Recommendations for

MEDIAL TIBIAL STRESS SYNDROME (MTSS 'SHIN SPLINTS')

HOW TO RECOVER SUCCESSFULLY

This information is designed to be used only under the care and advice of your trained health professional. Please consult your health professional with all questions and concerns.

WHAT IS MTSS?

Medial Tibial Stress Syndrome is often called 'Shin Splints' by runners and athletes. We prefer MTSS as it describes the issue more clearly - it is a stress reaction of the tibia (the larger of the two bones in your lower leg). It's 'medial' which just means towards the midline of your body. The medial tibia means the part of it closest to your midline i.e. on the inside of the shin.

Bones adapt to exercise in a similar way to muscles, tendons and joints,. They get thicker and stronger if allowed enough time to adapt. However if your training increases too rapidly the bone can become overloaded and develop a stress reaction where it becomes sensitive and painful.

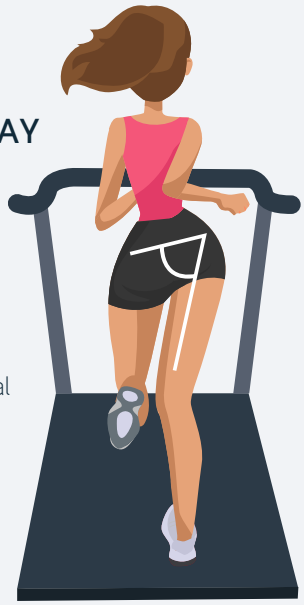
WHAT CAUSES MTSS?

Increasing running distance, training frequency or speed too quickly or adding in lots of hill running can irritate the tibia.

The majority of running injuries, including MTSS are linked to how much you train and how quickly it increases.

OTHER FACTORS CAN PLAY A ROLE TOO SUCH AS

- Your running gait.
- How well you recover.
- Other activities/ sports you do.
- Lifestyle factors like sleep and stress.
- Your general health and previous medical history can also play a role.



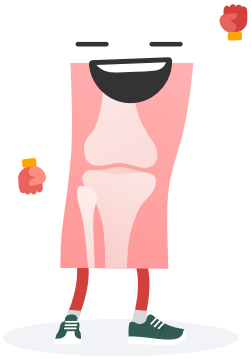
DOES RUNNING OR EXERCISE HARM THE BONE?

- Running or exercising at a level the bone can manage stimulates it to adapt and remain strong, rather than harm it.
- Your pain is a sign of sensitivity, like how pressing a bruise is often painful. It hurts because there is pressure on sensitive tissue, not because it's being harmed. We want this sensitivity to settle and staying active at the right level can help this. If you keep doing too much it's very hard to reduce your symptoms.
- **It's usually impact activities that the bone finds most challenging, many non-impact activities like cycling and swimming can often be continued pain free.**

HOW CAN WE FIX IT?

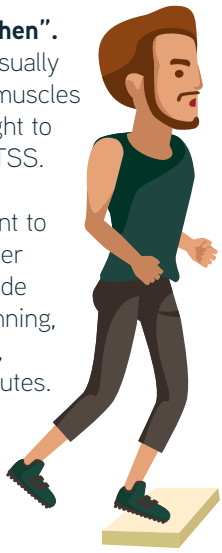
The body is pretty amazing! If we create the right environment for it in terms of activity levels and recovery it will adapt and symptoms will settle. Your treatment will normally have three phases:

Phase 1 "Calm it down".
Modify or reduce painful activities like running to a level your tibia can manage. This allows any irritation to settle.



Phase 2 "Strengthen".

- Build strength, usually targeting the calf muscles as these are thought to be important in MTSS.
- We may also want to strengthen the other muscles that provide support during running, such as the quads, hamstrings, and glutes.



Phase 3 "Build back up".
When symptoms have settled we can start phase 3 and gradually build your running distance, frequency and intensity towards your training goals.

These 3 phases can overlap and often vary between different people depending on individual need.

HOW LONG WILL IT TAKE?

- Recovery timeframes vary and are difficult to predict.
- Some patients see improvements in as little as 2 to 4 weeks, however returning to your normal training is likely to take longer, especially if you have challenging goals to achieve.
- It's important to allow time and be consistent with rehab as it can take 12 weeks or more to see significant improvements.
- If the symptoms have been with you a long time or are particularly severe and you've had to stop running altogether it usually takes longer to recover.
- With time and consistency you can get great results!

Walking 30 mins with minimal pain

HOW SHOULD I MODIFY MY TRAINING?

- If your pain is severe and troubling you with everyday activities like walking and going up/ down stairs it's best to take a break from running to let things settle.
- If you can walk around 30 minutes with minimal pain and most daily activities are comfortable it's often ok to return to running (or continue at a manageable level) **under the guidance of your health professional**.
- With MTSS it's best to try to stick to running with minimal symptoms. Continuing to run through pain seems to prolong recovery so adapt your running to a pain free level if possible. Reducing run duration/ speed and introducing walk breaks can help to reduce symptoms during a run.

HOW DO I PREVENT IT HAPPENING AGAIN?

The best approach is to ensure you build your training gradually and plan recovery into it. This can include recovery days within each week as well as a recovery week roughly every fourth week when your training volume is reduced.

Once you've achieved your rehab goals it's a good idea to keep it going once or twice per week to maintain your strength and support your running.

WHAT ELSE CAN I DO TO HELP MY RECOVERY?

Your body will recovery more quickly if you take good care of it! Try to get 7 to 9 hours of quality sleep per night. Below are 10 top tips to help with this. There is evidence that stress can delay healing so seek help for your mental wellbeing, especially if you feel low in mood, stressed or anxious.

TEN TIPS TO IMPROVE SLEEP FOR ATHLETE RECOVERY AND PERFORMANCE

Based on research by Bird et al. (2013), Bonnar et al. (2018) and work from The Centre for Sleep and Human Performance.

- Increasing how long you sleep at night has the most evidence for improving performance and reducing daytime tiredness.
- 7 to 9 hours sleep per night is recommended for healthy adults but **athletes may need 9 to 10 hours.**
- Day time napping may help to extend sleep and reduce effects of sleep deprivation. Consider timing and length of sleep - 20 to 30 mins may be sufficient.
- Optimising sleep is especially important as training load increases. **Train more, sleep more!**
- Consider adjusting training to extend sleep - for example changing times for late night or early morning sessions.
- **Develop a regular sleep routine** and habits especially waking times. Limit sleeping in on the weekends within 1 hour or normal waking time.
- Learn coping strategies for worry and anxiety that affects sleep such as relaxation techniques and guided imagery.
- Avoid caffeine, alcohol and nicotine in the hours before sleep.
- **Wind down before bed** and restrict stimulating activities such as "screen time".
- **Create a comfortable bedroom environment** - cool, dark and quiet (use earplugs/ eye masks if necessary).

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WHAT REHAB SHOULD I DO?

We've developed a programme tailored to your needs:

DATE	EXERCISE	SETS	REPETITIONS	LOAD	HOW OFTEN?