

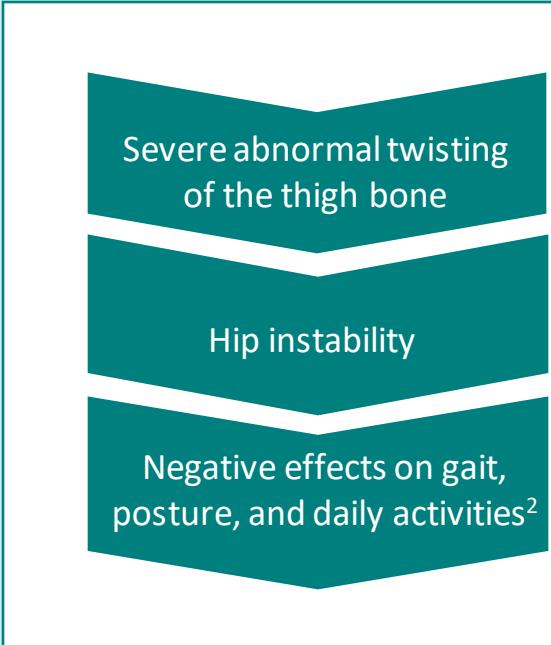
# Abnormal femoral anteversion and the development of hip osteoarthritis

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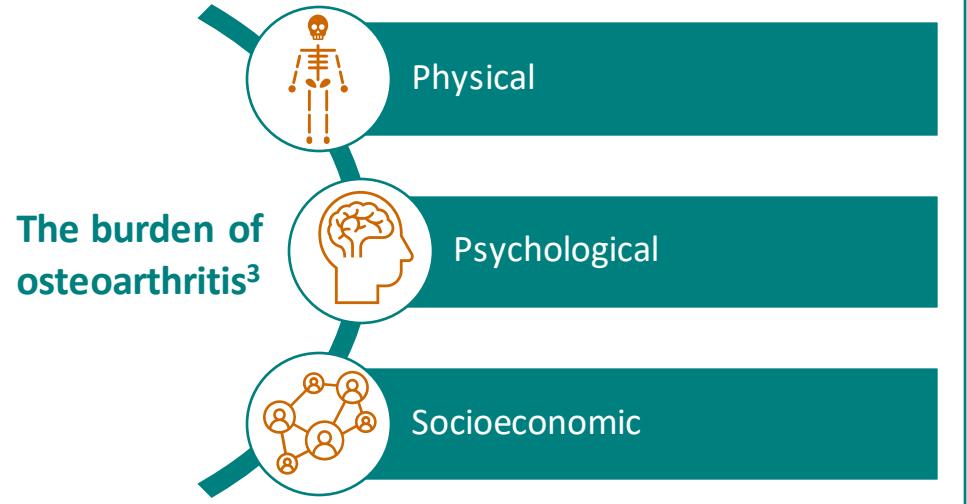
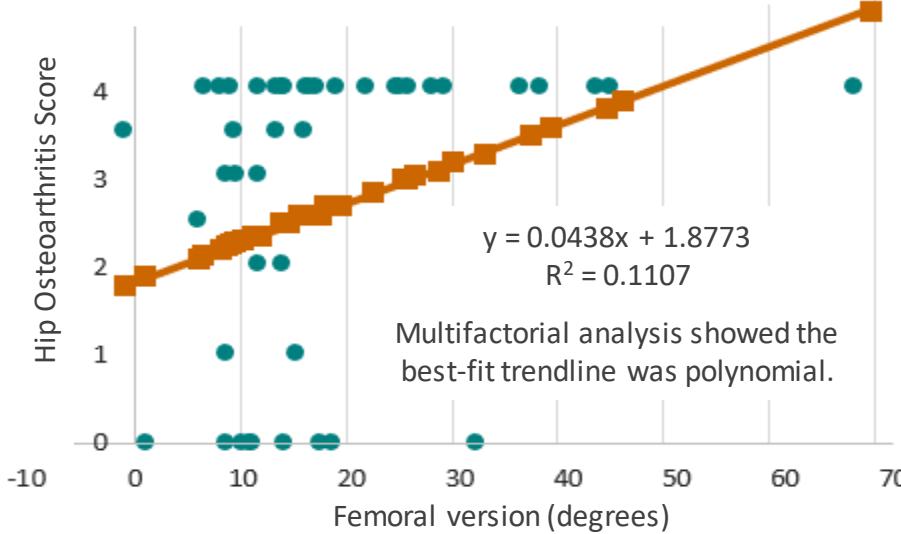
What?  
Femoral anteversion is an inward twisting of the thigh bone.<sup>1</sup>  
It causes a child's knees and feet to turn inward, a condition also known as a "pigeon toe".<sup>1</sup>



Why?  
Most cases correct themselves but, on rare occasions, femoral anteversion can be severe and surgery may be required.<sup>1</sup>  
Abnormal femoral anteversion is a risk factor for the development of hip osteoarthritis.<sup>2</sup>



Linear regression of average femoral version and average Kellgren–Lawrence osteoarthritis scores<sup>2</sup>



Who?  
Femoral anteversion is typically detected when a child begins to walk but may manifest at different ages for different reasons, and it is more common in females.<sup>1</sup>  
Hip and knee osteoarthritis was ranked as the 11th highest contributor to global disability in 2020.<sup>4</sup>

Author Comments

- In most cases, femoral anteversion should not be of concern, but in **severe cases there is potential for substantial burden** and complications.
- The results of the meta-analysis are independent of the presence of hip dysplasia or previous arthroplasty.<sup>2</sup>
- The message in the literature was inconsistent and there was a consensus that additional quality research is needed.

References  
1. <https://www.hopkinsmedicine.org/health/conditions-and-diseases/femoral-anteversion>  
2. Parker, E. A., et al. (2021). Abnormal Femoral Anteversion Is Associated With the Development of Hip Osteoarthritis: A Systematic Review and Meta-Analysis. *Arthroscopy, sports medicine, and rehabilitation*, 3(6), e2047–e2058. <https://doi.org/10.1016/j.asmr.2021.07.029>  
3. Litwic, A., et al. (2013). Epidemiology and burden of osteoarthritis. *British medical bulletin*, 105, 185–199. <https://doi.org/10.1093/bmb/lds038>  
4. Cross, M., et al. (2014). The global burden of hip and knee osteoarthritis: estimates from the global burden of disease 2010 study. *Annals of the rheumatic diseases*, 73(7), 1323–1330. <https://doi.org/10.1136/annrheumdis-2013-204763>