

Les Mills Lab: BODYPUMP Rep Effect Study



Background

The fitness industry is constantly searching for training methods that will burn the most amount of calories in the shortest time possible. When it comes to resistance training, what is the best approach to maximize calorie expenditure?

BODYPUMP™ is based on the principle that lifting lighter weights for a high number of repetitions will create the same workload as the more traditional approach of lifting heavy weights for less repetitions.

The Question

What causes the biggest energy output – slow or fast contractions? Or, in BODYPUMP language, a slow 4/4 tempo, or the faster singles?

Method

15 participants aged between 18 and 40 performed four separate squat conditions in a random order. Each condition was devised to produce the same amount of work for four minutes.

WORK = FORCE × DISTANCE

1 WORK = 5kg × 120 REP = 600

2 WORK = 10kg × 60 REP = 600

3 WORK = 15kg × 40 REP = 600

4 WORK = 20kg × 30 REP = 600

Results

The results conclusively proved that the faster tempos burned the most calories. Participants expended 29.3% more energy during the 5kg conditions with faster repetitions compared to the 20kg conditions with slower repetitions. In other words, it is the speed of the movement that generates the greatest energy expenditure, not the weight of the load.

Conclusion

BODYPUMP is the perfect program to capitalize on these results as lots of fast contractions are completed in every class. We can therefore say that BODYPUMP is the ultimate calorie burning resistance training workout, with over 800 reps completed in every class.

A link to the published abstract in the Journal of Fitness Research is available [here](#).