



QUESTION | WHY DO SOME PATIENTS WITH **FIFTH METATARSAL FRACTURES** NEED SURGERY, WHILE OTHERS ARE ALLOWED TO WEIGHT BEAR IMMEDIATELY? WHAT DISTINGUISHES ONE FIFTH METATARSAL FRACTURE FROM THE OTHER?

ANSWER

Proximal fifth metatarsal fractures are fairly common and often caused by an inversion injury to the ankle. Awareness of this fracture is important when assessing patients with ankle sprains, as the mechanism of injury is similar. There are essentially THREE types of proximal fifth metatarsal fractures, differentiated by those three most important values in real estate—location, location, location.

A **Tuberosity Avulsion Fracture** is the most proximal of the three types. This fracture occurs due to the pull of the peroneus brevis tendon that inserts at the base of the fifth metatarsal. This fracture has been called the “dancers” fracture, as it occurs quite commonly in ballet dancers due to an inversion injury. My preference is to place them in a short walking boot initially, then progress to a hard soled shoe and regular shoes when pain allows. The pain usually resolves by six weeks, although radiographic healing may take longer. Some tuberosity fractures fail to unite (a non-union), resulting in prolonged symptoms that almost always resolve. I allow full activity as tolerated at six weeks, and sports with a rigid ankle brace for up to three months.

The **Jones Fracture** is slightly distal to the avulsion fracture and is far more concerning. In 1902, Sir Robert Jones described these fractures as occurring “3/4 of an inch from the end of the bone”. This area is a vascular watershed area, and as a result there is a relatively high incidence of non-union, especially if allowed to bear weight. Therefore it is recommended that these be treated in a cast non-weight bearing for six weeks. For a quicker recovery, especially in athletes, they can be treated with an intramedullary screw. Weight-bearing is allowed between three and six weeks following screw placement.

The **Diaphyseal Stress Fracture** is slightly different from a Jones fracture. This type of fracture usually occurs over time as a stress related injury. An acute episode may result in a complete fracture. This entity is often seen in athletes involved in cutting sports. A cavovarus foot deformity may be present which predisposes to this problem. Pain can be present for several months, worse with activity. Plain radiographs will show a fracture or non-union. Treatment usually parallels that of a Jones fracture, with an emphasis on surgical treatment due to the chronic nature of the problem.

In conclusion, proximal fifth metatarsal fractures should not be grouped into the same category. Healing potential and treatment varies too greatly depending upon the location. Proper early treatment will improve outcomes and help to avoid complications of delayed care.

- Todd Gothelf | Foot, Ankle, Shoulder Surgeon

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Avulsion Fracture



Jones Fracture



Diaphyseal stress fracture



Intramedullary screw