



Lipid transport

COMPARING ATP FROM VARIOUS SOURCES

Metabolic Pathway	Substrate(s) Oxidized	Products	ATP
Glycolysis	1 Glucose	2 Pyruvate, 2 ATP, 2 NADH	5 ATP
Oxidation	2 Pyruvate	2 Acetyl CoA, 2 NADH, 2CO ₂	5 ATP
Citric acid cycle	2 Acetyl CoA	6 NADH, 2 FADH ₂ , 2 ATP, 4CO ₂	20 ATP
Complete oxidation	Glucose + 6O ₂ →	6CO ₂ + 6H ₂ O + 36 ATP	30 ATP

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ATP's per carbon atom in:

Glucose: 30 ATP / 6 C = 5 ATP / C
 Myristic acid: 92 ATP / 14 C = 6.6 ATP / C
 Glycerol trimyristate: 292.5 ATP / 45 C = 6.5 ATP / C

Fatty acids give more energy than glucose because they start off in a more reduced state. Remember oxidation = energy and fatty acids require more oxidation.