MELIORA MEDICAL

ADOLESCENT ATHLETE · RETURN-TO-SPORT PATHWAY

Pars Stress Injury — Return to Sport

A guide for athletes and parents on recovery phases and when it is safe to return to activity

PATIENT & PARENT GUIDE

WHAT IS A PARS STRESS INJURY?

A **pars stress injury (spondylolysis)** is a stress reaction or small fracture in the lower spine, common in young athletes — especially in sports involving repeated bending, twisting or extension. With the right rehabilitation, **most young athletes make a full return to sport.**

HOW DOES RECOVERY WORK?

Recovery follows **three progressive phases.** You move to the next phase when you meet the readiness criteria — not on a fixed timetable. Your physiotherapist or doctor will guide your progress based on your **pain, movement quality and confidence.**

BEFORE YOU BEGIN

- ✓ A doctor has confirmed the diagnosis and explained any restrictions or imaging
- ✓ No new leg pain, tingling or numbness — tell your clinician if these develop
- ✓ Painful sport activities are reduced, but complete rest is usually not needed
- ✓ You are being monitored by a physiotherapist or sports doctor

⚠ **ALL PROGRESSION SHOULD BE APPROVED BY YOUR PHYSIOTHERAPIST OR DOCTOR** — do not advance to the next phase without clinical clearance

01 PHASE 1 — Building Your Foundation

Typically 4–6 weeks
Advance when criteria are met, not by time

Goal: control pain and build core strength in a comfortable, neutral spine position — no running or impact yet.

- Core stability exercises keeping your back in a natural, pain-free position
- Hip strengthening and hip-hinge movements (e.g. bridges, step-ups)
- Upper back and shoulder strengthening
- Gentle flexibility work where relevant
- Normal daily activities are usually fine if they don't increase your pain

READY FOR PHASE 2 WHEN… — *WHEN CLEARED BY YOUR PHYSIO/DOCTOR*

- ☐ Core feels stable and controlled during exercise
- ☐ Can bend and straighten your back 10 times without pain
- ☐ Phase 1 exercises and daily activities don't cause ongoing pain

02 PHASE 2 — Getting Moving Again

Typically 4–6 weeks
Advance when criteria are met, not by time

Goal: restore full back movement, build overall strength, and gradually reintroduce running and impact activities.

- Core exercises through a fuller, more active range of movement
- Squats, lunges and rotation exercises as tolerated
- Jogging introduced gradually, building up to full-speed running
- Jumping and landing carefully reintroduced when ready
- Acceleration and deceleration work once running is pain-free
- Cutting and direction changes added once deceleration is well established

READY FOR PHASE 3 WHEN… — *WHEN CLEARED BY YOUR PHYSIO/DOCTOR*

- ☐ Running at full speed without pain
- ☐ Can bend, straighten and twist back freely
- ☐ Jumping and landing are pain-free

03 PHASE 3 — Gradual Return to Sport

Typically 2–6 weeks
Advance when criteria are met, not by time

Goal: return to full training and competition, building speed, intensity and sport-specific movements confidently.

- Sport-specific drills and training sessions
- Build one variable at a time: volume first, then speed, then intensity
- Continue strength work alongside sport re-exposure
- For contact sport a return to contact plan needs to be considered alongside this

CLEARED TO COMPETE WHEN… — *WHEN CLEARED BY YOUR PHYSIO/DOCTOR*

- ☐ All back movements fully pain-free at end of range
- ☐ A minimum of 2 weeks return to sport training pain-free including a minimum of 1 week of full training
- ☐ Confident with all sport movements — no guarding or hesitation

BONE HEALTH & RECOVERY

Z — Sleep
Aim for **9–10 hours per night.** Bone repair and muscle recovery happen primarily during deep sleep — this is one of the most powerful tools in your recovery.

Ca — Nutrition & Calcium
Bone healing depends on adequate calcium. Prioritise **dairy, leafy greens (spinach, kale), sardines and fortified foods** daily. Adequate protein supports muscle recovery too.

D — Vitamin D
Vitamin D helps the body absorb calcium and is essential for bone health. **Discuss supplementation with your doctor** — especially if training indoors or during winter months.

STOP & CONTACT US IF…

- ⚠ Pain becomes steadily worse or stops settling as expected
- ⚠ Pain wakes you at night, or new leg pain, tingling or numbness develops
- ⚠ You start protecting, limping or guarding a movement during training
- ⚠ You are not progressing despite reducing your training load

This guide supports — but does not replace — individual clinical advice. Progress should be directed by your treating clinician, who will advise on any imaging, restrictions or modifications specific to you. If your symptoms do not follow the expected pattern, pause and contact your clinician before continuing. © Meliora Medical 2026.

Meliora Medical
48 Wimpole Street, London W1G 8SF
melioramedical.co.uk

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RETURN-TO-SPORT PATHWAY

Pars Stress Injury — Visual Summary

A pictorial guide to your three-phase recovery — for patients, parents & athletes

AT A GLANCE

PROGRESS ONLY WHEN CLEARED BY YOUR PHYSIOTHERAPIST OR DOCTOR

BEFORE YOU BEGIN Diagnosis and restrictions explained • Painful sport reduced • Clinician monitoring in place • Report new leg symptoms

01 PHASE 1 — Building Your Foundation

Typically 4–6 weeks • readiness criteria guide progress

Control pain and build strength.
No running or impact yet.


Core stability


Hip bridges


Step-ups


Upper back + shoulders


Gentle flexibility


Normal daily activity

READY FOR PHASE 2

When cleared by your physio / doctor

- ✓ Core feels stable and controlled during exercise
- ✓ Can bend and straighten your back 10 times without pain
- ✓ Phase 1 exercises and daily activities don't cause ongoing pain

02 PHASE 2 — Getting Moving Again

Typically 4–6 weeks • readiness criteria guide progress

Restore movement and strength.
Gradually reintroduce running and impact.


Core + rotation


Squats + lunges


Jogging → full speed


Jumping + landing


Accelerate + decelerate


Change direction

READY FOR PHASE 3

When cleared by your physio / doctor

- ✓ Running at full speed without pain
- ✓ Can bend, straighten and twist back freely
- ✓ Jumping and landing are pain-free

03 PHASE 3 — Gradual Return to Sport

Typically 2–6 weeks, depending on the sport
Advance when criteria are met, not by time

Build confident sport movement, one variable at a time.
Contact sport: include a return-to-contact plan.


Sport-specific drills


1. Build volume


2. Add speed


3. Add intensity


Continue strength


Full training week

CLEARED TO COMPETE

When cleared by your physio / doctor

- ✓ All back movements fully pain-free at end of range
- ✓ Minimum 2 weeks of pain-free return-to-sport training, including at least 1 week of full training
- ✓ Confident with all sport movements — no guarding or hesitation

SUPPORT BONE HEALTH & RECOVERY

Z — Sleep
Aim for 9–10 hours per night.

Ca — Nutrition + calcium
Calcium-rich foods and adequate protein.

D — Vitamin D
Discuss supplementation with your doctor.

STOP & CONTACT YOUR CLINICIAN

Pain worsens or stops settling • Pain wakes you at night • New leg pain, tingling or numbness
Protecting, limping or guarding movement • No progress despite reducing training load

Illustrations represent recovery activities, not exercise technique. Individual clinical advice takes priority.

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