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3RD SSI INTERNATIONAL ARTHROSCOPY CONFERENCE



CHIEF EDITOR'S DESK

Dr. Sarthak Patnaik, MS. Orthopaedics, FSSISA, FASM, FHA, FSSM Arthroscopic & Sports Surgeon

DEAR READERS,

Welcome to the third edition of Sports Science India (SSI) Fanzine. With each edition, we have been trying to offer an informative as well as engaging read to our readers and subscribers. Moreover, the feedback from our readers is also being taken into account. The key highlights of the current edition include the rare feat of a vegetable seller-turned-mountaineer, an informative piece on the sporting activities of one of Bangalore's most popular clubs and an article by an expert from Spain. Various topics related to sports science have been covered for sports like, Tennis, Squash and Golf. The edition also throws a light on the activities undertaken by Sports Science India to ensure a healthy and fit life of sports enthusiasts and athletes. I wish our readers a happy reading and thank them for encouraging us to keep your grey matter active. Thanks for all the love and support. Do mail us at Info@ssifanzine.com for your feedbacks.

MOVE ON!

Foot pain, caused due to plantar fasciitis, can deter all your plans. But, it is treatable too. Know how to cure the condition:

It isn't a rare affair when vacations get spoiled or key meetings are missed because of an aching foot. This condition is quite common and present in all age groups and gender. But, what causes the pain in the sole of the feet? Are there ways to treat the pain? Well, one of the most common causes is the inflammation of planta fascia ligament or plantar fasciitis. This article takes a closer look at what causes such a condition, its symptoms and treatment.

Learn the symptoms

A patient typically complains of pain on the base of his or her feet. The pain is present while waking up early in

the morning. He or she often complains of stretching or agonizing pain. Sometimes, the patient experiences a burning sensation around the feet or complains of difficulty in keeping the feet on ground during mornings. In such cases, the history of injury may or may not exist. Patients may also complain of difficulty in standing, sitting or walking for prolonged hours. Such a condition is commonly seen in patients with diabetes, geriatric, dancers, people wearing hard footwear or those having flat feet.

What is Plantar Fascia?

Plantar fascia is a band of tissue that connects the heel bone with the base of your toes. It supports the arch of the foot and absorbs shock while walking. The inflammation of this ligament can cause foot pain. Clinical presentation & diagnosis On examination, mild swelling and redness of the feet may be spotted. Plantar fascia is tense and there is tenderness on passive movement of the feet against resistance. Pain may exist around the calf region. Patient may also complain of pain around the medial aspect of feet and heel. Radiologically, an X-ray is helpful to determine the presence of a calcaneum spur—a small bone growth in the calcaneum at the site of insertion of plantar fascia. Generally calcaneum spurs are quite common. This is nothing major as long as they are small. In a few instances, they grow massively when the patient requires a surgical intervention. In a few cases, MRI is needed to determine the intensity of the tear of the fascia.

RISK FACTORS

There are a few factors, which can increase your risk of developing this condition. These include:

Age: Plantar fasciitis is most common in people between the age group of 40 and 60 years.

Certain types of exercises: Activities that place a lot of stress on the heels and attached tissues — such as long-distance running, ballet dancing and aerobic dance — can contribute to the onset of plantar fasciitis.

Foot mechanics: Flat feet, a high arch or even an atypical pattern of walking can affect the way weight is distributed when you are standing and can put added stress on the plantar fascia.

Obesity: Excess pounds put extra stress on the plantar fascia.

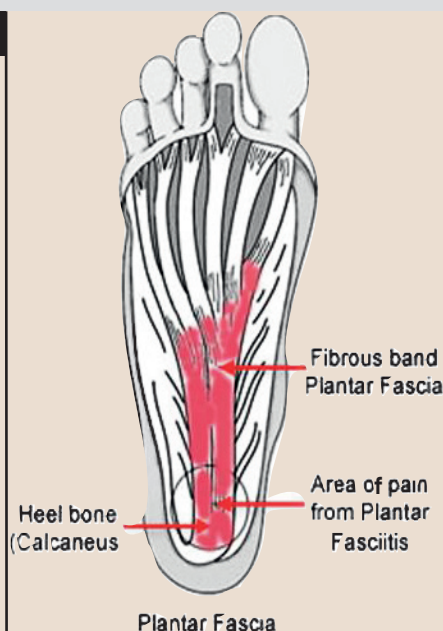
TREATMENT

A minimal dose of analgesics is given along with hot and cold water rehabilitation

Foot massage or release of the plantar fascia helps.

Rehab of plantar fascia benefits a lot.

In rare instances, steroid injections are opted for.





3RD SSI INTERNATIONAL ARTHROSCOPY CONFERENCE

As part of its initiative to spread awareness on sports science, Sports Science India—founded by Dr Sarthak Patnaik—organised the third edition of conference on sports injuries related arthroscopy for global professionals. Budding athletes to elite ones, the conference intended to benefit all sportspersons with the benefits of science. Surgeons from across the country participated in the conference along with top notch academics for the first time in Odisha. As many as 520 participants and over 50 speakers/faculties attended the conference. Total six papers were selected for presentation from several states at the conference. On both the days, nearly 20 relive surgeries were demonstrated. The paper presented by KGMC, Lucknow received the first prize. Six panel discussions were hosted. The debate on repair of cartilage using grafts was appreciated by the audience. Three Olympians attended the conference as guest sportspersons. The conference drew 22 delegates from all over the country and was supported by 22 companies.





10 MINS TO WARM UP!

A warm-up is a short activity or exercise undertaken prior to a more intensive exercise or activity. A good warm-up before physical exercise is a vital part of the workout. Of course, the main goal of warming up is to prepare your body and mind for the training session or match. But, can a warm up session be wrapped up in only 10 minutes? Yes, it is possible. In fact, you must prefer short warm-up option, as many club players don't turn up for their matches with much more than 10 minutes to spare! Transport problems have led to the late arrival of players and a lengthy warm-up hasn't been an option. In such fraught situations, having a condensed warm-up routine up your sleeve is definitely a good thing. Ten minutes is probably the shortest amount of time that it will take for most players to achieve the warm-up goals of:

Body temperature increase

Dynamic stretching of the major joints and muscles

Firing up the major muscle groups

Optimising co-ordination and practicing squash-specific movements.

This 10 minute warm-up can be expanded and added to as the need arises. For instance, it may take longer to get the body up to speed in the depths of winter at the back of a freezing court. Additional exercises and movements can also be added to address any particular physical issues that individual players may have.

DEMONSTRATION

1: Jogging (1 min) - Simply run forwards and then backwards in a straight line over a short distance (5-10 paces). Slightly over emphasise your knee pick-up. After a few times travelling back and forth, put a little extra effort into the changes of direction. Purpose—a good start to prepare the body for the exercise.

2: Side Skipping (30 sec) - Initially move at jogging speed as you travel sideways leading with one leg and then skipping with the opposite foot to bring it alongside the leading foot. When you repeat this exercise for the second time you can increase your stride length slightly. You can also move a little quicker and put a little more effort into the changes of direction. **Purpose**- Fire up the inner and outer thigh muscles.



3: Crossover running (30 sec) - Jog forwards, taking a short step with one foot (e.g. the left), and then cross the other foot (the right) behind the leading foot. Next take a step forward with the leading foot (left) followed by the other foot (right). Step forward alternating the leading foot and repeat the sequence of crossover steps. A slight variation is to twist the shoulders and trunk with each step. This helps to loosen the back and trunk muscles. **Purpose**- improves agility

4: High knee Running (30 sec)

—Run at jogging speed in a straight line and with each step lift the knee to hip height. Keep up on your toes. This running action will fire up the calf muscles and will dynamically stretch the buttock muscles.



5: Heel to buttock running (30 sec) - Jog forwards and try to kick your backside with your heels. This will help to warm up the body and will dynamically stretch the front thigh muscles. **Purpose**- Dynamically stretches the front of thigh muscles



6: Hamstring stretch walking (30 sec)

—As you walk, lift each knee until your thigh is horizontal. As you do this reach forwards in the direction of your raised foot with the opposite hand. Stand tall and keep your back straight as you do this. You should feel a stretch down the back of the lifted leg. Perform this exercise slowly and smoothly rather than kicking the leg out quickly.

7: Lunge twist (30 sec) - Take a long stride and drop into a lunge. When you step forwards with the right leg, twist your body to the right and vice-versa. This exercise will fire up the thigh and buttock muscles and will dynamically stretch the front of the hip and thigh whilst mobilising the trunk.



8: Ghosting (3 mins) - Starting from a ready position (as on the T) practise taking off and moving to a shot set-up position, making the stroke (turning the body and using transfer of weight) and then recovering. Practise a variety of movement and shot options, gradually building up the speed. **Purpose**- introduce the body to squash specific movements.

Dr. Chetana Mayee Padhan

COVER STORY

VAIBHAV SURYAVANSHI AND THE REINVENTION OF BIHAR



A few years ago, whenever I told my friends in Delhi that I had played competitive cricket for Patna district, I would notice a familiar smile.

Not admiration. Amusement. The assumption was simple: Bihar and cricket were not supposed to belong in the same sentence. For decades, that has been Bihar's sporting reality.

A state of more than 130 million people. A state that has produced scholars, bureaucrats, entrepreneurs and political leaders. A state whose people have helped build economies across India and around the world. Yet when it came to sports, Bihar was largely invisible.

Today, that is changing and remarkably, the face of that change is a teenager from Samastipur. Remember this name - Vaibhav Suryavanshi.

This is not merely the story of a gifted cricketer. It is the story of how one young boy has begun changing the perception of an entire state.

Bihar's Long Cricketing Tragedy

The tragedy of Bihar cricket was never the lack of talent. The tragedy was the lack of opportunity and corruption. For years, aspiring cricketers from Bihar faced an ecosystem that simply could not compete with other states. Infrastructure was poor. Administrative uncertainty persisted. Professional pathways were limited.

The most famous example remains Mahendra Singh Dhoni. Dhoni's family roots trace back to Bihar, but history had other plans. After Jharkhand was carved out of Bihar in Nov 2000, Ranchi became part of the new state and resulted in Bihar's prolonged absence from the mainstream domestic cricket structure — that only worsened matters. The result was predictable, Dhoni wore the jersey for India from the state of Jharkhand. Talented cricketers increasingly sought opportunities elsewhere. Ishan Kishan followed a similar path. Countless others did the same.

For years, Bihar became a talent exporter rather than a talent destination. Ironically, every Bihari still celebrated these stars as their own. Because deep down, people knew the problem was never talent. The problem was the system.

The State That Exported Everything

For decades, Bihar exported people as Workers, Engineers, Doctors, Teachers, Civil servants, and Politicians. If there was one area where Bihar consistently dominated national conversations positively, it was the number of young men and women cracking the UPSC



Neeraj Jha

Sports Analyst
Business Head - Eurosport

examinations and entering the IAS and IPS. Bihar became synonymous with ambition and resilience. But not sporting excellence.

The state's image outside Bihar was often shaped by migration statistics, political headlines and stereotypes. Many Biharis living outside the state know exactly what I mean. We learned to carry our identity carefully. We were proud of being Bihari but we also knew the stereotypes attached to that identity.

Dhurandhar Style Entry: From Tajpur to the World Stage

In a cricket-obsessed nation that has produced legends from Mumbai, Delhi, Bengaluru, Chennai and Ranchi, a new name is emerging from an unlikely corner of the country. Vaibhav Suryavanshi, a teenager from Tajpur in Bihar's Samastipur district, has rapidly become one of the most talked-about young cricketers in the world.

At an age when most children are focused on school examinations, Suryavanshi is rewriting record books and forcing seasoned international bowlers to rethink their plans.

The numbers behind his rise tell only part of the story. At 13, he became the youngest player ever to secure an IPL contract when Rajasthan Royals signed him for ₹1.1 crore. A year later, he was the youngest centurion in men's T20 history — a 35-ball hundred that remains the fastest by an Indian in IPL history. During IPL 2025, he scored 252 runs in seven matches at a strike rate touching 207. He then dominated the 2026 Under-19 World Cup final with 175 off 80 balls and broke AB de Villiers' record for the fastest 150 in List A cricket.

But it was IPL 2026 that changed everything. The 680 runs he scored across 15 matches — the highest ever by an uncapped player in IPL history — were extraordinary enough. The 65 sixes were something else. Opposition captains



who once planned to attack him early began spending their pre-match meetings simply asking how to limit the damage. His 97 off 29 balls in the Eliminator, including 12 sixes, was the kind of innings that makes experienced broadcasters reach for words they don't normally use.

What the numbers cannot capture is the fearlessness. First-ball sixes against world-class bowlers have become his signature - not as a statement, but simply as his default mode. That mindset, at 15, is rarer than any statistic.

Opposition teams increasingly altered their field placements and bowling strategies specifically to contain him. Captains who once focused

on dismissing him quickly often found themselves searching for ways merely to limit the damage.

With success, however, came scrutiny.

During a recent India A versus Sri Lanka A tournament, Suryavanshi found himself at the centre of controversy following an on-field altercation with Sri Lankan players. The incident sparked widespread debate about aggression, temperament and the pressures of handling fame at such a young age.

The teenager's response came not through words but through performance.

In the tournament final, with

expectations and criticism at their peak, Suryavanshi delivered a match-winning 94 and walked away with the Player of the Match award. It was a statement innings that shifted attention back to what had brought him into the spotlight in the first place - his cricket.

His story carries significance beyond cricket.

For decades, Bihar has struggled to produce sporting stars who remained closely identified with the state throughout their rise. Suryavanshi's emergence has provided millions of young people in Bihar with something powerful: representation.

The records he currently holds may eventually be broken. New milestones

will emerge and fresh talents will arrive. But the sense of belief he has created among a generation of young cricketers from Indian and particularly Bihar may prove to be his most enduring contribution.

At just 15, Vaibhav Suryavanshi has already become more than a prodigious fearless batter. He has become a symbol of possibility.

I have deliberately avoided comparing him to Sachin Tendulkar or Virat Kohli. They are immortals of the game, each with their own unique story. Comparisons with legends such as Sachin and Kohli are inevitable, but perhaps premature. Both icons followed unique journeys that ultimately shaped Indian cricket. Suryavanshi's challenge is not to become the next Sachin or the next Virat, but to become the first Vaibhav Suryavanshi. Vaibhav deserves to write the first chapter of his own story. These numbers will change with every match and series, but they are already offering a glimpse of a player who could be destined for greatness.

One of the most destructive batting seasons ever witnessed from a teenager. Records broken, Milestones shattered, Bowlers intimidated, Experts stunned. But numbers alone do not explain what has happened. Because Vaibhav's biggest achievement is not statistical- It's emotional. For the first time in decades, Bihar has a sporting icon who is proudly and unapologetically identified with Bihar. Not Jharkhand, Not Mumbai. Not Delhi, Not Karnataka. That distinction matters, more than most people realise.

A 15-Year-Old Has Achieved What Thousands of Crores Could Not

Governments spend enormous amounts of money trying to change perceptions. Branding exercises, Tourism campaigns, Advertising slogans, Consultants, Roadshows, Investment summits. Sometimes they work - Often they don't.

Yet a 15-year-old cricketer has achieved something those campaigns rarely achieve. He has made Bihar aspirational. Across social media, something fascinating is happening. Biharis who once quietly mentioned their roots are now proudly displaying them. WhatsApp groups are buzzing. LinkedIn

posts are celebrating Bihar. He is viral on all social media platforms.

Young professionals in Bengaluru, Mumbai, Gurgaon, Dubai, London and New York are publicly embracing an identity many previously kept in the background.

The pride was always there - Vaibhav simply gave it a face.

From "Oye Bihari" to "Ek Bihari Sab Par Bhari"

MS Dhoni once recalled that Yuvraj Singh jokingly addressed him as "Oye Bihari." It reflected the reality of that era. Being called "Bihari" was often treated as a label.

Sometimes affectionate; Sometimes dismissive.

How dramatically things have changed. Today, "Ek Bihari Sab Par Bhari" is not merely a slogan shouted during elections or cultural events. It is becoming a sporting statement and saw DJ's using this whenever Vaibhav was on the wicket.

And Vaibhav Suryavanshi is its biggest ambassador. What makes

Vaibhav particularly unique is that he is changing perceptions beyond sport. At a time when social media rewards arrogance and controversy, his humility has become part of his appeal.

The images that travel fastest are not always his sixes. They are often images of him touching elders' feet. For millions of Indians, he represents values often associated with Bihar's social fabric - respect for elders, strong family bonds and cultural rootedness. Respecting coaches and players, acknowledging family and remaining grounded.

He has unintentionally become a cultural ambassador. Not through speeches. Not through endorsements. But through behaviour.

Bihar Must Not Waste This Moment

Vaibhav's impact is already larger than cricket and can inspire an entire generation. He cannot build stadiums. He can make children in Muzaffarpur and Bhagalpur dream of wearing white. He cannot create the infrastructure that turns those dreams into careers.

That responsibility sits elsewhere. Bihar has made encouraging moves - the facilities at Rajgir are a genuine beginning. But beginning is not enough. The state still trails the

leading sporting states by a distance that goodwill alone will not close.

Academies need to be built. District facilities need investment. School competitions need to matter. Coaches need to be paid properly and respected seriously. Professional pathways need to exist before talent decides it must look elsewhere - as talent from Bihar has so often done before.

For decades, Bihar waited for a sporting icon who could change how the rest of India viewed the state. In a remarkable twist of history, that transformation may have arrived not through a government initiative, a corporate campaign or a political movement, but through a fearless teenager from Samastipur carrying a cricket bat.

The most important goal is simple: the next Vaibhav Suryavanshi should not have to leave Bihar to become who he is meant to be.





THE SCIENCE OF STAYING STRONG

Can Phospholipids Help Athletes Perform Better and Extend Their Careers, Here's What Experts And Researchers Opine

Elite athletes spend years building strength, endurance and skill, but maintaining peak performance over a long career depends on more than training alone. Nutrition has emerged as a critical pillar of sports performance, with researchers increasingly focusing on compounds that support recovery, reduce physical stress and help athletes remain competitive for longer. Among these, phospholipids have attracted growing scientific interest.

Phospholipids are naturally occurring fats that form the structural foundation of every cell membrane in the body. They are especially abundant

in the brain, muscles and nervous system, where they play a vital role in cell communication, muscle contraction and tissue repair. Two phospholipids—phosphatidylcholine (PC) and phosphatidylserine (PS)—have been widely studied for their potential benefits in sports nutrition.

Unlike stimulants that provide a temporary boost, phospholipids are believed to support the body's natural recovery processes. Researchers suggest that their greatest value lies in helping athletes cope with the cumulative stress of repeated high-intensity training. Better recovery allows athletes to train consistently, reduce fatigue and minimise interruptions caused by overtraining or

muscle soreness—factors that can influence both performance and career longevity.

One of the most significant findings relates to phosphatidylcholine, a rich source of choline. Choline is essential for producing acetylcholine, a neurotransmitter that enables communication between nerves and muscles. During prolonged endurance events such as marathons, triathlons and long-distance cycling, blood choline levels may decline in some athletes, potentially contributing to fatigue and reduced muscle efficiency. Research published in the *Journal of the International Society of Sports Nutrition* suggests that phosphatidylcholine supplementation

may help maintain choline levels during prolonged exercise, supporting sustained muscle function and endurance.

Phosphatidylserine has shown promise in improving recovery after strenuous exercise. Studies have reported that athletes taking phosphatidylserine experienced reduced muscle soreness, improved feelings of well-being and greater exercise capacity in certain high-intensity activities. Researchers have also found that the supplement may help moderate increases in cortisol, the body's primary stress hormone, following intense training. Chronically elevated cortisol levels have been linked to impaired recovery, muscle breakdown and symptoms of overtraining, making stress management an important aspect of athletic performance.

Recovery has become a central focus in modern sport because it directly affects an athlete's ability to perform consistently. Whether it is a marathon runner preparing for consecutive races, a professional footballer navigating a packed fixture schedule or a cricketer playing across multiple formats, inadequate recovery increases the risk of fatigue, declining performance and injury. Nutritional strategies that support cellular repair and reduce physiological stress may therefore contribute to maintaining performance throughout a long competitive season.

Phospholipids may also offer cognitive benefits. Phosphatidylserine is a major component of brain cell membranes and is involved in memory, concentration and nerve signalling. Some research suggests it may help athletes maintain focus, reaction time and decision-making under pressure—qualities that are crucial in sports requiring quick tactical responses, such as cricket, football, tennis and motorsport.

Scientists emphasise that phospholipids are not performance-enhancing drugs and should not be



viewed as a substitute for disciplined training or balanced nutrition. Their potential lies in supporting the body's normal physiological functions, particularly recovery and adaptation to exercise. This makes them fundamentally different from substances that artificially stimulate performance.

Diet remains the best source of phospholipids. Foods such as eggs, fish, lean meat, soybeans and dairy products naturally contain these compounds,

while supplements may be considered for athletes with demanding training schedules under the guidance of sports physicians or registered dietitians.

Although the findings are encouraging, researchers caution that the evidence is still evolving. While several clinical studies have demonstrated improvements in recovery, reduced muscle soreness and better stress management, results on direct performance enhancement remain mixed. Experts continue to call for larger, long-term clinical trials to determine which athletes benefit most and to establish optimal supplementation protocols.

For athletes, however, the message is increasingly clear: success is not defined solely by how hard one trains, but by how well the body recovers. As sports science advances, phospholipids are emerging as one of several nutritional tools that may help athletes remain healthier, recover more effectively and potentially extend their competitive careers. Rather than offering a quick performance boost, they may contribute to the consistency and resilience for sporting excellence over time.



WHEN TAILBONE TAKES THE HIT

Understanding Coccyx Fractures in Sports, their treatment, prevention and road to recovery

In competitive sport, attention is often focused on injuries involving the knee, shoulder, ankle or spine. Yet one of the most overlooked injuries among athletes is a fracture of the tailbone, medically known as the coccyx. Though small in size, the coccyx plays a vital role in maintaining balance, supporting body weight while sitting and providing attachment points for muscles and ligaments essential for movement and pelvic stability.

A fractured tailbone can sideline athletes for weeks or even months, affecting performance, training schedules and quality of life. Sports involving high-impact falls, collisions or repetitive stress—including gymnastics, cycling, snowboarding, horseback riding, football, rugby, wrestling, skating and contact martial arts—pose a heightened risk.

Medical literature suggests that while most coccygeal injuries heal with conservative management, delayed diagnosis, persistent pain and premature return to sport can prolong recovery and, in some cases, lead to chronic disability.

The Role of the Coccyx

The coccyx is the terminal segment of the vertebral column, typically consisting of three to five fused vertebrae. Although often regarded as a vestigial structure, research has demonstrated that it serves several important biomechanical functions.

According to Nathan ST, Fisher BE and Roberts CS in *Coccydynia: A Review of Pathoanatomy, Aetiology, Treatment and Outcome* published in the *Journal of Bone and Joint Surgery* (British Volume, 2010), the coccyx acts as an attachment site for multiple muscles, tendons and ligaments, including portions of the gluteus maximus and pelvic floor musculature. These structures contribute to bowel and bladder function, pelvic stability and sitting posture.

The review further explains that the



coccyx also helps distribute body weight while seated, particularly when the body leans backward, making injuries to the region particularly painful for athletes who spend prolonged periods sitting during travel or recovery.

How Tailbone Fractures Occur in Sports

A coccyx fracture generally results from direct trauma.

Researchers report that common sporting mechanisms include:

Falling directly onto the buttocks during skiing, snowboarding or skating.

Crashes involving cyclists or horse riders.

Hard tackles in rugby or football.

Falls during gymnastics or cheerleading.

Repetitive pressure from prolonged cycling or rowing.

High-impact collisions during combat sports.

According to Fogel GR and Cunningham PY in *Coccygodynia: Evaluation and Management* published in the *Journal of the American Academy of Orthopaedic Surgeons*, the force

generated during a backward fall can fracture or dislocate the coccyx, damaging surrounding ligaments and soft tissues.

In elite athletes, repeated microtrauma can also produce chronic inflammation and stress-related injury without a dramatic single event.

Recognising the Symptoms

The hallmark symptom is severe pain at the base of the spine, particularly while sitting.

Scholarly literature identifies several common symptoms:

Sharp pain after a fall.

Pain worsening while sitting or leaning backward.

Difficulty rising from a seated position.

Pain during bowel movements.

Tenderness directly over the tailbone.

Bruising or swelling.

Pain while running, jumping or cycling.

Reduced athletic performance due to discomfort.

Nathan and colleagues note that some athletes experience persistent pain despite apparently minor trauma because surrounding ligaments and muscles remain inflamed long after the initial injury.

Diagnosis

Diagnosis begins with a detailed clinical examination.

According to the review by Nathan and colleagues, physicians assess:

History of trauma.

Location of tenderness.

Pain while sitting.

Mobility of the coccyx.

Imaging may include:

Standard X-rays.

Dynamic sitting and standing radiographs.

CT scans to detect fractures.

MRI scans when soft-tissue injury, inflammation or stress injury is suspected.

The authors note that dynamic imaging can identify abnormal coccygeal movement that may not appear on conventional radiographs.

Treatment: Most Athletes Recover Without Surgery

Medical literature consistently indicates that the majority of coccyx fractures heal through conservative treatment.

Rest and Activity Modification

The injured athlete is advised to avoid activities that worsen symptoms, particularly running, jumping and contact sports during the acute phase.

Nathan et al. state that allowing sufficient time for healing significantly reduces the risk of chronic pain.

Pain Management



Scholarly recommendations include:
Non-steroidal anti-inflammatory drugs (NSAIDs).

Ice application during the first 48 hours.
Heat therapy during later recovery stages.

Pain control enables gradual return to movement while preventing stiffness.

Cushions and Sitting Adjustments

Ring cushions or wedge-shaped cushions reduce direct pressure on the coccyx.

The review emphasises posture correction and limiting prolonged sitting during recovery.

Physiotherapy

Sports physiotherapists may prescribe:
Pelvic floor rehabilitation.

Core strengthening.

Stretching of surrounding muscles.

Gradual return-to-sport programmes.

According to orthopaedic literature, strengthening muscles around the pelvis reduces stress on the injured coccyx.

Manual Therapy

Selected patients with abnormal coccygeal mobility may benefit from manual manipulation performed by trained specialists.

Nathan and colleagues report that carefully selected patients have experienced symptom improvement following manual treatment.

Image-Guided Injections

Persistent pain lasting several months may require corticosteroid injections or local anaesthetic injections.

Research indicates that image-guided injections can reduce inflammation and provide significant pain relief in appropriately selected patients.

Surgery

Only a small proportion of athletes require surgery.

The procedure, known as coccygectomy, involves removal of the coccyx.

Nathan et al. report that surgery is generally reserved for patients with severe chronic coccygodynia who fail prolonged conservative treatment. Although many patients experience improvement, surgery carries risks including wound infection and prolonged healing.

Recovery Timeline

Recovery depends on injury severity.



According to orthopaedic literature: Bruises generally improve within weeks.

Stable fractures often heal within six to twelve weeks.

Complex fractures or associated ligament injuries may require several months.

Chronic coccygodynia can persist beyond six months if treatment is delayed.

Sports medicine experts caution that athletes should return only after pain-free sitting, running and sport-specific movements are possible.

Possible Complications

Untreated or poorly managed fractures may result in:

Chronic coccyx pain.

Difficulty sitting for prolonged periods.

Reduced athletic performance.

Altered posture.

Pelvic muscle dysfunction.

Persistent inflammation.

Psychological stress due to prolonged pain.

According to the Journal of Bone and Joint Surgery review, chronic coccygodynia can become difficult to manage if early rehabilitation is neglected.

Prevention in Athletes

Although not every injury is preventable, sports medicine research recommends

several measures to reduce risk.

Protective Equipment

Athletes participating in snow sports, skating, cycling and contact sports should use appropriately designed protective padding.

Strengthening Core Muscles

Strong abdominal, hip and pelvic muscles improve stability and reduce the force transmitted through the pelvis during falls.

Learning Safe Falling Techniques

Gymnasts, martial artists and snowboarders are taught controlled falling techniques that distribute impact away from the coccyx.

Proper Training Surfaces

Maintaining well-padded training environments reduces impact during accidental falls.

Bicycle Fit

Cyclists should ensure proper saddle design, height adjustment and riding posture to minimise prolonged pressure on the coccyx.

Early Medical Assessment

Persistent tailbone pain after a sporting injury should never be ignored. Early diagnosis can prevent chronic complications.

Athletes at Greater Risk

Research indicates increased risk among:

Gymnasts.

Figure skaters.

Ice hockey players.

Snowboarders.

Skiers.

Cyclists.

Horse riders.

Rugby players.

Wrestlers.

American football players.

Martial artists.

Cheerleaders.

Female athletes may also experience coccyx pain more frequently because of anatomical pelvic differences, although fractures can occur in athletes of any age or sex.

Looking Ahead

Sports medicine specialists increasingly recognise that tailbone injuries deserve the same careful attention given to more common musculoskeletal injuries. While coccyx fractures are rarely life-threatening, they can significantly impair athletic performance, disrupt training and affect everyday activities if left untreated.

Evidence from orthopaedic and sports medicine journals indicates that early diagnosis, adequate rest, structured rehabilitation and gradual return-to-play protocols provide the best outcomes. Surgery remains uncommon and is generally considered only after prolonged failure of conservative treatment.

As awareness grows among coaches, athletes and medical professionals, prompt recognition and evidence-based management can shorten recovery times and help athletes return safely to competition while minimising the risk of chronic pain.

Scholarly Sources Referenced

Nathan ST, Fisher BE, Roberts CS. "Coccydynia: A Review of Pathoanatomy, Aetiology, Treatment and Outcome." Journal of Bone and Joint Surgery (British Volume). 2010.

Fogel GR, Cunningham PY. "Coccygodynia: Evaluation and Management." Journal of the American Academy of Orthopaedic Surgeons.

Maigne JY, Chatellier G, Faou ML, Archambeau M. "The Treatment of Chronic Coccydynia with Intrarectal Manipulation." Spine.

Wray CC, Easom S, Hoskinson J. "Coccydynia: Aetiology and Treatment." Journal of Bone and Joint Surgery (British Volume)

SWING SMART: SAVE YOUR BACK!

Playing golf can take a toll on your back, regardless of the number of times you tee it up. Though it provides cardiovascular benefits, social connections, and mental stimulation and improves balance, overuse injuries are common in golfers because of differences in swing intensity, training frequency and injury mechanisms that differ between professional and amateur golfers. Often high amount of force applied during golf swing leads to injury. If a golfer lacks strength and has poor swing techniques, he can damage soft tissues with the lower back most commonly injured. Lower back pain can be a thorn in the side of any golfer's game. Prevalence of lower back injuries is between 15% and 35% in amateurs and up to 55% in professionals.



Causes of lower back pain in Golfers

- Improper swing technique
- Limited thoracic and hip rotation
- Core weakness

PROPER SWING TECHNIQUES FOR PAIN-FREE TEE OFF

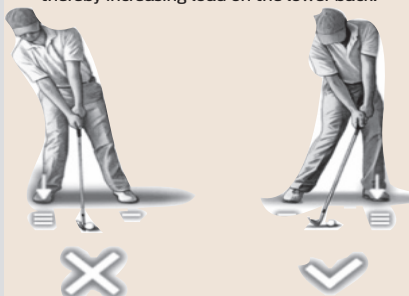
TAKEAWAY (FROM ADDRESS UNTIL CLUB IS HORIZONTAL TO GROUND)

Lower back should be straight and weight evenly distributed between both feet. Buttock should not protrude and slight bend in the knees to prevent hunching forward. This allows proper activation of abdominal and gluteal muscles and protects the spine too.



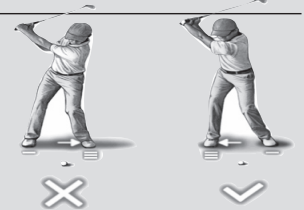
DOWNSWING (FROM TOP OF BACK SWING UNTIL CLUB IS HORIZONTAL)

At the beginning of downswing, the hips should uncoil first with the shoulders and arms to follow. Sequence should be hips-shoulders-arms. When the hips and lower body do not rotate, this encourages back extension and leaning away from the ball, thereby increasing load on the lower back.



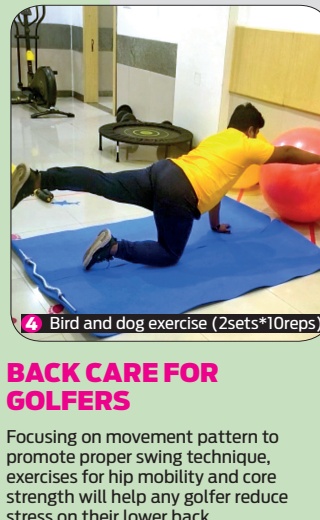
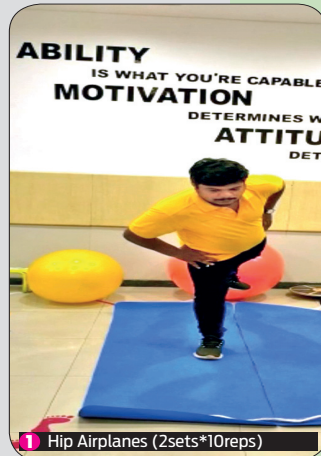
BACKSWING (HORIZONTAL CLUB TO TOP OF BACKSWING)

Core muscles should be engaged, hips and thoracic spine should rotate in order to prevent overextension of lower back. Sequence should be arms-shoulder-hips during this movement. Leaning towards target should be avoided which might lead to increased extension and excessive loads on lower back through impact.



FOLLOW-THROUGH (FROM BALL CONTACT UNTIL END OF SWING)

In follow through, back heel should release to prevent excessive torque through the lower back. It is important to maintain a strong spinal posture and avoid completing swing in an overextended position that will add stress on lower back.



BACK CARE FOR GOLFERS

Focusing on movement pattern to promote proper swing technique, exercises for hip mobility and core strength will help any golfer reduce stress on their lower back.

Dr. Gayatri Upasana Acharya

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