ANKLE & FOOT ORTHOPEDIC EXAMS

HOMAN'S: With the patient supine and knee extended, the examiner dorsiflexes the ankle while squeezing the calf.
(+) calf muscle pain
DDx: deep vein thrombosis, chronic venous insufficiency, muscle spasm

ANTERIOR DRAWER: With the patient seated or supine and the ankle in slight plantarflexion (about 10-20°), the examiner stabilizes the tibia with one hand and pulls the calcaneus/talus forward with the other hand.
(+) excessive forward translation of the talus
DDx: anterior talofibular ligament tear/sprain

POSTERIOR DRAWER: With the patient seated or supine and the ankle in slight plantarflexion (about 10–20°), the examiner stabilizes the tibia with one hand and pushes the calcaneus/talus posteriorly with the other hand.
(+) excessive backward translation of the talus
DDx: posterior talofibular ligament (PTFL) tear/sprain

THOMPSON'S: With the patient lying prone and feet hanging off the table, the examiner squeezes the calf muscle.
(+) absence of plantarflexion at the ankle
DDx: Achilles tendon rupture

MORTON'S: With the patient seated or lying supine, the examiner squeezes the metatarsal heads together by applying lateral compression across the forefoot.
(+) sharp forefoot pain or paresthesia radiating into the toes
DDx: Morton's neuroma, plantar fasciitis

TIBIAL TORSION: With the patient seated and knees flexed to 90 degrees, the examiner holds the thigh and foot, then measures the angle between the axis of the thigh and the axis of the foot.
(+) excessive internal or external rotation of the tibia beyond normal range
DDx: internal or external tibial torsion (congenital or developmental)

TALAR TILT TEST: With the patient seated or lying supine and ankle relaxed, the examiner stabilizes the tibia with one hand and inverts the calcaneus/talus with the other to stress the lateral ligaments.
(+) excessive inversion or eversion movement compared to the opposite side
DDx: Inversion stress → calcaneofibular ligament tear/sprain, eversion stress → deltoid ligament tear/sprain

RIGID SUPPLE FEET TEST: With the patient standing, the examiner observes the medial longitudinal arch, then asks the patient to rise on tiptoes or sit while the examiner rechecks the foot arch while non-weight bearing
(+) arch does not reappear in non-weight bearing or on tiptoes (rigid flatfoot)
(+) arch reappears (supple flatfoot)
DDx: rigid flatfoot from tarsal coalition or congenital deformity, supple flatfoot from ligamentous laxity

DORSIFLEXION TEST: With the patient seated or lying supine, the examiner stabilizes the leg and passively dorsiflexes the ankle with the knee first extended, and then flexed.
(+) limited dorsiflexion that remains the same with knee flexion suggests ankle joint restriction
(+) improvement with knee flexion suggests gastrocnemius tightness.
DDx: gastrocnemius contracture, Achilles tendon tightness, ankle joint restriction

BURGER'S: With the patient supine, the examiner elevates the straight leg to about 45 degrees for ~3 minutes, then lowers it and has the patient sit with their legs dangling over the edge of the table.
(+) blanching upon leg elevation
DDx: lower extremity arterial compromise

LATERAL STABILITY: with the patient seated or lying supine and the ankle slightly plantar-flexed, the examiner stabilizes the tibia with one hand and applies an inversion stress to the calcaneus/talus.
(+) excessive gapping or pain along the lateral ankle
DDx: anterior talofibular ligament tear/sprain, lateral ankle instability

MEDIAL STABILITY: with the patient seated or lying supine and the ankle slightly plantar-flexed, the examiner stabilizes the tibia with one hand and applies an eversion stress to the calcaneus/talus.
(+) excessive gapping or pain along the medial ankle
DDx: deltoid ligament tear/sprain, medial ankle instability

NAVICULAR DROP: With the patient seated and foot flat (but non-weight bearing) the examiner marks the height of the navicular tuberosity from the floor. Then, the patient stands. The new height of the navicular bone is measured and the difference between the seated and standing heights is calculated.
(+) > 10 mm difference in navicular bone height
DDx: plantar fasciitis, achilles tendonitis, excessive pronation, pes planus (flatfoot)