

Ketone Bodies

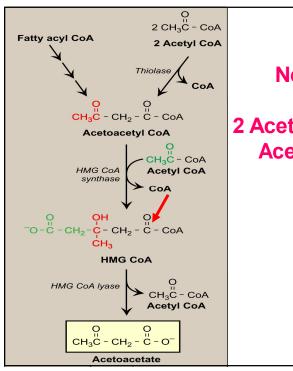
• Synthesis:

In Liver

• Precursor:

Acetyl CoA

- At high rate during:
 - -Fasting
 - Uncontrolled Diabetes Mellitus



Net Reaction ??

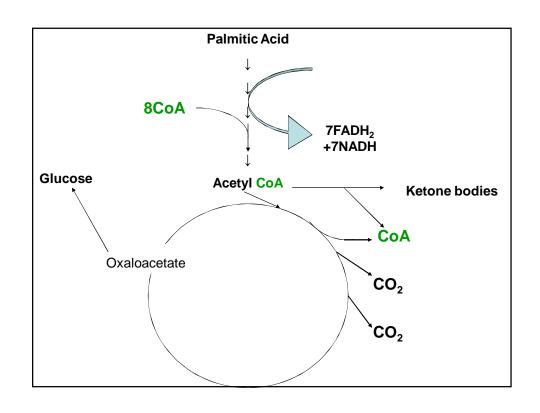
2 Acetyl CoA → Acetoacetate + 2 CoA

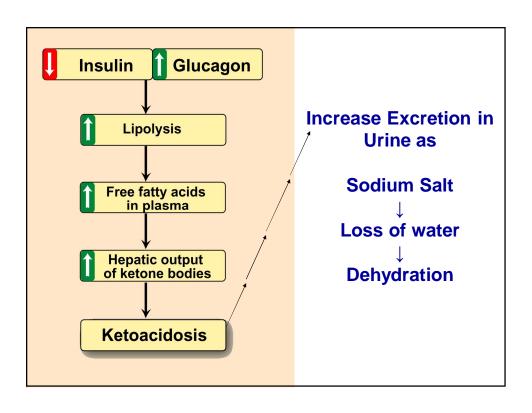
Net Reaction

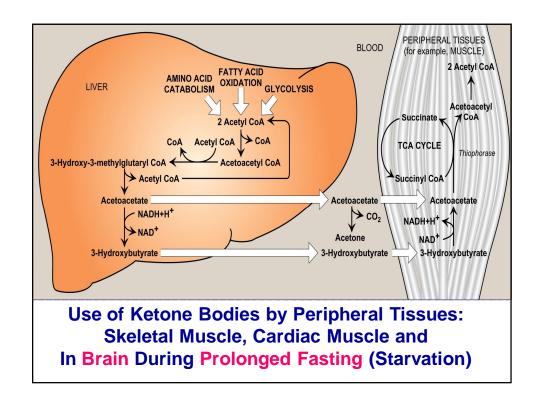
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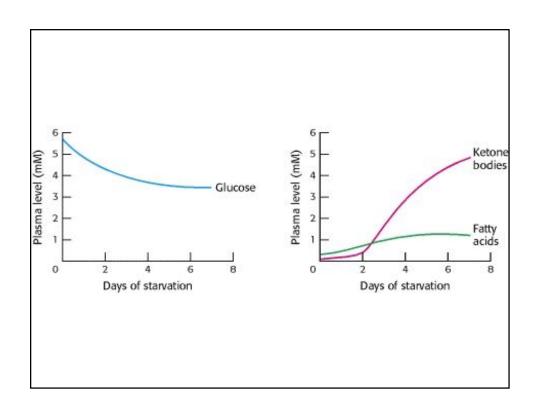
Advantage (Purpose)?

- For the liver
- For the tissues









Fuel metabolism in starvation

	Amount formed or consumed in 24 hours (grams)	
Fuel exchanges and consumption	3rd day	40th day
Fuel use by the brain		
Glucose	100	40
Ketone bodies	50	100
All other use of glucose	50	40
Fuel mobilization		
Adipose-tissue lipolysis	180	180
Muscle-protein degradation	75	20
Fuel output of the liver		
Glucose	150	80
Ketone bodies	150	150