Accepted Manuscript

Non-Linear Changes Of Lower Extremity Kinetics Prior To Gait Transition

Shuqi Zhang, Jiaohao Pan, Li Li

PII: S0021-9290(18)30453-6

DOI: https://doi.org/10.1016/j.jbiomech.2018.06.022

Reference: BM 8760

To appear in: Journal of Biomechanics

Received Date: 21 November 2017

Revised Date: 12 May 2018 Accepted Date: 19 June 2018



Please cite this article as: S. Zhang, J. Pan, L. Li, Non-Linear Changes Of Lower Extremity Kinetics Prior To Gait Transition, *Journal of Biomechanics* (2018), doi: https://doi.org/10.1016/j.jbiomech.2018.06.022

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

NON-LINEAR CHANGES OF LOWER EXTREMITY KINETICS PRIOR TO GAIT

TRANSITION

Shuqi Zhang¹, Jiaohao Pan², Li Li^{2,3}

¹Northern Illinois University, DeKalb, Illinois, USA

²Shanghai University of Sport, Shanghai, China

³Georgia Southern University, Statesboro, Georgia, USA

Keywords: Walk-to-run, gait transition, dynamics, kinetic, non-linear

Word count 3650

Corresponding author:

Li Li, Ph.D.

- 1. Key Laboratory of Exercise and Health Sciences of Ministry of Education, Shanghai University of Sport, Shanghai 200438, China
- 2. Department of Health Sceinces and Kinesiology, Georgia Southern University Statesboro, GA 30460, USA

Tel.: 1-912-478-0200

Email: lili@georgiasouthern.edu

Abstract

Introduction: The purpose of this study was to examine the changes of lower extremity kinetics during walk-to-run (WR) transition and if the changes would follow a non-linear trend within the five strides before WR transition using a constant acceleration protocol. Methods: Fourteen participants performed gait transition on the instrumented treadmill at a constant acceleration. Peak, time to peak, and movement and power of hip, knee and ankle joints were recorded and analyzed in sagittal plane for five strides before gait transition. Three Two-way MANOVA were employed to examine the differences of kinetic

Download English Version:

https://daneshyari.com/en/article/7235574

Download Persian Version:

https://daneshyari.com/article/7235574

<u>Daneshyari.com</u>