Title: A narrative review of texting as a visually-dependent cognitive-motor secondary task during locomotion

Author: T. Krasovsky P.L. Weiss R. Kizony

PII: S0966-6362(16)30715-9
DOI: http://dx.doi.org/doi:10.1016/j.gaitpost.2016.12.027
Reference: GAIPOS 5276

To appear in: *Gait & Posture*

Received date: 12-7-2016
Revised date: 12-12-2016
Accepted date: 20-12-2016

Please cite this article as: Krasovsky T, Weiss PL, Kizony R.A narrative review of texting as a visually-dependent cognitive-motor secondary task during locomotion.*Gait and Posture* http://dx.doi.org/10.1016/j.gaitpost.2016.12.027

A narrative review of texting as a visually-dependent cognitive-motor secondary task during locomotion

T. Krasovsky[1,2], P.L. Weiss[1], R. Kizony[1,3]

[1]Department of Occupational Therapy, University of Haifa, Haifa, Israel

[2]Pediatric Rehabilitation Department, Sheba Medical Center, Tel Hashomer, Israel

[3]Center of Advanced Technologies in Rehabilitation, Sheba Medical Center, Tel Hashomer, Israel

Corresponding author: Dr. Tal Krasovsky, krasovskytal@gmail.com

Highlights

- Texting-while-walking (TeWW) causes decrements in both tasks' performance
- Texting costs on gait most likely result from visual and fine motor demands
- Texting performance measures show poor reliability which depends on users' skill
- TeWW performance may differentiate between populations (e.g., young vs. older)
- Research is needed to evaluate the predictive validity of TeWW to fall risk

Abstract

Typing while walking is an example of people's ability to interact with technology while engaged in real life activities. Indeed, an increasing number of studies have investigated the typing of text messages (texting) as a dual task during locomotion. The objective of this review is to (1) describe the task requirements of texting-while-walking, (2) evaluate the measurement and psychometric properties of texting as a dual task, and (3) formulate