

# Injuries and How You Can Try to Prevent Them

## PHYSICAL INJURIES

The main purpose of fitness training is to strengthen and improve the efficiency of your body to ensure that you can cope with the physical demands of badminton. Exercise, recovery and rest time and the right sort of food and fluid are the main ingredients of a fitness training programme. In addition a proper warm-up and cool-down period (see page 129), good technical skill, proper equipment, clothing and footwear; and safe and suitable playing conditions are all necessary to safeguard you against possible injury.

If any of these things are ignored or neglected you may risk injury to your muscles, tendons, ligaments and bones. These can occur as bruises, pulled and strained muscles, torn tendons and ligaments, fractured and broken bones.

## WHAT ARE MUSCLES, TENDONS AND LIGAMENTS?

**Muscles** are made up of lots of fibres. The function of muscle is to move your bones (as levers) at your joints, e.g. knees and ankles. To do this some muscles contract (shorten) while opposite groups stretch to allow your bones to move. Muscle tissue has a rich supply of blood which is one reason why you usually recover more quickly from muscle injuries than from tendon or ligament injuries.

**Tendon** is the name given to the tissue which connects your muscle to your bone. See Fig 77. Tendons do not receive such a rich supply of blood as muscles and so they usually take longer to heal.

**Ligaments** connect your bones together and ensure that your bones move within a certain range.

They can be narrow (cord-like) or wide (belt-like). Ligaments receive a very limited blood supply and, if injured, take longer to heal than tendons. Players with ligament injuries often have the joint strapped up to prevent any movement while the ligament heals.

**Bones** provide the supporting bony structure of your body.

## WHAT FORMS OF INJURY ARE THERE?

There are three main forms. These are:

**Overuse Injuries** These usually appear with gradual increasing pain over a period of time, e.g. shin splints, backache, tennis elbow, badminton shoulder.

**Traumatic Injuries** These are sudden injuries which are caused by either an external force (a blow or a knock), or an **internal force** (your muscle strength or a joint twisting), e.g. an Achilles tendon tear, a knee cartilage tear, and a ligament tear as your foot twists over. In badminton the cause will more often be an internal force.

**Overload Injuries** These are often a combination of overuse and traumatic injuries. Your muscles, tendons, or ligaments may gradually weaken until suddenly they become damaged.

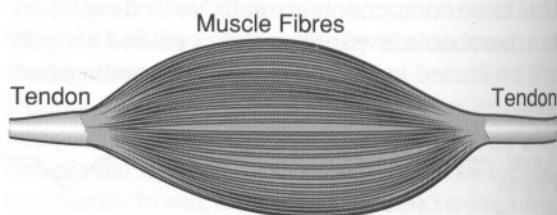


Fig 77

**What can cause injuries in badminton and what can you do to try to prevent them?**

Let's consider each form of injury and identify some causes.

**OVERUSE INJURIES**

**Causes:**

**One-sided play** which may result in an extended racket arm, an enlarged racket shoulder and trunk, a sideways tilt of your spine in the opposite direction to your racket arm.

**Prevention:** Exercise both sides of your body by doing regular stretching exercises for flexibility, body circuit training, weight training, or regular swimming. Make sure that you do a thorough warm-up and cool-down each time you train, practise or play.

**Excessive Repetition** which may result in shoulder and elbow injuries resulting from excessive clearing and smashing practices.

**Prevention:** Reduce the number of repetitions in practice and take frequent rests and/or changes of activity so that your body can adapt to the workload. Rely on your common sense and feelings and stop your game when you begin to feel any pain or it is becoming hard work.

**TRAUMATIC INJURIES**

**Causes:**

Lack of flexibility, inadequate warm-up, lack of strength, poor technical skill, poor footwear, a slippery floor, trying too hard.

**Prevention:** From reading why these happen, it should be obvious what steps you can take to reduce the risk of traumatic injuries.

Make sure that your body can cope with the physical demands of the game, always play in the right clothing and footwear for the conditions, check the floor surface, improve your technical skill and warm up properly.

**OVERLOAD INJURIES**

**Causes:**

- Excessive repetitive actions in practice and in training and ignoring the warning signals that you are becoming too tired.
- Poor technique.
- Not taking sufficient rest breaks. (See page 134 on anaerobic training.)
- Running on hard surfaces with inadequate footwear and/or poor technique which may cause compression injuries such as shin splints, tendon and ligament injuries particularly in the knees, hip joint and lower back.
- Weight training with too heavy a weight.
- Weight training with poor technique. Back injuries often result from this.
- Inappropriate fitness training exercises, e.g. deep knee bounces.
- Using shuttles which are too slow when performing smashes and clears.
- Inadequate diet causing fatigue.
- Inadequate liquid intake causing dehydration and muscle cramps (see page 143).
- Not warming up and cooling down properly.

**Prevention** It is also obvious here that you should be avoiding all the things that may cause overload injuries. Make sure you:

- Warm up and cool down properly.
- Improve your technical skill.
- Vary your practices and training.
- Get adequate rest (recovery) breaks and take in sufficient food and drink during training and practice.
- Make sure that your training programme, e.g. strength training, is suitable for you.

**YOUR MENTAL ATTITUDE AS A POSSIBLE UNDERLYING CAUSE OF INJURY**

Your mental attitude can cause you to tense up, lose concentration, try too hard, not try hard enough, give up easily, not prepare properly and use sloppy techniques.

**Causes:**

- Pressure from the expectations of others.



- Feeling cheated.
- Your ambitions.
- Personal, social and financial problems.
- Ignorance.

#### Prevention:

- Set realistic goals, be honest about your performance and learn to play for yourself and not others.
- Develop tactics for dealing with cheats and decisions that go against you.
- Adopt a sound personal philosophy about winning and losing in competitive sport.
- Learn and practise the actor's golden rule, 'The show must go on', and when it does learn to perform up to standard whatever your personal problems. If you cannot perform under pressure then you should seriously consider whether you ought to play until you have resolved your problems.
- Study the game and all aspects of your craft and

become knowledgeable.

#### HOW SHALL I TREAT AN INJURY?

You should always refer to a qualified medical practitioner if you ever suffer from any type of sports injury.

Here is some general advice which you should follow if you do suffer an injury.

- Do not continue to train or play if you do have an injury.
- Visit your doctor or a physiotherapist as quickly as possible to find out what sort of injury you have and what treatment you need.
- Follow their advice. If you are not happy with it do not ignore it but obtain a second qualified medical opinion.
- Buy a book on sports injuries. There are several good ones available which I have listed on page 192.
- Do not try to short-cut the healing process by starting practice and training too soon.