

ARE YOU READY FOR THE CRICKET SEASON?



AN EXERCISE & EDUCATION PROGRAMME
TO REDUCE INJURY RISK IN
YOUTH CRICKETERS

kids back
@sport



DO YOU KNOW THE MOST COMMON CAUSE OF LOW BACK PAIN IN JUNIOR CRICKETERS?

Most low back pain in young cricketers is the result of a bone stress injury. The lower back bones (vertebrae) do not fully mature until the child is around 23 years of age, so the bone is more vulnerable to injury in adolescence than it is during adulthood. Bone stress injuries occur when the capacity of the bone is exceeded.

When the volume or intensity of cricket exceeds the current capacity of the body, the body takes steps to try and protect itself. When bones are exposed to sudden spikes in activity, they lay down new bone to try and reinforce the existing bone. This new bone takes several weeks to get strong enough to withstand repetitive loads and during that time, it is more susceptible to injury.

At the start of the season, the sudden opportunity to play in multiple games and training sessions may prove too tempting. If children have not done sufficient training before the season starts, this sudden increase in activity can overload the immature bones and create a bone “bruise”. Often the child complains of intermittent low back pain on activities like bowling, kicking, and sprinting. Initially, the pain is usually felt on the opposite side to their bowling arm. A right arm bowler would commonly get left sided low back pain.

If the bone is given time to adapt and become stronger, this bone bruise will settle and given time become more robust and better able to tolerate more load. If managed incorrectly, these injuries can result in a stress fracture in the lower back bones which although rarely serious take many months to heal and can result in a season lost. The season is over before it begins!

HOW DO WE PREVENT LOW BACK PAIN IN YOUNG CRICKETERS?

Bowling too much is not the biggest injury risk to young bowlers, but, bowling too much, too soon is. If the bone is given time to adapt, it gets stronger and can tolerate higher loads. By planning ahead, the bone can be given time to gradually be exposed to greater loads and develop the resilience it needs at the start of the season. However, it is not just bowlers who get low back pain, kids who play multiple sports which involve repetitive activities such as kicking, throwing, sprinting and gymnastics are at risk too, especially when sports seasons overlap. At the start of the cricket season, it is rare that rugby, hockey, football and netball seasons are over, so the child is exposed to increased stresses on their bodies. The key is preparation to allow time to adapt.

Our bodies can adapt to anything ifwe give them time

To prepare effectively we need to consider how much the child wants to play and what else they participate in.



Let's look at an example:

Player A is playing in the u14 age group.

The England and Wales Cricket Board have directives for junior pace bowlers that limits how many balls they can bowl in a spell and per day for each age group. One problem with specifying safe limits by age group is that there are differences of up to 6 years in maturation between children of the same age. For example, a 12 year old could have the body of a 9 year old or a 15 year old.

A second problem, with these guidelines is that they do not take in to consideration the training completed in recent weeks as preparation for the work to be performed this week.

Avoiding too many back to back days of high intensity activity helps bones have time to adapt, so the ECB suggest avoiding high intensity bowling more than 4 times in every 7 days and no more than 2 days in a row.

AGE	MAX OVERS PER SPELL	MAX OVERS PER DAY
Up to 13	5	10
U14, U15	6	12
U16, U17	7	18
U18, U19	7	18

www.paulgriffiths.info/ecbdirectives

Source : The England & Wales Cricket Board

Under these guidelines, an u14 player can bowl 6 overs in a spell and up to 12 overs in a day. That's 72 balls a day up to 4 x in a 7-day period which adds up to nearly 300 balls a week.

This level is safe to bowl, but only if the training has been completed.

So, how much has Player A done in preparation for that level of bowling?

Most winter net sessions are in groups and facilitate kids bowling around 30-50 balls on average per session and they are usually limited to 1-2 net sessions per week.

In the last 4 weeks, Player A has bowled:

- Week 1: 30 balls
- Week 2: 35 balls
- Week 3: 0 (he was ill)
- Week 4: 35 balls

Total balls bowled: 100 over 4 weeks so average 25 balls a week.

He has therefore trained to bowl 25 balls a week. Most kids can cope with around a 10% increase over and above what they have trained for, however this is dependant upon whether they are in a growth spurt, eating and sleeping well. The longer the child has been participating in the activity, the greater protection against injury, so if the child is relatively new to the sport, increases should be more gradual.

If the child has only done 100 balls a week in winter nets, that is the level trained for and prepared for. Just because they are excited to play, shouldn't mean abandoning the graduated training programme.

Over the next few weeks, providing Player A continues to remain pain free and is coping with the current load, he can gradually add more volume and build up the intensity gradually in preparation for the start of the season.



HOW TO PREPARE FOR THE SEASON IF YOU ARE NOT CURRENTLY BOWLING.

If you decide you want to run a marathon, the majority of people would follow a graduated training plan, especially if they are new to running or have not participated for some time. The plan would start slowly and build up week on week giving time for adaptation. This approach is a sensible way to prepare a junior bowler for the season. If they haven't bowled since last season, they shouldn't start hard and fast. It is not just about volume. The intensity of the session is also relevant. Bowling at half pace in those early sessions can ease the pressure on the tissues and allow them to adapt.

Start slowly, avoiding bowling at pace on back to back days. Focus on accuracy and technique not pace in those early sessions, allowing the body to get used to the new exercise. Most players tolerate around 3-4 overs at half pace in the early weeks.

It is advised to add running training to replicate the length of their run up in intervals. Poor running technique and in particular crossing over the feet as pace bowlers approach the crease has been associated with injury.

Gradually build up the volume and intensity adding around 10% more each week and monitor for any signs of low back or shoulder pain recommended.

It is important to remember, that whilst kids build up their training load over the winter, many then take 2 weeks off over the Easter holidays and their average training load drops. This should be accounted for when the season starts.

Easing into the season, adding a little more over the first few weeks is a safer approach to ensure a successful, injury free season.

BETTER TO START SLOWLY, THAN GET INJURED IN THOSE FIRST FEW WEEKS OF THE SEASON.

HOW CAN KIDS BOOST THEIR CAPACITY TO DO MORE?

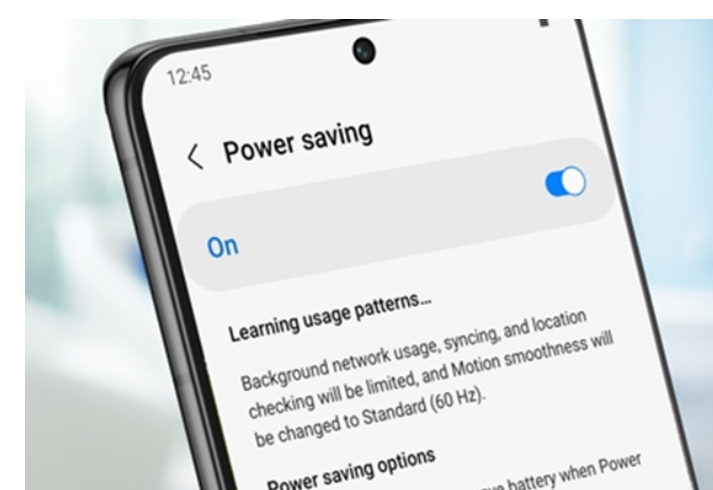
Doing too much, too soon is one cause of injury in children. However, that does not explain why when children do a group coaching session and are all exposed to similar loads, they don't all drop down with an injury at the same time. If load were the only factor, we would expect them all to be injured at the same point. If young athletes are ill, stressed, going through a growth spurt, not eating enough for what they do, or very tired, they may not have the same capacity as a child who is achieving a better activity: recovery balance. This explains why given the same volume of activity, some kids get injured when others don't.

Children are just like mobile phones. They need to be recharged each night to perform well and they need adequate energy for optimal performance. If they don't eat enough for what they do, they will prioritise where the remaining energy is spent and that rarely includes bone health, immunity and building new muscles.

Children can boost their capacity, by focussing on getting high quality sleep, good nutrition, and adequate recovery days.

RECOVERY DAYS ARE WHEN WE GET STRONGER = 4 R'S

**REPAIR AND GROW
REHYDRATE
REFUEL
REST**



GETTING STRONGER INCREASES YOUR BODY'S CAPACITY TO DO MORE

Just like children work on numeracy and literacy in school, they also need to develop physical or movement literacy. By building the foundations for good movement competency, they can acquire skills more easily in sport, use the correct technique in the gym, tolerate greater fluctuations in load, and have greater protection against injury.

The Ready 4 Cricket programme is an injury reduction programme has been especially designed to teach junior cricketers the movements they need for cricket.

What is the Ready 4 Cricket Injury Risk Reduction Programme?

A multi-level, progressive exercise & education programme for junior cricketers

What are the benefits?

Reduced injury rates by 32-48%



To develop physical literacy, strength and robustness to reduce risk of injury

To develop excellent movement foundations before adding resistance training

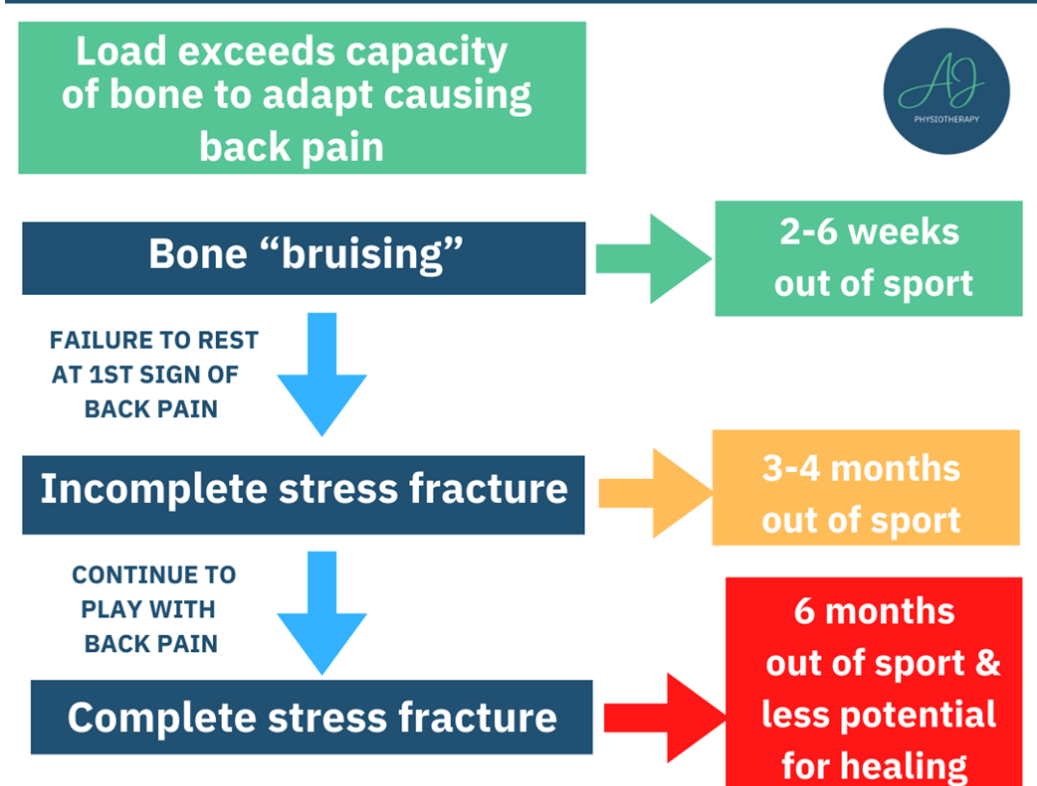
To educate coaches, athletes and parents about injury prevention

WHAT SHOULD I DO IF MY CHILD DEVELOPS LOW BACK PAIN?

If your child develops low back pain when playing sport, the sooner they are rested from the pain provoking activity the less likely the injury will progress, and the less time they will likely be out from sport.

It is important to remove them from all activities involving arching their back (kicking, throwing, gym, twisting, not just bowling) for a minimum of 2 weeks to allow the bone to heal and adapt.

LOW BACK PAIN IN JUNIOR ATHLETES IS A STRESS FRACTURE UNTIL PROVEN OTHERWISE. START 2 WEEKS REST AT 1ST SIGN OF BACK PAIN TO PREVENT BONE BRUISING PROGRESSING TO A FRACTURE



If the pain has totally settled, they can gradually add one new activity in every other day at low intensity. If they start to get pain again, then they need to resume resting and it is important to see a health professional with experience in youth athletes. This condition is rarely seen in adults, so most clinicians are not aware of the diagnosis and management.

Check the Kids Back 2 Sport website to find a clinician near you or contact Angela Jackson at info@kidsback2sport.com for a 121 consultation.

THIS MATERIAL IS THE EXPERIENCE AND OPINIONS OF PHYSIOTHERAPIST, ANGELA JACKSON FROM KIDS BACK 2 SPORT LIMITED. NO LIABILITY CAN BE GIVEN FOR THE CONTENT OR HOW IT IS USED. IT IS FOR SINGLE USE ONLY AND MUST NOT BE USED, COPIED OR SOLD EXCEPT WITHOUT THE EXPRESS PERMISSION OF KIDS BACK 2 SPORT LIMITED