



### Finger and Hand Flexors and Extensors

1. Grasp the tennis ball in your **non-writing** hand. A legal squeeze causes a dent in the ball made by using the heel of the hand.
2. You are to record the number of squeezes in your Data Table every 10 seconds, but you are NOT TO STOP between trials.
3. You will be squeezing the tennis ball without stopping for 100 seconds.  
**NEVER STOP SQUEEZING. REALLY SQUEEZE. DO NOT STOP BETWEEN TRIALS.**

Data:

Name	10 sec	20 sec	30 sec	40 sec	50 sec	60 sec	70 sec	80 sec	90 sec	100 sec

### Foot Plantar Flexors and Dorsiflexors

1. Stand with your legs shoulder width apart. You will raise your heels and stand up on your toes. And then relax your heels back to the ground. (A calf raise)
2. You are to record the number of calf raises in your Data Table every 10 seconds, but you are NOT TO STOP between trials.
3. You will be performing this exercise without stopping for 100 seconds.  
**NEVER STOP EXERCISING. REALLY PUSH IT. DO NOT STOP BETWEEN TRIALS.**

Data:

Name	10 sec	20 sec	30 sec	40 sec	50 sec	60 sec	70 sec	80 sec	90 sec	100 sec

### Leg Flexors and Extensors

1. Start at the 100 m starting line
2. Run the 100 m. You are to record the time it takes to run the 100 m.
3. Then, turn around and run the 100 m back. Record the time of your second run.  
**ONLY STOP LONG ENOUGH TO TURN AROUND AND RESET.**

Data:

Name	1 <sup>st</sup> 100 m	2 <sup>nd</sup> 100 m

Conclusions:

1. After how many trials did your arm muscles become obviously fatigued? How does the data show this? Describe how your muscles felt.

2. How did your squeezing hand and arm feel towards the end of your squeezing time period?

3. By looking at your results of your calf raises, pinpoint when you first had a lot of lactic acid buildup. How do you know?

4. How long did it take for the burning feeling to disappear?

	Arm	Hand	Lower Leg	Running
How Long?				

4. Explain how resting for 10 minutes between trials would have affected your results. What would occur in the body?

5. What are 3 examples of working conditions that might cause an animal to become fatigued?

6. What age of animal is more likely to become fatigued more quickly, young or old? Why is this so?

7. How can we decrease the chance of livestock becoming fatigued?

8. How do we treat muscle fatigue in humans? How might we treat it with animals?