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**Knee Pain: Iliotibial Band Friction Syndrome
Dr Scott Burne**

“Did You Know?”

Netball was officially established in England 1901. In Australia and New Zealand it was known as “Women’s Basketball” until 1970.

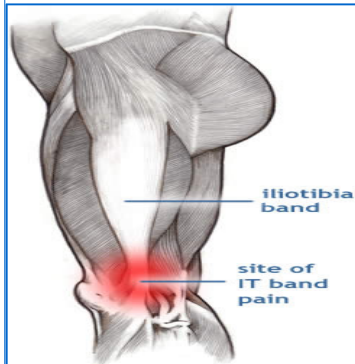
Original games in 1895 were played on grass by women in long skirts, “leg-of mutton” sleeve, bustle backs, nipped waists and button-up shoes. Needless to say this impeded running!

These games were played with a broomstick handles for posts and paper bags for nets!

The commonest cause of lateral (outer side) knee pain in runners is iliotibial band friction syndrome (ITBFS). This inflammatory condition is where the iliotibial band (ITB, a tendon) rubs on a bony prominence at the lateral knee when the joint is 25-30° flexed. This is approximately the flexion when the foot strike the ground.

The result is a collection of inflammatory fluid near the ITB (see MRI image next page). The pain associated with this can be severe. Marathon and other longer distance athletes are especially prone. Downhill run-

ning, or running on a sloped surface (putting one leg lower than the other) also increases the risk.



There will be exquisite tenderness at the lateral aspect of the knee.

Runners are especially prone when there is a rapid

increase in training volume or there are adverse biomechanical factors in the runner.

These factors include excessive pronation (this results in inward rotating of the tibia, tightening the ITB); pelvic imbalance, due to weakness of hip muscles; and an excessively tight ITB.

Treatment of these factors via physiotherapists, podiatrists and massage therapists are usually successful. Occasionally a corticosteroid injection via a Sports Physician is required to settle the pain.



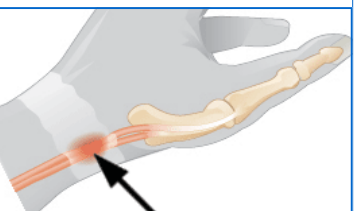
Tendonitis of the Thumb (de Quervain’s Tenosynovitis)

- ◆ Physiotherapists
- ◆ Sports Physicians
- ◆ Podiatrists
- ◆ Massage Therapists
- ◆ Orthopaedic Consultants
- ◆ Dietitians
- ◆ Sports Psychologists
- ◆ Exercise Physiologists
- ◆ General Surgeon

This inflammatory condition of the thumb (running along the edge of the bone) involves 2 tendons (*extensor pollicis brevis* and *abductor pollicis longus*) that act to extend (straighten) and elevate. Almost all hand activities, will involve these tendons.

Tenosynovitis, where the sheath of the tendon becomes inflamed, swollen and painful, can occur in

arthritic conditions (e.g. rheumatoid arthritis). Friction in the tendon sheaths leads to inflammation. In



sports, repetitive actions involving the thumb and wrist, such as racket sports (eg tennis, squash) or row-

ing, may lead to tenosynovitis.

Diagnosis is usually clinical. Ultrasound or MRI can confirm the inflammation.

Treatment initially involves rest, topical anti-inflammatory medication and a splint with physiotherapy. Some cases may need cortisone injection. Surgery is reserved for cases that do not settle with other treatments.

Sports Quiz

1. How many grand slam tennis events has Roger Federer won?
2. In her entire 20 year career, how many matches did Australian squash player, Heather McKay lose?
3. What sport is Australian, Walter Lindrum considered the greatest ever player?
4. Why is the Australian Broadcasting Commission's address PO Box 9994?

“Did You Know?”

Australian statistics data indicated that in 1985 only 3 children in 200 (1.5%) were obese.

By 2004, this figure had increased to a frightening figure of 40 cases in 200 (20%).

This represents an astonishing more than 1300% (or over 13 times) increase in the incidence!

Australia has the highest rate of television food advertising to children in the world. Eighty percent of these ads were for non-

Answers to quiz:

1. 15 Slam titles!
2. 2 matches!
3. English Billiards
4. Chosen after Don Bradman's record batting average (99.94)

Common Investigations in Sports Medicine

Dr Scott Burne

Skilled Sports Medicine relies on careful history-taking, examination and, often, radiology investigations. These latter commonly include x-rays, ultrasound, computed tomography (CT) scanning, magnetic resonance imaging (MRI) and bone scan.

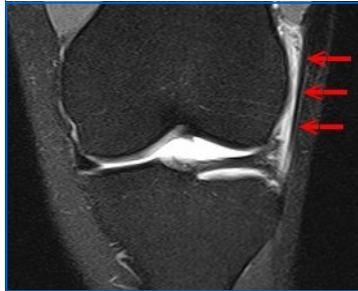
X-rays are used especially for fracture detection; assessment of arthritis; bony spurs and anatomical variations in a population that may predispose to injury. X-rays deliver a small, but detectable, radiation to the patient.

Ultrasound has a role in soft tissue diagnosis. It is user-dependent, meaning that the person performing the test must be experienced and appreciate musculoskeletal conditions. Ultrasound uses sound waves and the relative reflection off tissues of different densities. There is no radiation and considered completely safe.

Ultrasound can detect muscle and tendon tears, although this is usually evident clinically

(e.g. acute Achilles tendon rupture). In addition, MRI is almost always a better option for detection of the extent of rotator cuff (shoulder tendon) tears.

MRI detects water content in the body tissues by use of a powerful magnet. This creates a detailed image of all tissues, especially tendons, ligaments, muscle and the spine. It can detect fractures, but often CT scan is a superior test.



Iliotibial band friction syndrome

MRI can also show cartilage injuries, such as meniscus tears in the knee and labral tears in the shoulder or hip.

MRI does not involve radiation. However, it is a lengthy procedure and quite noisy.

Individuals must lie in a tunnel, and especially when the scan is for the upper body this can be daunting for some patients who are prone to claustrophobia.

CT scan, involving more radiation than x-ray, is extremely useful for fracture detection and tumour identification.

Bone scan is a nuclear medicine test. An injection into the blood stream is taken up by the bone and highlights increased turnover. This means that fractures will be shown at very high sensitivity. It can also detect tumours and infection, but often another test such as CT or MRI is needed to definitively make the diagnosis.

Appropriate ordering of tests can save time and money to the individual and community. It can overcome frustration for the individual in their pursuit in diagnosis and management of their musculoskeletal condition.

NEWS at SSMC

SSMC welcomes orthopaedic surgeons Drs **Jonathan Mulford** and **John Trantalis**.

Dr Mulford, who specialises in knee and wrist surgery, is also highly trained in trauma, and available for internal fixation of all **fracture types**.

Dr Trantalis, who specialises in shoulder and elbow surgery, is trained in advanced arthroscopic tech-

niques for treatment of all injuries.

Dr Corey Cunningham has been away during June with the Australian Rugby team at the IRB U20 World Championships in Japan.

Two of our practitioners in sports physician **Dr Donald Kuah** and physiotherapist **Brent Kirkbride** were privileged to be invited to be part of an expert international panel in Qatar for a seminar on “Use of

Growth Factors in Sports Medicine” which relates specifically to some of the new concepts on *autologous blood injections and blood products in the treatment of soft tissue injuries*.

Both Donald and Brent were asked to present talks on the subject and be involved in the planning of a wider randomised control study and further research.