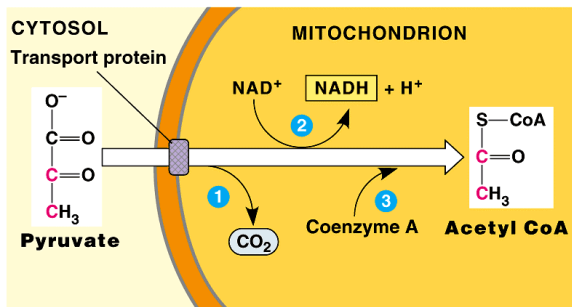


CHAPTER 9 KREBS CYCLE

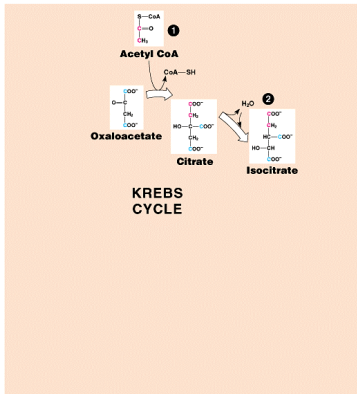
- BEGINS WHEN PYRUVATE, C3 IS CONVERTED TO C2-ACETYL CO-A
- GENERATES SEVERAL CO₂
- GENERATES 2 ATP PER GLUCOSE
- CARBONS ARE REARRANGED AND ELIMINATE MORE CO₂, FREES e⁻'s.
- e⁻ CARRIED BY NADH+ AND 2FAD+

Figure 9.10 Conversion of pyruvate to acetyl CoA, the junction between glycolysis and the Krebs cycle



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Figure 9.11 A closer look at the Krebs cycle (Layer 1)



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Figure 9.11 A closer look at the Krebs cycle (Layer 2)

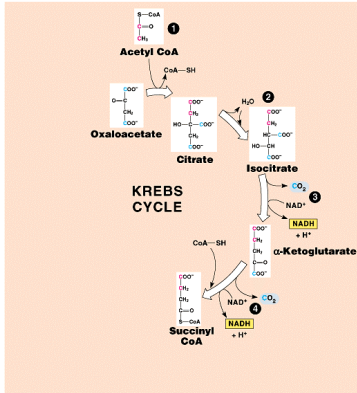


Figure 9.11 A closer look at the Krebs cycle (Layer 3)

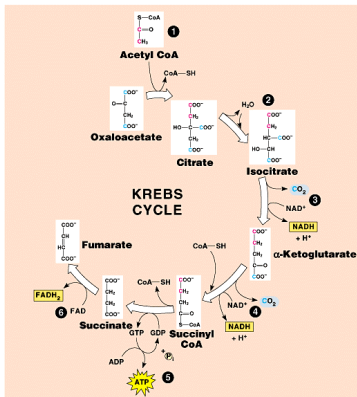


Figure 9.11 A closer look at the Krebs cycle (Layer 4)

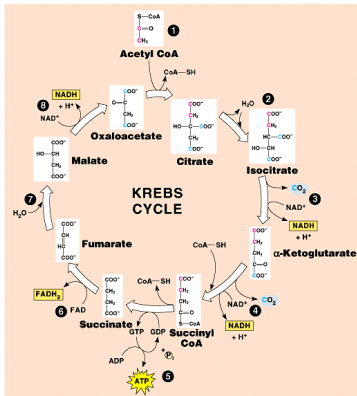
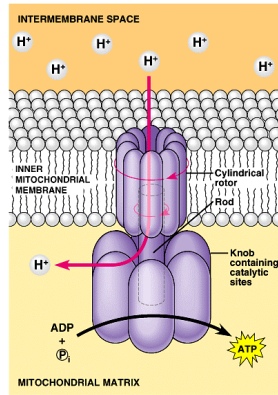
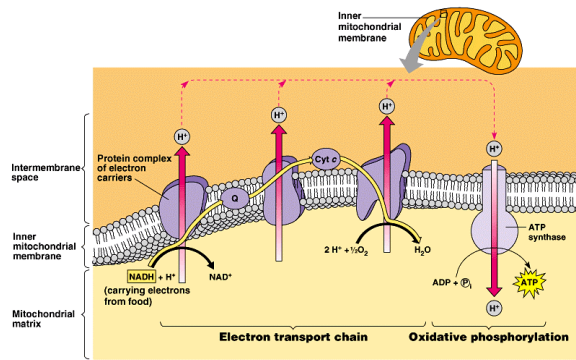


Figure 9.14 ATP synthase, a molecular mill



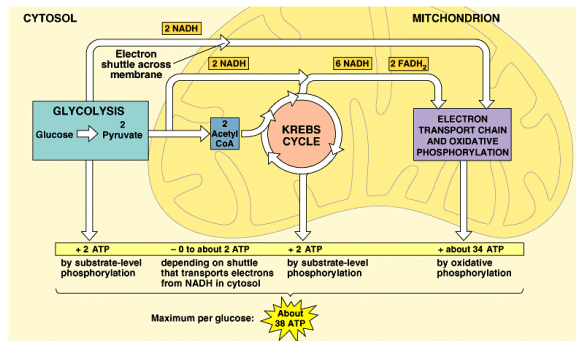
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Figure 9.15 Chemiosmosis couples the electron transport chain to ATP synthesis



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Figure 9.16 Review: how each molecule of glucose yields many ATP molecules during cellular respiration

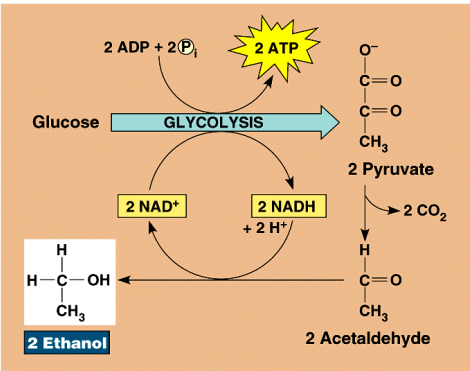


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FERMENTATION

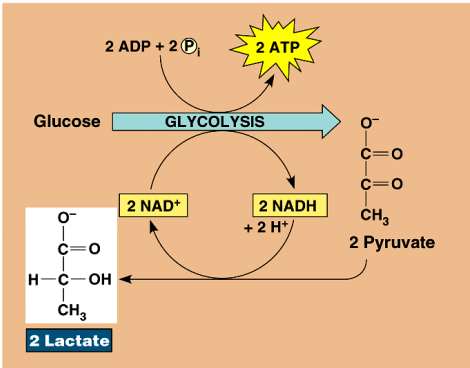
- ONLY OCCURS WITHOUT OXYGEN
- PYRUVATE IS CONVERTED TO:
- ETHYL ALCOHOL/CO₂/BACTERIA &
- YEASTS/ALCOHOLIC BEVERAGES,
- LACTIC ACID/SKELETAL MUSCLE
- LOST e⁻ CARRIED BY NADH⁺ TO GENERATE 2 ATP.

Figure 9.17a Fermentation



(a) Alcohol fermentation
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Figure 9.17b Fermentation

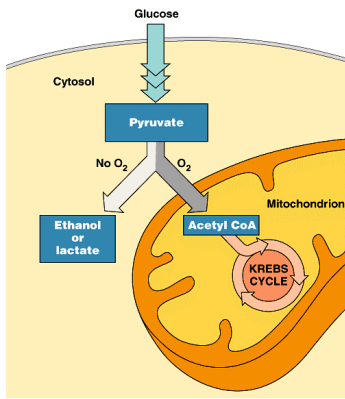


(b) Lactic acid fermentation
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Figure 9.x2 Fermentation

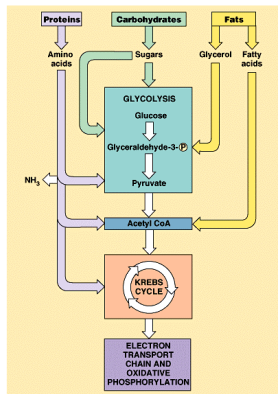


Figure 9.18 Pyruvate as a key juncture in catabolism



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Figure 9.19 The catabolism of various food molecules



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Figure 9.20 The control of cellular respiration

