

The Effect of Lifting Belts on Power Output

JULIO AGUILAR, BENJAMIN COLDWELL, PATRICK JACKSON, CADE PIPPEN, ZANE THORTON.

Kinesiology & Health Science; Stephen F. Austin State University; Nacogdoches, TX

Category: Undergraduate

Advisor: Chelette, Amber, amber.chelette@sfasu.edu

ABSTRACT

Lifting belts, when lifting heavy weights, are purportedly used to support, stabilize, and attenuate the load on the spine. With the additional support, potential questions arise about whether weightlifting belts affect the power performed when squatting. This study aimed to examine the power produced during a squat with a weightlifting belt compared to a squat performed without one. Ten subjects, five male and five female, performed squats of two sets of 3 repetitions, one set without a belt and one set with a belt. Each participant would perform this squat at a consistent tempo monitored with a stopwatch, with power measured and recorded using a KINVENT® DELTA force plate. After each set's completion, the power produced by the three squats was averaged to provide a result. Data shows a consistent increase in power with squats performed with a belt; however, there were outliers, with few subjects having increased amounts of power without the belts as opposed to squats with the belt. It resulted in a negligible difference in our data, with the average power of squats with a belt being 150.2 versus no belt squats being 150.3. In conclusion, our results indicate that squatting with a belt did show consistent improvement in power, but due to an issue with belt size and needing more experimentation, the results showed the belt did not change much. Although the original hypothesis was answered to a degree, the outliers raised a significant number of questions regarding the effect of lifting experience and technique on peak force during multi-joint exercises.