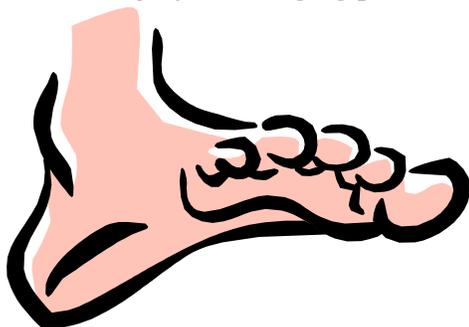


CUSTOM FOOT ORTHOTICS AND OSTEOARTHRITIS

by: GILLIAN LYTTLE, BPE, BHSc(PT), RCAMT, C.Ped(C)

Osteoarthritis (OA) can potentially be a very debilitating condition. It is characterized by joint pain, swelling, weakness around the affected joint, and a lack of flexibility and balance. These impairments can then lead to weight gain, a decline in functional mobility and quality of life. There are a number of avenues that can be taken to combat the effects of OA. The purpose of this handout is to address the beneficial effects of custom foot orthotics (custom-made shoe inserts) in treating OA.

Malalignments and mechanical problems in the feet and lower limbs (due to injury or the aging process) can lead to abnormal or increased stresses at the low back, hip, knees, and/or feet. This increased stress, in turn, may lead to abnormal changes in the joint that may lead to OA. There are a number of devices that can be recommended to address these mechanical problems and malalignments, such as metatarsal pads, heel lifts, shoe modifications and custom-made orthotics.



The goals of these devices are to limit excessive movement, unload specific aspects of a joint that is being affected by arthritic changes, and/or accommodate painful areas of the foot.

Treatment options may be as simple as educating the client regarding the correct shoe for their specific problem. However custom-made orthotics may be required for more complex issues. Certified Pedorthists are one of the “few health care professionals educated in the assessment, creation, modification and fit of footwear and foot orthoses (orthotics)”.

Common sites of OA in the lower limb include:

- *The big toe joint (1st metatarsal phalangeal joint)*
- *Ankle joint*
- *Subtalar joint (joint at the heel)*
- *Knee joint*
- *Hip joint*

By accommodating or controlling the movement at the foot with custom-made orthotics, stresses may be reduced not only through the foot and ankle joints but through the knee and the hip joints as well.

To alleviate the pain caused by arthritis, the Canadian Pedorthic Association recommends selecting footwear featuring:

- *Rigid rocker soles to decrease stress on the ball of the foot and provide a more efficient push-off*
- *Soft leather uppers or materials that will mold around deformities or sensitive areas*
- *Wide, deep, square toe boxes with no seams over hammer toes or other sensitive areas to decrease pressure on painful joints*
- *Velcro closures or elastic laces to eliminate the need to lace up a shoe, if fine dexterity in the fingers is difficult*
- *Heels should be lower than 1 inch or 2.5 centimeters – avoidance of high heeled shoes is recommended*

Gillian Lyttle, BPE, BHSc(PT), RCAMT, C.Ped(C) is a registered physiotherapist and certified pedorthist who has worked in sports medicine for 10 years. Gillian then completed her physiotherapy degree at McMaster University in 1995 where she played varsity soccer. In 2000, Gillian became a certified orthopaedic manual and manipulative therapist. Gillian’s interest in lower extremity injuries and biomechanics lead her to then become a certified pedorthist, completing her training at the University of Western Ontario.