

# Blame your parents for bunion woes

May 20 2013

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A novel study reports that white men and women of European descent inherit common foot disorders, such as bunions (hallux valgus) and lesser toe deformities, including hammer or claw toe. Findings from the Framingham Foot Study—the first to estimate the heritability of foot disorders in humans—appear in *Arthritis Care & Research*, a journal published by Wiley on behalf of the American College of Rheumatology (ACR).

Previous studies show that as many as 60% of older adults have [foot disorders](#) which may limit mobility and reduce their quality of life. In fact, bunions affect 23% of individuals 18 to 65 years of age and 36% of those over 65 years according to a study by Nix et al. While experts suggest that women, older adults and those with a higher body mass index (BMI) are at greater risk for foot disorders, there is little understanding of the genetics involved in their development.

The study, led by *Arthritis Care & Research* Editor-in-Chief, Dr. Marian Hannan from Hebrew SeniorLife and Harvard Medical School in Boston, Mass, included 1,370 participants enrolled in the Framingham Foot Study. Participants had a mean age of 66 years and 57% were female. Foot exams to identify hallux valgus, lesser toe deformities and plantar soft tissue atrophy were conducted between 2002 and 2008. The team estimated [heritability](#) using software that performs genetic analyses of familial data (pedigree structures).

Results show the prevalence of bunions, lesser toe deformities and plantar soft tissue atrophy was 31%, 30% and 28%, respectively. Hallux

valgus and lesser toe deformity, two of the most common structural foot disorders that affect up to half of older adults in the U.S. and Europe, were found to be highly heritable depending on age and sex. The team reports that plantar soft tissue atrophy did not demonstrate significant heritability in the study cohort.

"Our study is the largest investigation of the heritability of common foot disorders in older adults, confirming that bunions and lesser toe deformities are highly inheritable in Caucasian men and women of European descent," concludes Dr. Hannan. "These new findings highlight the importance of furthering our understanding of what causes greater susceptibility to these foot conditions, as knowing more about the pathway may ultimately lead to early prevention or early treatment."

**More information:** [www.blackwellpublishing.com/abstract/doi/10.1111/j.1469-7580.2013.02781.x](http://www.blackwellpublishing.com/abstract/doi/10.1111/j.1469-7580.2013.02781.x)

Provided by Wiley

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