

Consistently “Walking the Walk”

Partial Weight Bearing: Implications for Practice

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Introduction

- ❖ Partial Weight Bearing (PWB) is commonly taught by physiotherapists. The rationale is a reduced load through an affected limb, implemented at the appropriate time, will enhance stabilisation and bone healing, thus reducing the risk of potential mal-alignment (Soloman et al, 2005). However, it remains unclear if subjects are consistent in effectively transmitting the advised load.

Aim

- ❖ To see if subjects are able to consistently repeat their perceived level of partial weight bearing (50%) over 3 consecutive days.

Method

- ❖ Convenience sample of healthy subjects (n = 13)
- ❖ Measured over 3 consecutive days using a Kistler Force Platform; 3 attempts on each day (mean calculated)
- ❖ Standardised instructions including the use of the same footwear
- ❖ Analysed descriptively and using intra class correlation coefficients (ICC's)

Results

- ❖ Day 1: 393.77N (±165.49)
- ❖ Day 2: 361.17N (±188.40)
- ❖ Day 3: 344.04N (±184.82)

Mean PMB decreased by 8% on day 2, and by 13 % on day 3 (when compared with day 1.

ICC = .924

Conclusion

- ❖ The overall level of reliability of PWB was excellent (Landis and Koch, 1977), but there was tendency for the load to decrease progressively over 3 days
- ❖ This suggests clinicians can be confident that perceived PWB is applied consistently thus enhancing the desired goals of stabilisation and bone healing

References

- ❖ Landis J and Koch G (1977). The Measurement of Observer Agreement for Categorical Data. *Biometrics* 33 (1) 159 – 174
- ❖ Solomon L, Warwick D, Nayagam S (2005) *Apley's concise system of orthopaedics and fractures (3rd ed)*. London; Arnold



Figure 1: Walking with Elbow Crutches PWB

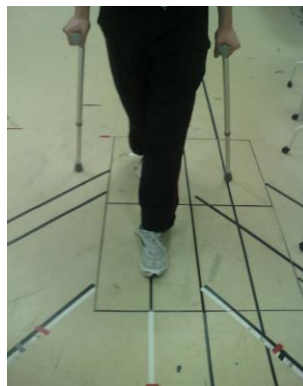


Figure 2: PWB on Force Platform

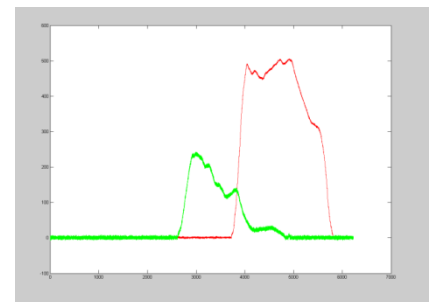


Figure 3: Kistler Platform Output: green line PWB; red line, FWB