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Limb Pain Syndromes

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8. Patellofemoral pain - knee pain

8.1 What is it?

Patellofemoral pain is the most common paediatric Overuse Syndrome. Disorders of this group result from repetitive motion or sustained exercise-related injury to a particular part of the body, in particular the joints and tendons. These disorders are much more common in adults (tennis or golf elbow, carpal tunnel syndrome, etc.) than in children. Patellofemoral pain refers to the development of anterior knee pain with activities that place additional load over the patellofemoral joint (the joint formed by the knee cap (patella) and the lower part of the thigh bone or femur).
When the knee pain is accompanied by changes in the inner surface tissue (cartilage) of the patella, the medical term "chondromalacia of the patella" or "chondromalacia patellae" is used.
There are many synonyms for patellofemoral pain: patellofemoral syndrome, anterior knee pain, chondromalacia of patella, chondromalacia patellae.

8.2 How common is it?

It is very uncommon in children up to 8 years, becoming progressively more common in adolescents. Patellofemoral pain is more common in girls. It can also be more common in children with significant angulation of the knees such as knock-knees (genu valgum) or bow legs (genu varum), as well as in those with diseases of the patella due to misalignment and instability.

8.3 What are the main symptoms?

The characteristic symptoms are anterior knee pain that worsens with activities such as running, climbing up or down stairs, squatting or jumping. Pain is also worsened by a prolonged sitting position with the knee bent.

8.4 How is it diagnosed?

Patellofemoral pain in healthy children is a clinical diagnosis (lab test or imaging studies are not necessary). Pain may be reproduced by compression of the knee cap or by restraining the upward movement of the patella when the thigh muscle (quadriceps) is contracted.

8.5 How can we treat it?

In most children with no associated diseases (such as angulation disorders of the knees or patellar instability), patellofemoral pain is a benign condition that resolves by itself. If the pain interferes with sports or with daily activities, initiation of a programme of quadriceps strengthening may be of help. Application of cold packs may relieve pain after exercise.

8.6 What about everyday life?

Children should lead a normal life. Their level of physical activity should be adjusted to keep them pain-free. Very active children may use a knee sleeve with a patellar strap.