

Lauge-Hansen Classification of Ankle Injuries

SER I Supination external rotation mechanism. Lateral rotation of the talus pushes the lateral malleolus posteriorly leading to AITFL rupture. No fractures.	
SER II + low anterior, high posterior orientation spiral fracture of the fibula at the level of the plafond	
SER III + posterior malleolar fracture or rupture of the PITFL	
SER IV + rupture of the deltoid ligament or medial malleolus fracture	
SA I Supination Adduction- talus is adducted causing pressure under the medial ankle structures and traction on the lateral ankle. ATFL ± CFL rupture ± transverse fibula fracture at the level of the plafond	

SA II + vertical fracture of the medial malleolus



PER I Pronation external rotation. Talus rotates externally, leading to rupture of the **deltoid** ligament *or* **avulsion of the medial malleolus**



PER II + rupture of the **AITFL** with widening of the tibiofibular space, indicative of rupture of the AITFL with extension into the interosseous membrane. Widening of the medial mortise



PER III + **high fibular fracture**, typically 6 cm above the tibio-talar joint level



PER IV + **PITFL** rupture *or* fracture of the posterior malleolus from extreme external rotation of the talus



PA I Pronation abduction. The talus is abducted, resulting in traction of the medial ankle structures and pressure under the lateral ankle structures. Rupture of the **deltoid** ligament *or* **transverse medial malleolus** fracture (looks like PER I)



PA II + rupture of both **AITFL** and **PITFL** or fracture of the **posterior malleolus**.
Widening of the medial mortise. Look for high fibular fracture.



PA III + high fibular fracture or oblique fibular fracture at the level of the plafond.

