



# The Young Athlete



## Paediatric Physiotherapy - Injury Management

IN 2012 in Australia 60% of Children aged 5-14 years participated in at least one sport outside of school hours, soccer the favourite amongst the boys and dancing the favourite amongst the girls. Injury prevalence in the sporting population is high and as organised sports participation in children increase, the incidence of injury in the young athlete is also increasing.

Sports Epidemiologist Caroline French, reports up to 50% of sports injuries are preventable.

Training and sports participation during and post periods of rapid growth can lead to the presentation of apophyseal conditions such as Sever's Disease, Osgood-Schlatters Disease and Sinding-Larsen-Johansson Syndrome. Injuries such as these are common in the age group of 10-15 years and the management is different to tendon pathologies in the adult.

During the adolescent stage of development, injury prevalence is at its highest, rapid periods of growth often accompanies periods of relative poor co-ordination which may account for some of these injuries.

To prevent lower limb injuries in youth sports there is evidence to support a structured warm-up program incorporating running, cutting, landing techniques as well as neuromuscular control, balance and strength.

### Little's Developmental

These classes are designed to help infants in their motor development. Parents and their child attend the group session (maximum of 4 children per group), together learning and experiencing new skills. Children may have other diagnoses but are requiring some encouragement to improve certain motor tasks.

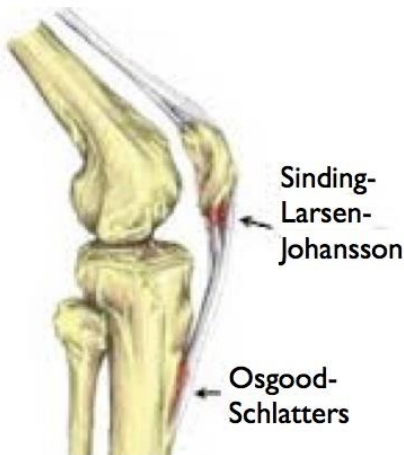
### Kids Classes



### Tinies Co-ordination and strength

Kiddies struggling with more complex motor tasks like, jumping, hopping and balancing and their parents are involved in this fun action packed skills class. The classes focus on core and global strength and functional skills that are age and developmentally appropriate, the combination of strength and skills practice is shown to provide optimal outcomes for these children.

# PREVENTION & MANAGEMENT



The Knee: Potential apophyseal injuries to the knee.



Clinical experience and evidence shows us that children and adolescents involved in sports who are hypermobile or have poor strength, balance and co-ordination are more susceptible to injury and inappropriate loading and training of the youth can lead to over-use injuries and burn out.

Educating trainers, coaches, parents and children is an important part of prevention and injury management as well as youth burn out.

When injury does occur we need to take their age and skeletal maturity into consideration as well as their musculoskeletal condition; are they hypermobile or low tone.

Providing children with appropriate environmental opportunities for strength, movement, balance and co-ordination is an important part of growing up and when these components are lacking we need to provide these in an appropriate exercise program.

Exercises for children differ depending on their age and whilst push ups for a 3 year old are not appropriate, climbing

through tunnels and pushing a ball along the ground with your nose are great for upper body strengthening. For the older children we need to be specific with our exercise prescription to target their specific sport such as, gymnastics or soccer. In the adolescent population we have found that exercise coherence is better in a group environment, this also allows for block therapy with clear functional goals and a timeframe of which to achieve them in.

Targeting specific strength deficits and motor recruitment patterns in adolescent athletes with injuries is important in many over load and over-use injuries.

In adolescents, with the use of Real Time Ultrasound, we can ensure the Transverse Abdominus, pelvic floor and diaphragmatic muscles are working efficiently. Building on this we can then strengthen the pelvic girdle, target specific lower limb biomechanics and build a specific exercise program to return to full activity and/or sport involvement.

## JUNIOR PILATES

Our adolescent classes focus on initially, the activation and motor control of the deep core and postural muscles, then focus on strength and endurance of these as they move into functional and activity specific postures.

We rebuild the appropriate motor recruitment patterns and aim to keep children as active in their activities or sport as possible during this process.

