Week 2 In-Lab

BIOE 320 Systems Physiology Laboratory

Data Analysis

Table 1: EMG measurements for dominant forearm

Cluster	min (mV)	max (mV)	P-P (mV)	mean (mV-sec)
1				
2				
3				
4				

6. (a) What is the percentage increase or decrease in EMG activity between the weakest and strongest clench for the dominant forearm? Show your calculations.

   (b) Why can't you use the raw EMG signal to determine the mean value? Why must the integrated EMG signal be used?

Table 2: EMG measurements for non-dominant forearm

Cluster	Min (mV)	Max (mV)	P-P (mV)	Mean (mV-sec)
1				
2				
3				
4				

7. (a) Compare the mean values of the strongest clench in EMG activity between the two forearms. Report the difference between the two forearms as a magnitude (mV or mV-sec) as well as a percentage (%). Show your calculations.

(b) Does the dominant or non-dominant forearm show the highest EMG clench? Explain the physiological basis of your results.

(c) List four factors that influence maximum clench strength.

Table 3: Tonus measurements

Period	Forearm 1 Min (mV)	Max (mV)	Forearm 2 P-P (mV)	Mean (mV-sec)
1				
2				
3				

8. (a) Is there a difference in tonus between the two forearms? If so, quantify (and show your work) and explain why.