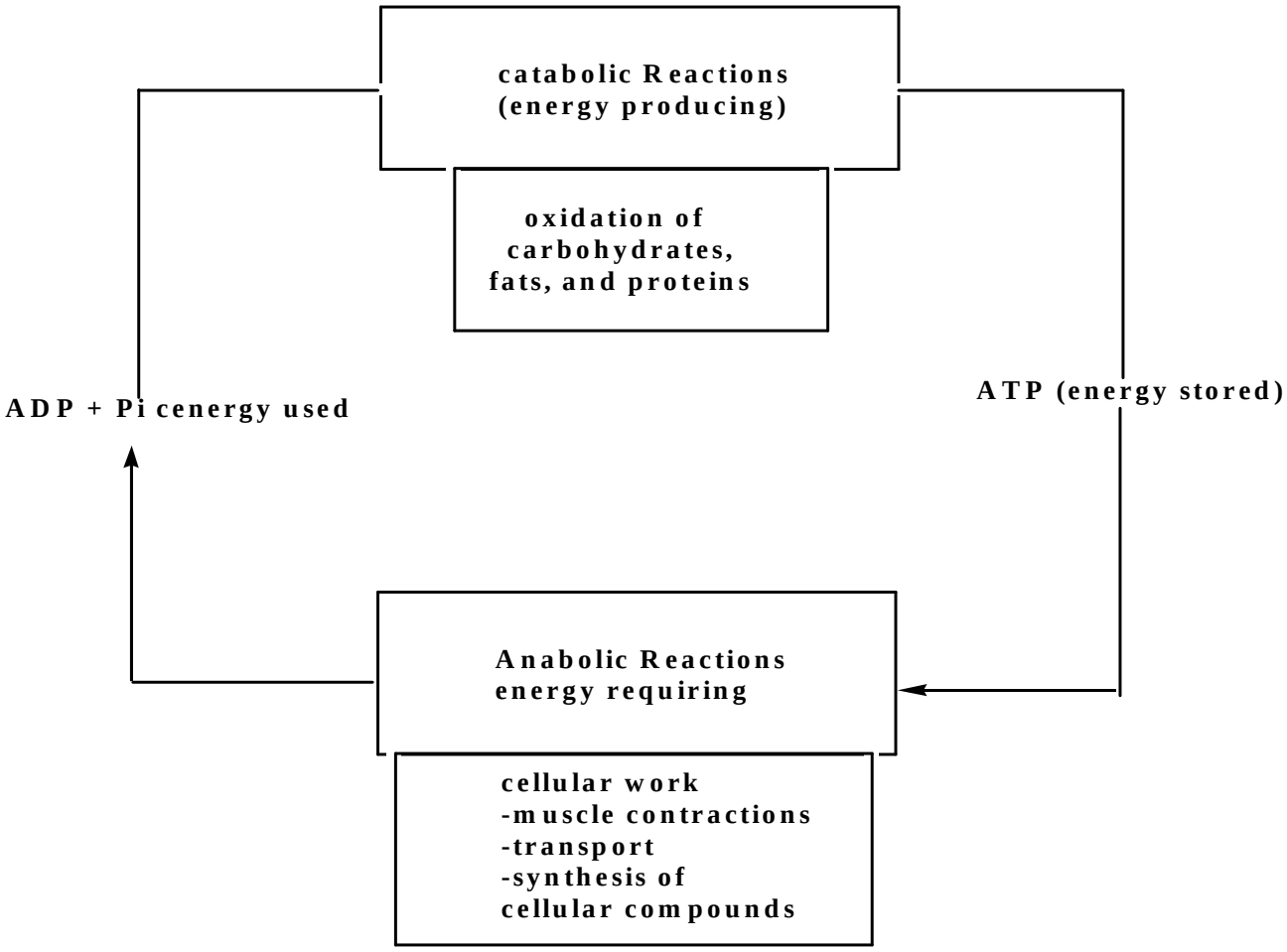
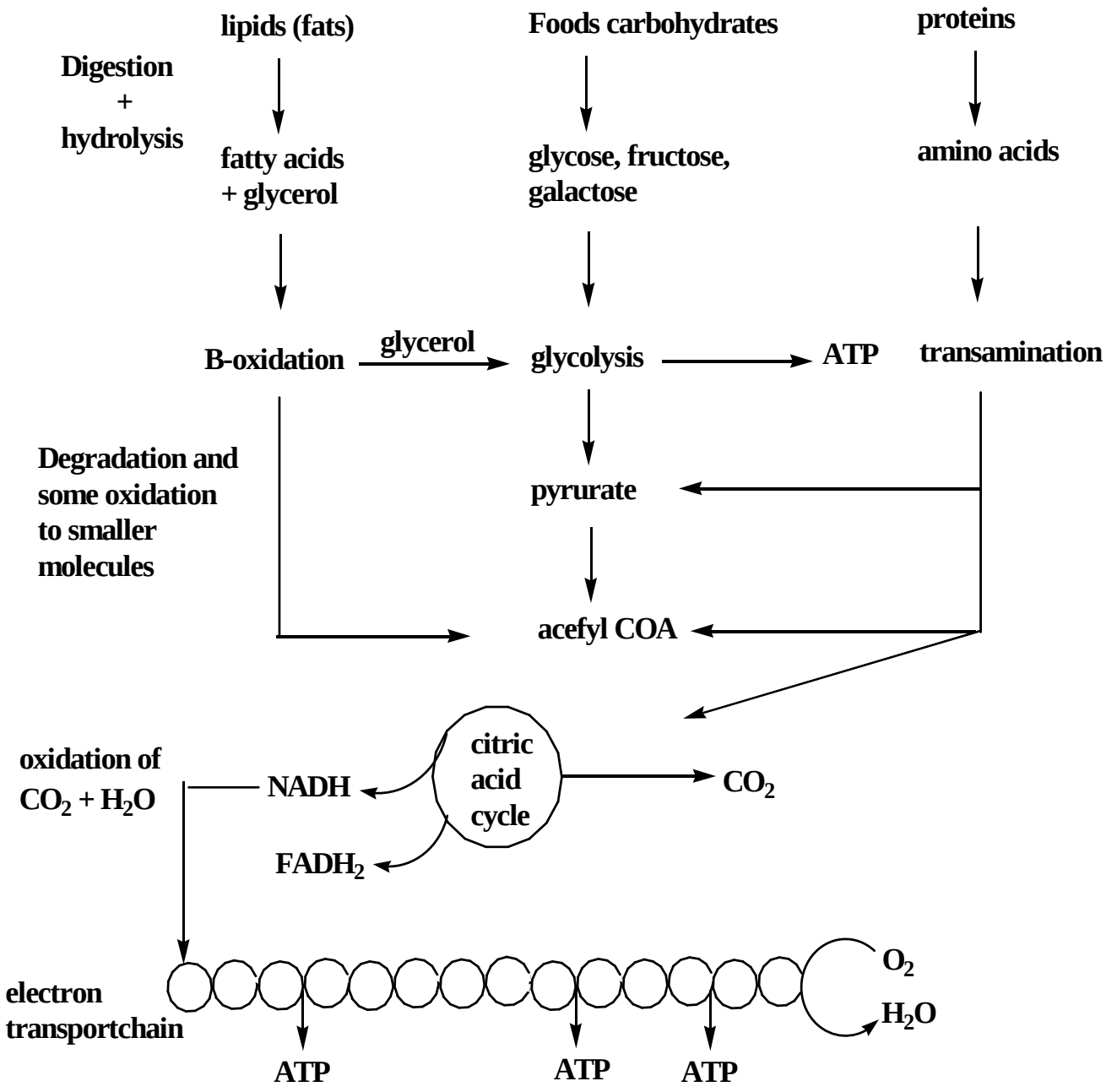


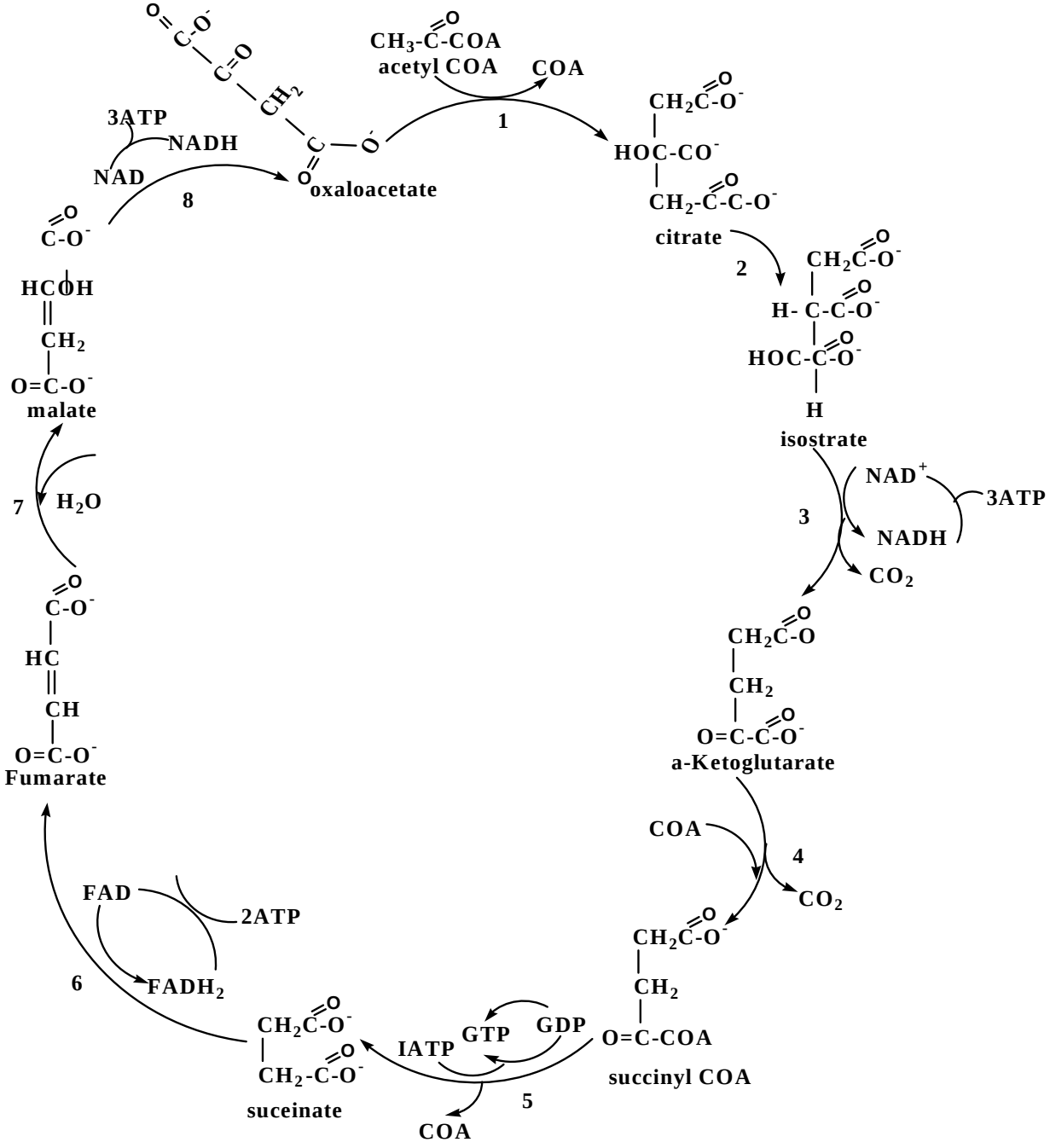
Catabolic Reactions:

Catabolic reaction begin with digestion. The process of breaking down carbohydrates, fats and proteins in the intestinal tract. The products, amino acids, fatty acids, and monosaccharide's, are absorbed into our cells where they are oxidized when we need energy. The energy released by catabolism is linked with the synthesis of ATP, which stores energy. Although different metabolic pathways are used to extract energy, their carbon, hydrogen, and oxygen atoms are eventually found in the oxidation products CO2 and H2O.

The Electron Transport chain:

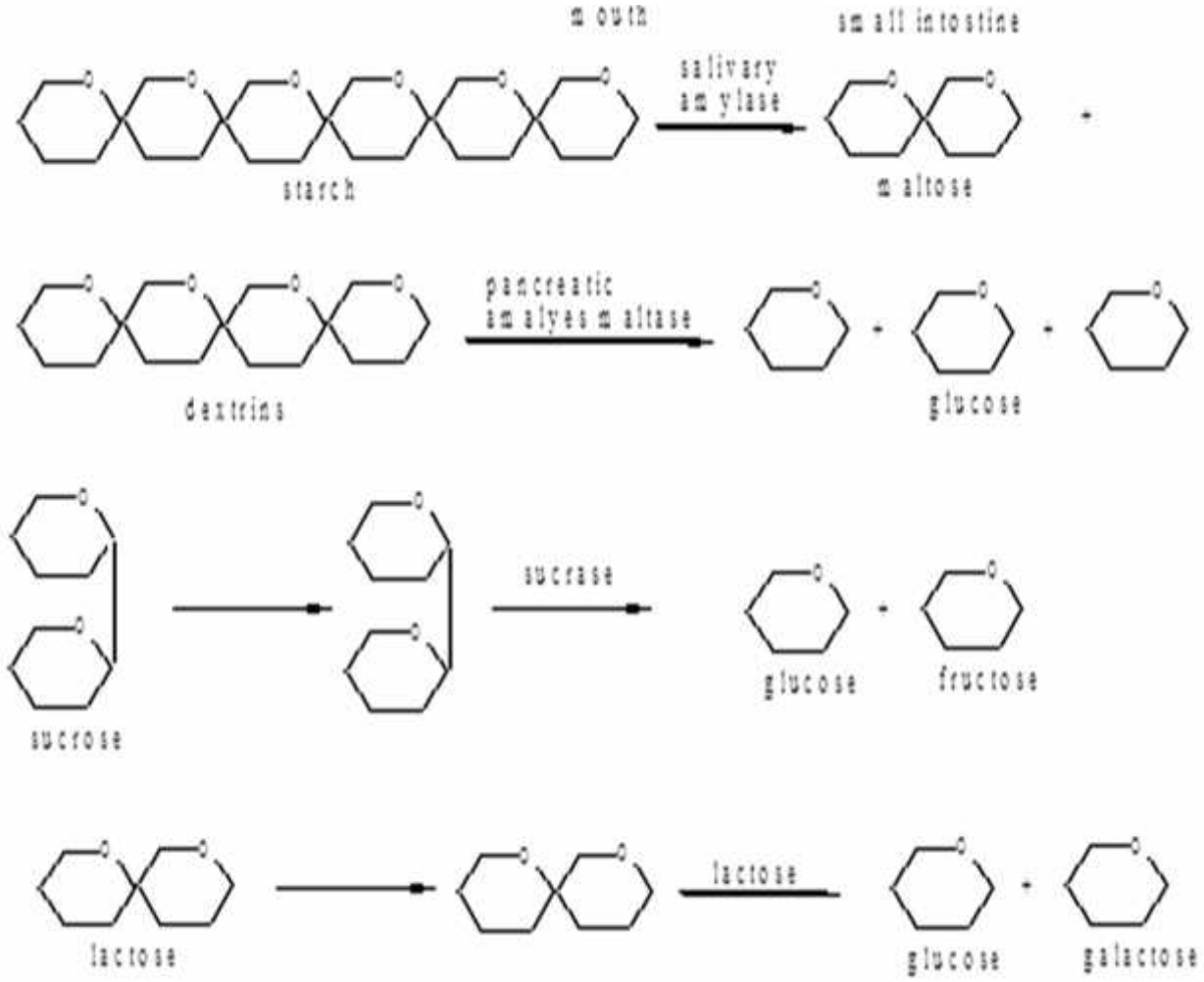


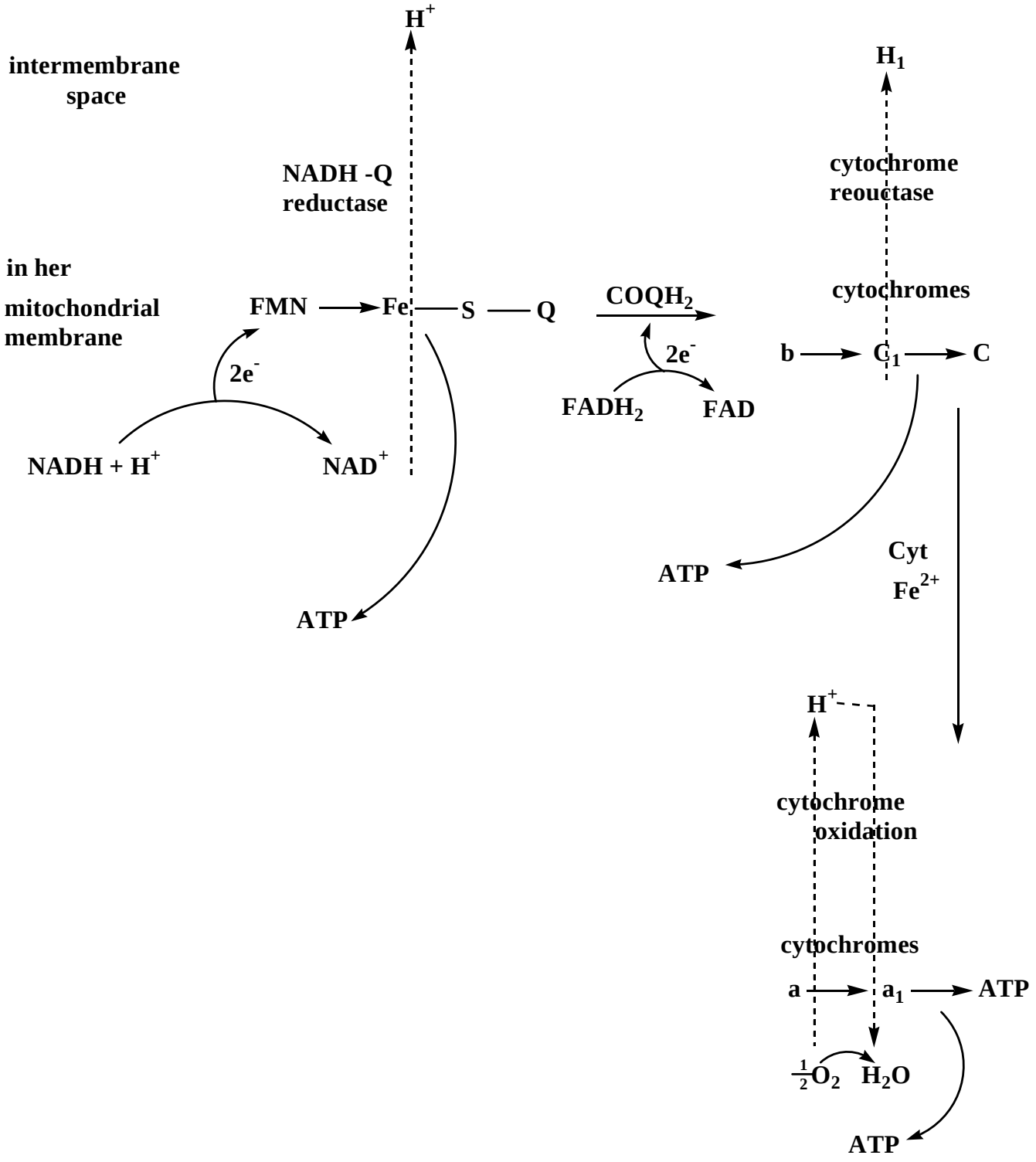
Citric acid cycle or Krebs cycle or (TCA) :-



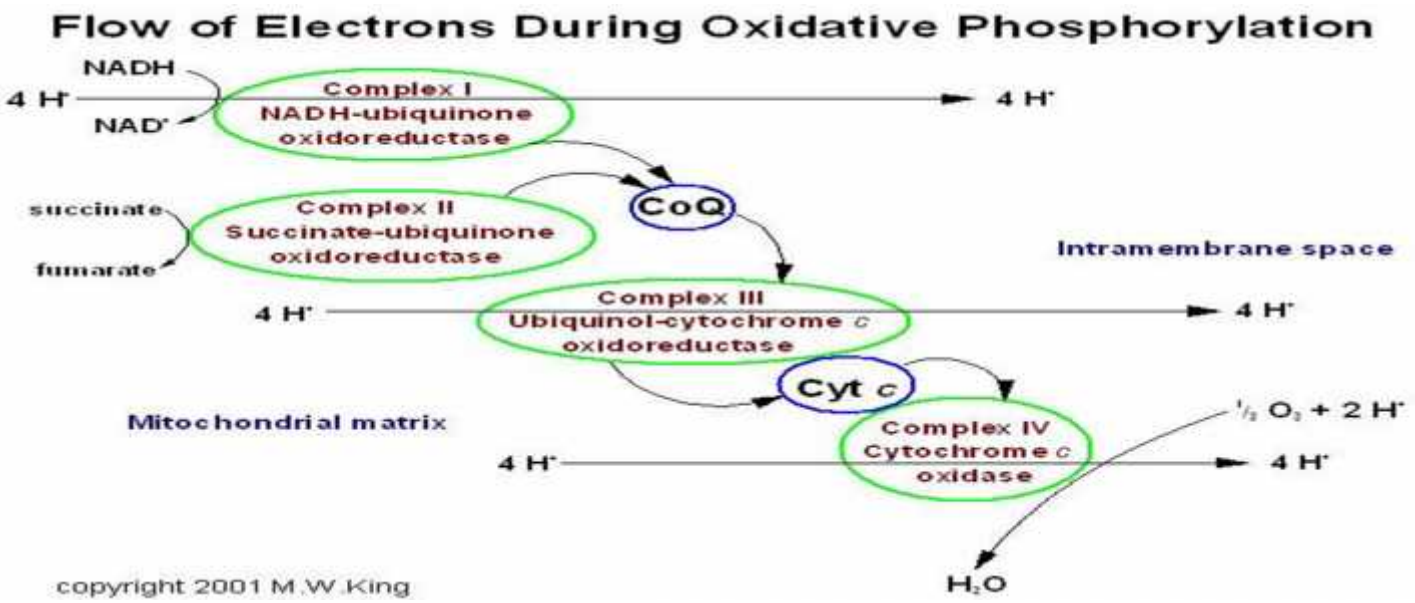
Digestion of Foods:

Digestion of carbohydrates:

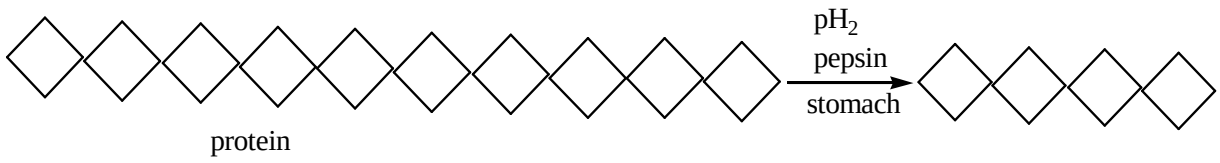


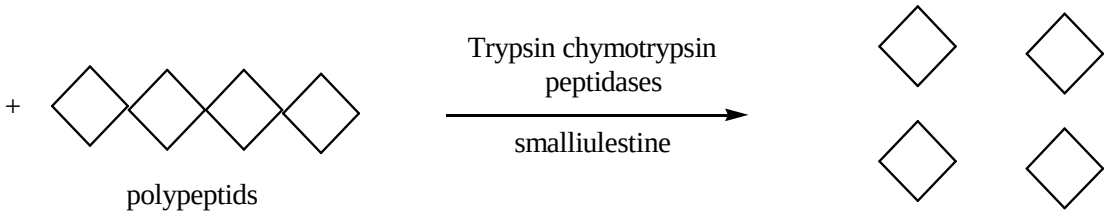

H+
intermembrane space
NADH -Q reductase
H1
cytochrome reouctase
in her
mitochondrial membrane
FMN
Fe
S
Q
COQH2
cytochromes
2e-
b
C1
C
FADH2
FAD
NADH + H+
NAD+
ATP
ATP
Cyt
Fe2+
H+
cytochrome oxidation
cytochromes
a
a1
ATP
½O2
H2O
ATP

-



Digestion of proteins:





Digestion of Lipids: