

Digital deformities: General Surg/Conser

Digital/ Toe deformities of the lesser toes

Lesser toe deformities are caused by alterations in normal anatomy that create an imbalance between the intrinsic and extrinsic muscles. They are among the most common toe deformities and cause joint pain and skin lesions due to excessive pressure and friction on socks and the shoe. The deformities are considered a cosmetically unesthetic problem by the patient.

Besides heredity, improper shoe wear, trauma, genetics, inflammatory arthritis, and neuromuscular and metabolic diseases are responsible for the appearance of toe deformities.

Typical deformities include mallet toe, hammer toe, claw toe, curly toe, and crossover toe.

Anomalies of the metatarsophalangeal (MTP) joints include hallux valgus of the first MTP joint and instability of the smaller MTP joints, especially the second toe. Midfoot and hindfoot deformities such as high arch, varus hindfoot, valgus hindfoot with forefoot pronation may also occur. Plantar plate ruptures may also lead to subluxation, and a collateral ligament injury may result in a medial or lateral drift with a potential valgus or varus rotation of the affected digit - this pathology leads to a cross-over deformity.

Nonsurgical management focuses on relieving pressure and correcting deformity with various appliances. If the joints are flexible, conservative therapy with corrective traction taping or corrective padding underneath can be applied. During and after taping therapy, the biomechanical misalignment in the metatarsal area normalizes with the previously shortened foot length and pain reduction occurs.

Surgical management is reserved for patients who fail nonsurgical treatment and in case of rigidity of the affected joint. Options include soft-tissue correction such as tendon transfer, as well as bony procedures like joint resection, fusion or metatarsal shortening, or a combination of techniques.

Hammer toes/ Mallet toes -

are characterized by hyperextension of the Metatarso-phalangeal and distal interphalangeal joints, and hyperflexion in the proximal joint of lesser toes.

Claw toes-

are characterized by hyperextension of the Metatarso-phalangeal joint and hyperflexion in the proximal and distal interphalangeal joints of lesser toes.

Hallux rigidus, Hallux limitus

Due to the narrowing or blockage of the Metatarso-phalangeal joint of the big toe, mobility is painfully restricted in Hallux rigidus. Normal ambulation is not possible, especially due to the restriction of dorsal extension. Hypermobility at other parts of the foot as compensation can be observed.

Moderate range-of-motion exercises to improve mobility and rolling support or podiatric plantar orthoses can be considered as therapy.

Functional hallux limitus can be treated with podiatric plantar orthosis.

In structural hallux limitus, joint mobility is surgically restored.

References:

**Fleischner**, Dr. Gerhard, *Der schmerzende Fuß, Monographie, Ein Kompendium der medizinischen Fußpflege Band II*, Verlag Neuer Merkur München, ISBN 3-921280-745, 1991 (*The aching foot, monograph, A Compendium of Medical Foot Care Volume II*)

**Goransson 1, Miranda, Constant 2, Dustin, Hammertoe**, In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan. 2021 Jul 25. Affiliations expand, PMID: 32644694 Bookshelf ID: NBK559268, Free Books & Documents, Copyright © 2022, StatPearls Publishing LLC.

**Schrier 1, Joost C M, Verheyen, Cees C P M, Louwerens, Jan Willem, Definitions of hammer toe and claw toe: an evaluation of the literature**, Review J Am Podiatr Med Assoc. May-Jun 2009;99(3):194-7. doi: 10.7547/0980194. Affiliations expand, PMID: 19448169 DOI: 10.7547/0980194

**Shirzad 1, Khalid, Kiesau, Carter D, DeOrio, James K, Parekh, Selene G, Lesser toe deformities**, Review J Am Acad Orthop Surg, . 2011 Aug;19(8):505-14. doi: 10.5435/00124635-201108000-00006. Affiliations expand, PMID: 21807918 DOI: 10.5435/00124635-201108000-00006

**Żłobiński 1, Tobiasz, Stolecka-Warzecha 1, Anna, Hartman-Petrycka 1, Magdalena, Błońska-Fajfrowska 1, Barbara, The Impact of Kinesiology Taping on a Greek Foot with a Hammertoe-A Case Report**, Case Reports Healthcare (Basel). 2021 Sep 7;9(9):1178. doi: 10.3390/healthcare9091178. Affiliations expand, PMID: 34574952 PMCID: PMC8466801 DOI: 10.3390/healthcare9091178, Free PMC article

[www.fip.global](http://www.fip.global)

[#IPD2022](#) [#feetmatter](#) [#fipifp](#) [#podiatry](#) [#FootHealthAwarenessMonth](#)  
[#healthcareprofessionals](#) [#Feet](#)