

Acute Training Variables, Muscle Growth, Strength, and Power – Conclusions for Series

By Jacob Wilson, M.S., PhD. Candidate, C.S.C.S.

Conclusions for series

In the September 2008 issue of JHR, 8 monumental articles were composed on how to manipulate acute training variables in the weight room for optimal strength power, and most importantly muscle growth.

It is my hope that this work will give you much greater gains in the gym. Variables are summed below in table 1.0.

Table 1.0 Summary of Acute Training Variable Effects on Muscle Growth and Hypertrophy.

	Hypertrophy	Strength and Power
Muscle Action	<ul style="list-style-type: none"> ❖ Eccentric over concentric, but a combination is preferred. ❖ Isometric contraction by flexing between sets may enhance hormone levels. 	<p>Based on the specificity principle a combination of both concentric and eccentric should be used.</p> <p>There is little transfer in isometric contractions to any movement.</p>
Resistance or Intensity Used	70-85% (6-12 repetitions)	86-100% (1-5 repetitions)
Rest Period Lengths	30-60 seconds	3-5 minutes
Volume in sets	4 for untrained and moderately trained 8-14 for highly trained	4 for untrained and moderately trained 8 for highly trained
Exercise Selection	Compound / Large body part exercises produce more growth than isolation, but a combination should be used.	Should practice the criterion lift you so desire strength increases in.
Exercise Order	Generally large before small, and compound before isolation.	Generally large before small, and compound before isolation.
Repetition Velocity	Moderate (1-3 sec for CON and ECC each) and Fast (1 sec each). For injury prevention, 2-3 sec on heavy lifts (e.g. 85% 1RM).	Moderate (1-3 sec for CON and ECC each) and Fast (1 sec each). For injury prevention 2-3 sec on heavy lifts, (e.g. 85% 1RM).
Frequency of Training days	3 untrained, 2 moderately trained, 2-3 highly trained	3 untrained, and 2 for moderately and highly trained