Medial Tibial Stress Syndrome

Medial tibial stress syndrome (MTSS), often referred to as shin splints, is a common overuse injury characterised by pain at the inside border or the tibia or shin bone. It is common in activities such as walking, running, and jumping, occurring in 13 to 20% of runners and up to 30% of military personnel and is more common in females. It can be considered a stress-induced injury that presents early in the continuum, with stress fractures being at the very end of the spectrum if the load is not reduced adequately.

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Several risk factors have been proposed to contribute to shin splints, including:

- Sudden increases in training volume or intensity (eg. introducing hill repeats or increasing mileage).
- Being overweight.
- Lower limb weakness and/or poor biomechanics.
- Decreased mobility of the hip or ankle.
- Less running experience.

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- Poor footwear choice or a change of footwear may cause overload.

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Diagnosis

Medial tibial stress syndrome is largely diagnosed by your physio in the clinic based on your history and a thorough physical examination including the location and nature of the pain, the ability to reproduce pain on palpation around the bottom of the tibia and a battery of tests designed to provoke pain through loading the shin. Imaging such as MRI may be used to help confirm the diagnosis depending on how far along the continuum the process is, particularly if stress fractures are suspected.

Management

Management of MTSS is a multimodal approach that should be based on the assessment findings in the physiotherapy consult, often including:

- Education surrounding the causes and management of bone stress injuries.

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- Activity modification to reduce load on the tibia where necessary, eg. reducing running mileage or keeping an eye on your daily step count.

- Graduated loading of the bone and soft tissues with strength training and a slow progression back to explosive movements such as running.

- Correction of any abnormal biomechanics.

- Changes in footwear to a more cushioned shoe or the use of some orthotic supports may be effective in either the short or long-term.

- Looking at nutrition and vitamin D intake may be helpful for good bone health.

- Other adjuncts may include manual therapy, ice, shockwave therapy, pain medication or injections in some cases.

With a concerted effort on rehabilitation and a shared decision-making process between the client and physiotherapist, these management strategies will help you get back to doing what you love.

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If you are experiencing shin pain and reduced function,

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book now with one of the experienced physiotherapists at In Balance Physiotherapy and Pilates to get a plan to get you back In Balance!

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