



Low-risk clinical examination

Low-risk clinical exam defined as: isolated pain, tenderness, or both, with or without edema or ecchymosis of the distal fibula below the level of the joint line of the ankle and/or over the adjacent lateral (ie, anterior and posterior talofibular and calcaneofibular) ligaments.

Low risk injuries include: sprain, contusion, lateral talar avulsion fracture, fractures of the distal fibula (nondisplaced SH-1 or SH-2, metaphyseal buckle fracture, epiphyseal avulsion fracture).

In a patient with a low-risk clinical exam, an x-ray is not needed as this suggests a low risk injury that can be safely managed using this algorithm.

Low Risk Ankle Rule has a sensitivity of 100% for detecting clinically significant fractures. Consistent use can decrease unnecessary x-rays by up to 63%.

References

Boutis K, Grootendorst P, Willan A, et al. Effect of the Low Risk Ankle Rule on the frequency of radiography in children with ankle injuries. CMAJ. 2013;185(15):e731-38.

Boutis K, Komar L, Jaramillo D, et al. Sensitivity of a clinical examination to predict need for radiography in children with ankle injuries: a prospective study. Lancet. 2001;358:2118-21.

Boutis K, Willan AR, Babyn P, et al. A randomized, controlled trial of a removable brace versus casting in children with low-risk ankle fractures. Pediatrics. 2007;119:e1256-63.

Boutis K, von Keyserlingk C, Willan A, et al. Cost consequence analysis of implementing the Low Risk Ankle Rule in emergency departments. Annals of Emergency Medicine. 2015;66(5):455-67.