

Title: External Tibia Torsion and Passive Muscle Stiffness of Quadriceps as Two Important Contributors of Joint Loading during Walking in People with Knee Osteoarthritis

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# The Hong Kong Polytechnic University

## Department of Rehabilitation Sciences

### Research Project Informed Consent Form

Project title: **The effect of altered muscle stiffness and tibia torsion on joint loading in people with knee osteoarthritis**

Investigator(s): Name, highest academic degree, and position of all investigators including student(s) of this project must be provided.

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### Project information:

The overall aim of this project is to determine the role of passive muscle mechanical properties and tibial torsion on knee loading during walking.

You will have 3 assessments.

- (1) You will be positioned in supine lying. Your knee will be passively move from 0° to maximal flexion for 6 times. During each movement, an ultrasound transducer will be used to estimate the stiffness of the 3 superficial heads of the thigh muscle.
- (2) You will be required to walk along a 8-meter walkway for 10 times. Before the walk, 16 reflective balls will be positioned on your lower legs. Your walking pattern will be captured by 8 cameras.
- (3) You will be in standing position while perpendicular biplanar radiographs will be conducted.

The evaluation will be conducted at the Duchess of Kent Children Hospital. The total time will be about 1.5 hours

The evaluation will not cause any pain, tiredness nor radiation on your body. The findings from this project enable better understandings on increased joint loading in subjects with knee osteoarthritis. New strategies can be proposed for reducing joint loading on these individuals.

### Consent:

I, \_\_\_\_\_, have been explained the details of this study. I voluntarily consent to participate in this study. I understand that I can withdraw from this study at any time without giving reasons, and my withdrawal will not lead to any punishment or prejudice against me. I am aware of any potential risk in joining this study. I also understand that my personal information will not be disclosed to people who are not related

to this study and my name or photograph will not appear on any publications resulted from this study.

I can contact the chief investigator, Dr Amy Fu at telephone 27666726 for any questions about this study. If I have complaints related to the investigator(s), I can contact Ms Vangie Chung, Secretary of the Departmental Research Committee, at 2766 4329. I know I will be given a signed copy of this consent form.

Signature (subject):

Date:

Signature (witness):

Date: