

FEMORAL NECK (HIP) STRESS FRACTURE

DESCRIPTION

Complete or incomplete break in the hip (femoral neck) caused by intense exercise or repetitive pressure on the extremity. The wear and injury in the bone exceeds the bone's ability to heal and repair the injury resulting in a breakdown of the bone, causing a stress or fatigue fracture. It may occur in both hips though only one causes significant symptoms

FREQUENT SIGNS AND SYMPTOMS

- Vague, diffuse pain or ache in the groin, thigh or knee. The pain is worsened by standing on the affected extremity and with exercise
- Limping and limited motion of the hip
- Occasional tenderness about the hip and groin

CAUSES

Repetitive forces greater than the bone can withstand. It usually occurs when there is an imbalance between bone injury and bone remodeling (healing). This usually follows a change in training or performance schedule or equipment and/or intensity. It is also associated with a bone's ability to heal and may be impaired with loss of menstrual period in women. There also is an association with femoroacetabular impingement (FAI)

RISK INCREASES WITH

- Previous stress fracture
- Military recruits, distance runners and triathletes
- Bony abnormalities (including osteoporosis, tumor)
- Metabolic disorders, hormone problems and nutritional deficiencies and disorders (anorexia and/or bulimia)
- Females, especially when there is loss of or irregular menstrual periods
- Poor physical conditioning (strength/flexibility)
- Sudden increase in the duration, intensity or frequency of physical activity.
- Running on hard surfaces
- Poor extremity alignment, including flat feet
- Inadequate footwear with poor shock absorbing capacity
- Poor technique

PREVENTIVE MEASURES

- Appropriate warm-up and stretching before practice or competition.
- Appropriate conditioning including muscular strength, endurance, flexibility as well as cardiovascular fitness
- Proper footwear, including changing shoes after 300 - 500 miles of running
- Proper technique with training and activity
- Gradual increase in activity and training
- Hormonal disorder treatment, including birth control pills for women with menstrual period irregularity
- Correction of metabolic and nutritional disorders.
- Cushioned arch supports for runners with flat feet

EXPECTED OUTCOME

Usually curable with appropriate treatment within 3 - 6 months.

POSSIBLE COMPLICATIONS

- Displacement of the stress fracture (becomes a complete hip fracture that loses proper alignment of the bones)
- Bone death due to interrupted blood supply to the ball of the hip
- Failure to heal (non-union)
- Healing in poor position (mal-union).
- Recurrence of stress fracture.
- Risks of surgery including infection, bleeding, injury to nerves (numbness, weakness, paralysis), need for further surgery, in addition to complications above
- Having another stress fracture, not necessarily at the same site, occurs in 1 of every 10 patients.

GENERAL TREATMENT CONSIDERATIONS

Initial treatment consists of medications and ice to relieve pain, relative rest from the activity that caused the fracture. Because the risk of this stress fracture displacing and becoming a true fracture with many possible complications that may result in disability, crutches and staying off the affected extremity for at least 4 - 8 weeks is often recommended to protect the bone while it heals. Certain patterns of stress fracture (with the fracture on the upper side) have a high risk of becoming a displaced stress fracture, and surgery is often recommended to prevent the fracture from displacing. This usually involves the placement of large screws. Menstrual, nutritional and metabolic abnormalities need to be identified and treated appropriately to help healing and prevent recurrence. After rest, gradual return to activity is recommended. Uncommonly, bone stimulators which provide electrical currents to the bone may be attempted. Physical therapy may be helpful in gradually increasing strength of the muscles and bones after stress fracture and/or maintain cardiovascular fitness while awaiting the bone to heal. Surgery is necessary for certain types of stress fractures of the femoral neck to help prevent or treat the complications.

MEDICATION

- Non-steroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take if surgery planned within 7 days), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician - contact them if any bleeding, stomach upset or an allergic reaction occurs.
- Narcotic pain relievers may be prescribed by your physician for severe pain. Use only as directed.

NOTIFY OUR OFFICE IF:

- Symptoms get worse or do not improve in 2 weeks despite treatment
- The following occur after immobilization or surgery:
 - Swelling above or below the fracture site.
 - Severe, persistent pain
 - Blue or gray skin below the fracture site, especially under the nails or numbness or loss of feeling below the fracture site.
- Report any of the above signs immediately.
- New, unexplained symptoms develop. Drugs used in treatment may produce side-effects.