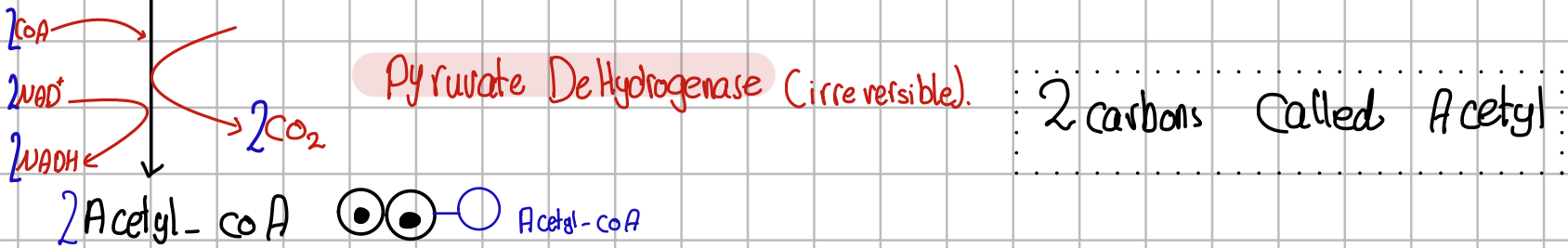


Acetyl-CoA formation

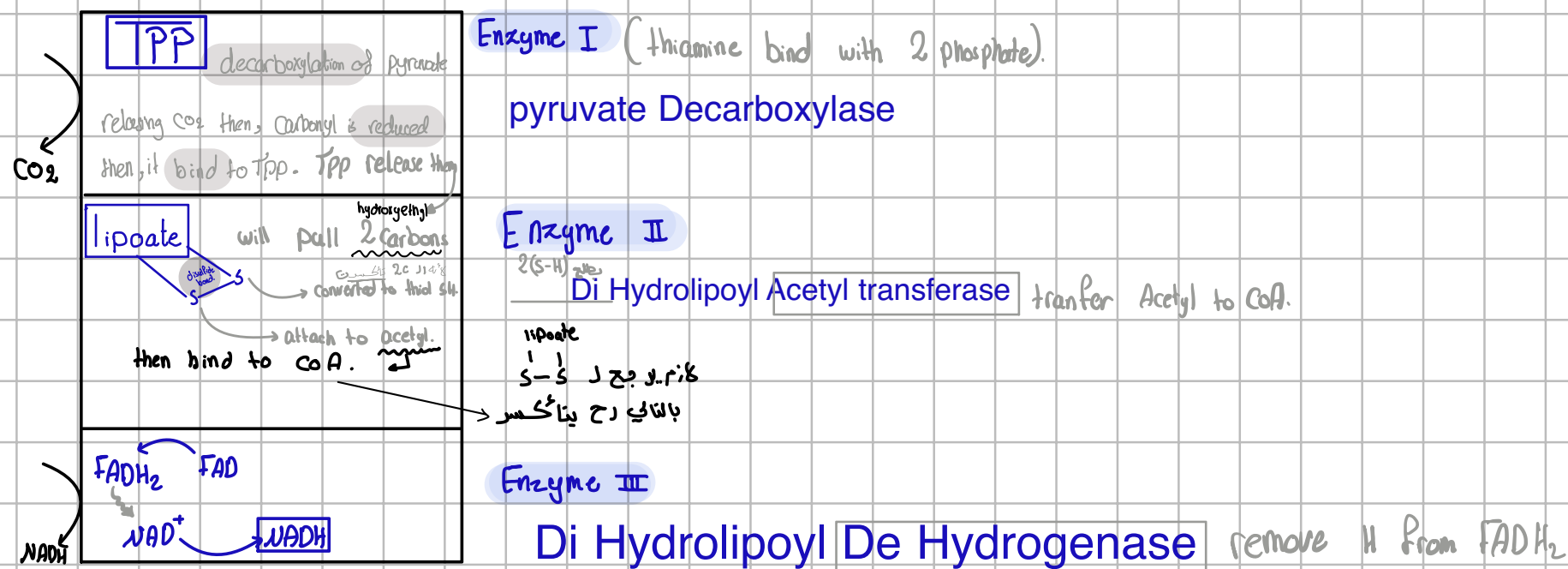
2 Pyruvate (precense in cytosol).

O_2 enzyme

2 Pyruvate (precense in mitochondria)



pyruvate DeHydrogenase



* This enzyme heavily regulated by Allosteric regulator (bind directly to enzyme).
AS = $NADH$, Acetyl-coA.

Inhibitor 1: enzymes

1) Pyruvate D.H Kinase adding (P) to enzyme one → inhibit the enzyme.

So this enzyme inhibit ATP production.

when it get activated? $\uparrow ATP$, $\uparrow NADH$, $\uparrow Acetyl\ CoA$

when it get inhibited? $\uparrow ADP$, $\uparrow Pyruvate$

2) Pyruvate D.H phosphatase removing (P) to enzyme one → active the enzyme.

Ca^{+2} activate this enzyme to stimulate making ATP so muscle can contract.

INSULIN also active this enzyme.

* Deficiency

thiamine deficiency → cause severe neurological disease