Abstract

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Methods

Ten UTA Kinesiology students were asked to participate in a study over reaction/movement time (RT/MT). 5 of them were right handed (RH) and the other 5 were left handed (LH). A coin was flipped twice to decide whether the subject started with your left or right arm reaction, along with whether they would be holding 50% of their 1RM. It also showed the LH individuals to have a quicker RT on the left side. However, when just looking at the RH individual’s CON RT was recorded, they were asked to relax their arm and this process was repeated 2-5 times depending on the EMG readings, with 30 secs rest in between each trial.

Results

Reaction/Movement Time (RT) was then started.

The subject was then asked to go through a simple bicep curl in order to make sure the program is collecting data correctly. Once the program was collecting data, on GO, the subject was asked to perform a bicep curl as quickly as possible. During this time, RT/MT was gathered from the program. Once their RT/MT was recorded, they were asked to relax their arm and this process was repeated 2-5 times depending on the EMG readings, with 30 secs rest in between each trial.

The other trial was the same simple bicep curl, however the subject was holding 50% of their 1RM in their opposite hand at a 90 degree angle at the elbow. The same rest time was given between each trial and the weight was taken away after each reaction time to reduce the amount of potential fatigue.

After one of the trials was recorded and the subject had been given about a minute of rest, they repeated the entire process for the opposite arm.

Conclusions

The results showed no significant difference when both groups reaction times were averaged together, and compared to those done at 50% 1RM. It also showed the LH individuals to have a quicker RT on their right hand side as opposed to their left. This might be due to the fact verbal stimulus enters into the left hemisphere of the brain first and then must cross over to the right hemisphere in order to react on the left side. However, when just looking at the RH individual’s CON and 50% 1RM, there was significant difference in the RT recorded.