

Foot and Ankle Disorders: A Comprehensive Review of Anatomy, Function, and Common Conditions

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The foot and ankle are intricate structures that are fundamental to human mobility and overall well-being. This comprehensive review provides an in-depth examination of the anatomy, function, and common disorders related to the foot and ankle. Understanding the complexity of these structures, their biomechanics, and the pathophysiology of professionals' knowledge of foot and ankle disorders, promoting optimal patient care and improved outcomes.

Keywords: Anatomy, Biomechanics, Musculoskeletal, Wound, Fractures, Arthritis

Introduction

The foot and ankle are complex structures that play a crucial role in human locomotion. They are composed of numerous bones, ligaments, tendons, and muscles, all working together to provide stability and support. The foot is divided into three main regions: the forefoot, midfoot, and hindfoot. The ankle is formed by the distal ends of the tibia and fibula, which articulate with the talus bone of the foot. The ligaments of the ankle provide stability, while the tendons and muscles allow for movement. The foot and ankle are also subject to various common conditions, such as arthritis, fractures, and soft tissue injuries. Understanding the anatomy and function of these structures is essential for the diagnosis and treatment of these conditions.

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Anatomical Overview

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Biomechanical Considerations

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Common Disorders

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Pathology: Arthritis, Fractures, Soft Tissue Injuries

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Malleolus lateralis (Malleolus lateralis): A bony prominence on the lateral aspect of the ankle, formed by the distal end of the fibula. It articulates with the talar tuberosity of the talus bone.

Falx (Falciform Ligament) and Calcaneus (Calcaneus): The falx is a ligamentous structure that connects the distal tibia to the calcaneus. The calcaneus is the largest tarsal bone and is located at the base of the foot.

Olecranon: The distal end of the ulna, which articulates with the olecranon fossa of the humerus.

Dactylitis

Dactylitis is a condition characterized by inflammation of the soft tissue of the digits, often associated with psoriasis or reactive arthritis. It typically presents as a "sausage digit" appearance. Diagnosis is often confirmed through imaging studies such as X-rays and MRI. Treatment involves anti-inflammatory medications and physical therapy [13-15].

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Acromioclavicular joint: The joint between the distal end of the clavicle and the acromion of the scapula. It is a synovial joint that allows for gliding and rotational movements. Bony changes such as osteophyte formation and joint space narrowing are common in degenerative conditions.

Cervical spondylarthritis: A form of spondyloarthritis that affects the cervical spine. It is characterized by inflammation of the intervertebral discs and the sacroiliac joints. A common feature is the presence of enthesopathy. MRI and X-rays are used for diagnosis. Efficacy of treatment is often assessed using the EULAR response criteria.

Dactylitis calcaneae: A condition characterized by inflammation of the soft tissue of the calcaneus, often associated with psoriasis or reactive arthritis. It typically presents as a "sausage digit" appearance. Diagnosis is often confirmed through imaging studies such as X-rays and MRI. Treatment involves anti-inflammatory medications and physical therapy [13-15].

Tarsal tunnel syndrome: A condition characterized by compression of the medial tarsal tunnel, often associated with diabetes or rheumatoid arthritis. It typically presents as a "sausage digit" appearance. C

14. Singer AJ, Tassiopoulos, Kirsner RS (2018) Evaluation and Management of Lower-Extremity Ulcers. N Engl J Med 378(3): 302-303.

15. Armstrong DG, Boulton AJM, Bus SA (2017) Diabetic Foot Ulcers and Their Recurrence. N Engl J Med 376(24): 2367-2375.