Accepted Manuscript

Title: Postural control in blind individuals: A systematic

review

Authors: Rodolfo Borges Parreira, Luanda André Collange

Grecco, Claudia Santos Oliveira

PII: S0966-6362(17)30231-X

DOI: http://dx.doi.org/doi:10.1016/j.gaitpost.2017.06.008

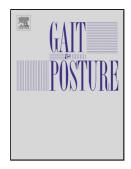
Reference: GAIPOS 5454

To appear in: Gait & Posture

Received date: 1-11-2016 Revised date: 8-6-2017 Accepted date: 10-6-2017

Please cite this article as: Parreira Rodolfo Borges, Grecco Luanda André Collange, Oliveira Claudia Santos. Postural control in blind individuals: A systematic review. *Gait and Posture* http://dx.doi.org/10.1016/j.gaitpost.2017.06.008

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

Postural control in blind individuals: A systematic review

Rodolfo Borges Parreira^{a,c*}, Luanda André Collange Grecco^b, Claudia Santos Oliveira^c

^a School of Postural and Manual Therapy, Salgado Institute of Integral Health. Rubens Carlos de Jesus st. #355, zip code: 86015-300; Londrina, Paraná, Brazil. Phone: + 55 43 33754714; Fax: + 55 43 33754709. Email: dolfo23@yahoo.com

^b Center of Pediatric Neurosurgery, CENEPE-Rehabilitation. Capitão Mor Roque Barreto st. # 47, zip code: 01323-030, São Paulo, SP, Brazil. Phone: +55 11 3505-6079. Email: luandacollange@hotmail.com

^c Rehabilitation Sciences, Universidade Nove de Julho. Doutor Adolfo Pinto av., #109 - Barra Funda, zip code: 01156-050 São Paulo, Brazil. Email: csantos@uninove.br

Corresponding author:

Rodolfo Borges Parreira

School of Postural and Manual Therapy, Salgado Institute of Integral Health.

Rubens Carlos de Jesus St. # 355, Londrina, Paraná; Brazil. zip code: 86015-300;

Phone: + 55 43 33754714; Fax: + 55 43 33754709

Email: dolfo23@yahoo.com

Research highlights

- Structural changes of the cortex can be seen in congenitally blind people.
- Blind people have poor postural control, which may interfere in their activities.
- Posture is altered during gait to compensate for impaired vision.
- More experimental studies focusing on rehabilitation of PC in the blind are needed.

ABSTRACT

Postural control (PC) requires the interaction of the three sensory systems for a good maintenance of the balance, and in blind people, lack of visual input can harm your PC. Thus the objective is to perform a literature review concerning role of sight in the maintenance of PC and the adaptation of brain structures when vision is absent. Studies were searched from Pubmed, and EMBASE that included individuals with congenital blindness. Articles studying person with acquired blindness or low vision was excluded from this review. 26 out of 322 articles were selected for review, and we found that 1) blind individuals exhibit PC deficits and that is compensated by the intensification of the remaining systems; 2) Neuroplastic adaptation occurs throughout the entire cerebral cortex; and 3) Sensorimotor stimulation and transcranial direct current stimulation seem to be a rehabilitation strategy. According to this review, the

Download English Version:

https://daneshyari.com/en/article/5707790

Download Persian Version:

https://daneshyari.com/article/5707790

<u>Daneshyari.com</u>