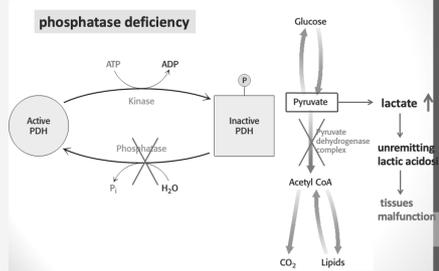


### Disruption of TCA cycle may cause health issue



### phosphatase deficiency

pyruvate dehydrogenase is always phosphorylated and thus inactive.

Consequently, glucose is processed to lactate rather than acetyl CoA.

This condition results in unremitting lactic acidosis—high blood levels of lactic acid.

. In such an acidic environment, many tissues malfunction, most notably the central nervous system.

Nausea, Vomiting, Abdominal pain, Anxiety...

### Summary

Pyruvate Dehydrogenase Links Glycolysis to the Citric Acid Cycle

**Oxidative decarboxylation, from pyruvate to acetyl CoA, Mt**

The Citric Acid Cycle Oxidizes Two-Carbon Units

**8 steps, 3 irreversible steps, 3 NADH, 1 FADH<sub>2</sub>, 1 ATP, 2 CO<sub>2</sub>**

Entry to the Citric Acid Cycle and Metabolism Through It Are Controlled

**PDH, isocitrate dehydrogenase, alpha-Ketoglutarate dehydrogenase**

The Citric Acid Cycle Is a Source of Biosynthetic Precursors

**Citrate, alpha-ketoglutarate, succinyl CoA, oxaloacetate**



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