LET'S TALK ABOUT..... ARE YOU READY FOR THE CRICKET SEASON?



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HOW TO REDUCE THE RISK OF INJURY IN JUNIOR CRICKETERS THIS SEASON

At the start of the cricket season, the sudden opportunity to play in multiple games and training sessions may prove too tempting for most junior players. After a long winter, often involving no cricket-based training, enthusiastic children take to the nets at school and in clubs without considering how much training they have done in preparation for the season ahead.

Injuries occur when children exceed the current capacity of their muscles or bones.

In children who have not done sufficient training before the cricket season starts, the sudden spike in throwing and bowling can causes stresses on the immature skeleton and injuries may follow. In addition, in some instances the child's capacity to tolerate the level of activity is reduced due to a growth spurt, lack of sleep or adequate nutrition. Understanding these concepts can help protect the child from making training errors that result in prolonged periods of time away from sport.

WHICH INJURY CAUSES THE HIGHEST NUMBER OF DAYS LOST IN JUNIOR CRICKET?

Low back pain in young cricketers is common and not just in fast bowlers. In most instances, low back pain associated with sport is the result of a bone stress injury. The fast-bowling action can increase ground reaction forces through the body by up to 3-5 times bodyweight. In addition, the lower back bones 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 more stress is placed on the immature bones than they can tolerate at that time. The current capacity of the bone is exceeded, and the bone can develop a "bruise". The body takes steps to try and protect itself by laying down new bone to reinforce the existing bone, but this new, immature bone takes several weeks to get strong enough to withstand repetitive loads and during that time, it is more susceptible to injury.

Despite higher forces generated during fast bowling actions, these injuries are also common in spin bowlers, and children who also participate in other sporting activities that cause repetitive overarching of the lower back such as tennis, gymnastics, soccer and golf. Many children play multiple sports, and the seasons overlap placing additional demands on the body. Equally, specialising in just one sport all year round before the age of puberty, can also increase injury risk, so it is helpful to play different sports, not just one so that the body can develop a broader base of movement literacy.

Load exceeds capacity of bone to adapt causing back pain

Bone "bruising"

FAILURE TO REST AT 1ST SIGN OF BACK PAIN



Incomplete stress fracture

CONTINUE TO PLAY WITH BACK PAIN



Complete stress fracture



NO CHILD SHOULD HAVE LOW BACK PAIN DURING SPORT

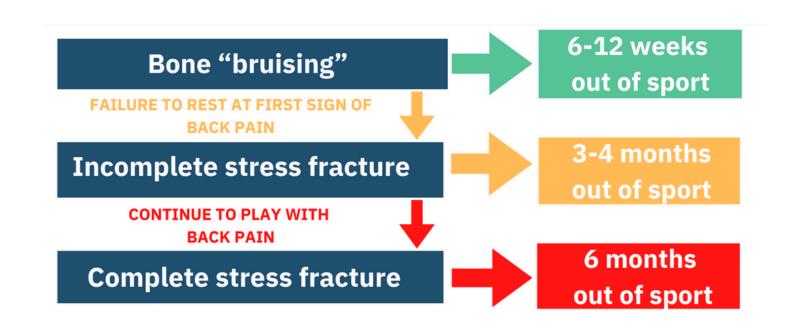
At the very first signs of low back pain, stiffness, or ache associated with playing sport, the athlete should stop doing any activities that cause repetitive arching of the lower back (throwing, kicking, sprinting and bowling, gym) for at least 2 weeks to allow the bone to reinforce itself.

This will give the bone time to adapt and reinforce itself to tolerate higher loads.

Even if the child's pain settles in a few days, this is not an indicator that the bone has healed and it is important to still avoid activities that might "bruise" the bone further for at least 2 weeks.

If the pain does not settle with rest, it is important to see a health professional with experience in youth athletes. Check the Kids Back 2 Sport website to find a clinician near you.

If the cricketer continues to play with pain, the "bruise" can increase, and a stress fracture may result. Stress fractures are rarely serious but do take many months to heal and can result in a season missed.



ANY CHILD WHO PRESENTS WITH LOW BACK PAIN DURING SPORT SHOULD BE TREATED AS A BONE STRESS INJURY UNTIL PROVEN OTHERWISE. THESE INJURIES CAN ONLY BE CONFIRMED VIA AN MRI SCAN

HOW DO WE PREVENT LOW BACK PAIN IN YOUNG CRICKETERS?

If we understand why injuries occur, we can take steps to educate athletes, coaches and parents to take positive steps to prevent training errors from occuring. Doing too much is not the biggest injury risk to young athletes, but doing too much, too soon might be, especially in those young athletes who do not have adequate strength and energy intake for the level of sport they participate in.

Injuries and illness occur with not doing too much training but...

- Not enough training to prepare for a new season low bowling volume
- Sudden spikes in activity not trained for high weekly bowling volume
- Too little recovery or sleep to allow for adaptation bowling > 4 x per week
- Multiple back to back days of high intensity activity
- Too little fuel for the sport they do
- Too much stress
- Rapid growth spurts
- Low iron or Vitamin D levels

OUR BODIES CAN ADAPT TO ANYTHING IFWE GIVE THEM TIME

BOWLING BUILDS POSITIVE BONE STRENGTH GAINS

If the bone is exposed to appropriate loads and given time to adapt, it gets stronger and can tolerate higher loads. The period of greatest bony strength gains occurs during adolescence, so it is critical to allow children to optimise this period and build strong bones for life. A junior player who has been exposed to bowling loads for several years will have built up greater positive adaptations and bone strength and may tolerate greater fluctuations in weekly load. It is for this reason, that we don't want to demonise exposing junior bowlers to higher bowling volumes. If they are overly protected as a junior, they will not be adequate prepared or robust enough as the volumes increase in senior cricket.

Bowling too much or too little can be injury risks for young bowlers.

Bowling too little such as in the off season or following injury leads to inadequate loading of the bone and the bone deconditions and is more vulnerable to injury. By planning ahead, especially at the start of a season, the bone can be given time to gradually be exposed to greater loads and develop the resilience it needs.

The key is preparation to allow time for bones and muscles to adapt to what is expected of them.

HOW TO PREPARE FOR THE SEASON

To prepare effectively we need to consider how much the child wants to play when the season starts.

- 1. How many teams do they play cricket for?
- 2. How many other sports do they play?
- 3. How many cricket sessions will they have a week?
- 4. Are they on back to back days in the week?
- 5. Will they have days when they play in more than one setting?
- 6. What is their role within the different teams?
- 7. Are they going through a growth spurt?
- 8. How are they coping with their current activity level? Any niggles or recurrent viruses?



To safely return to bowling after the offseason, we need to consider the training done in the last 4 weeks that has prepared the player for the season ahead. Most winter net sessions are in groups and facilitate juniors bowling around 6 overs per session 1-2 times per week. That is likely to result in juniors being under prepared for bowling 3-4 times a week at the start of the season and exceeding their current training level. In addition, the timing of the start of the UK season usually coincides with the Easter holidays and many children may not have bowled for 2-3 weeks despite extensive preparation in winter nets which results in a drop off in weekly load.

To ensure that junior cricketers are exposed to appropriate loads the ECB's <u>RECREATIONAL CRICKET JUNIOR FAST BOWLING</u> <u>GUIDANCE 2024</u> has been released advice on how to start the season gradually for those children who have not completed sufficient winter training. It is well worth reading these to ensure children do not exceed their current capacity.

Junior cricketers around the world are limited in terms of how many balls they can bowl in a spell and per day for each age group by bowling directives. **The England and Wales Cricket Board** directives for junior fast bowlers have changed for 2025 and are outlined in the latest **ECB Recreational Cricket Safety Regulations** and are summarised in the table below. They are organised in to age groups based on date of birth rather than maturation.

Age	Overs per spell	Overs per day
11 & below	4	8
12 & 13	5	10
14 & 15	5	12
16 & 17	6	15
U18 & U19	7	18

IN ANY 7-DAY PERIOD, THERE SHOULD BE A MAXIMUM OF 4 FAST BOWLING DAYS & ONLY ONE INSTANCE OF BOWLING ON BACK TO BACK DAYS

Many children who are fast bowlers believe that switching to spin bowling after they have finished their allocated fast bowling spell is going to reduce their injury risk, but the spin bowling action also places stress on the immature lower back bones and this practice should be avoided. Equally, having done fast bowling, children should not then go on to play another activity that replicates the overarching of the lower back such as tennis serving, soccer or high jump.

HOW TO PREPARE FOR THE SEASON

Let's take an example of a Player A playing in the u14 age group

An ul4 player can bowl 5 overs in a spell and up to 12 overs in a day. The guidelines suggest that juniors can bowl up to 4 times per week. That's up to 48 overs in a 7-day period. That sounds a lot and it is unless the player has gradually built up to that volume over the winter period. To start at that level would be like running a marathon without training for it.

This level maybe safe to bowl at for some more mature and experienced individuals, who have done adequate training and are coping well with their current activity load, but for many it is not a safe level to start the season at.

So, how much can player A do? How much has Player A done in preparation for the season?

Player A has bowled:

Training	Bowling volume
Week 1	7 overs
Week 2	6 overs
Week 3	No bowling due to illness
Week 4	7 overs

Total balls bowled: 20 overs in last 4 weeks = average 6 overs a week.

Player A has therefore trained to bowl 6 overs a week. Everyone is different and has their own "training sweet spot". Most people can tolerate spikes in activity of around 10% with increases that exceed 15% being associated with greater injury risk but this depends largely on the individual and current wellness and fitness. Early in the season, player A should start the season below the recommended bowling directive volume for his age group and consider bowling at speeds just below their maximum effort focussing on accuracy and technique not pace in those early sessions. There is a table outlining safer bowling loads after a lay off from fast bowling within the ECB's RECREATIONAL CRICKET JUNIOR FAST BOWLING GUIDANCE 2024.

If 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 addition, the bowling guidance highlights recent research that found that lower back bones are more susceptible to bone "bruising" following two consecutive days of bowling in healthy athletes. This has led to the recommendation that junior bowlers should limit the number of times per week that they do fast bowling on consecutive days to just one instance in every 7-day period.

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

Despite planning ahead, there may be times in the season when the volume or intensity spikes and the child bowls a higher number of overs in one day, or week than was planned for. When this happens it is important to adjust the load the following week with greater rest and recovery. Junior players should adopt the best practices of professional players by lowering their bowling volume and effort:

- 1. When they have had a spike in bowling load
- 2. are stressed, ill, injured or fatigued
- 3. Adding a lower volume recovery week every 4-5 weeks to allow bones and muscles to adapt to what is being asked of them and let them reinforce themselves to become stronger.
- 4. Plan a week off from bowling mid-season.
- 5. Taking a full 4 week break off from bowling at the end of the season

On days when they need to rest from bowling, they can still do low intensity activities and work on batting.

WHAT HAPPENS IF MY CHILD PLAYS UP AN AGE GROUP?

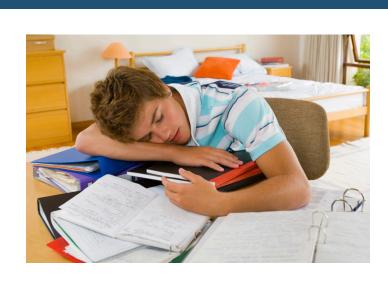
Junior fast bowlers must adhere to the restrictions associated with their actual age, not the age group they are representing. For example, a 15-year-old playing in a ul7 or senior game still must adhere to the directives for their age. One issue with junior cricket is that, like many sports they are organised in to age groups for social and practical reasons. However, this does not account for the wide variation of maturation that exists between children of the same age.

The guidance for safe bowling levels outlined in the many Fast Bowling Directives around the world assume that all children of the same age are equal in terms of development and that is not the case. During the adolescent growth spurt, which usually occurs around aged 11-12 in girls and 13-14 in boys, some children in the same age group may differ dramatically in size, weight and strength. The timing of this peak growth spurt varies in timing and intensity between individuals and can occur up to 3 years earlier or 3 years later than average 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 so specifying safe bowling limits by age group is not ideal and likely to cap progression of a child of advanced maturation who might be ready for more and yet be hugely inappropriate for a child who is a late developer. For more information on assessing maturation visit <u>Kids Back 2 Sport</u>

To address these risks, the ECB has released the <u>RECREATIONAL JUNIOR FAST BOWLING GUIDANCE 2024</u> to consider what adjustments should be made for children who are late developers or who are growing at a rate of greater than 7cm per year. It is worth reading these and familiarising yourself with the recommendations.

HOW CAN KIDS BOOST THEIR CAPACITY TO DO MORE?

Whilst there is little doubt that participating at a load not trained for is likely to result in a load that exceeds the current capacity of the tissues, it fails to explain why in a squad of players who, for example, who all attend a cricket festival and are exposed to similar training loads, they do not all get injured at the same time. Each player has their individual capacity, which fluctuates from day to day due to illness, a lack of sleep, nutrition, or perhaps a spike in stress levels or a growth spurt. This may explain why can some athletes tolerate much greater activity levels and changes in activity than others.





Children are just like mobile phones. They need to be recharged each night to perform well and they need adequate energy intake 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.

Just like phones limit access to high energy draining apps when in power saving modes, humans do the same diverting energy to the brain, heart and lungs in the event there is an emergency and powering down non essential hormonal processes such as growth, reproduction and immunity.

Teach them to listen to their body. If they are ill, stressed or just tired, missing a training session or training at a lower intensity can ensure they don't become injured. Sometimes, it is better to have a day off than end up in bed for a week, or worse still injured.

The <u>Kids Back 2 Sport</u> site has a library of free resources available to download and watch aimed at increasing awareness of Why Injuries Occur and how to help junior athletes boost their capacity and learn to listen to their body.

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 <u>Ready 4 Cricket</u> programme is an injury reduction programme has been especially designed for use within a school, junior club and county cricket setting. It includes both an exercise-based programme and an online education module for parents, players and coaches. If players understand why the programme is important, and what benefit there might be to the player on enhancing performance and reducing injury risk, compliance rates increase.

The programme includes an exercise based intervention to teach junior cricketers the movements they need for cricket and how to do an effective warm up for cricket. The education modules include information around fuelling junior athletes for performance, measuring growth and assessing maturation and predicted height, and how to track workload to reduce injury risk.

To date this programme has not been externally validated but provides a framework for future development.

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

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

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

- 1. Adhere to the bowling directive volume for age group
- 2. Don't add in every available session in week 1 of the season
- 3. Prescribe how many balls they bowl per session based on recent training levels. Encourage them to bowl quality over quantity
- 4. Reduce the intensity/pace in sessions where they are tired or at risk of over bowling
- 5. Keep a daily record of how much they are doing then plan ahead for the next few weeks
- 6. Make sure kids warm up before throwing and bowling. If you want some ideas, check out the Ready 4 Cricket programme for videos on how to do a cricket specific warm up and why.
- 7. Eat for performance learn more at Ready 4 Cricket about match day nutrition
- 8. Get stronger The Ready 4 Cricket programme is an injury reduction programme has been especially designed to teach junior cricketers the movements they need for cricket.
- 9. Listen to your body, and adapt how much and how hard you play to allow your body to recover and avoid increasing the risk of further injury. Sometimes a day out to recover can avoid a week off ill or injured. Vary the intensity of training, so that some days you work on technique rather than always pushing hard for greater distance or pace.

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