

Study results may help patients after ACL surgery

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A new study provides critical information on how osteoarthritis may arise after anterior cruciate ligament (ACL) injury. For the study, 30 athletes underwent gait analysis 6 months after ACL reconstruction.

It was found that the knee adduction moment (generated by the combination of the ground reaction force that passes medial to the center of the knee joint, and the perpendicular distance of this force from the center of the joint) has a large influence on joint contact forces after surgery.

This may provide a critical clue to understanding the mechanical pathway of post-traumatic osteoarthritis after ACL injury. Additional research is needed to identify other driving factors of joint loading in ACL-injured limbs and to help develop new therapies to prevent post-traumatic osteoarthritis.

"Not only does this work demonstrate the important role of aberrant joint mechanics in post-traumatic osteoarthritis development, but it also indicates that its development is potentially preventable and not inevitable," said Dr. Elizabeth Wellsandt, lead author of the *Journal of Orthopaedic Research study*, which was supported by the National Institute of Arthritis and Musculoskeletal and Skin Diseases and by the National Institutes of Health.

More information: Elizabeth Wellsandt et al, Predictors of knee joint loading after anterior cruciate ligament reconstruction, *Journal of Orthopaedic Research* (2016). [DOI: 10.1002/jor.23408](https://doi.org/10.1002/jor.23408)

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