

The Physicians Foot UPDATE

Volume 1, Issue 4

How the Foot Institute can Benefit Health Care Professionals in Private Practice

Medical Aid Mission to Belize, Central America

At the invitation of Belizean Prime Minister, The Honorable Said Musa, The Foot Institute along with Dr. Kham Ung and Anne Marie Mayer, RN, MPH successfully completed a Medical Aid Mission to Belize, Central America.

After two busy clinic days of treating over 150 patients, a number of surgical candidates were selected for surgery which was performed at the Southern Regional Hospital located in Dangriga, Belize. "The mission was a complete success" reports Podiatric Surgeon Dr. Todd Schnoor, "although I think we were all a little overwhelmed by both the volume and the magnitude of the problems that were there". "People in developing countries such as Belize have not had the luxury of a health care system like we have in Canada and the consequences are very apparent" says Dr. Scott Hollingsworth, also from the Foot Institute.

Drs. Ung, Hollingsworth and Schnoor were able to perform a number of relatively complicated surgeries while in Belize. Some of the more serious cases such as club foot and rear foot reconstruction had to be postponed until further equipment, surgical supplies and other preparations could be made.



Drs. Hollingsworth, Ung & Schnoor



Dr. Ung treating diabetic patient

Of particular interest to Dr. Ung and the rest of the team were the indigenous Native (Mayan) population living in Belize and their higher than average rate of diabetes. This is one area that definitely deserves more study, reports Dr. Ung. I suspect there is a correlation between the high rate of diabetes among Natives in Belize and what we are seeing among our Native populations in Canada and the US.

The Foot Institute plans to continue Medical Aid Missions to Belize and other developing nations in the future. Already they have two orthopedic surgeons from the US who have volunteered their services for the next mission. Ideally, The Foot Institute would like to have orthopedic and other specialists from Alberta as part of the team and will work toward this objective for future missions.

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PLANTAR FASCIITIS - THE CAUSE AND THE CURE

One of the most common causes of foot pain is Plantar Fasciitis. The condition is often very painful and without medical attention, will often deteriorate and cause an increase in sick days, immobility and chronic symptoms.

Overview

In the foot, there are five ligament bands that form the plantar fascia. They originate on the calcaneus and insert on the metatarsal heads. Plantar Fasciitis is an injury to one or more of these bands. As individuals walk, run or perform other physical activities, they often accelerate from 0 to 2-10 miles per hour, which can exert a force up to 4 times their body weight through each foot. In an ideal situation, strain is distributed among all five fascial bands as people ambulate.

A large percentage of the population however have biomechanical problems. In these cases, when people walk, run or perform ambulatory activities, the propelling force is often concentrated on one band. By far the most common band to become inflamed or injured is the medial band, which connects the first metatarsal head to the medial tuberosity of the calcaneus. An injury or tear can occur anywhere along the band, but the majority of patients who injure this ligament tear it at the origin where it connects to the medial calcaneal tuberosity.

The Vicious Cycle

Generally, when a patient first injures or tears one of the fascial bands, they feel little or no pain given a decreased innervation of the plantar fascia. Accordingly, most people continue the activity which first caused the injury, thus exacerbating the situation.

In response to the injury or tear, inflammation frequently occurs which is often the first noticeable sign of a problem. Most often the inflammation will

occur as we sit, lie down or sleep since the weight of the body is not on the feet. This allows swelling to accumulate. Seldom will inflammation occur while a patient is on their feet since the ligaments under the feet are under tremendous pressure - thus reducing the ability of swelling to accumulate.

Most patients report that the first significant and noticeable sign of pain occurs after a period of rest. As a patient stands up, their body weight produces hydrostatic pressure (i.e. fluid is being squeezed outside the ligaments to better-innervated areas of the foot) with its symptomatic pain.

As a result of this pain, people often compensate or adjust their weight to the opposite or lateral aspect of the foot. Generally this compensation is done subconsciously or without cognitive realization. After the patient becomes active and starts to walk, the weight of the body tends to cause the fluid to distribute which decreases the pressure and the pain.

As soon as the pain is reduced the patient feels or senses that everything is fine and begin to walk in their "normal" fashion. If a person is pronating, this will often cause excessive strain on the plantar fascia and the injury can easily reoccur with the same cycle of inflammation, hydrostatic pressure and corresponding pain.

Frequently, patients will adopt a routine where they compensate (change the way they walk to a less painful position) such that they can go for a period of time without experiencing pain. However, as soon as the pain is reduced and they relax, they again begin to walk in a "normal" often pronating fashion thus stressing the medial band and the injury easily reoccurs. The cycle will result in "good days" and "bad days" depending on the individual, the activity and the extent of the injury. Sometimes these cycles can be days or even weeks apart but the patient will rarely experience any long-term resolution to their problem without medical intervention. Doctors at the Foot Institute see patients where this cycle has been on going for many years, since the ligament never receives the extended rest period necessary to properly heal.

The Cure – Proper Orthotics

Although NSAIDS, stretching, exercise or cushioning in shoes may help this condition, often the fascial ligaments need to be isolated and free from excess stress for approximately 8 weeks in order to completely heal.

The most effective way to accomplish this is through the use of prescription functional orthotics. These orthotics differ greatly from accommodative or cushioning orthotics which generally do not correct biomechanical dysfunction, or prevent excess tension on the plantar fascia during the critical healing phase.

Other Alternative Treatments - Surgery

Of the thousands of patients that have been treated at the Foot Institute for this condition, approximately 80% see a complete resolution of their symptoms within an 8-10 week period through the use prescription functional orthotics. Only approximately 20% will continue to have symptoms after 8 weeks. These symptoms generally continue because the injury to the ligament was so severe that the weakened ligaments are unable to withstand even part of the load. For these individuals, we recommend a method of taping the foot which keeps the first metatarsal head lowered such that the medial band of the plantar fascia is in its shortest position. After a period of 3 weeks, the fascial band is generally sufficiently healed to withstand more strain and functional orthotics are usually enough to allow the healing process to continue.

A small minority of patients will have caused such injury to the plantar fascia that the only remaining option is a surgical procedure known as a

plantar fascial release. Surgeons at the Foot Institute recommend this procedure only after all conservative measures have proven unsuccessful.

This surgical procedure is effective in approximately 80% of patients who are unresponsive to conservative therapy. The procedure is done at a Surgical Center with few patients experiencing any significant discomfort. The fasciotomy procedure will be explained in detail in a later addition of the Physicians Foot Update.

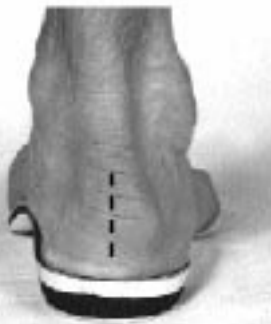
Hints for the Busy Family Doctor

We estimate that over 90% of the people with plantar fasciitis are afflicted as a result of a biomechanical problem. We recommend that patients be examined by a foot specialist to determine if and what the underlying problem is. Generally patients will benefit from orthotic therapy assuming the orthotics are properly prescribed. If a patient has orthotics which are not from a Podiatrist (e.g. the patient received their orthotics from a physical therapist, chiropractor, shoe store, etc.) then it is unlikely they are prescription functional orthotics and may not best correct the biomechanical dysfunction.

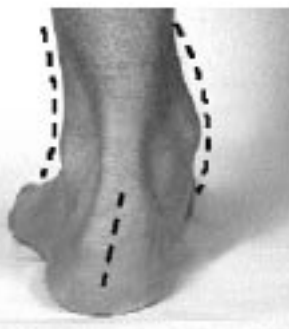
Podiatric Physicians take extensive courses in biomechanics, gait analysis, lower limb anatomy, orthotic design and treatment, etc. during their ten years of education and are best able to diagnose, correct and treat these types of difficulties. Podiatrists utilize non-weightbearing casting techniques which although difficult to master, allow the foot to be captured in its proper position. This results in an orthotic device which is best able to control the foot for optimal patient outcomes.

We recommend Physicians refer patients to a foot specialist who will perform a biomechanical exam, patient workup, outline the best treatment option available and communicate patient information to you in order to achieve the best possible patient outcome.

Orthotically Corrected
Rectus (Normal) Foot
(Right Foot)



Pronating Foot
(Left Foot)



Supinating Foot
(Left Foot)





Dr. Todd Schnoor, DPM

Ask Your Podiatrist:

Q: How common is Plantar Fasciitis?

A: With the aging of our population and the abundance of hard surfaces that we walk, run and perform other activities on, I believe we are seeing more patients with this painful condition. In our practice, it is a very common problem. The good news however is that with advances in orthotic function and design, we can usually treat this condition very effectively. As Plantar Fasciitis is usually related to improper foot biomechanics, we first focus our attention and efforts in identifying and treating the underlying problem before turning to medication or surgery.

Northern Alberta Clinic Directory



Dr. Scott Hollingsworth, DPM



Dr. David Gibbs, DPM



Dr. Brent Young, DPM

EDMONTON

Main Clinic & Admin. Office
2308 - 96 St.
(780) 444-FOOT (3668)

U of A Hospital
Metabolic Centre

The Allin Clinic
10155 - 120 St.

Clareview Medicentre
3504 - 137 Ave.
*(780) 475-7070

Weinlos Clinic
15508 - 87Ave.

Terwilliger Medicentre
600 Riverbend Sq.
*(780) 434-7234

Calgary Trail Medicentre
#1, 10407 - 51 Ave.
*(780) 436-8071

Links Clinic
11910 - 111 Ave.

BONNYVILLE/COLD LAKE

Bonnyville Health Centre
5001 Lakeshore Drive
*(780) 826-3311

DRAYTON VALLEY

Towers Medical Clinic
5207 - 50 St.
*(780) 542-5305

EDSON

Edson Medical Centre
616 - 50 St.
*(780) 723-5531

FT. MCMURRAY

Thickwood Heights Clinic
108 Wolverine Dr.
*(780) 791-4547

FT. SASKATCHEWAN

Fort Saskatchewan Medical Clinic
9421 - 94 Ave.
*(780) 998-2231

GRANDE PRAIRIE

Prairie Medical Clinic
10309 - 98 St.
*(780) 539-4010

LEDUC

Medical Arts Clinic
4721-47 Ave.

LLOYDMINSTER

Lloydminster Clinic
5120 - 46 St.
*(780) 875-2221

SHERWOOD PARK

Dr. Stan Kolber & Assoc.
50 Brentwood Blvd.
#100 Normed Center

SLAVE LAKE

Associate Clinic
213 - 3rd Ave. N.E.
*(780) 849-4155

SPRUCE GROVE

Grove Plaza Medical Centre
100 King Street
*(780) 962-FOOT (3668)

ST. ALBERT

Associate Medical Clinic
25 St. Michael St.

WAINWRIGHT

Brilz Associates Clinic
405 - 9th St.
*(780) 842-5829

WESTLOCK

Associate Medical Clinic
203, 10030 - 106 St.
*(780) 349-3341

WETASKIWIN

Wetaskiwin Lung Clinic
5217 - 50 St.
*(780) 352-7085

In Edmonton and area Call **444 - FOOT** (3668) to book an appointment near you.

The Foot Institute is independently owned and operated from the above clinics and institutions and is an association of doctors for the practice of podiatry.

South / Central Alberta Clinic Directory



Dr. Todd Schnoor, DPM



Dr. Jason Lehr, DPM

CALGARY

Beddington Medical Clinic
#302, 8120 Beddington Blvd. N.W.

Brentwood Family Medical Centre
510, 3630 Brentwood Rd. N.W.

Forest Lane Medicentre
21A, 3012 - 17th Ave. S.E.

Heritage Family Medical Centre
BLK E 8330 Macleod Tr. S.E.

Kingsland Medical Clinic
7712- Elbow Dr. S.W.

Richmond Road Family Medical Centre
290, 5255 Richmond Rd. S.W.

AIRDRIE

Airdrie Medical Clinic
#10-620 First Ave. West
*(403) 948-3109

CANMORE

Bow River Associate Medical Clinic
Suite 202, 1205 Bow Valley Trail
*(403) 609-2136

LACOMBE

Main Street Medical Clinic
4929 - 50th Ave.
*(403) 782-6717

STRATHMORE

Strathmore Clinic
#4, 55 Wheatland Trail
*(403) 934 - 5911

SYLVAN LAKE

Sylvan Family Health Centre
4936 - 50th Ave.
*(403) 887-2224

** Please book appointments directly with clinics.*

In Calgary and area Call **242 - FOOT** (3668) to book an appointment near you.

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