

Does Viral Infection Affect Cellular Respiration?

Infection of a cell by a virus can affect cellular respiration and the ability of cells to produce ATP. To test the effect of viral infection on ATP production, cells were infected with Mayaro virus and the amount of lactic acid and ATP produced were measured. The results are shown in Figure 1.

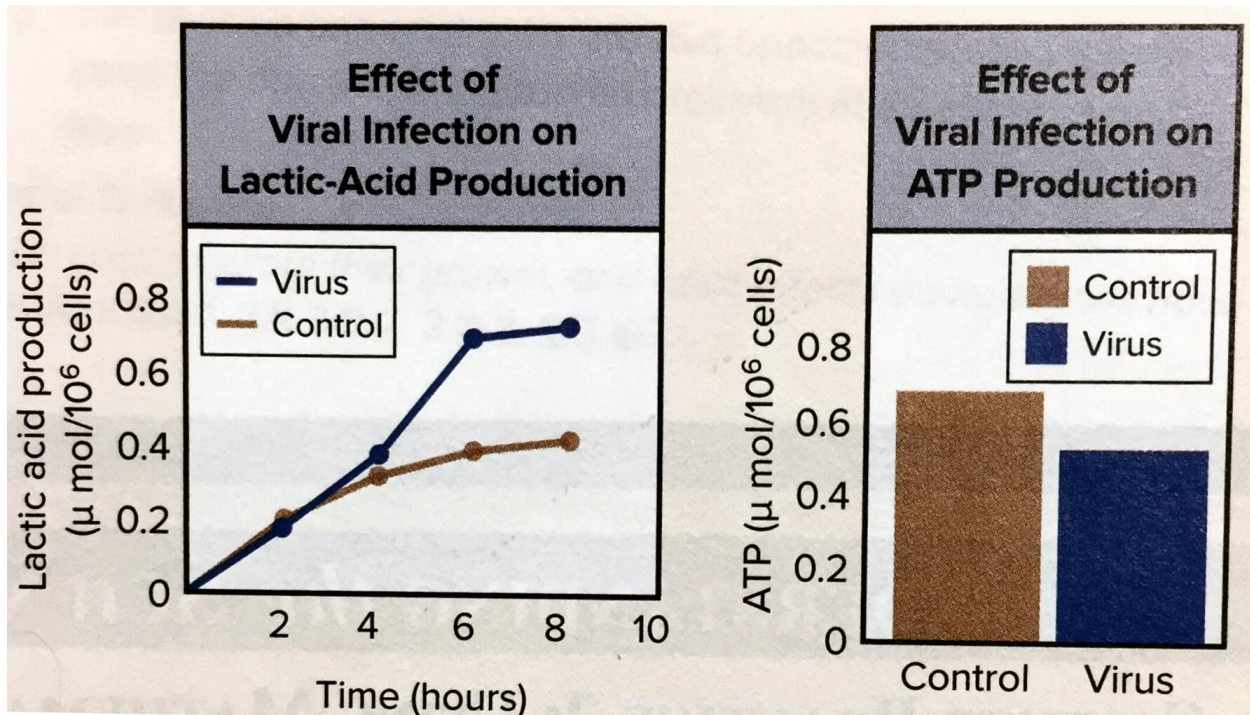


Figure 1 Lactic acid and ATP production in virus-infected and control cells

1. Describe the effect of the virus on the production of both lactic acid and ATP.
2. a) Calculate the percent difference in lactic acid concentration in virus-infected and control cells after 8 hours.
b) **Calculate** the percentage decrease in ATP production in the virus-infected cells.
3. Propose a reason why having a virus such as influenza might make a person feel tired.