

原作者及出處 (Original):

Damcott, Megan PhD; Blochlinger, Sheila PT, ATP; Foulds, Richard PhD
Pediatric Physical Therapy:
Fall 2013 - Volume 25 - Issue 3 - p 248-255
doi: 10.1097/PEP.0b013e318299127d

題目 (Title):

被動性與動態性承重對無行走功能兒童的骨骼健康之介入效果
(Effects of Passive Versus Dynamic Loading Interventions on Bone Health in Children Who Are Nonambulatory)

翻譯者 (Translator):

陳麗秋 (Li-Chiou Chen, PT, PhD,
臺灣大學醫學院物理治療學系 助理教授 台北 台灣
(Assistant Professor, School and Graduate Institute of Physical Therapy, College of
Medicine, National Taiwan University, Taipei, Taiwan)

校閱者 (Reviewer):

廖華芳 (Hua-Fang Liao)
台灣大學醫學院 物理治療學系暨研究所 兼任副教授 台北 台灣
(part-time Associate Professor, School of Physical Therapy, College of Medicine ,
National Taiwan University, Taipei, Taiwan)

目的 (Purpose):

探討一個新式動態性站立介入相較於傳統站立介入對於無行走功能的腦性麻痺患童的骨骼健康之效果。

(To investigate the effectiveness of a novel dynamic standing intervention compared with a conventional passive standing intervention on bone health in children with cerebral palsy who are nonambulatory.)

方法 (Methods):

4 名傳統站立組以及 5 名動態站立組兒童接受 15 個月的追蹤（每天站 30 分鐘，每週 5 天），每 3 個月使用雙能量 X 光吸光式測定儀測量兒童股骨末端的骨密度、總骨量、與面積。

(Four children in passive standers and 5 in dynamic standers were followed for 15 months (standing 30 min/d, 5 d/wk). Dual-energy x-ray absorptiometry scans of the distal femur were obtained at 3-month intervals to measure changes in bone mineral

density (BMD), bone mineral content, and area.)

結果 (Results):

動態性站立組兒童的骨密度顯著增加($P < .001$)，傳統站立組則維持與介入前相同。雖然二組兒童的總骨量都顯著增加($P < .001$)，動態性站立組較傳統站立組增加更多。在面積的增加則二組兒童無顯著差別($P = .315$)。

(Increases in BMD were observed during dynamic standing ($P < .001$), whereas passive standing appeared to maintain the baseline BMD. Increases in bone mineral content were observed in each standing intervention ($P < .001$), with dynamic standing inducing greater increases. Increases in area were comparable between interventions ($P = .315$).

結論 (Conclusions):

動態性站立顯示中強度與低頻率的承重活動可能可以增加骨密度，進一步的研究可以提供了解承重介入影響骨骼健康的機制。

(Dynamic standing demonstrated the potential of moderate-magnitude, low-frequency loading to increase cortical BMD. Further investigations could provide insight into the mechanisms of bone health induced through loading interventions.)

Lippincott Williams & Wilkins, a business of Wolters Kluwer Health and its affiliates take no responsibility for the accuracy of the translation from the published English original and are not liable for any errors which may occur²

威科集團醫療衛生業務部門之一：Lippincott Williams & Wilkins，及威科集團醫療衛生業務部門的其他附屬機構不承擔因從英文原文翻譯的準確性而導致的任何責任，也不承擔由於翻譯錯誤而導致的任何法律責任。