

THE DOCTORS CORNER

By: Dr. Peter Lewis M.B., B.S., Dip.SportMed.

JARRING THE JOINTS

Today we will look at a type of injury that is commonly seen in martial arts but is rare in most other sports. It is "jarring" of the joints which occurs when we punch or kick out suddenly and there is no resistance. We will look at what it is and what causes it, the typical injuries, how to assess and treat them, and ways to modify training to reduce their incidence.

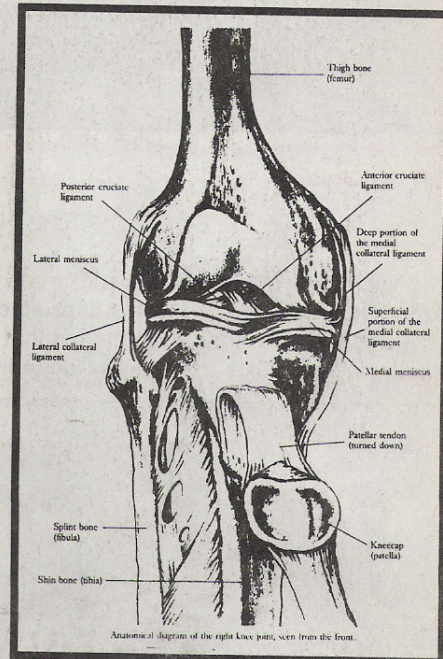
A typical joint jarring injury affects the strong ligaments that run alongside a joint and stop a joint from dislocating. It can occur at almost any joint but in martial artists it most often affects the hips, knees and elbows. It happens because the arm or leg is projected out, away from the body, usually with a reverse punch or a side kick. Occasionally we see it with a front kick. The muscles are supposed to decelerate the limb before the limb reaches full extension. With some types

of training it is encouraged to "snap" the kick or punch out. This is a very descriptive way to describe such techniques. In this situation the snapping affect is actually caused by the ligaments around the joint suddenly becoming taut as they absorb the kinetic energy of the limb. This happens as the joint goes beyond being fully straight or extended, into hyperextension.

Whether damage is actually done will depend on a number of factors.

- *The speed of the movement.
- *The strength of the ligaments.
- *The amount of deceleration provided by the muscles.
- *The degree of hyperextension.

Injury can occur as a result of forceful hyperextension without actual "jarring" as such. These are very painful and can be very serious but they are not really



the same as a jarring injury. They often happen when one is working on a bag, especially when using rotary moves such as roundhouse kicks, crescent kicks or spinning back fists. What happens is that instead of the point of contact being the hand or foot we may land closer to the knee or elbow. The momentum of the limb then forces the joint into severe hyperextension. This can lead to rupture of the ligaments.

Injuries of a jarring nature cause the following ligaments to tear...

AT THE KNEE

The medial and lateral collateral ligaments which run on the inside and outside of the knee.

Only very rarely do we see injury to the anterior cruciate ligament, although sometimes the posterior cruciate is partially torn.



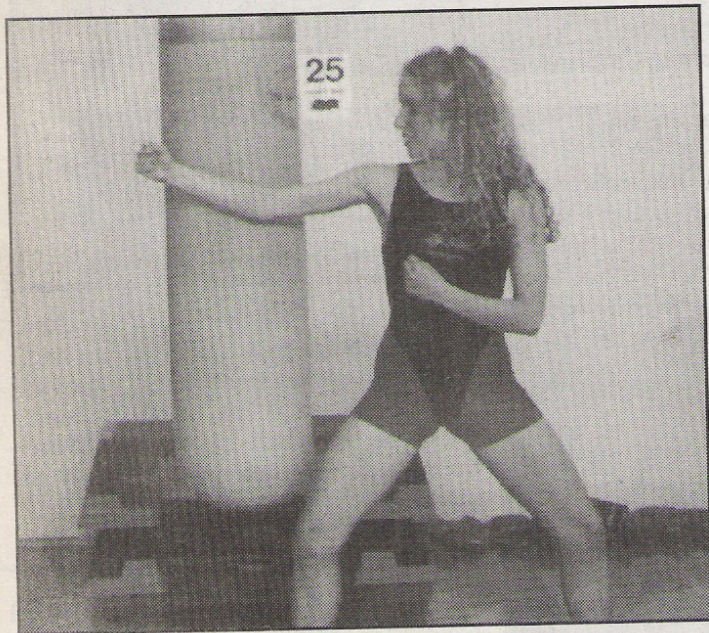
"Snapping out" a side kick can cause strain to the ligaments of both the knee and hip joint. When doing kicks be sure to control the movement with the muscles to avoid the sudden jerking of the joint.



Reverse punches that are not controlled are a major cause of jarring of the elbow joint.

AT THE HIP

The ligaments which are strained in the hip are usually the deep ones that form part of the capsule of the hip joint itself. They are so deep that you often cannot feel a tender spot. Depending on which of the three deep ligaments is torn the



Spinning backfists can be a painful experience if one accidentally contacts with the elbow instead of the fist.

movements which cause pain vary. Sometimes the pain is only reproduced on one specific kick or stretching position. For this reason these injuries are very hard to diagnose. They often take a considerable time to heal, sometimes a year or longer.

AT THE ELBOW

The ligaments on the inside of the elbow are torn more often than the ligament that runs on the outside.

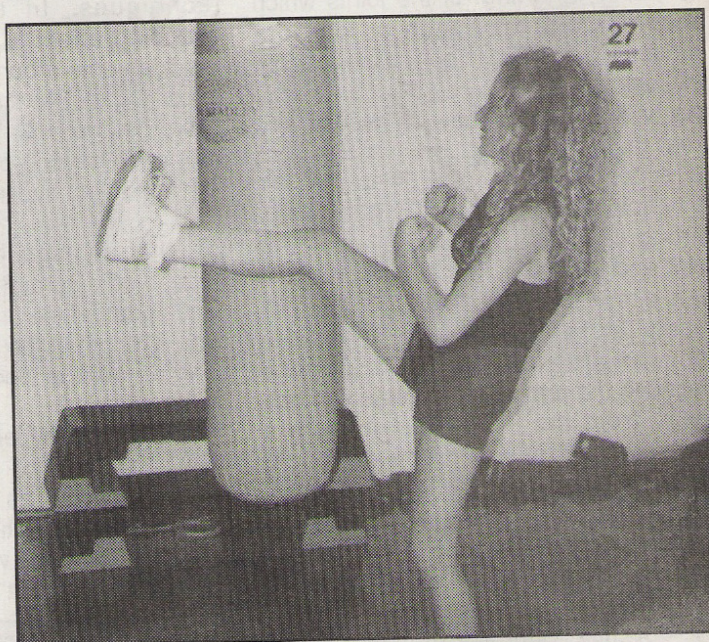
TREATMENT

As with most injuries the basic principles apply. R.I.C.E. should be used as soon as possible. Anti-inflammatory medication is very helpful and again should be used ASAP. Taping or braces can be helpful at the elbow or knee, but the only way to immobilise the hip joint is to tie the patient's knees together which most patients will not tolerate!

Physiotherapy is valuable after the first 48 hours. Very troublesome cases sometimes need to be X-Rayed to be sure that some of the bone hasn't been ripped out when the ligament tore. Many chronic injuries require cortisone injections which often give dramatic improvement.

PREVENTION

The basis of avoiding this type of injury is to not encourage the violent snapping action that causes the jarring. A much better way to develop strength and speed is to use resistance training. This includes using weight wall pulleys and elastic



A crescent or spinning crescent kick that overshoots the bag can cause tearing of the knee ligaments. In this case the momentum of the foot will put strain on the medial ligament of Karen's right knee if her knee hits the bag instead of her foot.

resistance. Tino Ceberano's U.T.P. equipment is an example of this. I also recommend training on bags or pads rather than kicking or punching in the air. The exception to this rule is that I have seen horrible injuries as a result of aiming for a bag that wasn't there! If you miss time the blow you can then end up with one of the worst types of jarring injuries.

Dr. Peter Lewis will be a guest lecturer at the American College of Sports Physicians 1993 National Conference in June. He has been invited to lecture on the subject of martial arts injuries. Along with Mustafa Zahirovic, a martial artist and physiotherapist, Peter has just founded the Flinders St. Sports Medicine Clinic, at the Underworld Fitness Centre, Melbourne. This is the first medical centre in Australia especially for martial artists. Tel 6211022.

BLITZ

