



SPORTS SCIENCE INDIA

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JULY, 2022
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WE ARE ONE

INDIA'S FIRST MAGAZINE ON SPORTS SCIENCE



Trendsetter Xaxti Riders

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SNIPPETS

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SSI Founder, Dr Sarthak was associated as team doctor in the recently concluded India - SA T20 Internationals.

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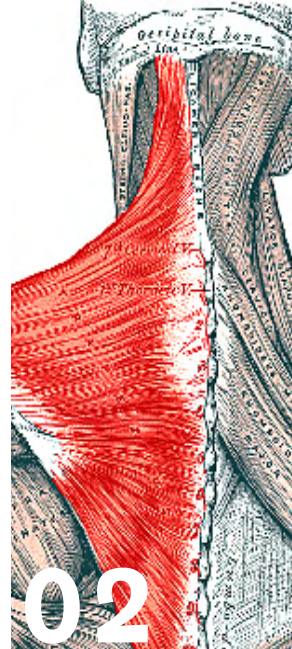
Mr. Soumya Patnaik

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DR. SARTHAK PATNAIK

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

DEAR READERS,

Welcome to our July edition. Kobe Bryant quoted "The moment you give up is the moment you let someone else win." We thank all our subscribers for their encouragement which has helped us to expand. In this edition we have highlighted the cycle revolution in Goa by Mr. Sameer Nadkarni, the "Xaxti Riders". They have been the real ambassadors for Goa & we salute their commitment towards nature & society. We also thank Mr. Anil Mukherji of Tollygunge club, Kolkata for their contribution in the field of sports. The edition throws light on the science behind overuse elbow injury among pitchers and role of plyometrics in fencing. We personally thank Dr. Sundararajan for his exclusive information on flat feet & its management. I wish our readers a happy reading.

Regards

Would love to know your feedback, please write to us at info@ssifanzone.com

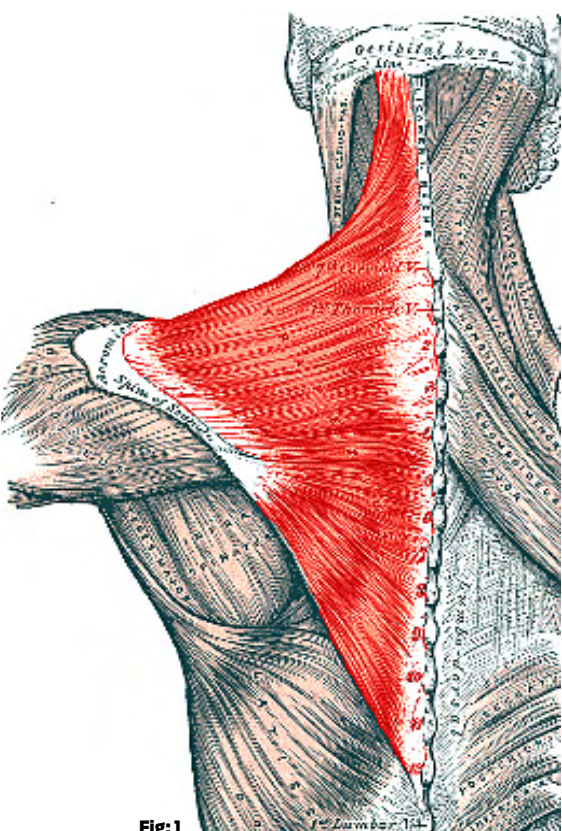


Fig:1

NECK PAIN: BEYOND SPONDYLITIS

Not all kinds of neck pain occur due to spondylitis. You could be suffering from Trapezitis as well. Here's all that you need to know

Neck pain is quite common among individuals of all age group. Initially, it was commonly found among the elderly and people with prolonged reading and writing occupations. The most commonly learnt terminology for neck pain of any kind is 'Spondylitis.' It is often perceived that spondylitis is the cause behind your neck pain. But how can we define spondylitis in the lower age group or persons with acute onset? At present due to the random use of mobile phones and other gadgets, the incidents of neck pain has increased by three to four folds. Perhaps, we are heading back to the Stone Age with our posture and attitude. So, spondylitis is a chronic condition affecting the spine such as neck, upper and lower back in the form of pain, restricted movement and bony changes on X-rays.

Most of the people generally complain of neck pain around the upper part of the neck (nape of neck) mid neck, shoulder and inter-scapular area. Neck pain can be of an isolated nature or a tingling sensation and heaviness of the bilateral or unilateral upper limbs. A pain, which is generated from the hand towards the neck, is separate from the pain around the neck towards the hands.

What is Trapezitis?

Isolated neck pain with acute onset and non-radiating is typically muscular. The most common muscle involved is trapezius. Trapezius is a long muscle towards the back of neck which arises from the nape of neck till the upper back with extension towards the bilateral shoulders. The muscle performs various functions—like lifting of the head upwards and shrugging of the shoulders. The upper back muscles

facilitate movement, rotation and stabilisation of the shoulder blade. So, any inflammation of the neck muscles or trapezius can cause severe pain and also affect the related movements.

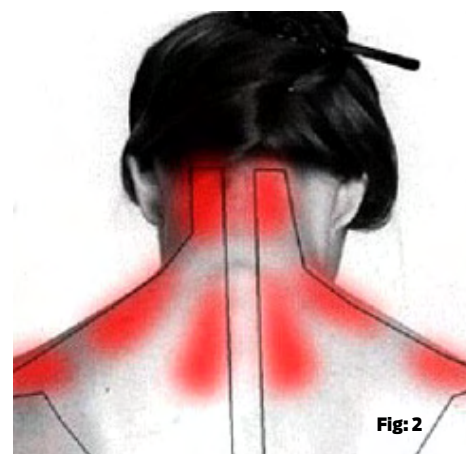


Fig:2

CAUSES OF TRAPEZITIS

- | | |
|---|--|
| Forward head posture | Prolonged head bending activities like reading |
| Sitting for a prolonged period without back support | Stiff pectoralis major muscles |
| Holding phone between head and shoulder | Turning head to one side |
| Too high keyboard on desk | Sport activities with sudden one-side movement |
| Working with no arm support on desk | |

SIGNS AND SYMPTOMS

- | | |
|--------------------------|--|
| Pain on the base of head | Limited range of Movement |
| Pain behind the eye | Intolerance to weight on your shoulder |
| Neck pain | Pain on the shoulder blades and down side of arm |
| Neck stiffness | |
| Upper shoulder pain | |

MANAGEMENT

It generally takes 1 to 2 weeks to subside by its own and if it is post-traumatic then it will take 2 to 4 weeks. Apply ice 2 to 3 times a day for 10 minutes each in acute cases. Encourage active neck movements along the direction of pain. Avoid neck or cervical collar.

PHYSIO THERAPY: MAINSTAY OF THE TREATMENT

Medications such as analgesics, anti-inflammatory and muscle relaxants are helpful. Physiotherapy is the mainstay of the treatment along with medications. Minimal isometric neck exercises with active or passive range of movement exercises along with release of trapezius muscles is required. Sometimes a neck mobilisation by an expert physiotherapist does help a lot.

FLAT FEET IN ATHLETES – IS IT A MAJOR CONCERN?

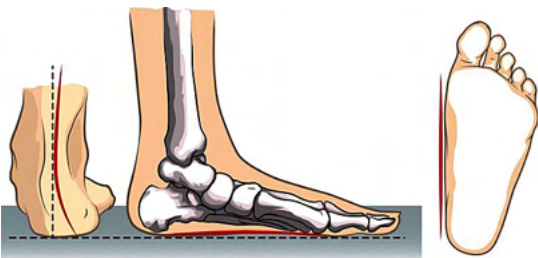


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WHAT ARE FLAT FEET?

Pes planus commonly referred to as “flat feet” is a relatively common foot deformity and is defined by the loss of the medial longitudinal arch of the foot when the foot contacts the ground.



Flat feet



Normal feet

FUNCTION OF THE MEDIAL ARCH & WHAT HAPPENS IN FLAT FOOT?

The arch serves as an adaptive flexible base and acts like a shock absorber to feet in dissipating the forces of entire body on wider region of the foot. Flat feet, on the other hand, tend to be hyper-flexible and prone to over-pronation which increases the amount of stress, pressure, and strain on the inside of the foot and ankle. Dysfunction of the arch complex alters the biomechanics of the lower limbs and lumbar spine increasing strain on muscles, bones, and joints throughout the feet, legs and back.

PROBLEMS ASSOCIATED WITH FLAT FEET IN ATHLETES?

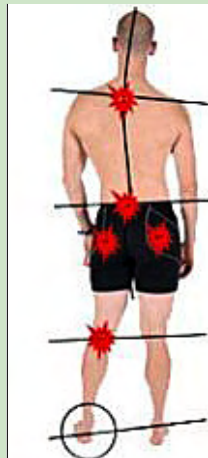
A. Foot pain: This is the major symptom of flat feet due to strained muscles and connecting tissues; Pain along the course of the posterior tibial tendon (PTT) and inability or pain upon attempting a single-leg heel rise

C. Ankle injuries: Ankle injuries are common among athletes who play sports like football and basketball. Flat feet being more flexible chances of ankle sprains are higher.

D. Physical foot changes: Long standing flat feet may cause major changes in the foot like Bunions, hammer toes, contracture of feet and ankle muscles at the lateral compartment, hindfoot and midfoot arthritis.



B. Uneven distribution of body weight with resultant one-sided wear of shoes leading to further injuries. The atypical wear and tear of footwear at times might be the clue for diagnosis.



COLLAPSED ARCH



ORTHOTIC CORRECTION

E. Back, Hip and Knee ailments: Altered biomechanics because of flat feet puts extra workload on back, hip and knees.

TYPES OF FLAT FEET?

A. Flexible flat foot - When the arch of the foot is intact on heel elevation and non-bearing but disappears on full standing.

B. Rigid flat foot - When the arch is not present in both heel elevation and weight bearing. Rigid pes planus is rare. It usually develops during childhood, but it can occur at any point in life. It develops from the tarsal coalition, accessory navicular bone, congenital vertical talus, or other forms of congenital hindfoot pathology.

CAUSES OF FLAT FEET?

PES PLANUS CAN EITHER BE CONGENITAL OR ACQUIRED.

A. CONGENITAL

Fairly common in infants and young children secondary to ligamentous laxity and lack of neuromuscular control. Most children develop normal arches by age 5 or 6. Most cases of pes planus in children are flexible. Obesity in children is significantly correlated with the tendency of the longitudinal arch to collapse in early childhood.

B. ACQUIRED

I. Posterior tibial tendon dysfunction – Commonly seen in females above 40 years with obesity and diabetes. It can also occur in adults with congenital pes planus, especially those who participate in repetitive high impact sports such as basketball, running, or soccer.

III. Associated with conditions of ligamentous laxity – Downs syndrome, Marfan's syndrome or Ehler-Danlos.

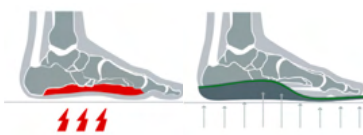
II. Trauma to the midfoot or hindfoot resulting in navicular, first metatarsal, calcaneal, or Lis-Franc ligament complex more commonly malunion of those fractures.

IV. Inflammatory or degenerative arthropathy viz rheumatoid arthritis, seronegative arthropathy

TREATMENT

Flat feet shouldn't keep the athletes grounded. Having flat feet doesn't necessarily mean one can't be good at sports or physical activities. Most of the people with flat feet are asymptomatic, they do not require any treatment.

However, a small percentage of individuals with flat foot can be symptomatic, & need meticulous work up and systematic rehabilitation.



MODALITIES OF TREATMENT:

I. ARCH SUPPORT: Insoles or custom orthotic inserts to support the collapsed arch. With appropriate orthotic support biomechanics of lower limb is corrected in individuals with flexible flat feet. Also back, hip and knee pain secondary to flat feet tend to improve.



Custom made Arch fit shoes

PHYSICAL THERAPY MANAGEMENT

GOALS

TO MINIMIZE PAIN

Pain Management: Cryotherapy, Massage or Ultrasound for pain relief and to relieve oedema. Electrical stimulation can also be used to improve vascularity and promote vascularity.

IMPROVE FOOT FLEXIBILITY

Foot Flexibility Exercises: Passive ROM of foot and ankle joints, Heel-cord stretch for the Achilles tendon and calf muscles to relieve tight heel cord and stretching of peroneus brevis muscles to facilitate varus and foot adduction.

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TIBIALIS POSTERIOR STRENGTHENING EXERCISE WITH THERABAND – FOREARM IS PLACED BETWEEN KNEES TO STABILISE LEGS, THEN THE FOOT IS SLID ALONG THE GROUND TOWARDS MIDLINE. THIS IS ALSO DONE WITH RESISTANCE APPLIED AT 45-DEGREE ANGLE USING THERABAND.



Fig: 2

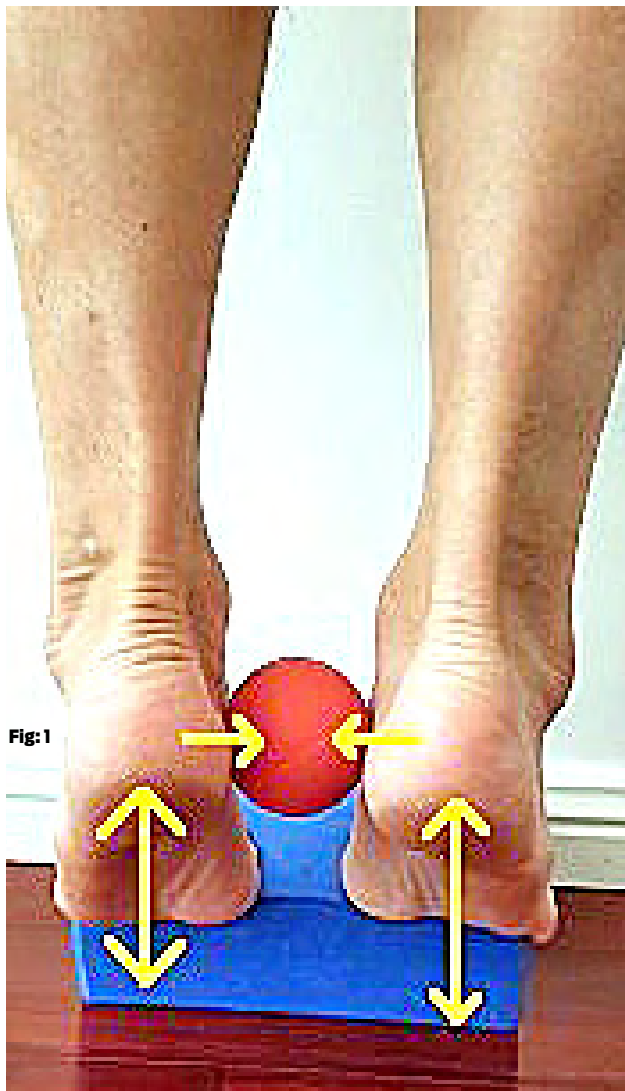


Fig: 1

HEEL RISE EXERCISES TO TRAIN TIBIALIS POSTERIOR. A BALL IS SQUEEZED BETWEEN THE HEELS AS YOU RISE UP ON YOUR TOES TO AID IN HEEL INVERSION.

PROPRIOCEPTION TRAINING

PROPRIOCEPTION TRAINING: TOE CLAWING OF TOWEL AND PEBBLES, FOREFOOT STANDING ON A STAIR, TOE AND HEEL WALKING TO MAINTAIN VIABLE ARCHES.



Fig: 3

PATIENT EDUCATION AND REASSURANCE.

Counselling on proper foot wear and insoles. Encouraging weight loss in obese individuals through exercise and dieting.



Fig: 4

MEDICAL/SURGICAL MANAGEMENT

TREATMENT IS BASED ON AETIOLOGY AND NSAIDS FOR PAIN.

Surgery is required in rigid pes planus and in cases resistant to therapy to reduce symptoms. Most surgical methods aim at realigning foot shape and mechanics. These surgeries could be tendon transfers, realignment osteotomies, arthrodesis and where other surgeries fail, triple arthrodesis is performed.

DOES FLAT FEET COMPROMISE ATHLETIC PERFORMANCE?

Researchers in various previous studies have analysed children with varying degrees of flat feet were tested for flexibility, balance and force production. Researchers concluded no disadvantages in sporting performance due to flat-footedness. Children with flat and children with "normal" feet were equally successful at accomplishing all motor tests; suggesting that there is no need for treatment of flexible flat feet with the sole purpose of improving athletic performance.

PEDALLING FOR FITNESS

In Goa, a cycling club is making all the difference in people's life by encouraging its members to take up everyday rides covering 30 to 35Kms for a healthy living

Come rain or shine, members of a cycling club in Goa—Xaxti Riders—pedal for about 30 to 35kms every day. And, they call such rides as 'immunity booster' and 'stress buster' rides.

Formed in 2017, the one-of-its-kind cycling club has about 300 members. With the motto—'live to ride'—the Club functions to promote fitness of the body and the mind. Ask its founder—Architect Sameer Nadkarni of Margao—and he says: "At Xaxti Riders, cycling is a passion, a sport and a fitness activity. We are not looking for customers here but are focused on spreading the benefits, free of charge."

According to Nadkarni, who had started the club with about 4 to 5 members in Margao, the Club promotes cycling as a means to maintain fitness of lungs, cardio and joints. "Cycling not only boosts the immunity of the rider but also endorses social interaction. This encourages a new rider to take up the activity," he adds.

So, what does it take to become a Xaxti Rider? "A cycle and helmet are the very basic requirements, which cost anything between Rs 20,000 and Rs 35,000 depending on the kind and quality of the bike. The budget increases as you add on accessories like lights, proper gear. To be a Xaxti Rider all you need is a cycle, a helmet and the passion! The Xaxti Rainbow Jersey will add the special Xaxti energy," he chuckles. For any Xaxti rider, the recommended daily distance to be covered is about 20Kms. For Sunday rides, the distance increases to 60Kms. "We reserve Fridays for our special elevation rides to Chandreshwar Parvat, followed by a fun filled breakfast at the foothill. We also have our waterfall rides in the peak of monsoons, Christmas rides and other special rides as and when occasions come," he says.

Xaxti Riders holds three major signature events in a single cycling calendar year. Among these events are the 100km



SAMEER NADKARNI

long XAXTI 100, the extremely challenging 200km long XAXTI 200 and the ladies special 100km long 'GO GIRLS GO 100.' The Club also hosts a Talent Search Programme. "Young talent from in and around Salcete are encouraged and trained to take up cycling as a sport. They become a part of our race team, Xaxti Racing. We give them cycles, gear and structured training through online coaching," the founder explains. Two Xaxti Riders had represented Goa at the Cycling Nationals held in 2021.

When it comes to the Club's major achievements, it boasts of having cyclists, who have taken on personal challenges like Everesting, Inter-state endurance rides, rides in Leh Ladakh, and rides along the entire East coast of India.

As a community, Xaxti Riders collaborate with various government departments to raise awareness on a plethora of issues. Xaxti Riders had recently partnered with the Election Commission of India (ECI) Goa, through their South Goa Election Office, for promotion of ECI's signature program of SVEEP (Systematic Voter Education & Electoral Participation). Again, they joined hands with the Goa State Biodiversity Board to conduct environment and biodiversity awareness rides as well as promotion of 'Save Soil Mission.' In all such initiatives, the Club also collaborates with Verna Industries Association (VIA).



Fitness mantra for cyclists: Stretching exercises

Diet: Healthy home-cooked food containing proteins, carbs and fibre

Must ensure: Proper Hydration

Aim: To see more people on saddle and the goal is to have fitter citizens in Goa and beyond

Challenges: Lack of dedicated cycling corridors in the country

Here’s how Plyometric training in fencing influences the intermuscular coordination & helps to get rid of the muscular imbalances

Fencing is an open skill combat sport characterized by high intensity explosive actions and recovery periods. Moreover, fencers need reactive strength to minimize their ground contact times and reach the maximum displacement speed in both concentric and eccentric modalities. Lower limbs’ neuromuscular efficiency and proprioception, associated to bio-mechanical parameters, allow fencers to perform the technical movements from “en garde” position to lunge.

Lunge in fencing can be improved by increasing the lunge length, the reaction time and the horizontal speed of the centre of gravity. Considering that, speed and accuracy of movement have been demonstrated to be related to fencing performance, workouts consist of power and repeated change of direction training, in order to improve the fencing performance, largely characterized by eccentric contractions.

Commonly fencers use the “repeat bout effect” of plyometric training to adapt the muscle system to eccentric loads. This training positively influences the intermuscular coordination, promoting greater excitability of the stretch reflex in muscle fibre mechanics, especially at the beginning of the concentric phase. Eccentric training is an eccentric method to improve lower limb range of motion (ROM) and that fencers need this skill to perform the technical movements without any limited ROM, such as lunge.

POWER UP WITH PLYOMETRIC!



SOUND PERFORMANCE PROGRAM FOR FENCING TRAINING:

1. Proprioceptive training and strengthening of the lower extremities should be employed to prevent hamstring strains and ankle sprains in the same way as the FIFA 11 program has positively influenced soccer to prevent ACL injuries.
2. Fencers need to use strength and power training to increase their speed and efficiency supporting the short-burst, high-intensity energy required.
3. A fencing lunge should be looked at as more of a lateral than a forward movement. To improve closing distance on the strip, perform exercises that improve lateral power and reactive power.
4. Lateral bound to lunge – this movement teaches how to decelerate and absorb forces. The athlete is able to control the hips, knees and ankles during explosive movements. The lateral power and quickness is enhanced, which is a major skill for overall performance of lunge. Lateral bound is a calisthenics, cardiovascular, and plyometrics exercise that primarily targets the quads and to a lesser degree also targets the calves, glutes, hamstrings and outer thighs.
5. Lateral hurdle progression - Lateral movements not only improve strength, stability, and coordination, they also help reduce the risk for sports injuries by enhancing balance and proprioception through the whole body and improving overall hip, knee, and ankle joint stability. Lateral drills also help build more balanced strength in the muscles of the lower body, including the hip abductors and adductors. Lateral drills improve sports performance for athletes who frequently, or abruptly, change direction, cut, or pivot.
6. Depth jump to catch – it is a plyometric exercise to increase the vertical leap and improve jumping ability. Main muscles involved: quadriceps, hamstrings, glutes, calf muscles.
7. Metabolic conditioning with a work-to-rest ratio of 1:3, rather than low intensity, high-duration workouts will be more productive.

TROUBLESHOOTING THE LUNGES: ELIMINATING THE IMBALANCES

Fencing is a unilateral sport, which can lead to muscle imbalances, incorrect body alignment and poor coordination when executing fencing technique. Younger, skeletally immature athletes should use whole-body, bilateral strengthening programs to reduce muscle imbalances. To combat the repeated one-sided nature of the sport, it is crucial to work both sides of the body and incorporate eccentric loading exercises for common tendinitis areas and postural correction exercises that encourage proper hip positioning. In addition, a strong emphasis should be placed on core stability and transfer of force.

TREATING INJURIES IN FENCING

Fencing rules allow each athlete one “10 min injury-time” per new injury per competition. Penetrating injuries have most commonly been the result of broken blades; however the vast majority of fencing injuries are related to the dynamic movement of fencing action rather than equipment issues. Injury rates in competitive fencing are, overall, quite low.



Dr. Rajat Pradhan, Dr. Brinda Bharati, Ms. Lakshmi Priya



TOLLYGUNGE CLUB

From horse riding to squash, Kolkata's Tollygunge Club—known for its heritage—is definitely a one-stop destination for various sporting activities in eastern India.

You name a sport and the 126-year-old club offers state-of-art facilities for the same. As the Tollygunge Club's CEO Anil Mukerji rightly says: "It is the only social club in the country where facilities for riding co-exist with infrastructure for other sports like swimming, tennis, squash, bridge, golf, snooker and billiards." Moreover, the club's Article states that it is meant for 'sporting activities of all nature.'

Setting up world-class standards in its equestrian activities, the club—one of the key riding hubs in eastern India—has earned its repute over the years in horse riding. Perhaps, it is the oldest riding club in the country.

At present, the Club has 40 horses in its stables. The club's history as a racing centre dates back to 1984. With about 150 regular riders availing the rectangular ring currently, the club keeps this sport alive at a time when interest for riding is fading.

"Riding is in fact our origin of sports.

ONE-STOP HUB FOR SPORTS

THE 126-YEAR-OLD TOLLYGUNGE CLUB OFFERS WORLD CLASS AMENITIES FOR SPORTS OF VARIOUS KINDS

We have had several national and international champions from here. The Club's young riders even have had the honour of representing the country abroad in show jumping and dressage and have also won several accolades, including laurels, at the Junior National Equestrian Championships," says Mukerji. The refurbished stables are one of the key attractions at the club.

Not just for the pros, Tollygunge club is also a sought-after destination for the trainees, who have either taken up horse riding for passion or to be professionals in this sport. "We have an emphasis on training younger people. We have training courses for golf, riding and swimming. We have Junior-level state

swimmers, squash and tennis players. We have people like Sourav Ghosal and Leander Paes as members. Therefore, sports is our main focus and we have produced some champions," says Mukerji. The Club has got national and International coaches, some of whom are Arjuna Awardees or have represented the country in Asian Games. One of the most accomplished coaches for riding at the club is Hon. Capt. (retd.) Sajjan Kumar, a former member of the President's Bodyguard.

What helps the Club score over other such facilities in the country is its golf course. The 18 hole, 70 par 100 acre championship all-season golf course—has been designed by golf architects of

internationally repute. "Modern equipment and underground irrigation systems maintain the course in top condition throughout the year. A floodlit driving range and illuminated putting and chipping green give the golfers an opportunity to hone their skills even after the sun has gone down," explains Mukerji.

HERITAGE: LINKS WITH TIPU SULTAN'S FAMILY

After the battle of Seringapatam in 1799 when Tipu Sultan was martyred, the British brought his sons to this part of the country to keep them away from Mysore. The property, where the Club had come up, was originally an indigo plantation home of Richard Johnson, a merchant in the East India Company, set up in 1781. Around 1806, the British dispatched Tipu Sultan's family to the city (then known as Calcutta). The family was given a living allowance. With the help of the allowance, Tipu Sultan's son Ghulam Mohammed Shah purchased the plantation grounds from Johnson. Later, they sold some portions of the plantation and leased out some other parts to William Dixon Cruickshank, a Scottish banker. In 1895, Cruickshank set up the Club to provide a space to the British to socialise.

HIGHLIGHTS

STRENGTH OF THE CLUB: PRESENTLY, IT HAS ABOUT 4,000 MEMBERS IN DIFFERENT VARIETIES.

IT'S UNIQUE: IT'S A VERY ECO-FRIENDLY INSTITUTION. IT HAS A WATER-RECYCLING AND RAINWATER HARVESTING SYSTEM. IT IS ALSO HOME TO RARE JACKALS, MONGOOSE AND OVER A HUNDRED VARIETIES OF BIRDS.

PUNCHLINE: SPORTS IS THE CLUB'S DNA.

ADDRESS: THE TOLLYGUNGE CLUB 120, DESHAPRAN SASMAL ROAD, KOLKATA-700 033, INDIA.

Be it physical therapy or surgical management, there are ways to eradicate that tingling pain in the elbows of throwing athletes. Here's all that you need to know about the disorder:

It isn't a rare episode when an athlete—especially associated with throwing sports—complains of sharp pain in the elbow or a sore elbow joint. In such a scenario, the athlete may be suffering from a disorder named as 'Pitcher's elbow.' Overhand throwing often puts high stress on the elbow. In baseball pitchers and other throwing athletes, these stresses are repeated, leading to serious overuse injury.

Therefore, Pitcher's elbow, also known as Valgus Extension Overload, is a disorder characterised by posteromedial elbow discomfort caused by repeated micro-trauma in throwing athletes. VEO can also produce numbness, edema, and discomfort.

VEO is not a one-time injury; rather, it develops over time as a result of excessive elbow usage. VEO is rare in non-throwers since it is produced by overuse and the repetitive high stress of throwing. Pain during or after throwing, a reduction in throwing speed, and recurrent numbness and tingling of the elbow, forearm, or hand are the most common symptoms.

CAUSE OF DISORDER

The humerus and olecranon are pushed and twisted against one other during a throwing action, and the UCL (ulnar collateral ligament) serves to support the whole joint. The olecranon's protective cartilage can degrade due to repeated motion and severe stress, resulting in abnormal bone protrusion (bone spurs/osteophytes).



RECOVERY TIME: IF NONSURGICAL THERAPY IS EFFECTIVE, THE ATHLETE CAN USUALLY RESUME THROWING IN 6 TO 9 WEEKS. IF SURGERY IS NECESSARY, THE TIME IT TAKES TO RECUPERATE DEPENDS ON THE DEGREE AND SURGICAL TECHNIQUE USED.

THROW THE PAIN!

REHAB PROTOCOL

In most circumstances, a brief time of rest is the first step towards VEO recovery. If pain eradication is insufficient, other treatment choices will be necessary. These procedures include: Physical rehabilitation: Specific workouts might help you regain your strength and flexibility. A good rehab program will allow you to gradually resume throwing. Ibuprofen (Motrin) and naproxen (Aleve) are two medications that decrease swelling and discomfort and are available in prescription dosages. Positional shift: To reduce excessive elbow stress, your throwing form may be assessed and modified.

HOW TO DIAGNOSE?

Range of motion, strength, elbow stability, sensitivity, muscle mass, appearance, and even shoulder is assessed. All of this information is used to pinpoint the exact location of the pain. A valgus stress test is carried out, which replicates the stresses that the elbow encounters during throwing. More testing, such as X-rays, may be necessary to determine. X-rays commonly reveal stress fractures, bone spurs, and other abnormalities. CT scans give three-dimensional images of the bone and can be quite helpful in diagnosing bone spurs and other skeletal illnesses that are commonly observed in VEO patients. MRI scans of the soft tissues of the elbow assist in distinguishing between VEO and ligament and tendon disorders, which commonly present with identical symptoms. This test can also detect a stress fracture that isn't visible on an x-ray image and help determine the severity of an injury, such as whether a ligament is mildly torn or completely ripped.

PREVENTIVE MEASURE: According to recent studies on VEO prevention, appropriate training, technique, and recovery time can assist to prevent elbow throwing injuries.

SURGICAL MANAGEMENT

Several surgical treatments for treating VEO without needing an athlete to adjust their playing abilities are available, including:

Arthroscopic removal of olecranon bone spurs, as well as any loose bone or cartilage within the elbow joint, is possible.

Ulnar Collateral Ligament Reconstruction (Tommy John surgery). This procedure is utilized if the VEO has resulted in an unstable or ruptured UCL. The whole ligament must be restored since most ligament injuries are not repairable. A tissue transplant is utilized to replace the injured ligament after surgery, functioning as a scaffold for a new ligament to grow on. In most situations, the ligament is one of the patient's own tendons.



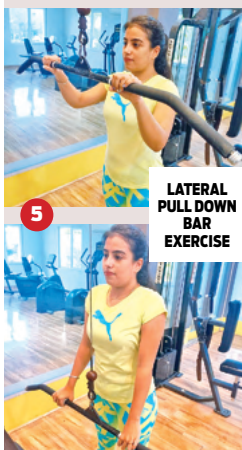
STANDING WRIST CURLS



STANDING WRIST CURLS-WRIST IN NEUTRAL POSITION



SITTING ELBOW CURLS (90°)



LATERAL PULL DOWN BAR EXERCISE



POWER BALL DEVICE FOR STRENGTHENING OF ARM AND FOREARM MUSCLES



STRENGTHENING EXERCISES WITH THE USE OF THERALOOP

MANAGEMENT

VEO may usually be treated with rest and physical therapy at the initial stage. If it progresses and physical therapy fails to eradicate the pain, a variety of surgical techniques can be used to relieve it.

DR. SHIVANI R. UTTAMCHANDANI (PT)

SPORTS SCIENCE INDIA SNIPPETS



ON THE FIELD

SSI FOUNDER, DR SARTHAK PATNAIK, AND HIS TEAM WERE PRESENT AS FIELD DOCTOR FOR THE T20 INTERNATIONAL SERIES MATCHES. (INDIA VS SA)



WORLD CYCLING DAY (PEDALLING TALES)

SPORTS SCIENCE INDIA (SSI) COLLABORATED WITH DECATHLON TO CELEBRATE WORLD CYCLING DAY. SSI CELEBRATED THE OCCASION WITH THE CYCLISTS OF THE MARATHON, WHICH WAS ORGANISED BY DECATHLON.



SPECIAL CAMP

SSI CONDUCTED A FMS (FUNCTIONAL MOVEMENT SCREENING) CAMP AT EAST COAST RAILWAY INDOOR STADIUM. THE TEAM GUIDED AND EDUCATED THE BADMINTON PLAYERS FOR THE STRENGTH OF THEIR MUSCULAR SYSTEM AND BONES.



HAPPY CLIENTS

FIVE POST ACL KNEE SURGERIES (INCLUDING 1 BILATERAL ACL) AND 1 BANKART REPAIR RT SHOULDER SURGERY.

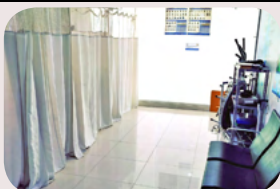


NEW BEGINNINGS

SPORTS SCIENCE INDIA OPENED ITS SECOND BRANCH OUTSIDE ODISHA AT HYDERABAD. IN THE CITY OF BIRYANI AND NAWABS, SSI GOT ITS NEW ADDRESS AT ROAD 10, BANJARA HILLS, HYDERABAD.



DR AJAY SINGH THAKUR
MBBS, MS, DNB
Arthroscopic and Sports Medicine Surgeon



FAN MOMENT

DR SARTHAK PATNAIK WITH SUDHIR KUMAR CHAUDHARY GREATEST FAN OF CRICKETER SACHIN TENDULKAR.



RENDEZVOUS

SSI FOUNDER, DR SARTHAK PATNAIK, HAD A FRUITFUL MEETING WITH QUINTON DE KOCK, FORMER CAPTAIN OF ALL THREE FORMATS OF SOUTH AFRICAN CRICKET.



FIH WOMENS WORLD CUP 2022

01 > 17 JULY - SPAIN & NETHERLANDS

SPORTS VENTURES TRAVEL, PLAY & EXPERIENCE

THE 2022 FIH HOCKEY WOMEN'S WORLD CUP WILL TAKE PLACE JULY 1-17, 2022 IN SPAIN & NETHERLANDS.

THE COMMON WEALTH GAMES WILL TAKE PLACE FROM 28 JULY AND 8 AUGUST 2022 IN BIRMINGHAM, ENGLAND WILL BE HOST OF THE EVENT FOR THE THIRD TIME. IT HAS BEEN ESTIMATED THAT MORE THAN 5000 ATHLETES AND 72 COMMONWEALTH NATIONS WILL TAKE PART IN THE 2022 COMMONWEALTH GAMES.



BIRMINGHAM 2022



HEART OF THE UK SOUL OF THE COMMONWEALTH

THE 11TH EDITION OF THE WORLD GAMES WILL BE HELD IN BIRMINGHAM, ALABAMA, USA, 7-17 JULY 2022. 3,600 ATHLETES FROM OVER 30 SPORTS AND 100 COUNTRIES WILL TAKE PART IN THE GAMES.



THE WORLD GAMES



2022
BIRMINGHAM, USA



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FEEL THE GLORY

WORLD ATHLETICS CHAMPIONSHIPS OREGON 22

THE 2022 WORLD ATHLETICS CHAMPIONSHIPS, THE EIGHTEENTH EDITION OF THE WORLD ATHLETICS CHAMPIONSHIPS, ARE SCHEDULED TO BE HELD IN 2022 IN EUGENE, OREGON, UNITED STATES FROM JULY 15-24, 2022.

FOR THE FIRST TIME IN ITS HISTORY, THE WORLD POLICE & FIRE GAMES WILL BE CONDUCTED IN NETHERLANDS, FROM FRIDAY 22 JULY THROUGH SUNDAY 31 JULY 2022.

SPORTS EVENTS OF JULY

NO.	DATE	SPORTS	EVENT
1	Jul 1-17	Field Hockey	Women's FIH Hockey World Cup
2	Jul 7-17	Multi-sports	World Games 2022
3	Jul 15-24	Athletics	IAAF World Championships 2022
4	Jul 22- Jul 31	Multi-sports	World Police and Fire Games 2022
5	Jul 28 - Aug 8	Multi-sports	Commonwealth Games



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SPORTS PSYCHOLOGY	SHOULDER CARE
ARTHROSCOPY	KINESIOTAPING
CUPPING	DRY NEEDLING



NEERAJ CHOPRA COMES FIRST AT KUORTANE GAMES 2022

Tokyo golden boy Neeraj Chopra won his first gold medal of the season at a rain-washed Kuortane Games with a single valid throw of 86.69m.



Khelo India Youth Games: Gymnast Sanyukta Kale bags 5 gold

Kale swept all the five gold medals on offer in rhythmic gymnastics to steal the limelight

Tailor's son bagged Jammu and Kashmir's first cycling gold at Khelo India Youth Games

Adil Altaf created history of sorts, winning the first cycling gold medal for Jammu & Kashmir in the Khelo India Youth Games in Panchkula.



India's Anahat Singh wins Asian Junior Squash title in U-15 category

Anahat Singh won the gold medal in the girls Under-15 category at the Asian Juniors Squash Championships in Pattaya.



Borrowing wheels to compete, Ladakh's only woman cyclist wins silver medal in Khelo India Games

Ladakh's Leakzes Angmo was overwhelmed seeing her competitors' cycling equipment at Khelo India Youth Games. She borrowed a set of wheels from another cyclist and sped away to glory.



KIYG: 17 weightlifters make cut for Asian Youth and Junior Championship 2022

Among the 30 weightlifters set to represent India at the Asian Youth and Junior C'Ships 2022 in Tashkent, 17 promising stars have come up from the Khelo India Youth Games 2021.



Asia-Oceania Para Powerlifting C'ships: Ashok shines with 2 gold medals; qualifies for Asian Para Games

India's Ashok booked a berth for the postponed Hangzhou Asian Para Games after claiming two gold and two bronze medals at the ongoing 2022 World Para Powerlifting Asia-Oceania Open Championships.

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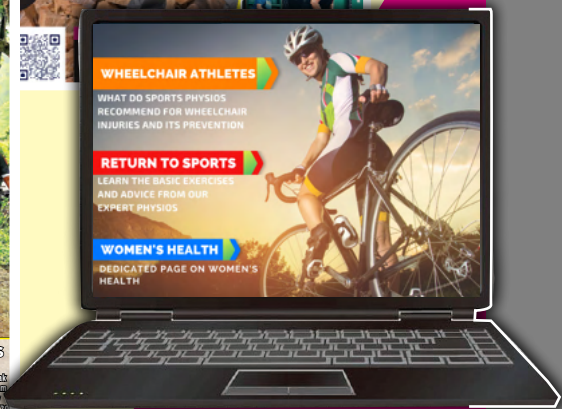
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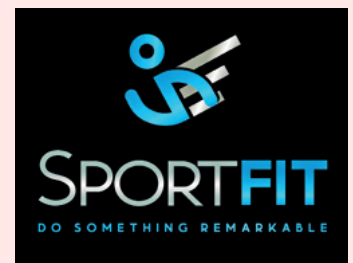


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