

Use of glucose in cell respiration to make ATP

1 molecule glucose

Glycolysis

byproduct 1 = 2 ATP
byproduct 2 = 2 NADH₂

Main product = 2 pyruvate, which goes on to next step IF Oxygen present!

If NO Oxygen:

Fermentation (anaerobic)

byproduct 1 = 2 ATP
byproduct 2 = lactic acid (lactate)

Pyruvate conversion

byproduct 1 = 2 NADH₂
byproduct 2 = 2 CO₂

Main product = 2 Acetyl CoA, which goes on to next step.

Kreb's cycle

byproduct 1 = 6 NADH₂
byproduct 2 = 2 FADH₂
byproduct 3 = 4 CO₂
byproduct 4 = 2 ATP

Electron transport chain

byproduct 1 = 10 NAD
byproduct 2 = 2 FAD
byproduct 3 = 12 H₂O
byproduct 4 = 30-32 ATP

How much ATP made? 31 - 36

O₂ present