**Introduction to EMG Name: Luke David and Jared**

**Group Names**

**Table 1**

|  |  |  |  |  |  |  |  |  |
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| **Table 1** | | | | | | | | |
| **Condition** | **Interval** | | | **Minimum mV** | **Maximum mV** | | **∆mV** | |
| **Jaw Clenching** | | **0-5 s** | **1.006** | | | **1.37** | | **.31** |
| **5-10 s** | **.934** | | | **5.63** | | **4.696** |
| **Chewing soft object ( sandwich)** | | **0-5 s** | **.9451** | | | **1.06** | | **.1149** |
| **Chewing interval** | **.3924** | | | **6.64** | | **6.2476** |
| **Chewing hard object ( gobstopper)** | | **0-5 s** | **.9536** | | | **1.094** | | **.1404** |
| **Chewing interval** | **.8572** | | | **7.74** | | **6.8828** |
| **Chewing medium object ( chewing gum)** | | **0-5 s** | **.9207** | | | **1.127** | | **.2063** |
| **Chewing interval** | **.9183** | | | **7.37** | | **6.4562** |

**Import graphs with descriptions**

**DATA ANALYSIS**

1. Rank, in order (from greatest to least), the amplitude of EMG electrical activity for each of

the items tested:

Gobstopper, Chewing gum, sandwich

2. Compare the frequency of muscle activation during mastication (chewing) of the three food

items tested. Is there a significant difference in the number of similar spikes generated during

a 5 s interval of data collection for each of the items tested?

Yes there is. The harder the object is, the bigger and more numerous the spikes are that a were generated during the data collection.

3. Compare rates of chewing within your lab group/class. Are there significant differences?

Yes, one group’s maximum was very low compared to ours, it never reached above two, and ours was above seven. However, our minimums were mostly similar.

4. On the basis of the findings in this experiment what recommendation would you make to a

friend with a temporomandibular disorder (TMD) regarding his/her food choices?

I would recommend them to eat softer foods so their muscles and tendons would not get more problems.

5. The “Iron Jaw Trick” is a popular circus act in which a performer (or two performers) hang

from a trapeze by his/her teeth. What exercises might someone do to strengthen the masseter

muscles of the jaw so that a trick of this type could be performed successfully?

Eat harder foods and chew with more vigor than normal. Clench their jaw for a certain time, and do this repeatedly.

6. Chronic headaches and temperomandibular disorders (TMD) may be the result of

unconscious clenching of the jaw. What are some ways to reduce/prevent jaw clenching?

Wear a mouth guard or be constantly chewing on something.