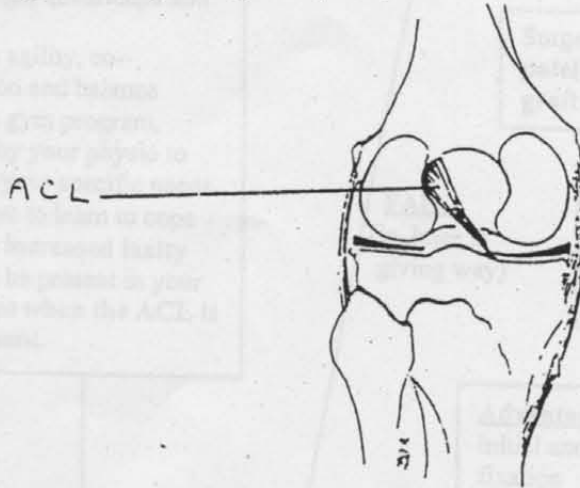


## **ANTERIOR CRUCIATE LIGAMENT INJURY**

### **WHAT IS THE ANTERIOR CRUCIATE LIGAMENT (ACL)?**

The ACL (seen in the picture below) is the most important ligament in your knee joint. It is thick and runs from the front of the tibia (your shin bone) to the back of your femur (thigh bone). This ligament is vital for maintaining a stable knee joint and has many important functions. Specifically, the ACL plays a major role in what is called the "screw home" mechanism. The role of the ACL in this mechanism is to control rotation of your tibia on your femur, in the last 30 degrees of extension, allowing it to fully straighten (lock).



Some other functions of this ligament are to:

- prevent hyper-extension of the knee
- reinforce the ligament running along the inside of your knee (medial collateral ligament)
- controls the forward movement of your tibia.

This ligament is commonly injured (approx. 60 in 100,000 people). Injury to the ACL often occurs when a person is twisting, jumping or decelerating suddenly. Sports where this injury often occurs are rugby, AFL, soccer, netball, skiing and basketball.

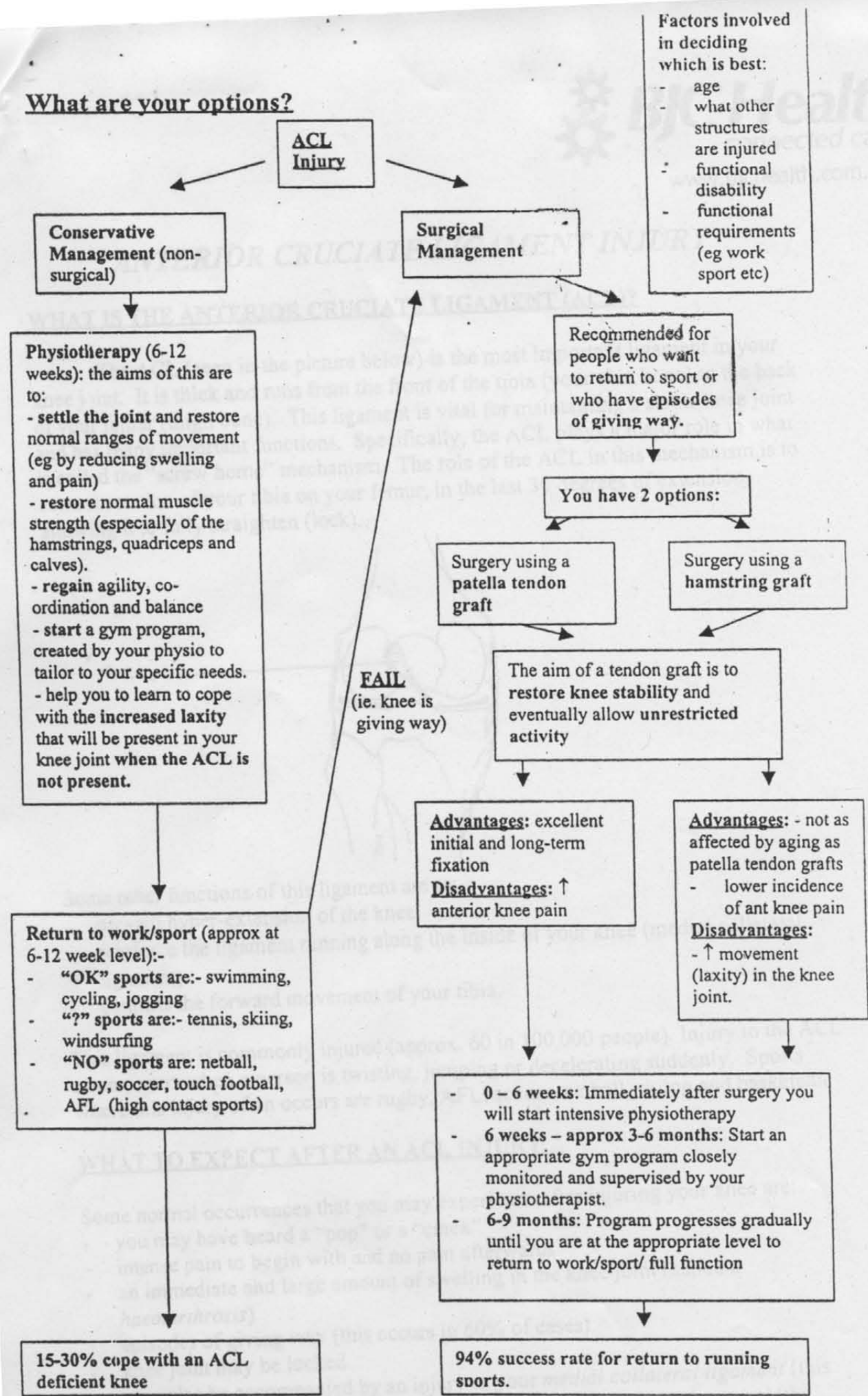
### **WHAT TO EXPECT AFTER AN ACL INJURY...**

Some normal occurrences that you may experience after injuring your knee are:

- you may have heard a "pop" or a "crack"
- intense pain to begin with and no pain afterwards
- an immediate and large amount of swelling in the knee joint (called a *haemarthrosis*)
- episodes of giving way (this occurs in 60% of cases)
- knee joint may be locked
- may also be accompanied by an injury to your *medial collateral ligament* (this runs along the inside of your knee) and your *medial and lateral menisci* (the cartilage in the knee joint).

After your injury has been diagnosed, you have 2 management options... (please turn over)

## What are your options?



**Factors involved in deciding which is best:**

- age
- what other structures are injured
- functional disability
- functional requirements (eg work sport etc)

**Physiotherapy (6-12 weeks):** the aims of this are to:

- settle the joint and restore normal ranges of movement (eg by reducing swelling and pain)
- restore normal muscle strength (especially of the hamstrings, quadriceps and calves).
- regain agility, co-ordination and balance
- start a gym program, created by your physio to tailor to your specific needs.
- help you to learn to cope with the increased laxity that will be present in your knee joint when the ACL is not present.

**Return to work/sport (approx at 6-12 week level):-**

- "OK" sports are:- swimming, cycling, jogging
- "?" sports are:- tennis, skiing, windsurfing
- "NO" sports are: netball, rugby, soccer, touch football, AFL (high contact sports)

15-30% cope with an ACL deficient knee

Recommended for people who want to return to sport or who have episodes of giving way.

You have 2 options:

Surgery using a patella tendon graft

Surgery using a hamstring graft

The aim of a tendon graft is to restore knee stability and eventually allow unrestricted activity

**Advantages:** excellent initial and long-term fixation  
**Disadvantages:** ↑ anterior knee pain

**Advantages:** - not as affected by aging as patella tendon grafts  
- lower incidence of ant knee pain  
**Disadvantages:**  
- ↑ movement (laxity) in the knee joint.

- 0 - 6 weeks: Immediately after surgery you will start intensive physiotherapy
- 6 weeks - approx 3-6 months: Start an appropriate gym program closely monitored and supervised by your physiotherapist.
- 6-9 months: Program progresses gradually until you are at the appropriate level to return to work/sport/ full function

94% success rate for return to running sports.

Remember, YOU must play an active role in your own rehab!