Shin Splints
(Medial Tibial Stress Syndrome)

CAUSES

Overuse/overloading structures and **poor single leg biomechanics**.

- Overloading examples including increasing training loads too quickly, change in training surfaces & footwear, inadequate rest time between training sessions
- Biomechanical factors include foot pronation, poor calf strength, decreased ankle mobility (in particular dorsiflexion), knee valgus during dynamic loading ('knocked knees') and poor hip & trunk (gluteal & 'core' strength) control during dynamic loading.

SIGNS & SYMPTOMS

- Pain is exercise induced from activities such as **running** and **jumping.**
- **Dull ache** at **start** of exercise and can often subside during exercise before **increasing** following exercise **once cooled down**.
- As the injury progresses pain can often **become sharp** with increase weight bearing movements such as when the **foot strikes** the ground in **running** and **landing** from **jumping**.
- Pain can be provoked on **palpating** along the **tibial border**.

WHAT ELSE COULD IT BE?

- Bone Stress - stress reaction or fracture
- Chronic exertional compartment syndrome

MANAGEMENT

- **Assessment** of;
  - Loading & exercise and injury history.
  - Lower limb muscular strength. Functional lower limb control in aggravating activities.
  - Foot biomechanics if appropriate; advice regarding footwear and/or referral to Sports Podiatrist.
- **Education** & advice surrounding correct loading. This will be dependent on sport for example a detailed return to running program for runners.
- **Manual therapy** to improve ankle range of movement & decrease muscle tightness where warranted.
- Comprehensive **rehabilitation** program designed to improve single leg biomechanics and functional strength specific to clients functional loading demands.
- Management may also include referral to Sports Doctor for review for any further medical intervention.

Lohrer, H., Malliaropoulos, N., Korakakis, V., & Padhiar, N. (2019). Exercise-induced leg pain in athletes: diagnostic, assessment, and management strategies. The Physician and sportsmedicine, 47(1), 47-59.
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