Phases of Fasting: From Meal to Ketosis

The body moves from dietary glucose to burning fat to protect itself

0-6h

Postprandial (0-6 h)

dietary glucose · high insulin, low glucagon · glycogen is stored

6-24

Short fast (6-24 h)

hepatic glycogenolysis (glucagon and catecholamines) · glycogen lasts about 12-24 h

>24h

Prolonged fast (> 24 h)

gluconeogenesis from amino acids (alanine) and lipolysis

wks

Very prolonged fast (weeks)

ketosis: ketone bodies spare muscle protein

Insulin first
Store

Glucagon next
Mobilize: glycogen, then new glucose and fat

Not DKA
Fasting ketosis is physiological

Only the liver exports glucose to the blood: muscle lacks glucose-6-phosphatase and keeps its glycogen for itself