The Placebo Effect of the Power Balance Band on Muscle Strength, Agility, Power and RPE.

Author: Mary Wiley
Facility Advisors: J.R. Wilson, PhD, Brad Heddins, Jeremiah Campbell
Cardiovascular Research Laboratory, The University of Texas at Arlington, Arlington, TX;

Introduction:
Power Balance advertises that its hologram bracelet improves exercise performance by harnessing the belief in the harmony of mind and body. There is no credible scientific evidence to support these claims. Previous research has shown that any increase in performance is due to the placebo effect. The mind-set of an individual is crucial in determining whether a placebo will cause a physiological response.

Purpose:
The purpose of this study was to examine the placebo effect of the power balance band on muscle strength, agility power and RPE on believers and non-believers of the Power Balance bracelet. Method: Fifteen male and female students from the University of Texas at Arlington voluntarily participated in this study.

Results:
A mixed factorial ANOVA was run on all variables using SPSS. The results of the analysis found the Wingate power main effects (believe, not believe and with, without band) 

F[1,13]=3.749, p=.041, \( \eta^2=.224 \). The other main effects and interactions were not significant. However, the interactions between believe and with, without band were significant 

F[1,13]=5.14, p=.041, \( \eta^2=.28 \) show a significant difference. Post-hoc analysis revealed that the non-believers group did significantly better than the believers when both wore the band.

Also Leg press main effects (believe, not believe and with, without band) 

F[1,13]=1.529, p=.238, \( \eta^2=.0105 \) and 

F[1,13]=.569, p=.464, \( \eta^2=.042 \), respectively, showed no significant difference.

Conclusions:
Trends in mean differences suggest a placebo effect according to the believer group. Recommendations: For future studies a larger number and variety of participants would be ideal. Replication of this study by other investigators is recommended.