

Chapter 9 Cellular Respiration

Chapter Vocabulary Review

Defining Terms *On the lines provided, write a definition for each of the following terms.*

1. calorie _____

2. glycolysis _____

3. cellular respiration _____

4. NAD⁺ _____

5. fermentation _____

6. anaerobic _____

7. aerobic _____

8. Krebs cycle _____

9. electron transport chain _____

Identification *On the lines provided, identify which phrase describes the following processes: cellular respiration, glycolysis, lactic acid fermentation, or alcoholic fermentation.*

10. important in baking bread _____

11. builds up in muscles after a few seconds of intense activity _____

12. requires oxygen and glucose _____

13. produces 2 ATP molecules and pyruvic acid _____

14. almost the opposite process of photosynthesis _____

15. the reason why runners breathe heavily after a race _____

What is cellular Respiration?

What are the reactants & products of cellular resp.?

What is the first step of cellular respiration?

Does glycolysis require oxygen? Where does it occur?

What does glycolysis produce from sugar? Energy?

If there is no oxygen present, how does the cell continue to produce ATP? (anaerobic)

Describe the 2 types of fermentation:

_____:

_____:

What do both types of fermentation create for the cell?

If there is oxygen present (aerobic) what happens after glycolysis? Where does it happen?

What is the 2nd step of cellular resp. called?

How many ATP's are produced in Krebs cycle?
Any carrier molecules?

What is the name given to the final step in cellular respiration?

How are the membranes involved?

What do the high energy electrons (carried by NADH & FADH₂) do?

Why is oxygen needed for Electron transport?

How many ATPs are produced for every pair of electrons in the electron transport?

What is the total number of ATP molecules made by electron transport?

What is the total amount of ATP made by cellular respiration (glycolysis, Krebs & electron trans.)?

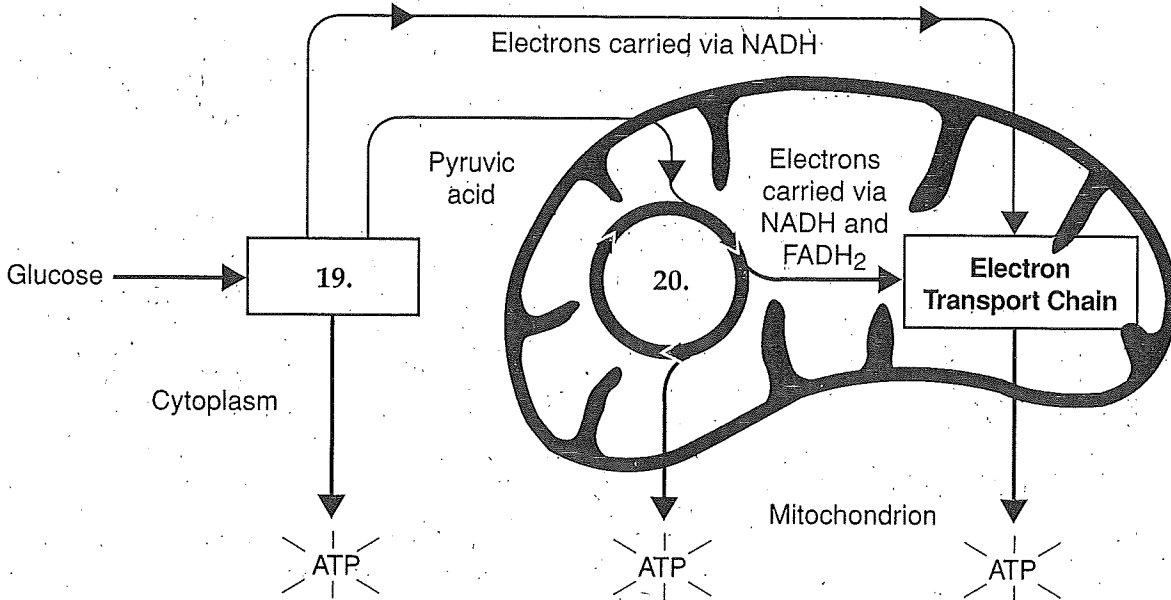
When exercising or running, small bursts of energy over short time intervals uses ATP from:

Long sustained workouts require larger amounts of ATP from:

Multiple Choice On the lines provided, write the letter that best answers the question.

- _____ 16. What is the net energy gain in glycolysis?
 a. 4 molecules of ATP c. 36 molecules of ATP
 b. 2 molecules of ATP d. 38 molecules of ATP
- _____ 17. Which of the following causes a painful, burning sensation in muscles after vigorous exercise?
 a. alcohol c. pyruvic acid
 b. glycolysis d. lactic acid
- _____ 18. What is another name for the Krebs cycle?
 a. the glycolysis cycle c. the citric acid cycle
 b. alcoholic fermentation d. the respiration cycle

Interpreting Diagrams On the lines below, write the name of the stage of cellular respiration that corresponds with the numbers in the diagram.



19. _____
 20. _____

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