

Life cycle of Glucose in Humans

SMPatel

Sources of Glucose

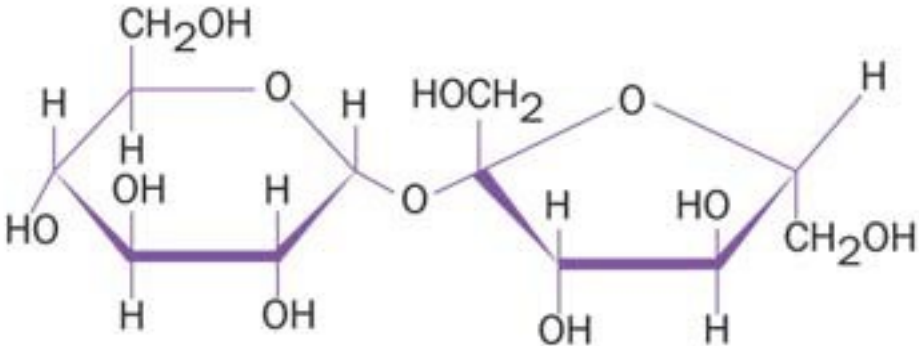
Makkhan Bhog **Agra Sweets**
Milk Palace



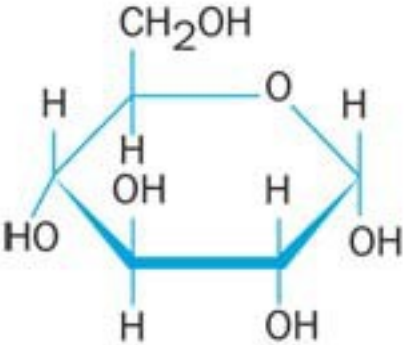
You are here

Sucrase, Intestinal Mucosa

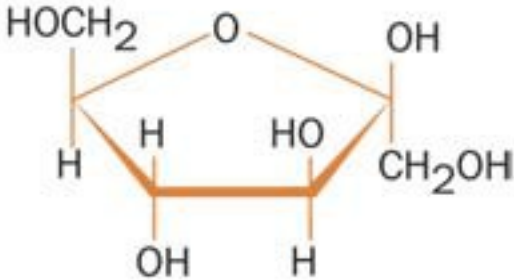
Sucrose



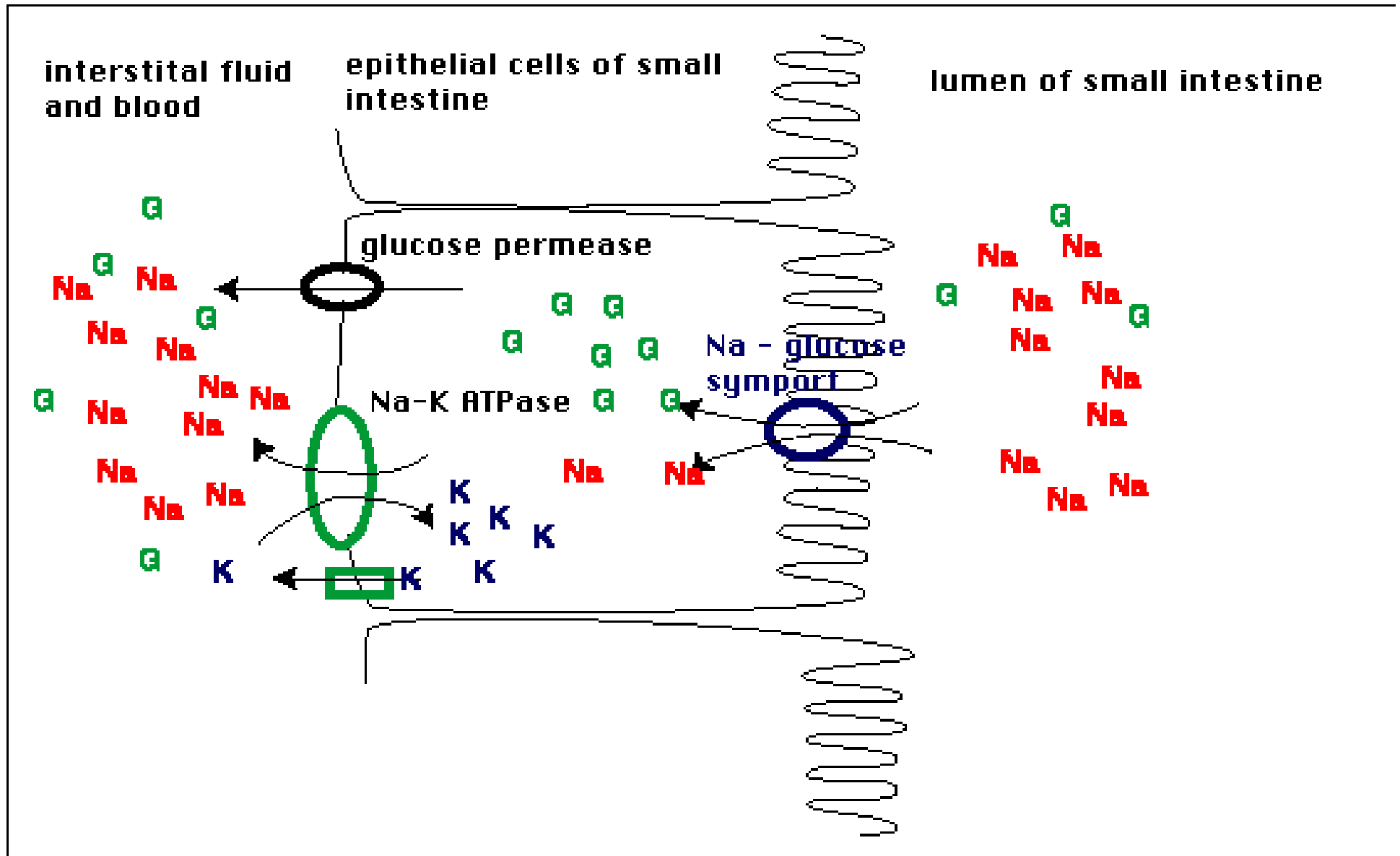
Glucose



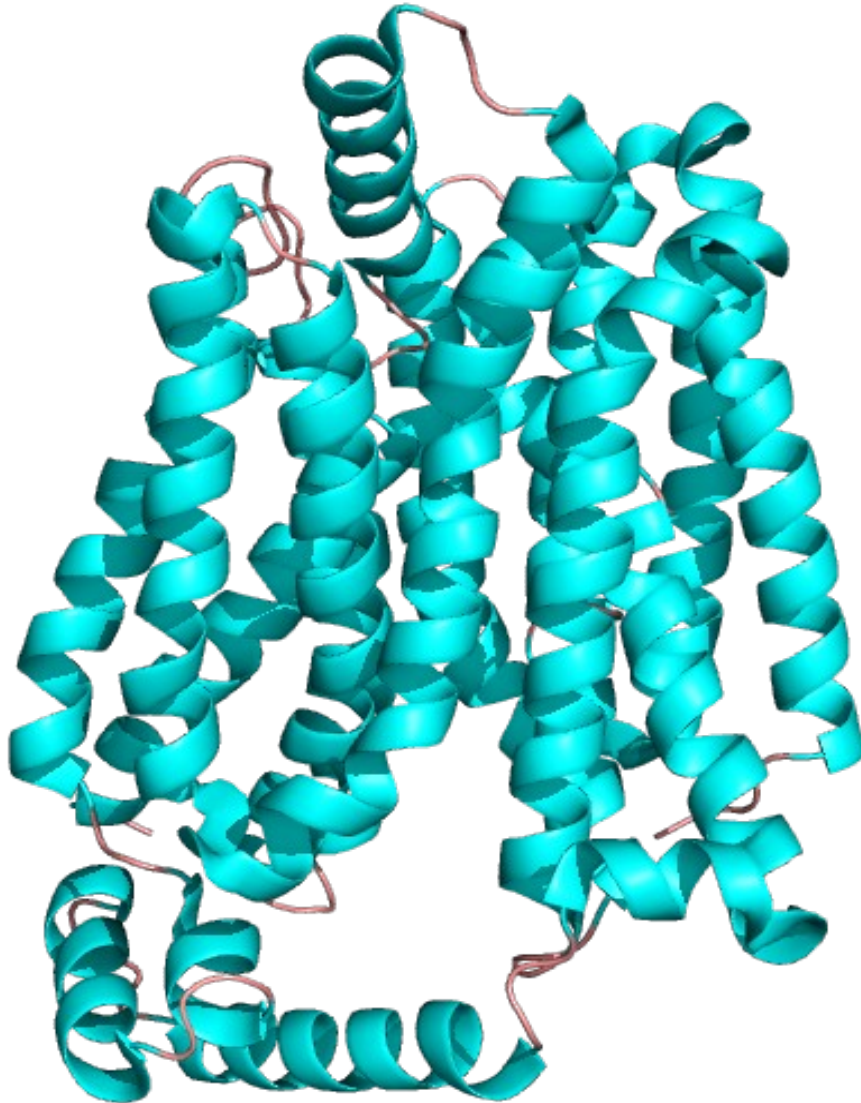
Fructose



Na⁺ Glucose Co-transporter



Glucose enter the cell

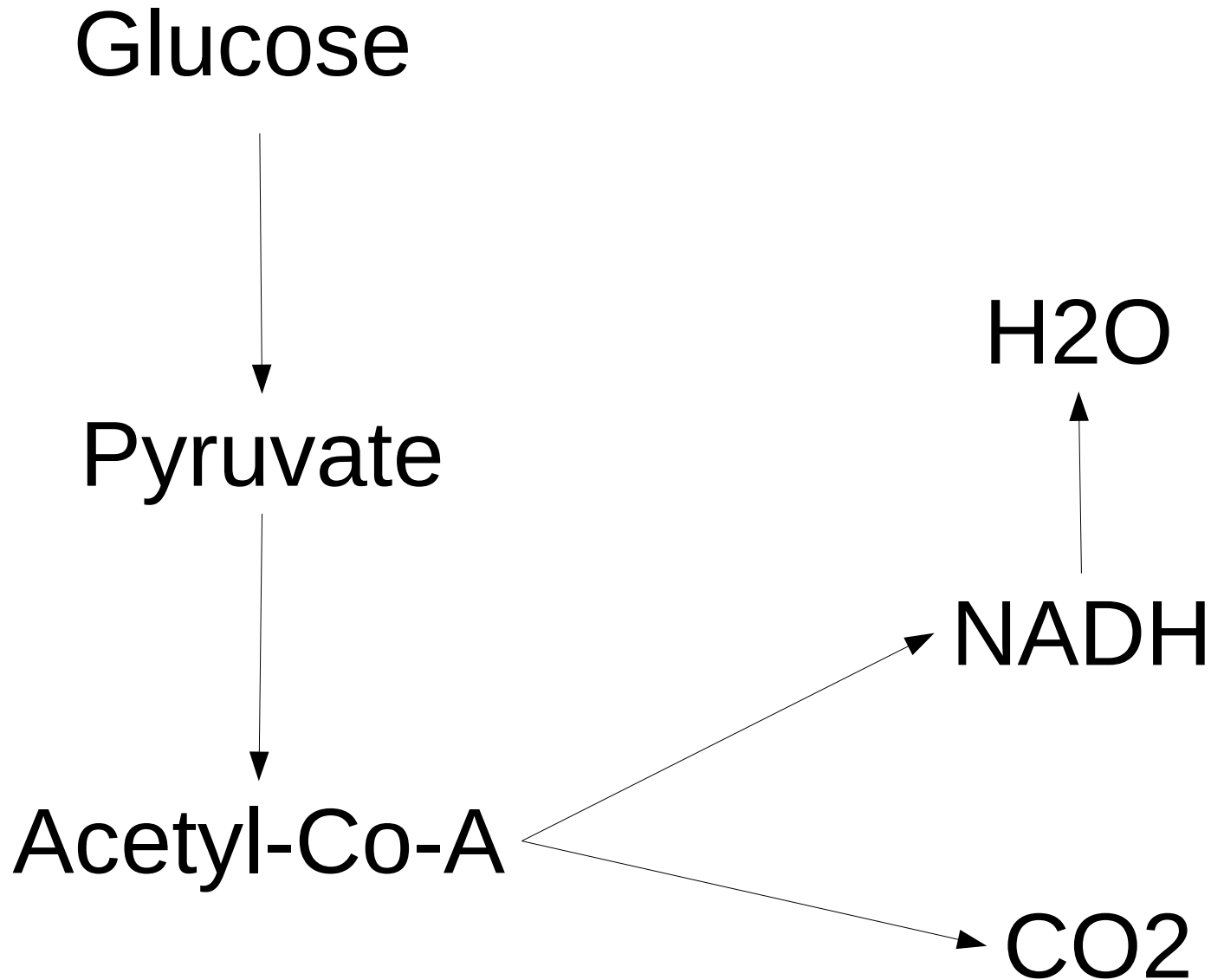


GLUT

Glucose
Transporter

Uniport

Glucose in the Cell



Glucose \rightarrow H₂O + CO₂

H₂O: How it leave Body?

CO₂: How it leave body?

How much water produced per day?

Requirement of energy kCal/day

gm of Glucose required

Glucose MW

mol of Glucose required

Glucose \rightarrow 6CO₂ + 6H₂O

mol Water required

H₂O MW

gm of H₂O required

How much water produced per day?

2000 kCal/day

$2000/4=500$ gm Glucose

Glucose MW 180

$500 \text{ gm} = 2.8 \text{ mol}$

Glucose \rightarrow $6\text{CO}_2 + 6\text{H}_2\text{O}$

$2.8 \times 6 = 16.8 \text{ mol Water}$

H₂O MW 18

$18 \times 16.8 = 300 \text{ gm}$

Glucose in the Cell

Glucose



Glycogen



Glucose

Glucose in the Cell

Glucose

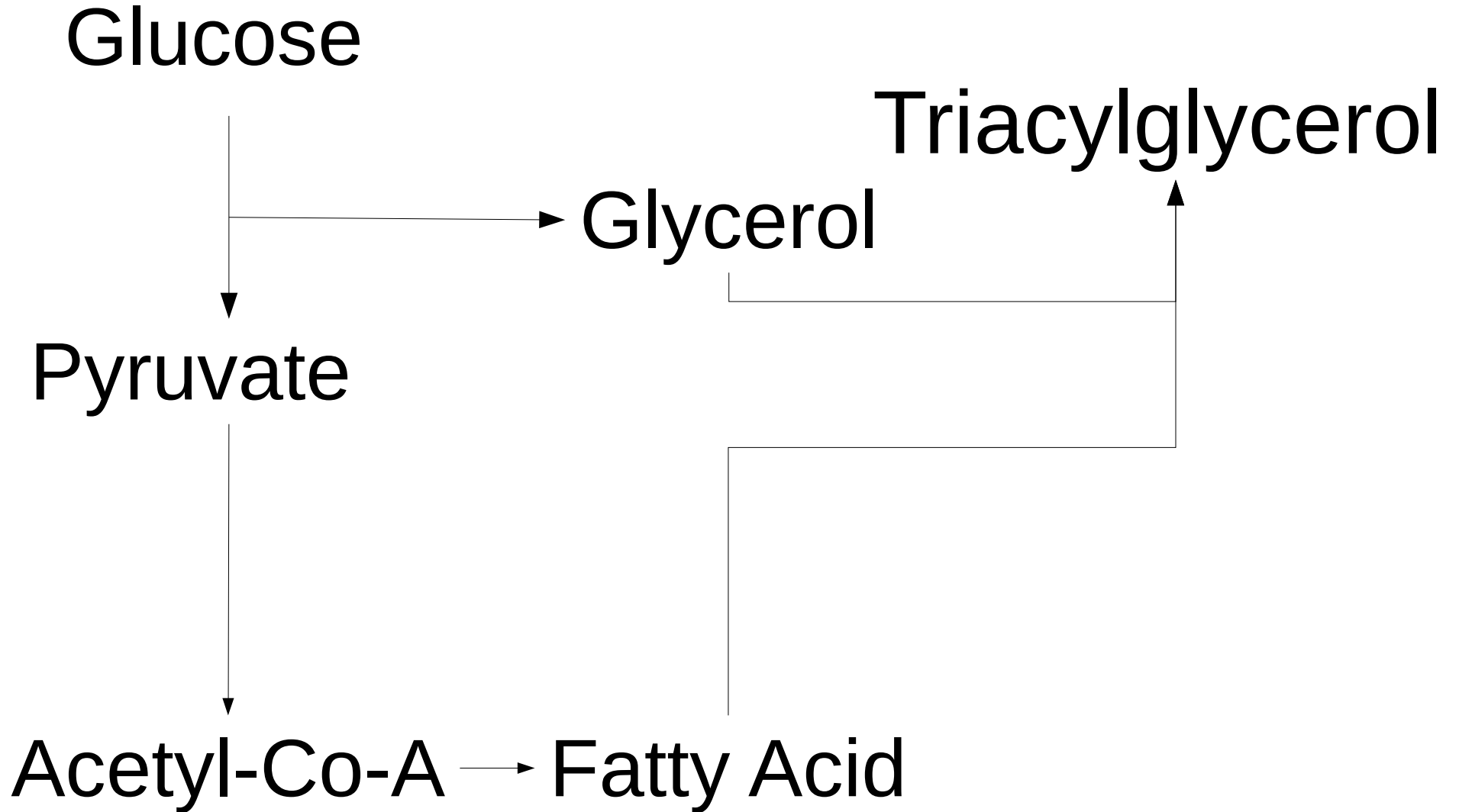


Glycogen

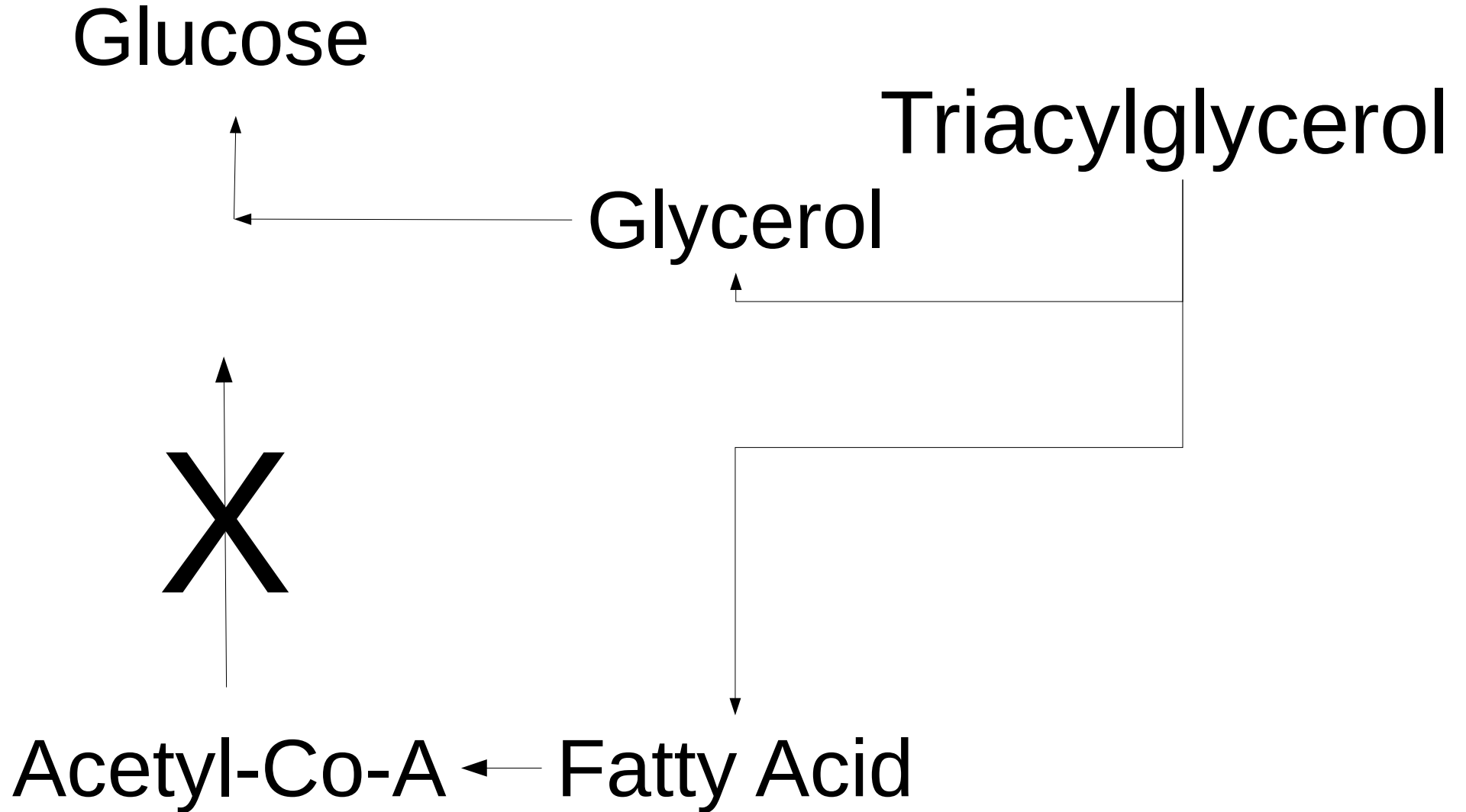


Glucose

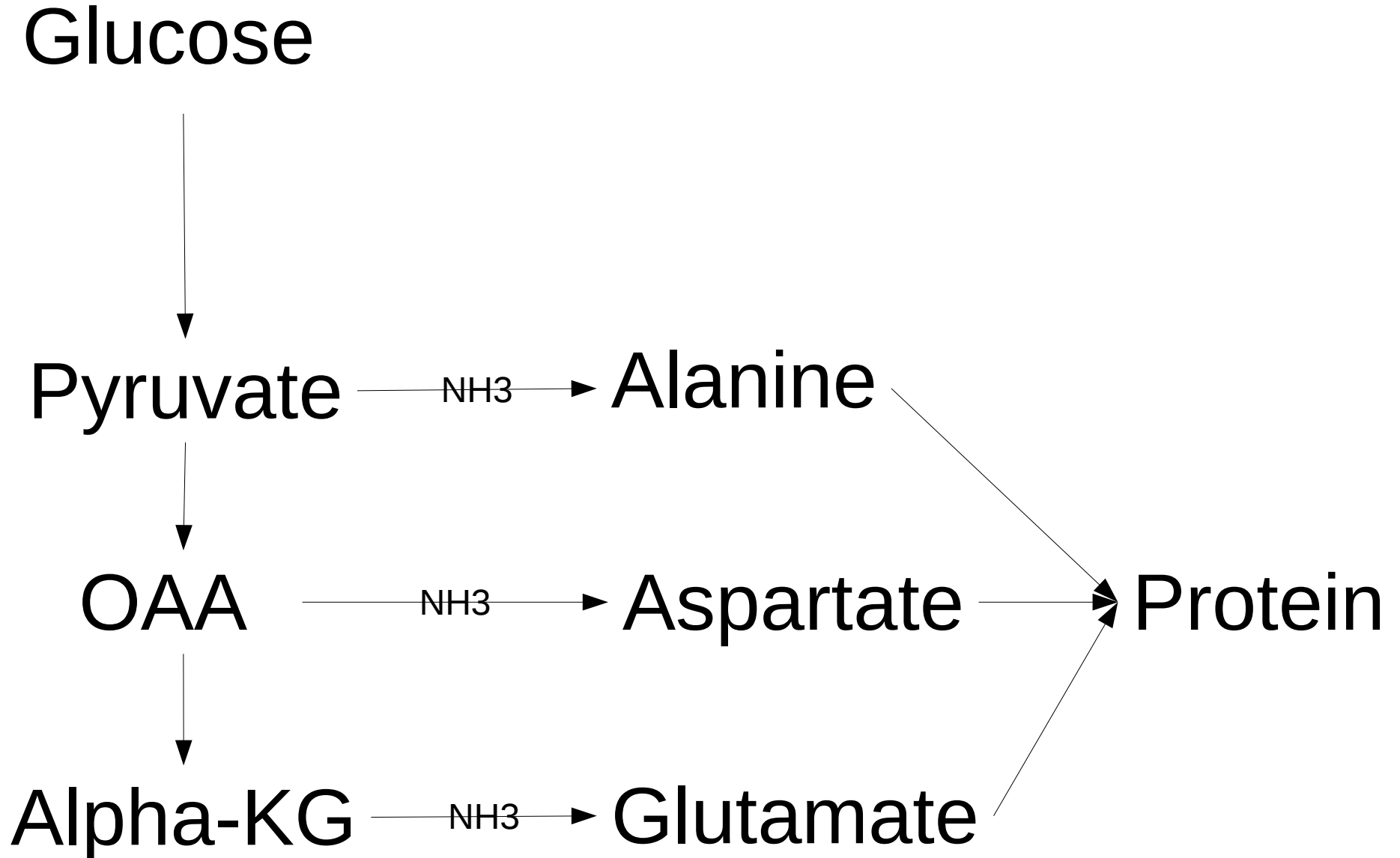
Glucose in the Cell



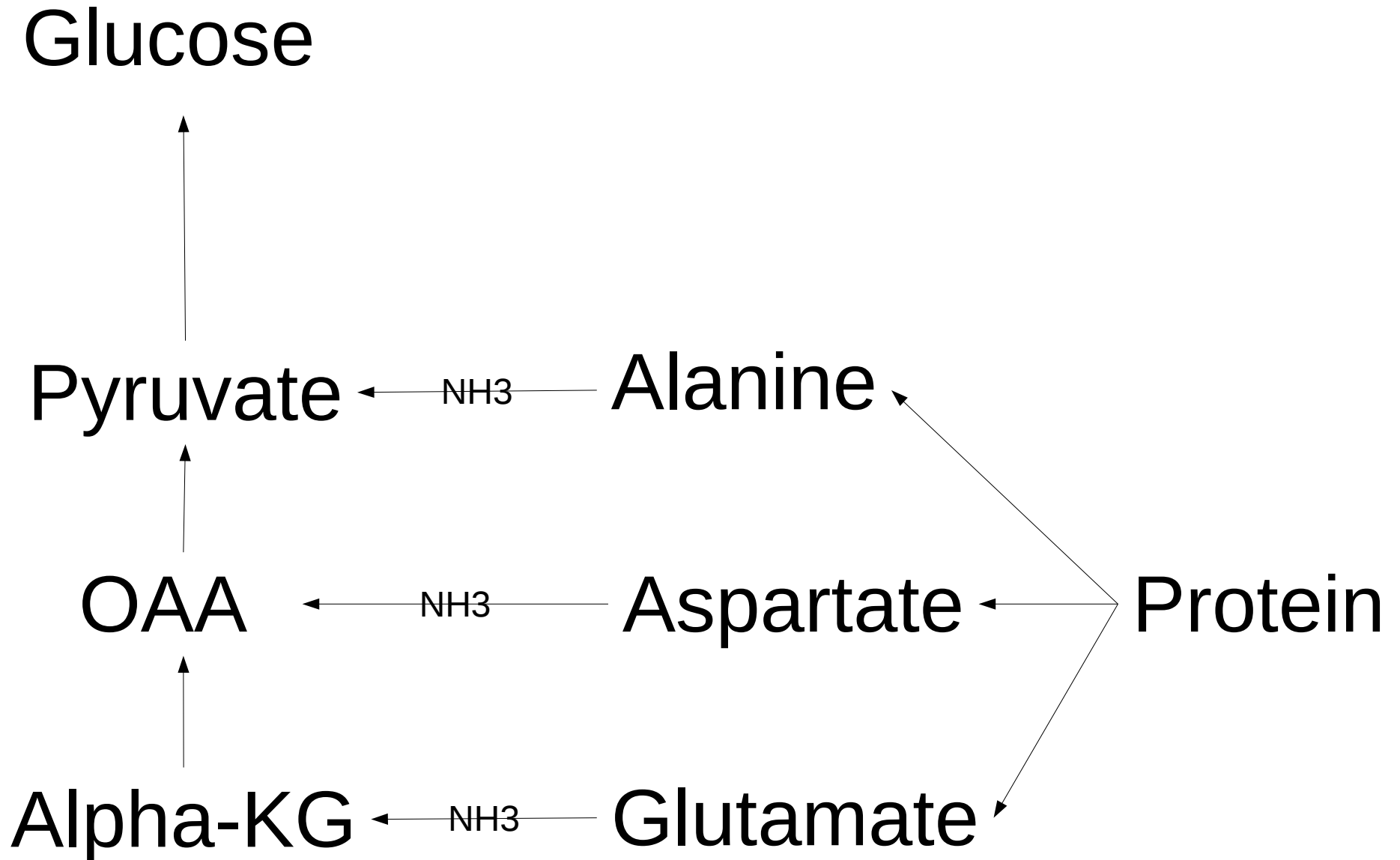
Glucose in the Cell



Glucose in the Cell



Glucose in the Cell



Food

Life of Glucose

Glucose

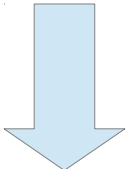
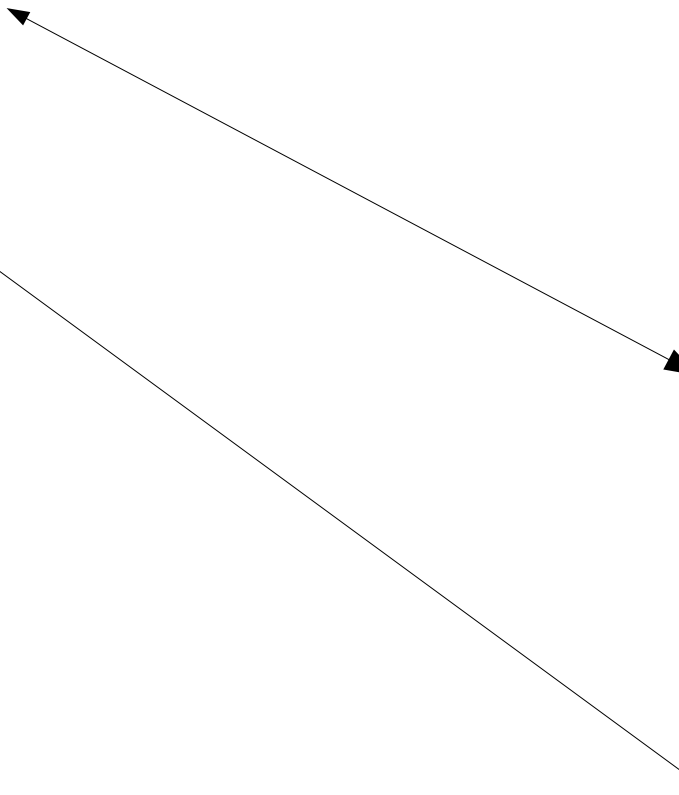
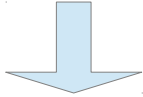
FA

Glycerol

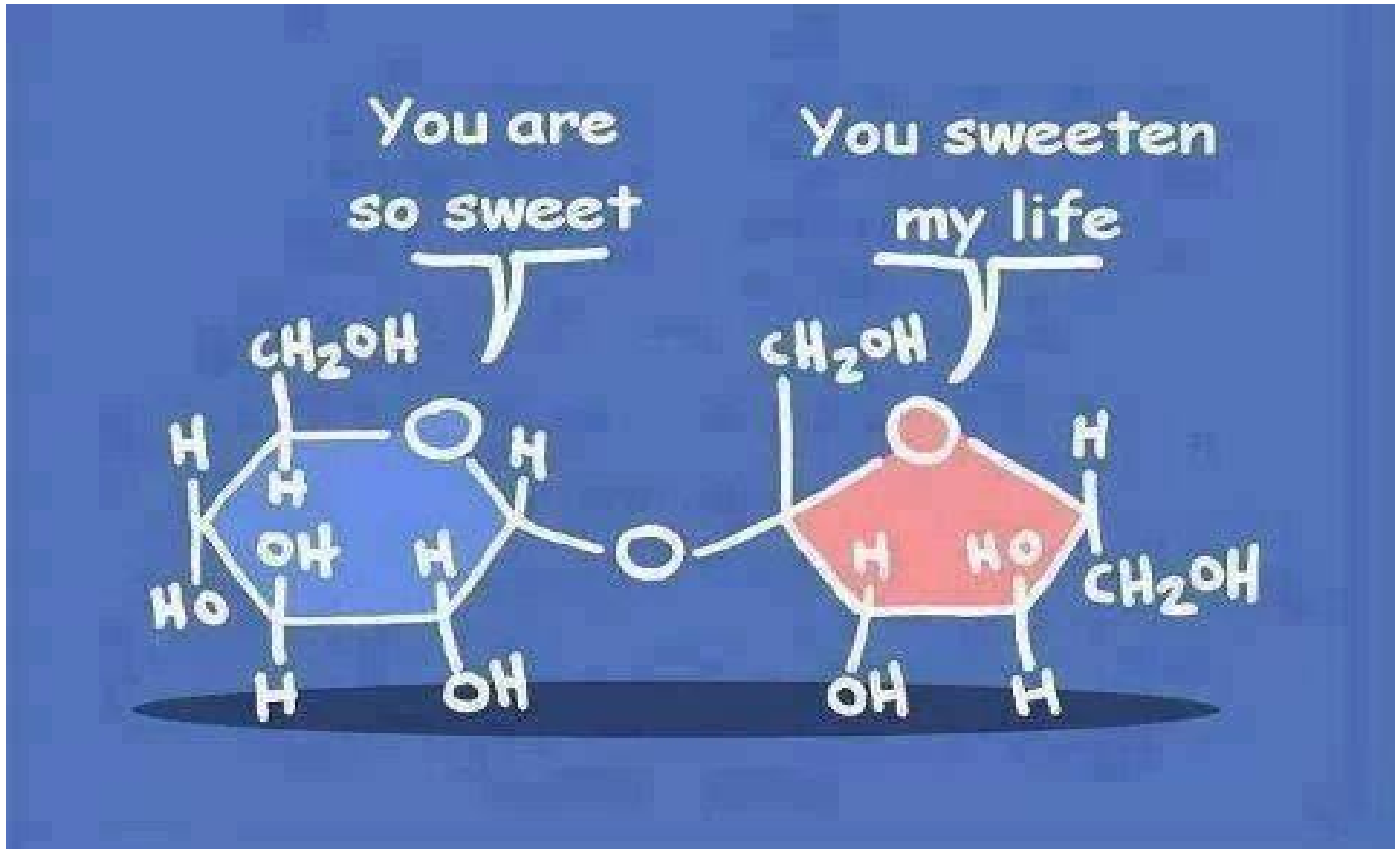
CO₂ + H₂O

Protein

Lung, Urine

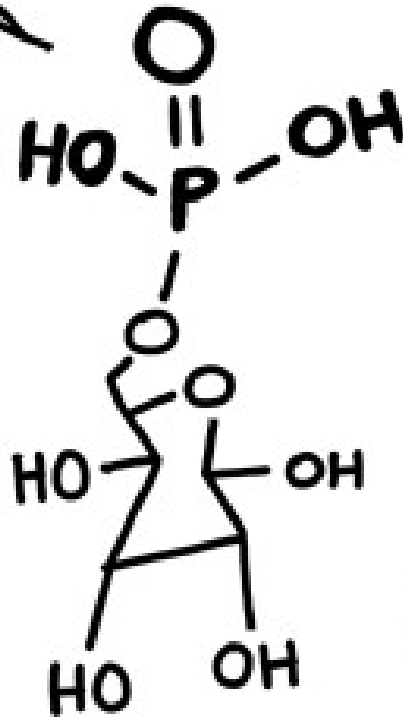


Sucrose is sweeter than Glucose



DOES THIS MAKE
ME LOOK FAT?

CHANGE ROOM



NAH, YOU
LOOK
SWEET.



GLASBERGEN

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“You have Type 3 Diabetes. Too much artificial sweetener in your blood!”