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## Painful Stiff Big Toe – Hallux Rigidus

### Definition

Hallux rigidus is a term used to describe a restricted amount of ‘upward motion’ or dorsiflexion of the big toe joint. The restriction of motion and pain associated with hallux rigidus is often attributed to a mechanical jamming of the joint and/or the presence of arthritis. X-ray investigation will often illustrate a loss of joint space with the presence of osteophytes (small bone fragments) and other indicators of arthritis.



### Incidence

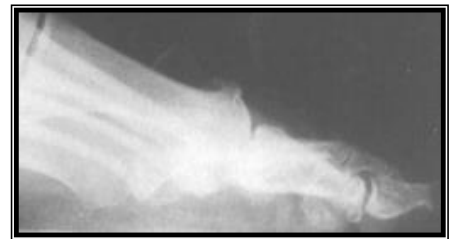
Hallux rigidus may affect the adolescent to adult populations but often early signs of limitation in joint function can be identified with certain foot types in the younger age group which may develop into significant hallux rigidus. This usually being a foot type that overloads the 1<sup>st</sup> toe joint.



**Normal joint**



**Arthritic joint**



**Note bone spur at top of joint**

### Symptoms

These include the following with not all necessarily present;

- Intermittent pain of the great toe joint that is worsened by activity
- Pain may be exacerbated with high heeled footwear or cold, damp weather
- Joint stiffness and decreased or loss of motion
- Grating may be noted in the joint
- Local swelling and redness
- Pain over the bony prominence (exostosis) with footwear
- Pain along the joint line
- Callus and corns on the mid bottom region of great toe
- A cocked up end portion of the great toe with possible nail distortion
- Walking either intoed or out toed to prevent excess load on the joint
- Pain of the ball of the foot due to walking differently and hence overloading this region
- A bunion or angulation of the big toe towards the 2<sup>nd</sup> may be present
- The flexing region of the sole of the shoe is more towards the toes than normal



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### Causes

Hallux rigidus may result from a number of different factors outlined below:

- The mechanical jamming or impingement of the top (dorsum) of the big toe joint resulting in arthritis formation.
- The shape of the metatarsal head
- A long or short first metatarsal may result in increased pressure or abnormal forces through the joint
- Elevated first metatarsal causing excess load and malfunction through the joint
- A pronated or 'flat foot'
- Trauma to the joint eg stubbing, sport or activity such as soccer, dance etc
- Arthritic conditions such as rheumatoid, gout, joint infection etc

### Treatment

- Anti inflammatory medication to assist in pain reduction
- Mobilisation joint exercises in early signs of limitation
- Local anaesthetic and or cortisone injections
- Footwear modifications eg. Extra depth/width or rocker bar sole
- Address biomechanical factors such as flat feet etc that cause overload of the 1<sup>st</sup> toe joint with appropriate insoles/orthotics prescribed by the Podiatrist
- Surgical procedures: May include some or all of the following
  - Removal of excess bony spurs or fragments
  - Removal of inflamed joint tissue
  - Release contracted tissue to enhance joint motion
  - Removal of portions of damaged cartilage
  - Correcting position of 1<sup>st</sup> metatarsal
  - Removal of degraded joint surface and creating a modified and greater joint space to improve motion
  - Possible joint implant
  - Fusion of the eroded joint

**Dr Nick Marino, Podiatric Surgeon can assist you with this problem.**