

(a). A direct injury is one that occurs at the point of contact, eg. Being struck by a cricket ball in the ribs whilst batting. An indirect injury is an injury that occurs away from the point of contact. eg. A soccer player attempts to break his fall with his hand and ~~the~~ on impact breaks his collarbone.

(b). Physical preparation plays a vital role in the prevention of sports injury. By increasing aspects of strength, endurance and flexibility, the chances of injury are reduced.

The aspect of strength plays a vital role in the prevention of sports injury.

A strengthening program designed to improve muscular strength strengthens muscles as well as ligaments and cartilage surrounding muscle fibres and tendons, as well as



~~The~~ bones and other joints. Strengthening also serves to provide a core base of stability, such as abdominal and lower back muscles, which can prevent the likelihood of injury through instability, such as an awkward tackle in football.

Endurance or Conditioning also provides a role for reducing the likelihood of injury. Developing a core fitness and efficient oxygen supply to working muscles can prevent the onset of fatigue, which can lead to muscle cramps and dehydration.

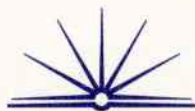
Flexibility provides the working muscles with a degree of mobility, or range of motion (ROM). Increasing the ROM of a joint safeguards ^{against} any muscular tears or strains, as well as sprains, in which

The ligaments surrounding the joint are torn.

These aspects of physical preparation all serve to reduce the likelihood of injury.

(c). There are many policies and procedures that can be followed to assess whether an athlete is ready to return to play after an injury. Both the athlete and the coach, as well as the administrators and the doctor, must reach a consensus whereby the athlete has successfully regained full fitness in order to play.

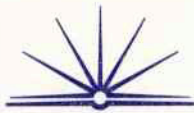
Aspects of strengthening and conditioning must be considered before an athlete is ready to play. The injured area must be pain free and the Range of ~~Motion~~ Motion is at a complete level. Eg. with a damaged anterior cruciate ligament in the knee, a complete concentric and eccentric



contraction should be able to be made by the knee joint without any pain. The injured area must also be strengthened to the level of ~~post~~^{pre}-injury, or if this is impossible, the highest level that is possible ~~being~~ ~~the~~ post-injury.

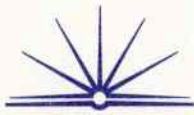
An injury need not affect the training schedule of the athlete. An aspect of this is referred to as "Total Body Fitness". When an injured part is unable to be utilised, other body parts can still be trained with no adverse effect. eg. Upper body weights work for an athlete with an ankle injury, or running programs for an athlete with a damaged Acromioclavicular joint in the shoulder.

Once the decision has been made for the athlete to return from injury, a program of progressive involvement should



be utilised. This includes perhaps playing only a percentage of the game time (such as starting off the bench in football), or even initial entry at a lower grade, such as reserves or a sub-competition. This allows the athlete to gain needed match fitness, as well as to test the injured part in a competition that might not be of a same standard and the chance of reinjury may be lower. This also allows the athlete to gain confidence in the injured part before a return to top-level competition.

There are many pressures placed on the athlete when deciding to return to play, such as money or sponsorships, or representative ambitions, which conspire to hasten the return to play, and therefore increasing the chance of reinjury. The correct policy to



Assure would involve a complete skills and fitness test, designed not only to test average levels of fitness and skill, but also to test the injured part in order to see how it would ~~be~~ the rigours of the activity in which it was involved.