

## Ankle Fracture



Ankle fractures are unfortunately a common injury that can lead to a lot of disability and pain when the alignment of the ankle joint is not restored anatomically. Even in cases of very well done surgery, some patients can still have some limitations and pain, however, anatomic restoration of the alignment of the bones and stabilizing the ligaments helps to minimize the risk of pain and arthritis. The bones of the ankle consist of the tibia, the fibula and the talus. When referring to an ankle fracture, surgeons are specifically referring to the fibula and tibia that are injured. Ankle fracture result typically from rotational injuries, such as a twisting motion that is combined with a fall. Higher energy injuries can occur as well, such as from motor vehicle accidents, bike accidents, or falls from height. The bones can be broken minimally in some cases such as when just the little bone is broken and there is very little ligament damage and patients are allowed to weight-bear with a boot. Alternatively, multiple bones can be broken with damage to multiple ligaments requiring a complex surgery to reconstruct the ankle.

The mechanism of the injury is important and this can help to understand the amount of energy that caused the fracture and helps to determine to what extent the soft tissue was injured. Pain is a notable finding for ankle fractures as one would expect. Understanding if the ankle had to be reduced (“popped back in place”) helps to understand the extent of the injury and if surgery is required. The skin is examined for any blister or wounds that can occur with ankle fractures and the amount of injury to the skin if present may require delaying the surgery until the skin conditions improve and this can take weeks in some cases. Xrays are required to assess the presence of a fracture and simply because someone can put pressure on their ankle, does not mean that a fracture has not occurred. Additionally imaging such a stress xray to determine the integrity of the ligaments may be ordered to determine if the ankle is stable. If there is a clear injury that needs surgery, a CT scan may be ordered to determine the extent of the bony injury so surgery may be planned appropriately.

In some cases, the fracture is minimally displaced (shifted) and the ligaments are not significantly involved. If this is the case, then the treatment can consist of weight bearing immediately with support such as a CAM boot for a 5-6 weeks with a transition to a brace and therapy. X-Rays are taken to ensure that the alignment is stable and the fracture is healing well. If there is concern about the alignment in followup or if the fracture fails to heal after many months, surgery may still be required. In cases where the alignment of the ankle is not acceptable, multiple bones are involved, or severe ligamentous injury has occurred - surgery may be offered as a superior solution to non-surgical treatment in order to restore the alignment of the ankle and minimize the risk of arthritis. In some rare cases, the overall health or needs of the patient preclude surgery and this is individually discussed and an alternative treatment plan is formulated. Historically, many surgeons focused only on the bones and did not consider reconstructing the ligaments as well. Although, there is no “perfect” method to surgically treat an ankle fracture, at Northwestern, we have researched and published on ankle fractures and patient outcomes and recognize that both restoration of the bony fractures and the ligament injuries is ideal for most patients in achieving the best functional outcomes and minimizing the risk of arthritis. We use modern techniques with anatomic plating and ligament reconstruction including the Tightrope and Internal brace to do our best to restore the anatomic alignment of the ankle and maximize your function.