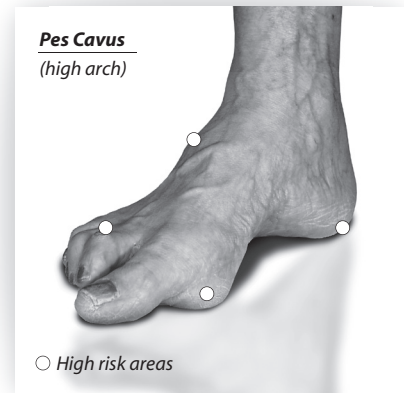
Flat Feet

Congenital (at birth) or developed with age, weight gain, and long hours of use, a flat arch allows the ankle to tip inward. The weight of the body moves from the centre of the foot to the inside edge, increasing pressure under the inside heel and large ball joint of the first toe. The toe may angle and stiffen at the joint (Bunion) creating pressure at the tip of the toe.



Short First Toe

12% to 28% of the population is born with this condition called **Morton's Syndrome**. Normally the large toe is the primary stabilizer of body weight as we push up and off our feet when walking. In Morton's Syndrome, the pressure shifts from the shorter 1st ball joint onto the longer 2nd metatarsal ball joint. This excess pressure can develop into an ulcer.



High Arch

Pes Cavus (high arched feet) are subject to excessive pressures due to their shape. Only a small percentage of the sole of the foot touches the ground. The heel and metatarsal (ball) joints are subject to extreme pressures. The top surface of the high arch and retracted toes can be subject to footwear abrasion.

PREVENTION Instilling Healthy Habits

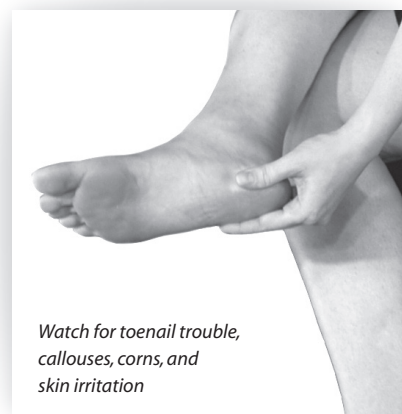
The following information may help insure healthy feet.

Personal Foot Hygiene

- See your family physician at least 3-4 times a year to monitor your diabetes and treatment.
- Always shake out your shoes and feel around inside to be sure they are free of foreign objects before you put them on.
- Keep a small unbreakable mirror where you take your shoes off (available at most retail department stores). When removing your shoes and socks check for redness and callousing which are indicators of pressure.
- Wash your feet each day, dry between your toes.
- Watch for toenail trouble, callouses, corns, and skin irritation. Consult your Pedorthist, chiropodist and/or podiatrist for treatment.
- Examine your shoes regularly for signs of wear that could cause the former problems.
- Wear diabetic socks without seams or elastics and avoid wrinkles.
- Visit an Canadian Certified Pedorthist twice a year and have your seasonal footwear (snow boots, sandals, house shoes, sports and everyday footwear) checked for wear and appropriateness.
- Check orthotics twice a year, have them recovered and rebuilt if needed.

Tips for Purchasing Footwear

- Make an appointment with an Canadian Certified Pedorthist (available at all BioPed centres) to help insure foot health.
- Measurement sizes are only a guide. The actual fit of a specific shoe size can change from one style to another style even when made by the same manufacturer. Be sure to fit to your larger foot first and try multiple size/width combinations to insure the correct fit.
- Take your time buying footwear. Walk for 15-20 minutes in the store, then take shoes off and examine the top, bottom, sides and toe tips of your feet. Look for red and/or swollen areas that denote pressure.
- Breaking in new shoes. Wear them for 30 minutes, 2-3 times per day for the 1st week. Inspect feet as mentioned above after each wear. Most upper and soling material develop flex lines as you break in a shoe.
- A common piece of advice is "to not purchase shoes unless they fit straight out of the box". This may be true for normal feet, however people with bunions, hammer toes or swollen ankles don't have a plethora of footwear choices, if any. Pedorthists are trained to take off-the-shelf footwear and modify them to fit an irregular foot shape. This customizing process has replaced most custom-made footwear, and is more fashionable.
- If any discomfort of the lower legs or feet arises, stop wearing the footwear and see your Pedorthist.
- When you come in for a Pedorthic consultation at BioPed, bring the footwear you most commonly wear for all your daily activities (include footwear worn at home).



THE SOLUTION Pedorthic Treatment Options



- ① *Cupped heel*
- ② *Arch support*
- ③ *Metatarsal support*
- ④ *Hollowing to reduce pressure on ulcer*
- ⑤ *Cushioning material*



Rocker soles reduce flexion and pressure through the (metatarsal) joints. This treatment can be used for prevention and/or treatment of ulcers



Poor or worn out footwear are major contributors to Diabetic foot complications ...read Tips For Purchasing Footwear

The Semi-Rigid (soft) Orthotic

Following the evaluation of your foot and ankle, the mould taken of your foot by the Pedorthist will reflect the amount of support, correction and pressure accommodations to be built into your custom made orthotic. Mild changes are often best initially, and more support can be progressively added as the foot acclimates to the orthotic.

Orthotic features for the diabetic foot may include:

- Cupped heel to distribute pressure evenly and away from pressure areas. Mild wedges can be applied to correct ankle problems.
- An arch and metatarsal support help to even pressures across the midfoot.
- Forefoot wedging and excavations under pressure spots can reduce chances of ulceration.
- Materials selected for cushioning, moulding abilities and friction reduction will be selected according to medical condition, weight, lifestyle and activity.

Rocker Soles

A large number of ulcerations occur under the metatarsal joints of the forefoot. This is due to the pressure these joints endure when we push up and off them, flexing, twisting and turning. A rocker sole, applied to most stability footwear can eliminate flexion and significantly reduce the pressure under the joints at toe off. Rocker soles have been shown in numerous medical studies as the most effective means to treat foot ulcers.

Footwear

Stable extra deep footwear is needed to accommodate the orthotic and give support to the patient. Footwear without seams may aid in the prevention of ulcers. The footwear industry has met the needs of the diabetic patient by manufacturing a selection of walking shoes, sandals and hiking boots – all available at BioPed centres.

The Canadian Certified Pedorthist

The BioPed Pedorthist is specialized in the casting, manufacturing, fitting and modification of many types of custom-made orthotics. Orthotics reflect the patient's condition, lifestyle and footwear requirements. A selection of fashionable footwear that are orthotic friendly, blended with on-site labs that can mould and shape footwear to fit, offers the patient relief from foot problems.



Diabetic feet are complex. Proper footwear can greatly improve mobility. Our manufacturers all know that a wide based shoe with a moulded insole can improve function and comfort for most normal feet. BioPed features shoes, sandals, boots and athletic footwear that have wide motion control sole systems and removable insoles that can be replaced with your custom orthotics.



**96200 (men)
ORTHOPAEDIC**



**96100 (unisex)
ORTHOPAEDIC**



**96501 (unisex)
ORTHOPAEDIC**



**NARITA (women)
COMFORT**



**UTRECHT (women)
COMFORT**

SAUCONY



**GRID OMNI (unisex)
ATHLETIC**

BROOKS



**BROOKS BEAST (men)
ATHLETIC**

LOWA



**RENEGADE (unisex)
OUTDOOR**



**SLIPON (women)
COMFORT**

MEPHISTO



**ZACH (unisex)
SANDAL**

ACOR



**COMFORT STREET™ (unisex)
STRETCHABLE**

This is only a small sample of the footwear selected by BioPed for its fit and comfort. Availability may vary with the season and location.

Please visit www.bioped.com for a list of all centres across Canada

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