

Improving Medical Students' Understanding of Glucose Metabolism

A Clinically Oriented Teaching Approach



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The Theory Disconnect

A

VS

B

Biochemical Theory

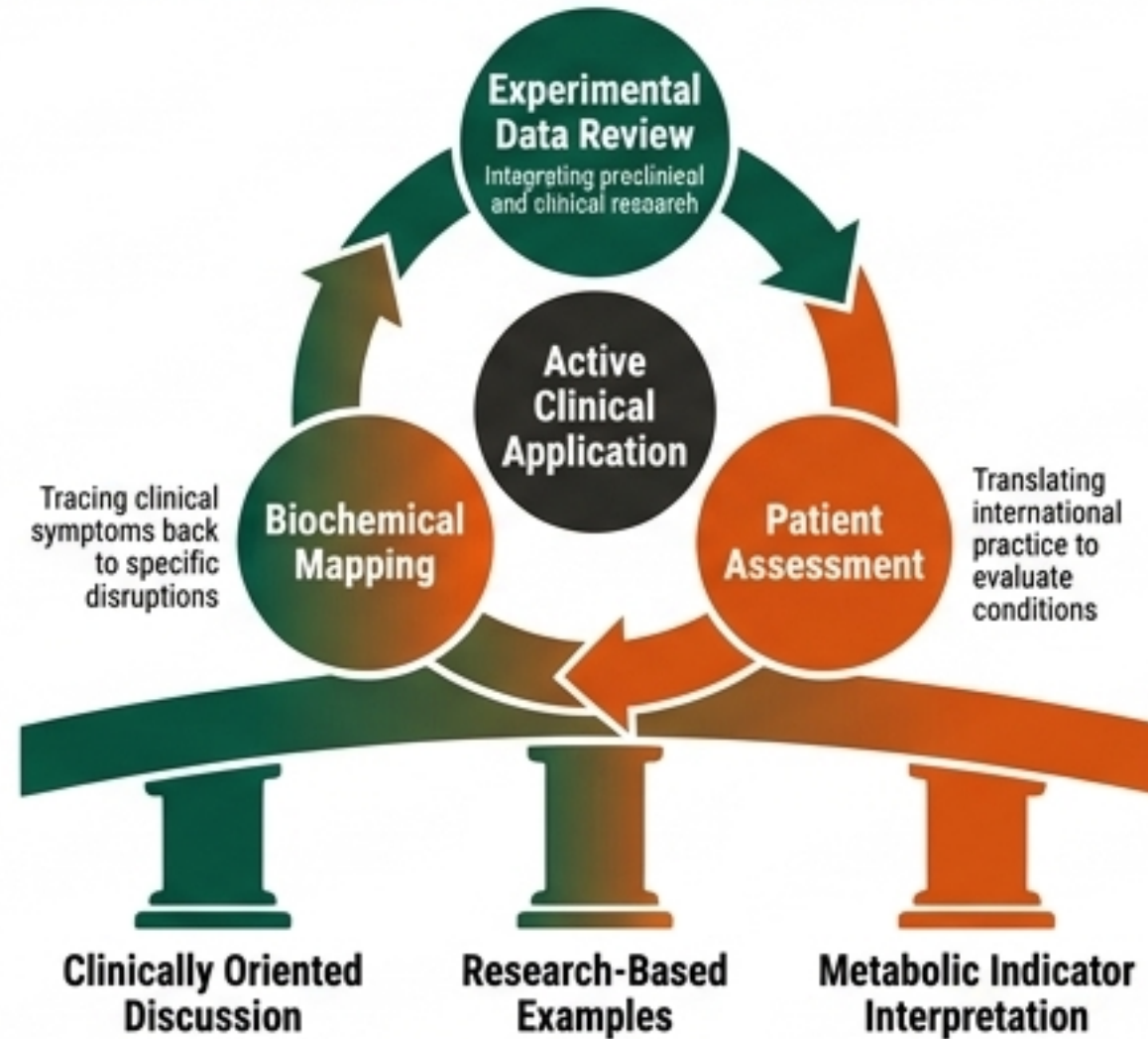
- Focuses on memorizing biochemical pathways.
- Treats glucose metabolism as an isolated, microscopic process.

Future Professional Activity

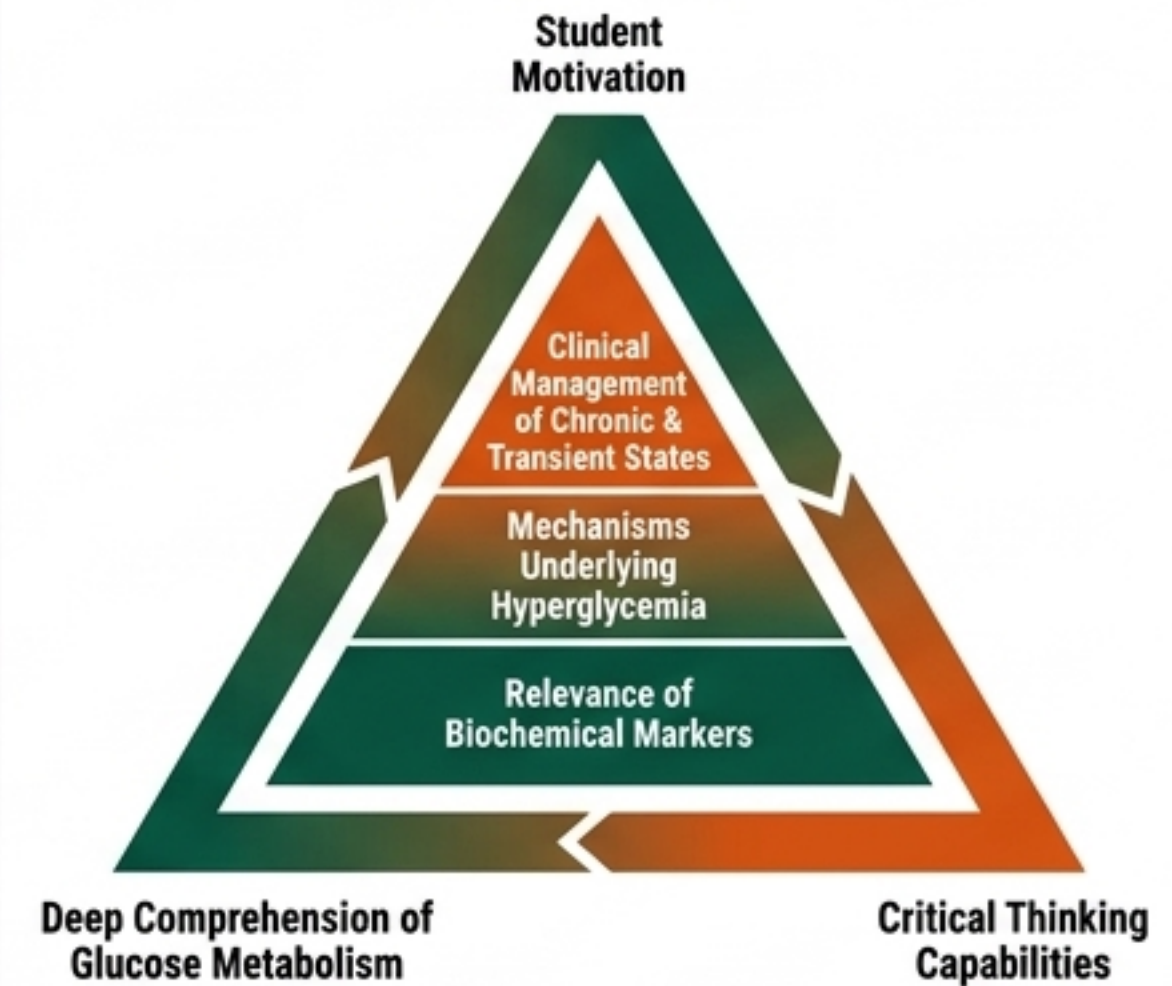
- Requires accurate diagnosis and treatment.
- Demands a systemic understanding of hyperglycemia's role in disease pathogenesis.

Providing theoretical knowledge alone fails to orient students toward the practical outcomes of medical practice.

The Applied Learning Engine



Scaffolding & Measured Mastery



Next Steps in Pedagogical Scaling

Phase 1: Refine Glucose Modules

Standardize modeled clinical situations for hyperglycemia.

Phase 2: Scale Methodologies

Apply the framework to lipid, protein, and other metabolic pathways.

Phase 3: Broad Curriculum Integration

Embed clinical data loops across all pre-clinical education.