



# Patient Education

## Plantar Fasciitis

**Cause:** Caused by injury to plantar fascia (a ligament extending from the heel to the toes) secondary to forces of walking. This injury can be exacerbated by tight Achilles tendon. With normal walking pressures, the foot requires 10 degrees of dorsiflexion (movement of foot toward nose) at the ankle. If 10 degrees is not available, the foot will find motion in other joints of the foot, stretching the plantar fascia and causing it to tear from the calcaneus (heel bone).



### Treatment:

#### 1. First Line Treatments

- Reducing injury to plantar fascia through wearing shoes with arch support (ie orthotic).
- **Stretching** of a tight Achilles tendon.
  - i. Calf stretch – Normal running stretch.
  - ii. Stair stretch – Toes on edge of stairs, drop heels. (Count 10, stretch 3-4 times. Repeat throughout day).
  - iii. Towel stretch – Towel over end of toes prior to getting out of bed and stretching.
- **Ice area** → Easiest with pop bottle or water bottle frozen. Place on floor and roll foot over.
- **Anti-inflammatory medication.** (Motrin 400 – 800 mg every 6-8 hours)

#### 2. Second Line Treatments (Choose one)

- **Topaz Mini-Plantar Fasciotomy** → Minimally invasive surgical procedure consisting of a pin hole grid (25-30 holes). A Topaz wand then utilizes radiofrequency waves to
  - 1) Stimulate new blood vessel formation,
  - 2) Create mild tears that allow lengthening,
  - 3) Stimulate growth factors for healing. (*see video at our website* <http://UtahFootDoc.com> or <http://www.youtube.com/watch?v=7RU4J4mZShY> )
- **Cold Laser** → Treatment of painful areas with 2-3 times per week for 8-12 treatments. Also found to decrease swelling and stimulate new blood vessel formation.
- **Steroid injection** → Usually done with anesthetic to reduce inflammation and allow regression of thickened fibrous tissue. May have up to 3 injections if indicated 4 – 6 weeks apart. *Note that you may have a “steroid spike” or increased pain 24 – 48 hours after injection.*

#### 3. Future treatment options (If symptoms don't improve)

- Orthotic arch supports
- Plantar Fascial night splint → holds foot stretched during sleep.
- Casting for 4-6 weeks to relieve pressure.

#### 4. Last resort consists of surgical cutting of plantar fascia.