



Dr Wolfgang Muller (Consultant Paediatrician)

Parent Information Guide:

Managing a Foot Stress Injury in Young Athletes

What is a Stress Injury

A stress injury to the foot—whether a stress reaction or stress fracture—is one of the most common overuse injuries in active young people. The good news: with proper management, these injuries heal well and your child can return to full activity.

What's Happening

Stress injuries occur when repetitive loading on bone outpaces the body's ability to repair and strengthen it. They're common in running, jumping, and court sports. The foot bones most often affected are the metatarsals (the long bones leading to the toes) and the navicular (a small bone on the inner arch).

Initial Management

Rest from aggravating activity is essential. This doesn't necessarily mean complete immobility, but it does mean stopping the sport or activity that caused the injury.

- Protected weight-bearing: Your doctor may recommend a walking boot, stiff-soled shoe, or in some cases crutches, depending on the bone involved and severity.
- Ice and elevation can help manage early swelling and discomfort.
- Pain relief: Paracetamol is generally preferred. Avoid anti-inflammatory medications (ibuprofen, naproxen) in the early weeks unless specifically advised—some evidence suggests they may slow bone healing.

Typical Recovery Timeline

Injury Type	Usual Healing Time
Metatarsal stress fracture	6–8 weeks
Navicular stress fracture	6–12 weeks (sometimes longer)
Stress reaction (no fracture line)	4–6 weeks

These are estimates. Healing depends on the specific bone, injury severity, nutrition, and how well activity is modified.



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Vitamin D and Calcium

Vitamin D and calcium are essential for bone health, and deficiency—common in athletes, particularly those who train indoors or have limited sun exposure—is a recognised risk factor for stress fractures. While correcting a deficiency is important (it may impair healing), evidence that supplementation beyond normal levels speeds bone repair is limited. It's reasonable to ask your doctor about checking your child's vitamin D status, and to ensure adequate dietary calcium and overall energy intake both during recovery and to reduce future injury risk.

What Your Child Can Do During Recovery

Complete rest isn't always necessary or helpful. Cross-training maintains fitness and mental wellbeing:

- Pool running or swimming (once cleared for water)
- Upper-body strength work
- Stationary cycling (if pain-free and approved)
- Core and hip strengthening—often a key part of preventing recurrence

A physiotherapist can design a safe program that keeps your child active without stressing the healing bone.

Returning to Sport

Return should be gradual and guided by symptoms, not the calendar. A typical progression:

1. Walking without pain or limping
2. Light jogging on flat surfaces
3. Sport-specific drills at reduced intensity
4. Full training
5. Competition

Jumping straight back to full activity is the most common cause of re-injury. Expect the return-to-sport phase to take several weeks on its own.



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Warning Signs to Watch For

Contact your doctor or physiotherapist if:

- Pain returns or worsens during the recovery period
- Swelling increases
- Your child develops pain in the other foot or elsewhere (may indicate compensatory overload)
- Healing seems slower than expected

Preventing Future Stress Injuries

Once healed, focus on reducing risk:

- Gradual training load increases—the 10% rule (no more than 10% increase in weekly volume) is a reasonable starting guide
- Adequate rest days built into the training week
- Supportive, sport-appropriate footwear replaced regularly
- Nutrition—adequate calcium, vitamin D, and overall energy intake are critical for bone health; restrictive eating is a major risk factor for stress injuries
- Strength training—particularly for hips, calves, and feet

Key Takeaways

- Stress injuries are common in young athletes and heal reliably with proper rest and graduated return.
- The most important treatment is reducing load on the bone—this often means time away from the aggravating sport.
- Cross-training keeps fitness and spirits up during recovery.
- Patience during return-to-sport prevents re-injury.
- Address training habits, footwear, and nutrition to reduce future risk.

If you have concerns about the diagnosis, healing progress, or return-to-sport plan, don't hesitate to ask your treating clinician for clarification.

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