

LET'S TALK ABOUT LUMBAR STRESS FRACTURES

WHAT DOES THE TERM "LUMBAR STRESS FRACTURE" MEAN?

Low back stress fractures involves repetitive stress on a small bone called the pars interarticularis in the lower back. During growth, the pars bone elongates and becomes thinner and weaker causing a potential for injury. The word fracture is used but you should think of it more like a bone "bruise" which is quickly reversible if you do the right things in the early stages. In some instances, the bruise can progress to a small hairline fracture which takes longer to heal

SO EARLY DIAGNOSIS IS KEY

WHY DOES IT OCCUR?

It usually occurs with repeated microtrauma in growing athletes who perform a sudden rapid, spike in volume or intensity of repetitive over-arching or side bending of the lower back such as in kicking, throwing, gymnastics, swimming, and overhead sports like tennis and cricket. Without adequate recovery, the bone is unable to repair and adapt and injury results.

INJURIES OCCUR WITH NOT TOO MUCH TRAINING BUT:

- Too little training or load e.g. preseason
- Too much too soon
- Too little recovery
- Too little energy intake and protein
- Low Vitamin D
- Growth spurts
- Poor technique

Understanding why you have developed the injury is key to knowing how to allow it to heal and prevent it from happening again.

NO CHILD SHOULD HAVE LOW BACK PAIN WHILST PLAYING SPORT

Any young athlete aged 8-23 who has the following types of symptoms for more than 1 week is assumed to have a stress fracture until proven otherwise:

- Low back pain on the opposite side to the one you throw with
- Pain that gets worse with activity then settles on rest
- Worse on arching backwards, throwing, bowling, running, jumping or kicking and improves with rest
- Pain may spread to both sides

To prevent the "bone bruise" from progressing to a hairline stress fracture, as soon as you get low back pain, stop all activities that hurt for 2 weeks to let it settle. Once the pain settles, it is important to gradually build back up the volume and intensity of sport again, not rush straight back to what you were doing before the injury.

You need to find a health professional trained in these types of injuries to get advice on how to return to sport and start a strength based programme. An x-ray will not show the injury. If your pain is not settling, they will advise if an MRI scan is necessary.

RETURN TO SPORT

MOST ATHLETES CAN RETURN TO SPORT 6-12 WEEKS AFTER A "BONE BRUISE" INJURY. FAILURE TO REST AT THE FIRST SIGN OF BACK PAIN CAN RESULT IN BONE BRUISING PROGRESSING TO A STRESS FRACTURE AND 6 MONTHS OUT OF SPORT

PREVENTION

PLANNING WORKLOAD

Use a diary to record sport and bowling volume. Research has highlighted that doing too little in preseason, followed by a rapid spike in volume puts you at a greater risk of a bone stress injury in the 2-3 weeks that follow. Start each sporting season and each school term gradually. Identify potential bottlenecks during the season which might create a “spike” in load or intensity. Take the rolling average of the last 4 weeks activity and add no more than a 10% increase week on week. Build up slowly to allow body to adapt and plan in recovery days to maintain wellness and fitness.



GET STRONG

Stronger athletes get fewer injuries and can tolerate greater changes in volume of training. It is essential to create a good foundation of strength and flexibility and do regular exercises before you play sport.

Mental toughness is a skill and needs to be practised just like strength exercises

RECOVERY

Plan in a rest day every week to allow the body to recover, strengthen and adapt.

Plan to only do activities like fast bowling and other high intensity activities no more than 2 consecutive days, no more than 4 days in every 7 days.

Have a month off at the end of every season.

Quality sleep is key to injury prevention, skill development and wellness

EAT FOR ENERGY

The energy needs of young athletes exceed those of the average adult. Energy is needed for growth in addition to sporting demands. Evidence supports that low protein and low calorie intake relative to the demands of sport can lead

to injury, illness, and stress fractures. If you often feel hungry, tired or lack energy, get advice on your diet

TECHNICAL ANALYSIS

It is important to have regular video analysis, especially after injury, to observe correct technique in your sporting activity by someone who understands the demands of your sport and your body. Simply returning to the activity that caused the problem without making the necessary changes to the technical aspects will likely lead to recurrence.

If you are concerned you might have a stress fracture and want further advice, please email info@angelajacksonphysio.com. This information is provided by Angela Jackson. It is a representation of her experience and research, but no liability is taken for the content of this document. It is meant as a guide and does not replace seeing a qualified medical professional. This material is not to be copied without the express permission of Angela Jackson