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Automated event detection algorithm for two squatting protocols

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Highlights

- Knee and center of mass velocities can be used for identifying squat events.
- Automatic squat event detection using this criterion highly successful.
- Criterion performed equally well applied to controls and a hip pathological group.
- Manual identification of events was highly reliable between reviewers.

Introduction

Squatting biomechanics assessed using motion analysis relies on the identification of specific events: start of descent, transition between descent/ascent and end of ascent. Automated identification reduces the time needed to process trials while allowing consistency across studies. The purpose of this study was to develop criteria for the identification of events and apply them to two squatting protocols in pathological patient and typically developing (TD) groups.

Methods

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