

Go For the Burn Lab

Goal: To investigate anaerobic respiration in our muscles.

Introduction: We know that all cells need energy to live and function. We also know that our cells, animal cells, get their energy from food. Metabolism is the name for all of the chemical processes that occur in our cells that enable our cells to utilize the energy in stored food. What happens when our cells are working too hard? Let's find out.

Materials: timer, clothespin

Method:

1. Work in pairs. One member of each team (partner 1) will put his or her hand on the table with their palm facing up. He or she will then open and close a clothespin as many times as they can in 20 seconds.
2. Partner 2 will count and record on the data table the number of times partner 1 opened the clothespin in 20 seconds.
3. Partner 1 will immediately begin another 20 second trial for a total of 10 trials.
4. Graph your results.
5. Repeat the experiment by switching jobs.

Data Table:

Trial	1	2	3	4	5	6	7	8	9	10	Avg.
#1											
#2											

Discussion Questions:

1. How did the muscle feel after repeated trials?
2. Use your knowledge of Cellular Respiration to explain what caused this sensation.
3. Summarize your results.
4. Write a short paragraph that relates this experiment to the idea of energy.