

like muscle stiffness, corns and callosities. Female middle distance runners had no injuries in the muscles but ligamentous injuries of the knee and ankle with tendon involvement of both tibialis anterior and Achilles tendons.

Female long distance runners were the second largest group in their sex with more ligamentous injuries of the foot and ankle and miscellaneous injuries like shin-splints, metatarsalgia and muscle stiffness. No injury of tendon, bursae, cartilage and bone was seen. Male counterparts had the predominance of cartilage injuries, chondromalacia patellae, early osteoarthritic changes and cystic meniscus and knee injuries of the collateral ligaments and patellofemoral pain.

Male hurdlers had mainly strains of the lower limb muscles and ligamentous injuries of the interspinous and sacro-iliac joints. Female hurdlers had skin injuries in the form of contusions caused at the time of crossing the hurdles and ligament injuries of the ankle and foot. No muscular strains were seen.

Male jumpers had more incidence of skin injuries in the form of bruises and contusions with Achilles peritendonitis and extensor tenosynovitis of the foot. Lower limb injuries of the muscles and ligaments were again frequent. Female jumpers suffered from ankle sprains mainly, and fractures of the metatarsals, as well as the usual hamstring muscle strains.

Decathletes showed a higher incidence of upper limb injuries involving biceps muscles and ligaments of acromioclavicular, elbow and wrist joints. Among the heptathletes were two cases of stress fracture of fibula, and one case of prolapse of an intervertebral disc, apart from the ligament sprains of the ankle, foot and wrist.

Walkers who were the lone trainees contributed the minimum incidence of 2% with involvement of the knee, the Achilles tendon and a problem with neuralgia. There was also one case of thrombophlebitis of the leg.

In a series of eight camps of 322 days of training with an average of 2 sessions per day by each athlete. In the total duration of 644 training sessions 317 injuries were seen. This indicates that approximately one injury was being sustained every day amongst the track and field athletes. The number of injuries did not appear so high when observed from the number of training sessions.

There were 140 men and women in the first three camps and this subsequently was reduced to 120 in the fourth camp, to 80 in the fifth, sixth and seventh camps and finally 65 were selected in the last camp. Thus, on average, 108 athletes were

in training in the total duration of the camps and each athlete sustained approximately 3 injuries in the 14 months of training prior to the competition. The incidence might be considered a little high but minor injuries, for which patients normally do not report, were taken into consideration. Muscular and ligamentous injuries which were the largest among all the injuries, usually take 3 to 4 weeks for complete recovery. This proves that on average each athlete lost approximately 50 days of training while convalescing from some injury or other which is highly significant in the proper preparation of the athlete for an important international competition.

Special emphasis should be laid on the prevention of the lower limb injuries and especially of the muscle and ligamentous injuries of the knee and ankle.

Proper documentation helps us to know the area where maximum attention should be given by the coaches and physicians while formulating training schedules.

Injuries prior to the competition need a vigorous physiotherapeutic service to shorten the convalescence period since every training session is important. Appropriate precautionary measures in the form of proper supervision on warming up and gradual building up of the training load depending upon the surface used for training should be considered.

During the convalescence period, cardiorespiratory fitness must be maintained by means of exercise other than that of the injured limb, to limit the effects of detraining.

Early treatment should be taken to prevent the injury from taking a chronic form which shall affect the physical work capacity of the athletes and hinder the performance in a major competition.

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## CORRESPONDENCE

The Manor House,  
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To the Editor:

Dear Sir,

### STRESS FRACTURE OF A RIB

In view of the increasing popularity of windsurfing I wish to report a stress fracture of my left first rib and the diagnostic problem caused by that event. I am 16 years old, 5' 7½" tall and weigh 9½ stone. I am fairly fit as I actively pursue many sports.

I had been windsurfing regularly throughout the year when in early September whilst windsurfing on an inland gravel pit

in a force five wind with a six square metre sail and a short board, I felt a sudden sharp and agonising pain in my upper left chest which forced me to stop windsurfing.

Soon after I developed a cough with pain on deep breathing and coughing. A week later I started to play hockey for the Town Men's Hockey Club. During a match, two and a half weeks after the windsurfing incident, my right shoulder collided with another player causing the same intense pain to return to my left upper chest.

Two days later I was examined by my Family Doctor who diagnosed pleurisy on hearing a loud "rub". To be certain he requested an X-ray of my chest and the Consultant Radiologist diagnosed from that X-ray a stress fracture of my left first rib, confirmed by a further X-ray a week later.

Yours faithfully,

John PEREIRA