

Information for patients  
**Metatarsalgia**



**Shropshire Orthopaedic  
Outreach Service 'SOOS'**

## Metatarsalgia

Metatarsalgia is a general term used to refer to any painful foot condition affecting the metatarsal region of the foot. Traditionally the term tends to refer to pain under the ball of the foot or 'metatarsal heads'. However there are a range of specific conditions that exist under the umbrella term of 'metatarsalgia'.

### What causes metatarsalgia?

What causes metatarsalgia is dependent on the specific condition that exists. The cause may be:

- Overuse
- Wearing high heeled shoes
- Being overweight
- Having a stiff ankle/tight Achilles tendon
- Morton's neuroma
- Claw foot (pes cavus)
- Hammer toe or claw toe deformity
- Bunion
- Previous surgery to the foot
- Stress fracture of a metatarsal
- Freiberg's disease
- Arthritis or gout
- Diabetes

### What are the symptoms of metatarsalgia?

- Pain in the ball of the foot
- Some people describe this as being like walking on pebbles
- Others describe a general aching under the ball of the foot

The symptoms can be localized i.e under one or two metatarsal heads or can be general and felt under all the metatarsal heads.

The symptoms can be made worse by standing, walking or running and may affect both feet.

## Initial treatments for metatarsalgia

### Rest

Metatarsalgia can be caused by overuse which can cause some mild inflammation in the metatarsal heads and nearby joints.

If you experience this discomfort you can protect from further injury by 'relative resting' e.g. reducing exercise thresholds such as running, jogging, aerobics, high impact gym classes & if possible avoid or minimize long periods of unnecessary standing and walking.

### Footwear



Wearing high heeled shoes can put extra stress on the metatarsal heads as well as encouraging development of corns and callus.

Footwear that is poorly fitting or too tight can also be a cause.

### Suitable Footwear



Ease and encourage recovery from metatarsalgia by selecting footwear which is well fitting with adequate width and depth across the front of the foot and which cushions the sole of the foot. This helps to 'rest' the metatarsal bones and metatarsal heads from impact.



On an average day, you take 5,000 to 10,000 steps. With every step you take, your feet have to absorb a force that is one and a half times your body weight. If you run, jump, or undertake high impact aerobics, the force is several times your body weight.

If it is necessary to wear smart dress shoes e.g. dress code for work – consider wearing wider, deeper, cushioning footwear outside of work e.g. trainers. This should help to reduce the amount of discomfort you are experiencing with your metatarsalgia.

### **Worn out footwear**



Replace footwear that has worn out. Firstly the material will have lost its shock absorbing ability and secondly the ‘biomechanics’ of the foot can become compromised further prolonging symptoms of metatarsalgia.

### **Being overweight**

This can put extra stress on the feet. Think about what your goals are and how these can be achieved without overdoing things for your feet. If you are exercising to lose weight and you have developed metatarsalgia, consider the footwear advice given and combine this with low impact exercise (such as swimming or cycling) along with changes to diet to lose weight. “Challenge the clock” by swimming or cycling at increased speeds to that you can comfortably cope with to raise heart & breathing rate – this helps to burn the calories and helps you to lose weight without overloading the feet. If you walk/run certain distances – spread the volume across a greater number of days.

### **Painkillers**

Painkillers such as paracetamol or ibuprofen may help to relieve pain. Ibuprofen is from a group of medicines called non-steroidal anti-inflammatory drugs (NSAIDs). However, you should not use ibuprofen or other NSAIDs for more than 7-14 days as metatarsalgia can be due to a varying number of conditions some whereby which ongoing use of NSAIDs delay healing e.g stress fracture. If you choose to use NSAIDs, revert back to a simple pain relief such as paracetamol after 14 days.

**Please consult your GP especially if you have co-existing medical conditions such as heart, liver and kidney disease, if you are pregnant or breast feeding, if you have ever had an allergic reaction to any medication, if you regularly drink large amounts of alcohol or if you are taking other medication.**

## Having a stiff ankle or achilles tendon

This can affect the way that pressure is distributed across the foot and may lead to extra stress on the metatarsal heads. Gentle calf stretches can help.

### Calf stretching exercises:

#### Gastrocnemius Muscle Calf stretch



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Stand in a walking position with the leg to be stretched straight behind you and the other leg bent in front of you.

Hold the stretch for a count of 30 seconds. Repeat for each leg. Repeat 5 times. 5 days a week for 4 weeks.

#### Soleus muscle calf stretch



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Stand in a walking position with the leg to be stretched behind you. Hold on to a support. Bend the leg to be stretched and let the weight of your body stretch your calf without lifting the heel off the floor.

Hold for 30 seconds – relax. Repeat 5 times, 5 days a week for 4 weeks.

## Padding



Padding using materials such as fleecy web, fleecy foam, felt or gel covers can help alleviate symptoms of metatarsalgia.

## Other treatments for metatarsalgia

If after four weeks of following this advice for Metatarsalgia, your symptoms do not improve – visit your GP. Your GP will discuss with you further management and may refer you for a more specialized opinion from a podiatrist or a foot and ankle surgeon.

### Further treatments may be:-

- 1 Insoles with dome pads placed underneath the ball of the foot or bespoke foot orthoses.
- 2 Corticosteroid injection therapy. Steroids are used to reduce inflammation arising from either a joint or soft tissue. If the metatarsalgia is due to an inflamed “MTPJT – (metatarsophalangeal joint) or a pinched nerve (Morton’s neuroma) – the steroid can help to settle the inflammation.
- 3 Investigations. Blood tests can check for diabetes, gout or inflammatory arthritis. X-ray can show a fracture, Scans can show a suspected stress fracture and Ultrasound scan can confirm a Morton’s neuroma.
- 4 Surgery. If your metatarsalgia is proving resistant to settling down with conservative measures e.g. pain in the ball of the foot due to a misshapen toe “hammer toe” – surgery may be an option.

## References and additional information

Use of text with permission from Patient.co.uk now <https://patient.info> available at <https://patient.info/foot-care/heel-and-foot-pain-plantar-fasciitis/metatarsalgia-metatarsal-injury> © 2020, Egton Medical Information Systems Limited. All Rights Reserved.

Additional information available from:- <https://patient.info/foot-care/heel-and-foot-pain-plantar-fasciitis/metatarsalgia-metatarsal-injury>

<https://cop.org.uk/foot-health/common-foot-problems>

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Standards of care for people with Musculoskeletal Foot Health Problems Podiatry Rheumatic Care Association A Project funded by Arthritis Research Campaign. The Musculoskeletal Service Framework Department of Health Jul 2006.

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Your healthcare provider will be happy to answer any further questions you may have.

## If you require a special edition of this leaflet

This leaflet is available in large print. Arrangements can also be made on request for it to be explained in your preferred language. Please contact the Patient Advice and Liaison Service (PALS) email: [rjah.pals.office@nhs.net](mailto:rjah.pals.office@nhs.net)

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