

Metabolism of other sugars - Fructose

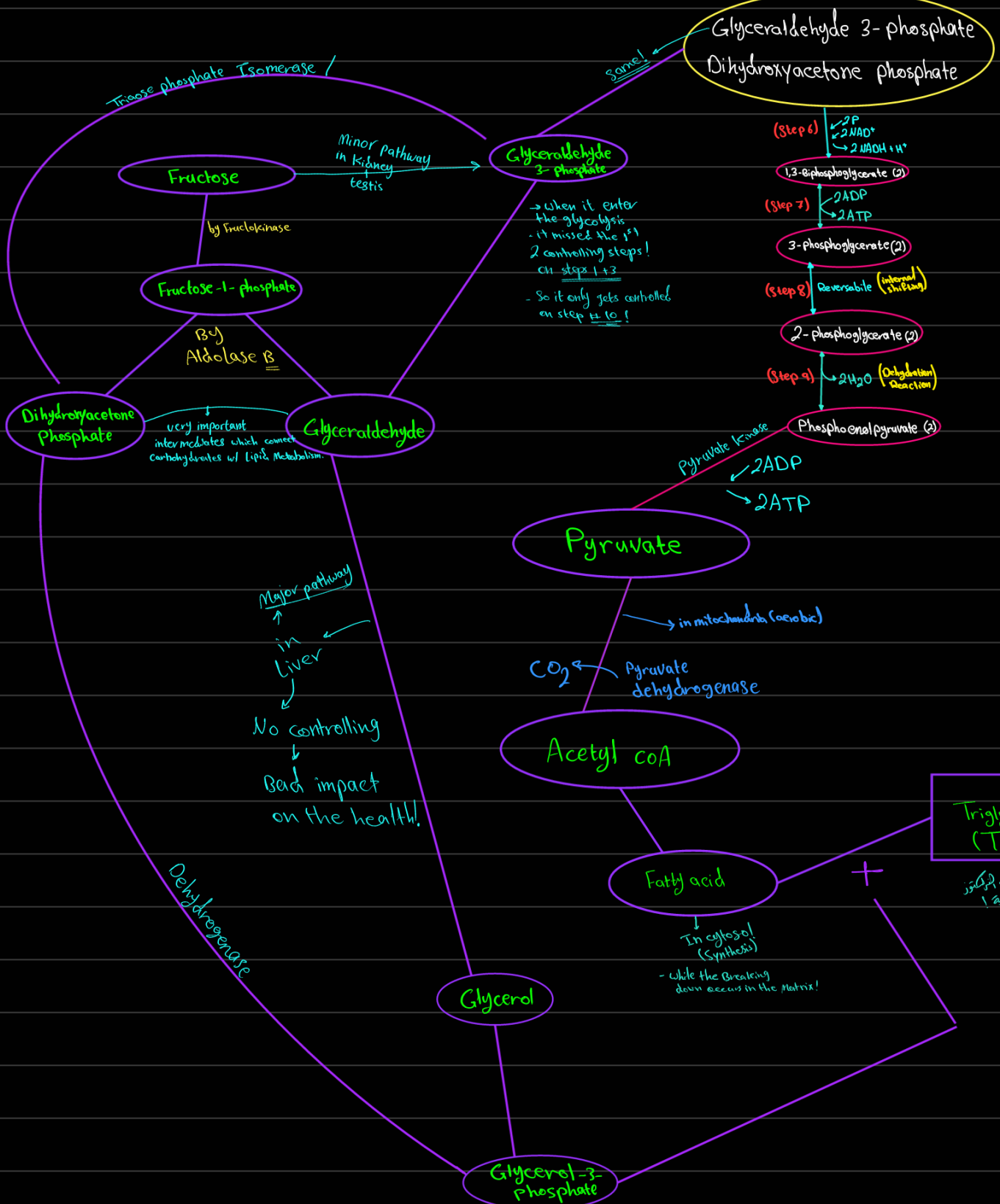
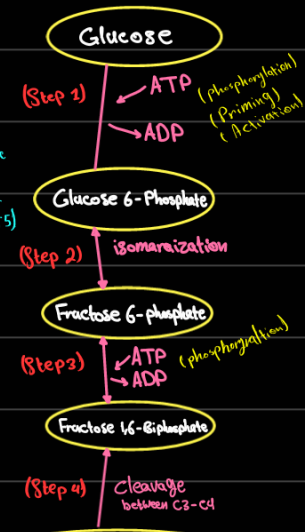
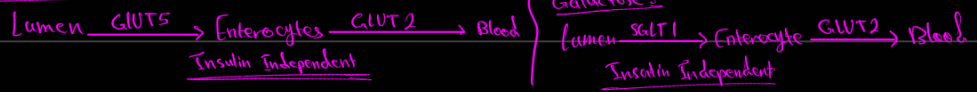
Abnormalities in Fructose Metabolism

- Essential fructosuria:** Deficiency of the hepatic fructokinase enzyme. (No treatment required) leads to incomplete metabolism of fructose in the liver excretion of the urine unchanged. Asymptomatic (benign condition).
- Hereditary fructose intolerance:** Deficiency of the aldolase B enzyme which results in accumulation of fructose-1-phosphate. (severe condition) Symptoms: vomiting, Abdominal pain, Hypoglycemia, Jaundice, Hemorrhage, Hepatomegaly and renal failure. Treatment: limiting fructose intake.

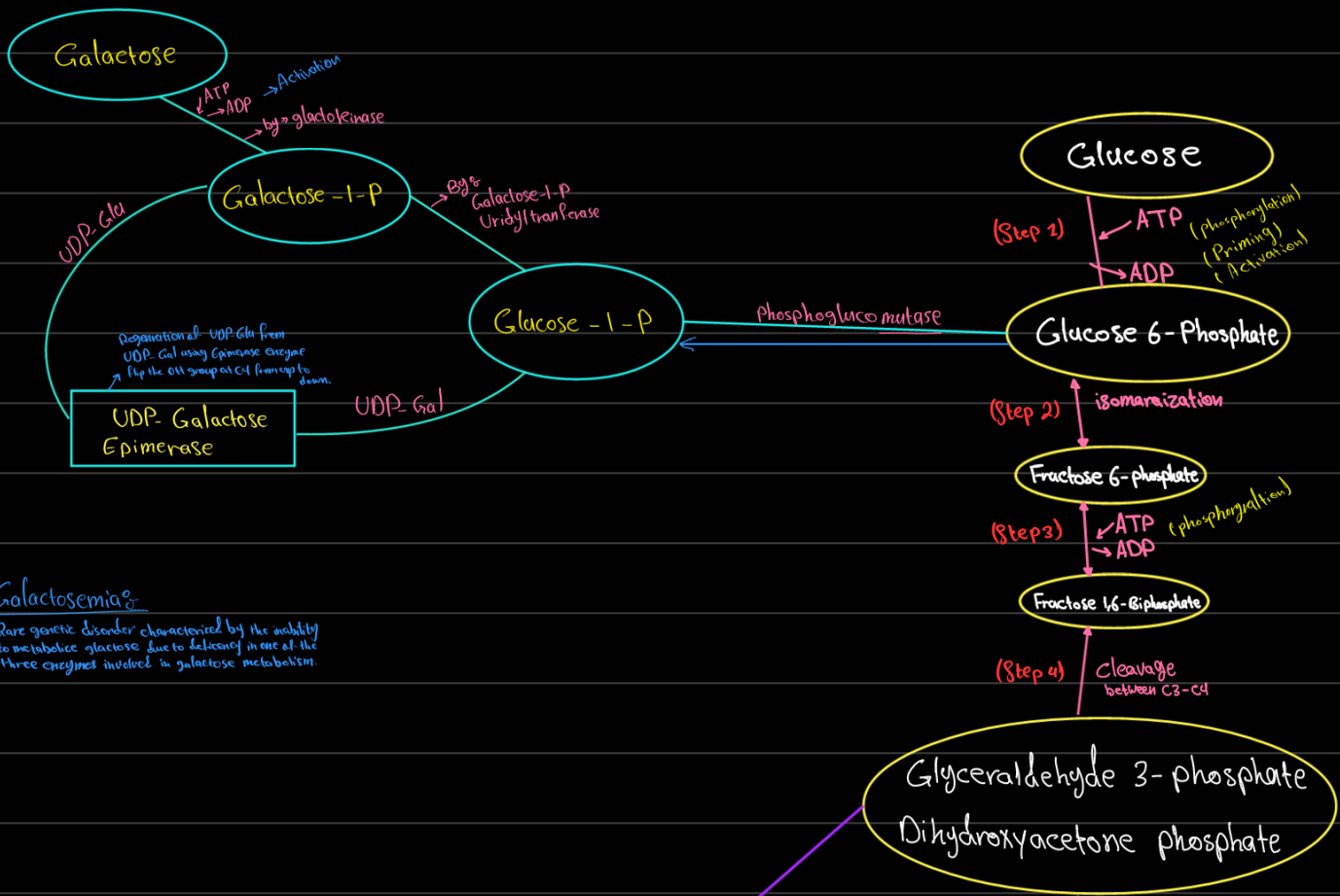
Dietary Fructose Intolerance: also known as fructose malabsorption, due to impaired absorption of fructose from small intestine as a result of deficiency in fructose carriers (GLUT5).
Symptoms: 1. Abdominal pain, 2. Cramps, 3. Diarrhea, 4. Bloating, 5. Flatulence, 6. Nausea.

IV infusion of fructose would make the liver so busy by trapping the Pi and phosphorylation of fructose by fructokinase 1 and its lipogenic.

Fructose Absorption



Triglycerides (TAG)
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Galactosemia

Rare genetic disorder characterized by the inability to metabolize galactose due to deficiency in one of the three enzymes involved in galactose metabolism.

