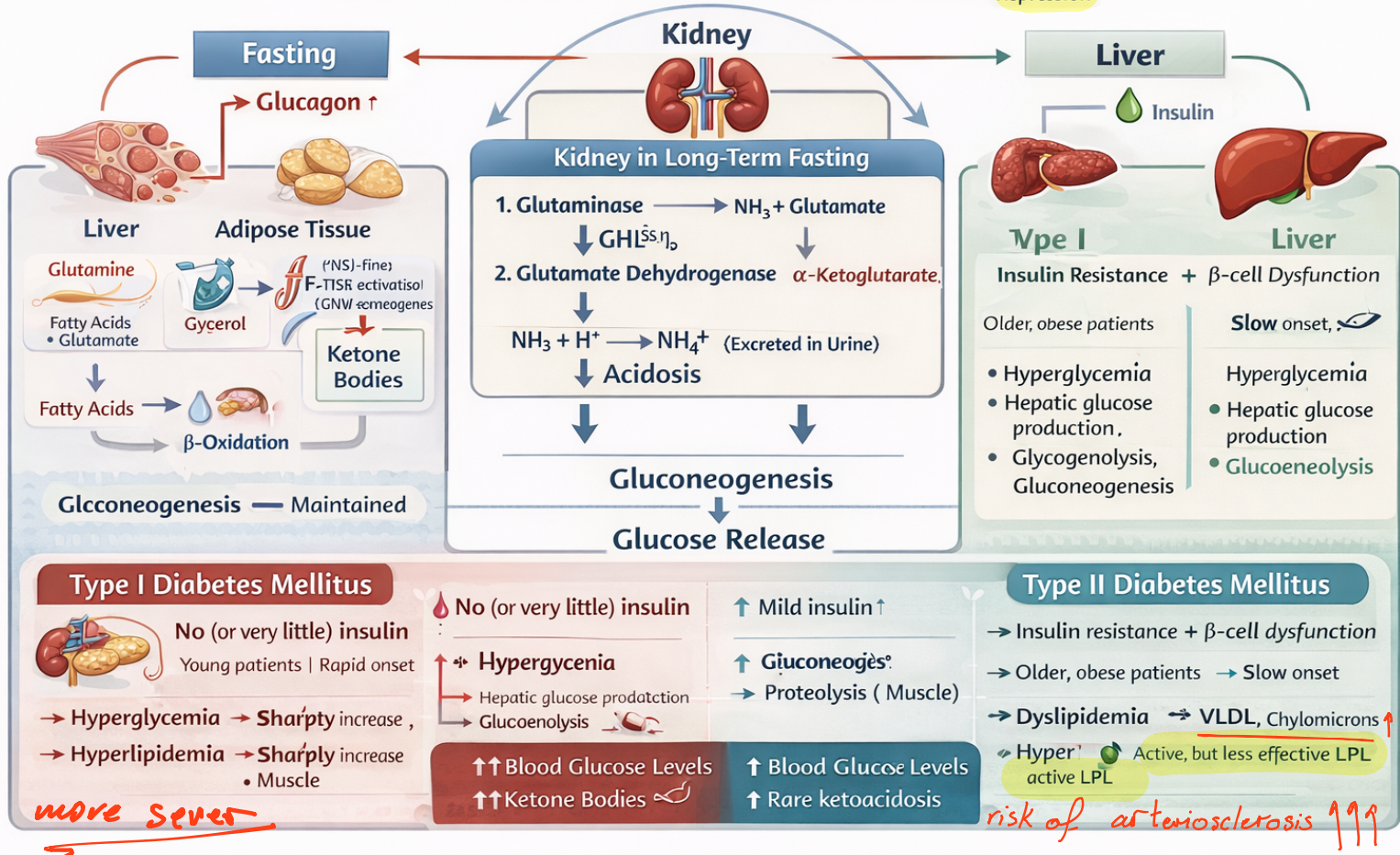


Final Metabolic Overview: Fasting & Diabetes Mellitus

- 1) Substrates
- 2) Allosteric Regulation
- 3) Covalent Modification
- 4) Induction / Repression



* Important Note about this picture :-

• insulin is an anabolic Hormon active JUST on well fed stat

↳ The over effect:

↳ ↑↑ Energy storage

↳ ↓↓ Energy break Down

• insulin → ⊖ HSL (Hormon sensitive lipolysis)

↳ TAG degradation ↑↑↑

* In Fasting → Glucagon - dominant

↳ I) Glucagon ↑↑

II) Lipolysis ↑↑

III) β -oxidation ↑↑

IV) Acetyl-CoA ↑↑

↳ Ketogenesis ↑

(maintain Blood sugar)

• Glucagon → ⊕ HSL

↳ TAG degradation ↑↑

I need Energy!

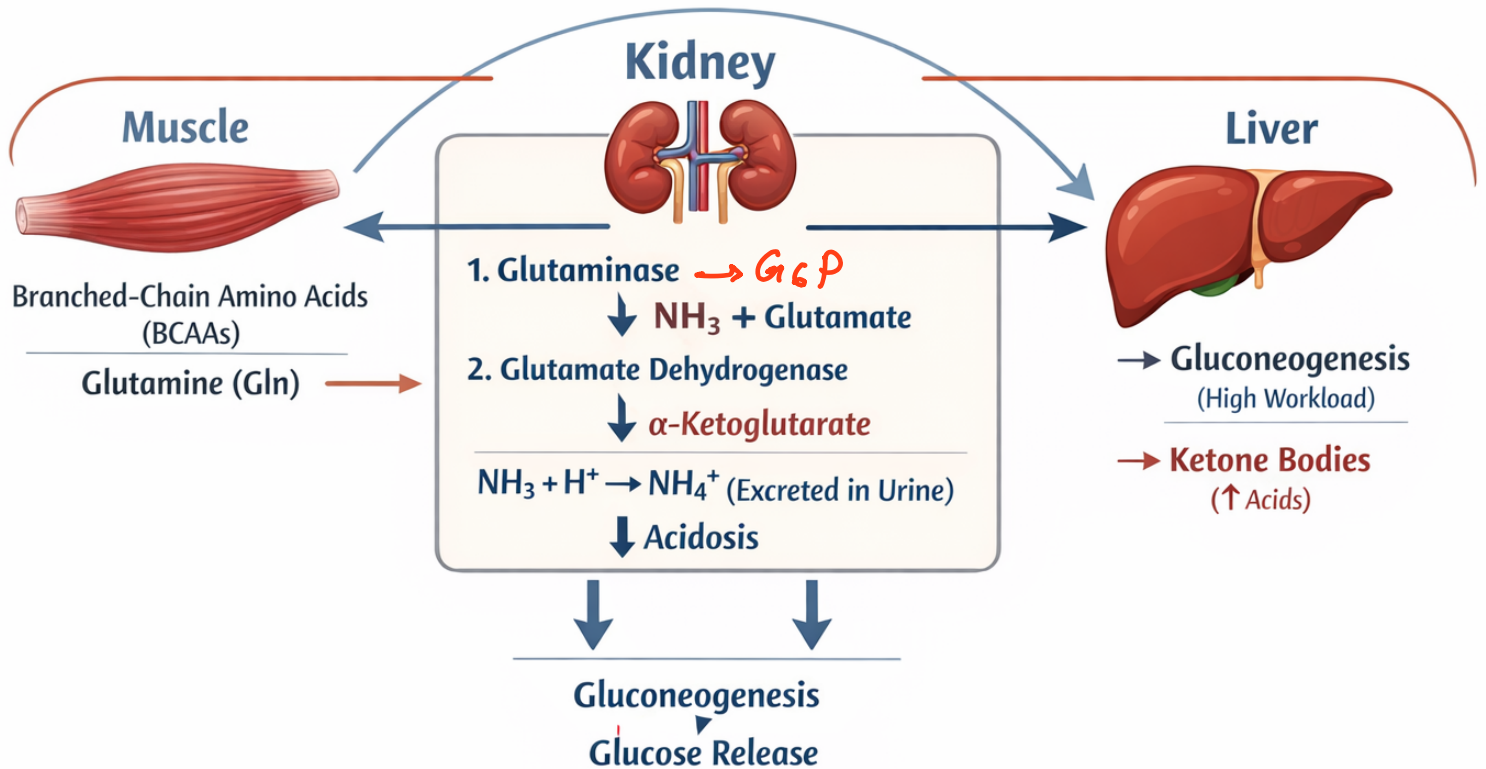
• Remember :- Muscle cells Don't Respond glucagon, glycogen used only for muscle activity

↳ No glucose to Blood

↳ Activated by exercise & epinephrin.

Long-Term Fasting

— Prolonged Starvation —



Energy saving $\rightarrow$ $\downarrow \downarrow$ urea cycle

$\downarrow \downarrow$ Acidosis

Good Luck Everyone
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Banani Al-Shaqier