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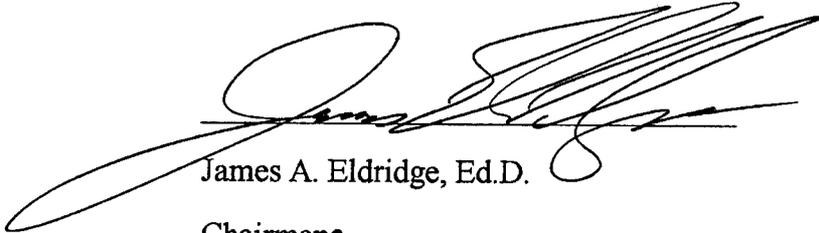
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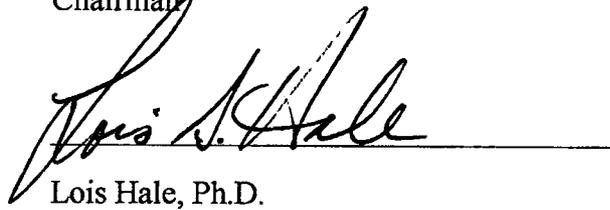
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THE EFFECTS OF REPETITION SPEED ON THE DEVELOPMENT OF
SKELETAL MUSCLE STRENGTH

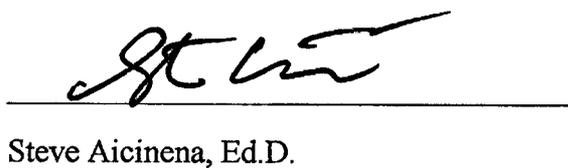
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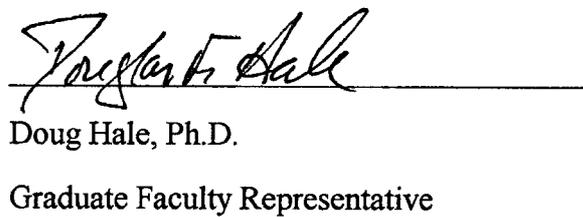
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THE EFFECTS OF REPETITION SPEED ON THE DEVELOPMENT
OF SKELETAL MUSCLE STRENGTH

by

KEVIN TAYLOR

RESEARCH IN KINESIOLOGY

Presented to the Graduate Faculty of Kinesiology

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Abstract

Taylor, K. D. Effect of repetition speed on the development of muscle strength. 1999. The purpose of this study was to determine the effects of repetition protocols on strength. Training was conducted 3 times per week for 8 weeks using 1 set of the free weight bench press in the fast (1 second concentric and 1 second eccentric contractions, N = 15) or slow (2 second concentric and 4 second eccentric contractions, N = 7) speed repetition protocol. Training weight increased from 50% 1 RM weeks 1-2, 75% 1 RM weeks 3-6, and 85% weeks 7-8. Subjects completed 10 repetitions weeks 1-2, and as many as possible weeks 3-8. Testing was done in the protocol used in training (training protocol pre and posttest) and in the protocol not used in training (velocity specificity pre and posttest). Neither group was significantly stronger than the other when tested in the training protocol ($F = .220$ $p > .05$). A velocity specificity effect was not demonstrated ($F = .167$ fast testing $p > .05$, $F = .055$ slow testing $p > .05$). Female subjects did improve significantly over male subjects in 1 RM strength by percentage. Fast group males = 14.15% increase, fast group females = 23.02% increase ($F = 4.51$, $p < .05$ after BMI adjustments). Slow group males = 14.87% increase, slow group females = 25.93% increase ($F = 9.25$, $p < .05$ after BMI adjustments). In conclusion, neither fast or slow speed repetitions are superior in developing strength in untrained subjects.