

**SYMPTOMS**

- Pain in area of "ball of foot"
- Burning or tingling sensation in the foot and maybe some numbness
- Pain may be sharp or stabbing
- Cramping may also occur
- No swelling or bumps

**DEFINITION**
**Neuroma**

- A bundle of nerve endings whose covering is inflamed
- Occurs when the tissue surrounding a nerve becomes enlarged - thickened
- Usually a pinching of the third and fourth metatarsal bones which compresses a nerve
- Generally occurs in adults and more common in females


**CONTRIBUTING FACTORS**

- Flat feet
- Wearing of tight, poorly fitting shoes such as pointed high heeled shoes
- Aggravated by prolonged standing
- Increased stress such as kneeling or climbing ladders
- Mechanically there is too much movement of the metatarsals (bones of the foot)

**TREATMENT - ADVICE GIVEN MOST OFTEN IN CURRENT LITERATURE**

The 3 S's - Stretching, Strengthening and Supporting, along with ICE and REST, have been found to be the simplest and most effective treatment for most foot and lower extremity, overuse injuries.

**PRIMARY CAUSE**
**Excessive Pronation**

- Pronation is a normal movement of the foot, that allows the arch to flatten to a degree, which helps the body to absorb shock and adapt to different ground surfaces.
- In analyzing one's gait, first contact is on the heel and outside of the foot; followed by a shift of body weight continuing forward, toward the arch and toes.
- If the foot is weak or tired and/or the footwear is not supportive, then the arch can flatten more than normal, which is excessive pronation.
- Flattening of the arch (excessive pronation) places pressure on the foot and can decrease the metatarsal arch thus increasing the chance of compression on the nerve creating a neuroma.
- With excessive pronation, increased stresses can be placed on the foot.

- Stretching of the foot and massage can help to decrease pressure between the toes and metatarsals.
- Strengthening of the foot with the toe curl can help to strengthen the arch.
- Supporting the foot with the proper shoes and insoles, can help prevent, improve or eliminate the vast majority of foot problems.
- Make sure the shoe has enough room in the toe box.