Foot & Ankle Injuries

For information on all types of injuries visit:
http://www.cssphysio.com.au/forpatients.html

Lisfranc Injury

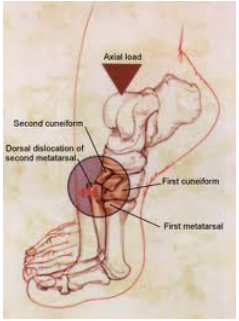
The Lisfranc Complex refers to the ligaments and bones between the midfoot, & the 1st and 2nd long bones of the foot (*metatarsals*). The ligaments that spans this complex are critically important for stability, and for helping to maintain the arches of the foot. An unstable Lisfranc complex can quickly lead to a collapsed arch and to arthritis at these joints.

The region gets its name from French doctor Jacques Lisfranc, surgeon in Napoleon's army. When soldiers developed this injury, they quickly became incapacitated and unable to march. Dr Lisfranc found they were able to continue service if he simply amputated the forefoot. Fortunately, modern methods aren't so drastic, and a well-managed injury should heal very well.

Similar to the ACL ligament of the knee, the Lisfranc ligament has a poor scope for healing when torn, so moderate to severe tears require surgery. These injuries are rare in the general population, at approximately 1 in 50,000. However there is a 4% incidence in NFL, generally due to direct downward force of one player's foot on another.

There are two main mechanisms of injury:

- *Direct trauma* – this is when a blow is received from above. An example is dropping a heavy object on the foot, or having it trodden on by another player in sport. This will result in a rupture of the capsular ligament under the joint.
- *Indirect trauma* – a load is placed longitudinally along the bones of the foot. An example would be a dancer on demi-pointe, and the midfoot collapses forward or twists. This will cause a rupture to the ligament on the top of the foot.



There will be midfoot pain & tenderness, often difficulty walking, and possible swelling. The

diagnosis may be confirmed with weight-bearing XRay. However a bone scan, CT scan or MRI may be ordered if there is any uncertainty.

There are generally three levels of injury severity:

Level I: Mild ligament injury. These are generally stable. There will be a normal XRay & a positive bone scan. Treatment will be a non-weight-bearing cast or boot for 6 weeks and sometimes longer. On removal, orthotics are recommended to support the arch with gradual return to sport.

Stage II: There is elongation or disruption of the Lisfranc ligament, with intact capsule under the foot. This leads to mild instability but no collapse of the longitudinal arch. The recommended treatment is surgery - open reduction & internal fixation, using a screw or wire.

Stage III: There is disruption of the ligament above and the capsule below, with collapse of the longitudinal arch. There is usually an associated fracture. The treatment will be surgery as above.

For information on all types of injuries visit:
http://www.cssphysio.com.au/forpatients.html

Concord Sport & Spine Physiotherapy
202 Concord Road
Concord West, NSW 2138
Sydney, Australia.
Ph (02) 97361092