

## Orthopedic Problems in Adolescents

Physical health problems encountered during adolescence can affect the development of the body, if not treated. There are few anatomic regions, such as spine, knee and ankle, in adolescents which can get orthopedic problems such as Osgood-Schlatter disease, and Slipped Capital Femoral Epiphysis.

Osgood-Schlatter disease is caused due to injury or overuse of the knee which causes swelling and pain in the area below the knee, above the shin bone. The patellar tendon and the soft tissues surrounding it gets inflamed, because of the constant pulling of the area where the tendon joins the below knee. Usually, adolescents who participate in sports actively and are athletic, such as football, basketball, soccer, ballet and gymnastics, tend to get the Osgood-Schlatter disease. Boys of age eleven to fifteen and girls of age eight to thirteen are at greater risk. The reason why adolescents get this problem is that their bones grow faster when compared to the tendons and muscles in this age and because of this the muscles and tendons stretch and become tight.

The symptoms of Osgood-Schlatter disease are swelling of knee, tenderness below knee area and limping. The doctor will check the medical history of the patient and will conduct physical examination and diagnostic procedures such as taking an X-ray. The physician will decide on the treatment to be done by studying the overall health, age, medical history, tolerance for certain medications and extent of the disease. Treatment will include medications, rest, compression, elevation, neoprene knee sleeve and physical therapy. The main aim will be to control and limit the knee pain by cutting down on the adolescent's physical activities. Usually the Osgood-Schlatter disease gets healed over a period of time and in very rare cases is a surgery required.

Slipped capital femoral epiphysis is a problem which affects the hip joint. The ball or head of the thigh bone, also known as femoral head slips from the thigh bone's neck. Because of this the hip joint becomes stiff and painful. Slipped capital femoral epiphysis is the most common disorder of the hip which can happen in both the hips or one and it is more common in boys when compared to girls. Basically, adolescents of the age ten to eighteen years and who are overweight can be affected by this condition. The condition can arise over a time interval of few weeks or years. The condition, if resulted because of trauma and is also called acute slip and if results after a period of time is called chronic slip. Slipped capital femoral epiphysis is caused because of medications, radiation treatment, thyroid problems, and chemotherapy.

There are three degrees of intensity of slipped capital femoral epiphysis, mild, moderate and severe. In mild slipped capital femoral epiphysis, only one third

of femoral head slips from the thigh bone. In moderate, one third to half slips and in severe, more than half of the femoral head slips. The symptoms of this condition are pain in hip which increases upon movement, pain in thigh, knee & groin and limpness in the leg. When an adolescent walks there will be a clicking sound in the hip and his/her legs will be turned outwards.

Apart from studying the medical history of the patient, the doctor will recommend diagnostic procedures such as bone scans, X-ray, magnetic resonance imaging and blood test. The bone scans will determine the arthritic changes and degenerative changes in the joints, which helps to detect tumors & bone diseases and the cause of pain and inflammation. The X-ray will give the inside picture of the bones, tissues and organs. The magnetic resonance imaging provide detailed image of the structures within the body with the help of large magnets. It is best if slipped capital femoral epiphysis is determined in the early stages, so that the femur bone's head doesn't slip off any further. The adolescent may need to undergo a surgery along with physical therapy.

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