

Author's Accepted Manuscript

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PII: S0021-9290(15)00219-5
DOI: <http://dx.doi.org/10.1016/j.jbiomech.2015.04.003>
Reference: BM7120

To appear in: *Journal of Biomechanics*

Received date: 15 July 2014
Revised date: 5 March 2015
Accepted date: 3 April 2015

Cite this article as: Hyun Soo Im, Oren Goltzer and Frances Sheehan, The effective quadriceps and patellar tendon moment arms Relative to the Tibiofemoral Finite Helical Axis, *Journal of Biomechanics*, <http://dx.doi.org/10.1016/j.jbiomech.2015.04.003>

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The Effective Quadriceps and Patellar Tendon Moment Arms Relative to the Tibiofemoral Finite Helical Axis

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Submitted to: Journal of Biomechanics (BM-D-14-00704) as a revised Original Research Manuscript
containing 3353 words with 5 Figures and 2 Tables

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Abstract

The moment arm is a crucial parameter for understanding musculoskeletal dynamics as it defines how linear muscle force is transformed into a moment. Yet, for the quadriceps tendon this parameter cannot be directly calculated, as the patella creates a dynamic fulcrum. Thus, the effective quadriceps moment arm (EQma) was developed to define the quadriceps force to tibial moment relationship. *In vivo* data in regards to the EQma are lacking and the critical question of how patellofemoral kinematics may influence the EQma remains unresolved. Therefore, the

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