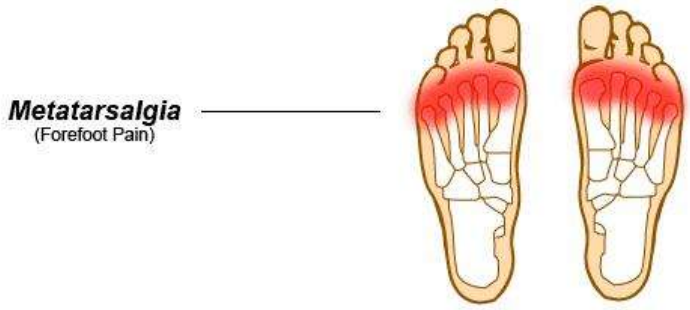
RED FLAG / GP ADVICE: CONSIDER METATARSAL STRESS FRACTURE OR CHARCOT FOOT (IF PATIENT DIABETIC WITH NEUROPATHY) IF SWELLING AROUND MIDFOOT. IN THE NEUROPATHIC DIABETIC PATIENT THE FOOT WILL BE RED & VERY WARM. REFER URGENTLY TO HOSPTIAL DIABETIC FOOT CLINICS OR FOOT & ANKLE ORTHOPAEDICS.

[1]METATARSALGIA
PATIENT INFORMATION LEAFLET



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

[1] Patent information leaflet: Metatarsalgia October 2014

INITIAL TREATMENTS FOR METATARSALGIA

REST

Metatarsalgia can be caused by **overuse** which can cause some mild inflammation in the metatarsal heads and nearby joints e.g. in runners or sports that involve jumping may also put extra stress on the metatarsal heads and lead to inflammation and pain.

If you experience this discomfort you can protect from further injury by relative resting e.g. reduce the amount of non-essential exercise such as running, jogging, aerobics, Zumba & try if possible to avoid or minimize long periods of unnecessary standing/walking.

FOOTWEAR

Wearing high heeled shoes can put extra stress on the metatarsal heads.

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

WIDER, DEEPER, SHOCK ABSORBING "CUSHIONING" FOOTWEAR

One of the best things you can do to ease and encourage recovery from metatarsalgia is to wear wider, deeper cushioning footwear. 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 do high impact aerobics the force is several times your body weight.

If it is essential to wear smart dress shoes e.g. dress code for work – consider wearing wider, deeper shoes outside 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 in general. Think about what your goals are and how you can achieve them without overdoing things for your feet e.g. if you are exercising to lose weight and your feet have developed metatarsalgia, consider the above advice on footwear plus use low impact exercise as well as diet to lose weight e.g. swimming or cycling. "Challenge the clock" by swimming or cycling at an increased speed 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.

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.

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 6 weeks.

Calf stretching exercises: Soleus muscle calf stretch.

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 6 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 six 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. Foot orthoses

These are bespoke insoles which can help support and control faulty foot mechanics whilst also helping to "offload" pressure points under the ball of the foot.

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:

Patient.co.uk
Trusted medical information and support

Barlow-Kearsley E, Calfas M, Donson L. Critical Review: The assessment and treatment of lesser/central metatarsalgia. Podiatry Now Jul 2011

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