**“Everest: The Death Zone” Documentary Reflection Questions**

*Directions: questions are in bold font, either use a different color or a non-bold font to answer the questions below those typed.*

*Use the following link to the 4 parts of the NOVA documentary:* [*https://www.youtube.com/watch?v=YC9sBo1WHXA&list=PLls93-A5FzRfxpo6KJmwOpdbEaNYmAQYU*](https://www.youtube.com/watch?v=YC9sBo1WHXA&list=PLls93-A5FzRfxpo6KJmwOpdbEaNYmAQYU)

**1. Why does the condition of hypoxia impact cellular respiration so severely? What specific step(s) of the process are most affected?**

**2. Which “strong” type of cells and “smart” cells were starving the most for oxygen at high altitude? Provide 2 reasons each for your choices?**

**3. What did the Gamow bag do to aid climbers suffering the effects of acute mountain sickness, FROM THE PERSPECTIVE OF CELLULAR RESPIRATION?**

**4. What is the overall impact of not having an appetite at altitude with respect to the process of cellular respiration? Where does it cost the climber most in the process?**

**5. When Dr. Hackett mentioned maximum heart rate (mhr) and resting heart rate (rhr), what did he say about the situation when these two rates are the same?**

**6. If you were in the cabin of an airplane at 30,000 feet that was not pressurized, you might suffer the same fate as climbers at the same altitude. What was pulmonary edema and WHY would it happen to climbers on Everest, or a passenger in an unpressurized cabin of an airplane? Moreover, what part(s) of cellular respiration is most affected by this medical issue?**

**7. Why would a climber NEVER want to expend all of his/her glucose in just getting to the summit of Everest? Why would you be concerned for a climber in this situation?**

**8. When climbers just arrived to Everest basecamp, they were out of breath and had an oxygen saturation of 60-70%. What did this level mean?**

**9. After 2 days at basecamp, climbers’ oxygen saturation started to approach 75🡪85🡪90%. Why did this happen and what was the term that we use for it?**

**10. If I were going to show you before and after pictures of climbers that have gone to Everest and successfully returned, what might you predict as the difference between the before and after pics? EXPLAIN in terms of cellular respiration why this difference would come to be.**

**Have a great spring break!**

**Climb on!**