



# Apophysitis of the Pelvis/Hip

## What is Apophysitis of the pelvis/hip?

An apophysis is a growth plate that provides a point for a muscle to attach. Growth plates are made up of cartilage cells, which are softer and more vulnerable to injury than mature bone. When the muscle attached to the apophysis is excessively tight or overworked, it can put increased tension and stress on the apophysis, which results in irritation and inflammation, a condition called apophysitis. There are several apophyses at the hip and pelvis that can be affected. Pelvic/hip apophysitis most commonly affects adolescents between 14 and 18 years of age.

## How does it occur?

Apophysitis is an overuse injury that typically occurs after repetitive activities of the muscles attached to the apophysis. Adolescents with excessively tight hip and thigh muscles are more prone to pelvis/hip apophysitis. The apophyses most commonly affected are the anterior superior iliac spine (ASIS), the anterior inferior iliac spine (AIIS), and the iliac crest. The muscles that attach to these apophyses flex the hip and rotate and twist the pelvis and trunk. Apophysitis of the pelvis/hip usually affects runners, sprinters, dancers, soccer players and ice hockey players.

## What are the symptoms?

You may have dull pain in the groin or the front or side of your hip that worsens with activity. There will be tenderness over the injury site and sometimes some swelling. Apophysitis may be mistaken for a muscle strain.

## How is it diagnosed?

Your doctor will review your symptoms and examine the injured area. Your doctor may order an x-ray to determine whether there has been a fracture to the apophysis.

## How is it treated?

Your doctor will recommend rest from irritating activities until the pain and tenderness go away. Ice should be applied to the painful area for 15-20 minutes as often as every 2-3 hours until the pain goes away. Once you can tolerate daily activities without pain, you can start gently stretching and strengthening the muscles that attach to the affected apophysis (the hip flexors and abdominal muscles). Once your flexibility and strength have improved, you can start sport-specific activities such as jogging and gradually progress to full activity.

## When can I return to my sport or activity?

The goal is to return you to your sport or activity as quickly and safely as possible. If you return to activities too soon or play with pain, the injury may worsen. This could lead to chronic pain and difficulty with sports. Everyone recovers from injury at a different rate. Return to your sport or activity will be determined by how soon your injured area recovers, not by how many days or weeks it has been since the injury occurred. In general, the longer you have symptoms before starting treatment the longer it will take to get better. You may return safely to your sport or activity when each of the following is true (Begin at the top of the list and progress to the bottom):

- You have full range of motion in the injured leg compared to the uninjured leg.
- You have regained normal strength in the injured leg compared to the uninjured leg.
- You are able to jog straight ahead without pain or limping.
- You are able to sprint straight ahead without pain or limping.



- You are able to do 45-degree cuts, first at half-speed, then at full-speed.
- You can do 20-yard figure-of-eight runs.
- You can do 90-degree cuts
- You can do 10-yard figure-of-eight runs.
- You are able to jump on both legs without pain and can hop on the injured leg without pain.

#### **How can apophysitis of the pelvis/hip be prevented?**

- Perform a proper warm-up before starting any activity. Ten minutes of light jogging, cycling, or calisthenics before practice will increase circulation to cold muscles, making them more pliable so that they put less stress and tension on their attachment sites (apophyses).
- Stretch tight muscle groups. The ideal time to stretch is after your workout. Be sure to include all major muscle groups. Hold each stretch for 30 seconds. Don't bounce.
- Do not play through pain. Pain is a sign of injury, stress, or overuse. Rest is required to allow time for the injured area to heal. If pain does not resolve after a couple days of rest, consult your physician. The sooner an injury is identified, the sooner proper treatment can begin. The result is shorter healing time and faster return to sport.