

# Blood Glucose

## Student Presentation Slides

### Learning Objective 4 | Blood Glucose

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Te Maki Toto Vene (T2): E Manamanata no Toki Iti Tangata

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# Te Maki Toto Vene (T2): E Manamanata no Toku Iti Tangata

## UNDERSTANDING BLOOD GLUCOSE

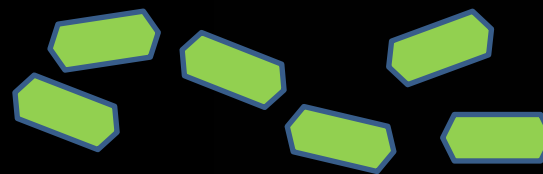
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# What is Glucose?

Glucose is the main source of energy for cells in our body



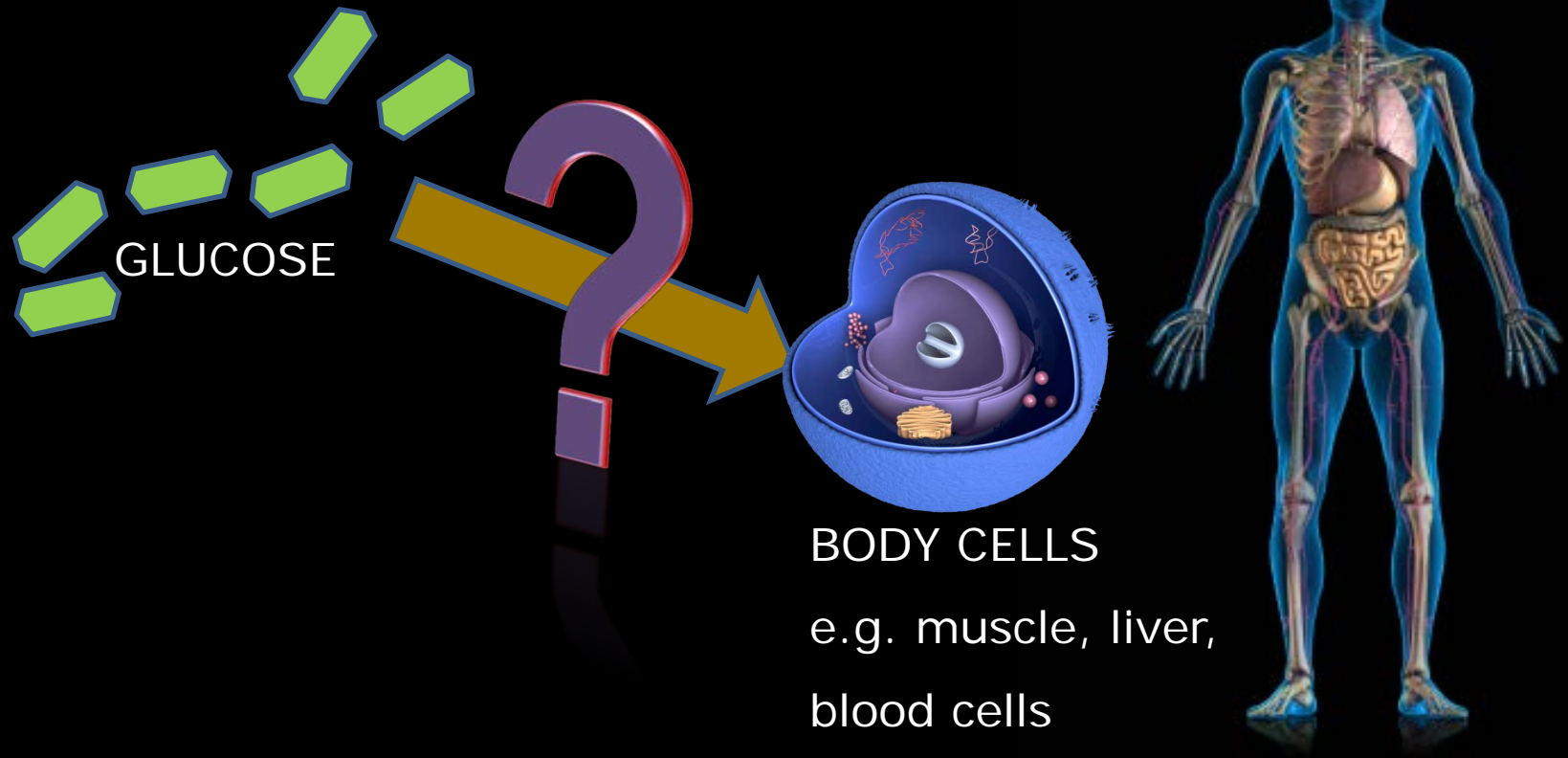
GLUCOSE



A detailed illustration of a variety of food items. In the upper section, there's a glass of milk, a carton of milk, a bottle of oil, and some nuts. Below this, a large grey box contains the text. The lower section features a vibrant assortment of produce: leafy greens, broccoli, carrots, tomatoes, bell peppers, apples, grapes, cherries, raspberries, bread, potatoes, and various grains like corn and rice.

Most of the food we eat is  
broken down into glucose

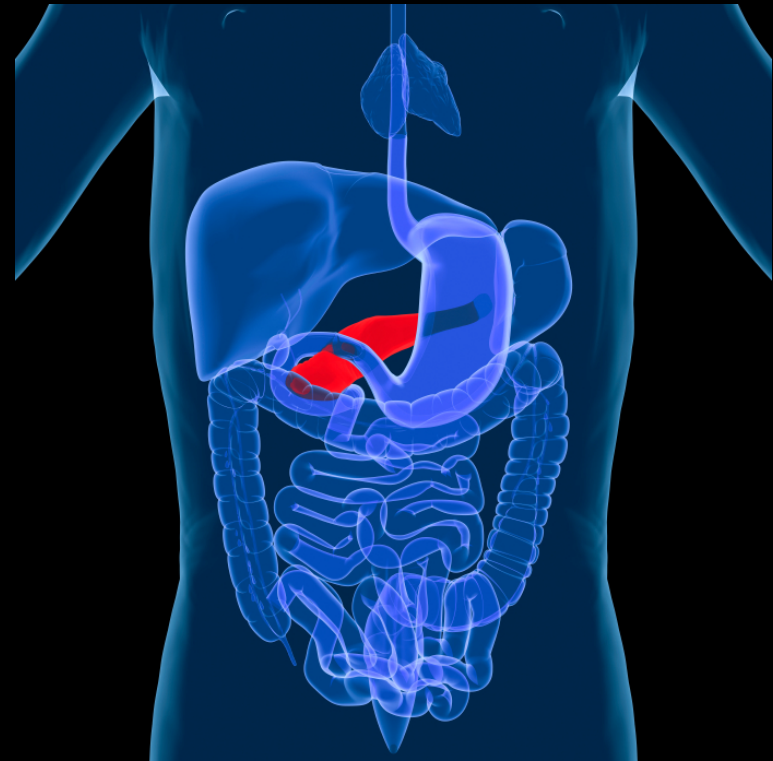
# How does glucose get into your cells?



# How does glucose get into your cells?

A chemical called  
**INSULIN** is produced  
in the pancreas.

Insulin helps glucose  
move into the cells.



# How does this happen?

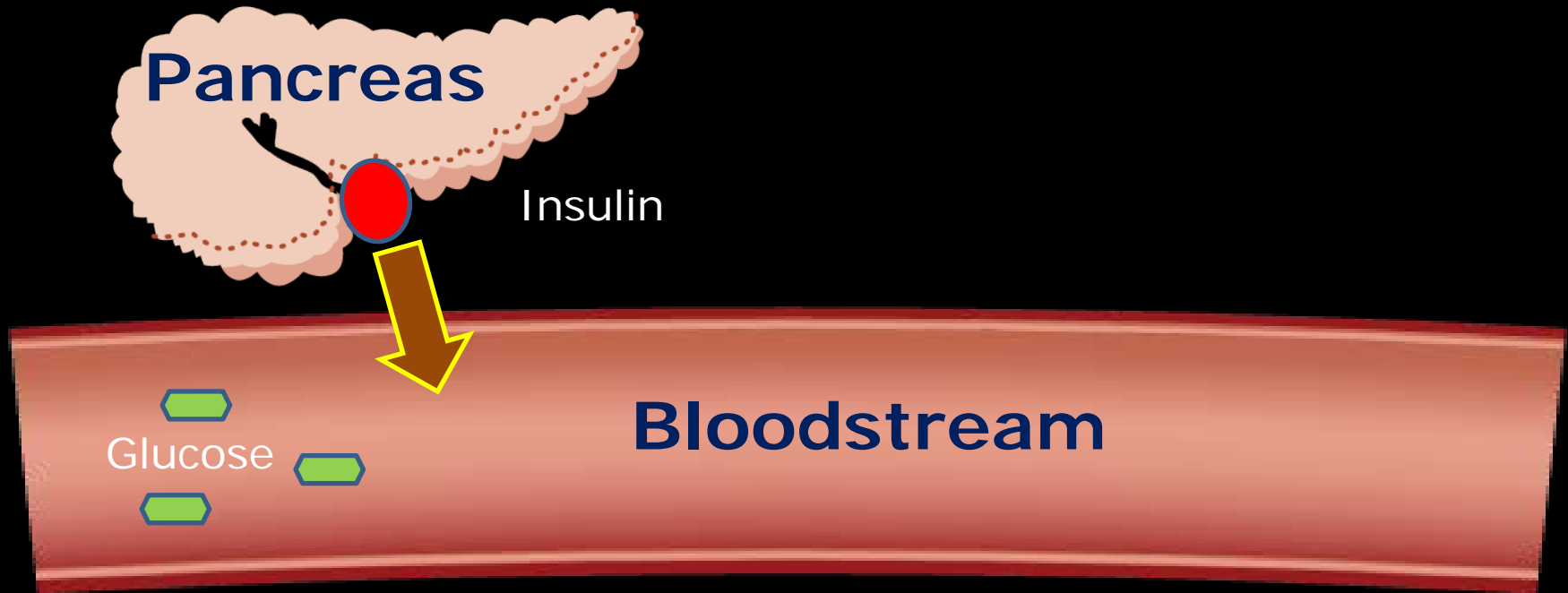
**Pancreas**

A diagram illustrating the process of glucose release from the pancreas into the bloodstream. The pancreas is shown as a light blue, irregularly shaped organ with a darker blue duct. A black arrow points from the pancreas towards a large, horizontal, light blue vessel representing the bloodstream. Inside the bloodstream, three green hexagons are shown, with the word 'GLUCOSE' written next to them. The word 'Bloodstream' is written in large, bold, black letters across the middle of the vessel.

GLUCOSE

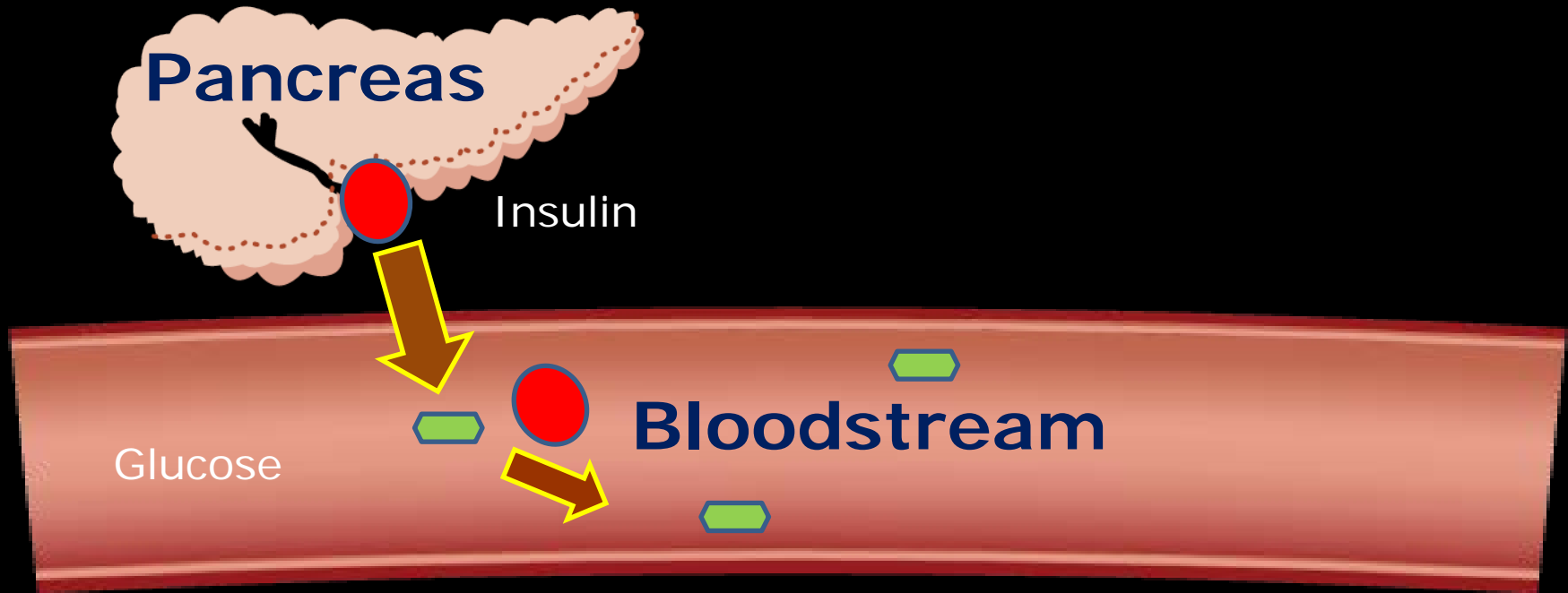
**Bloodstream**

# How does this happen?

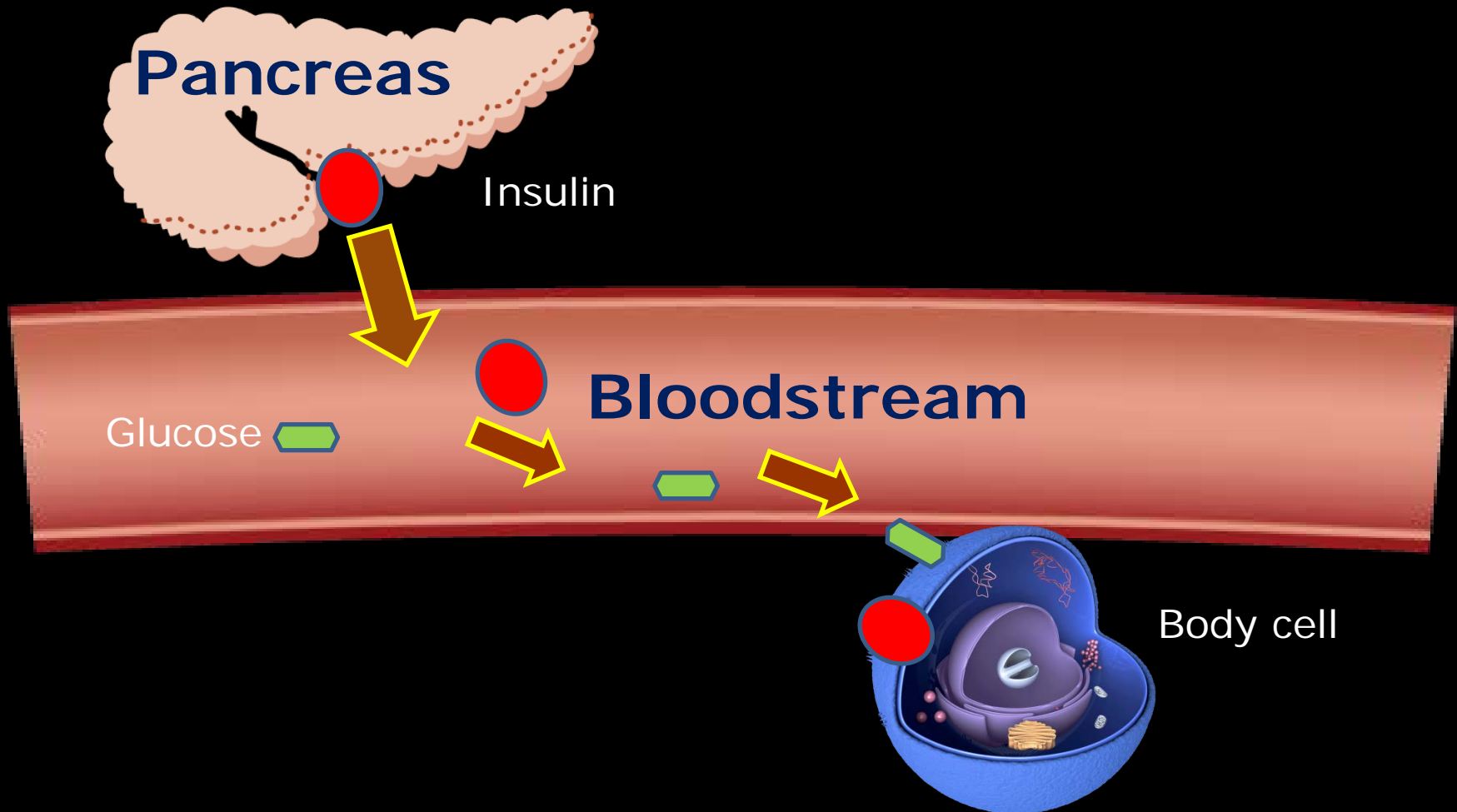




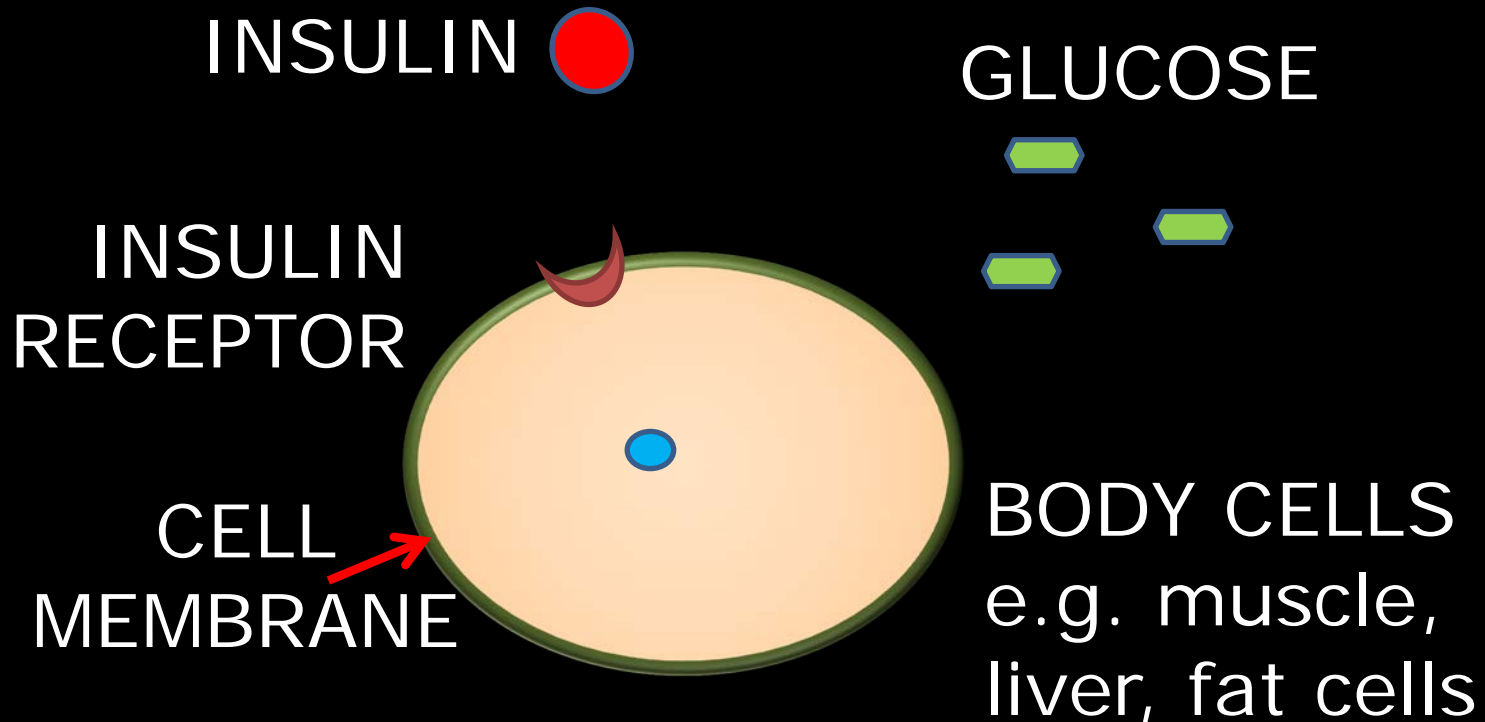
# How does this happen?



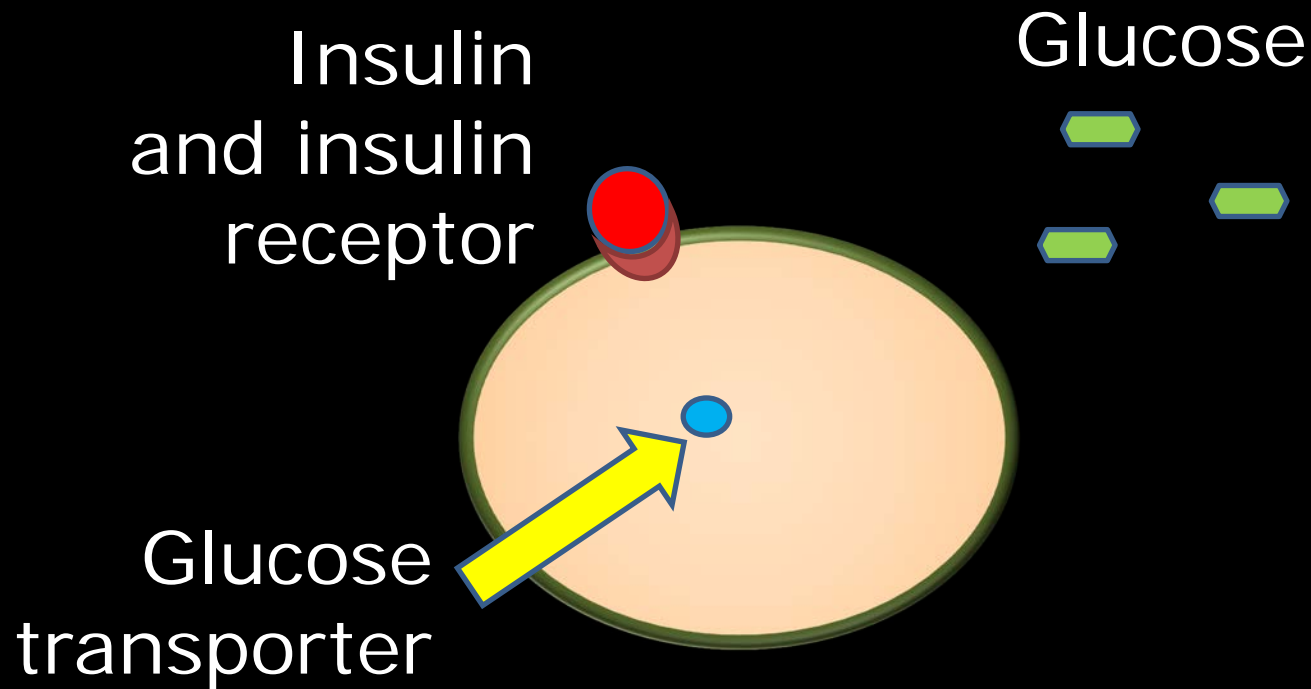
# How does this happen?



# How does insulin work?

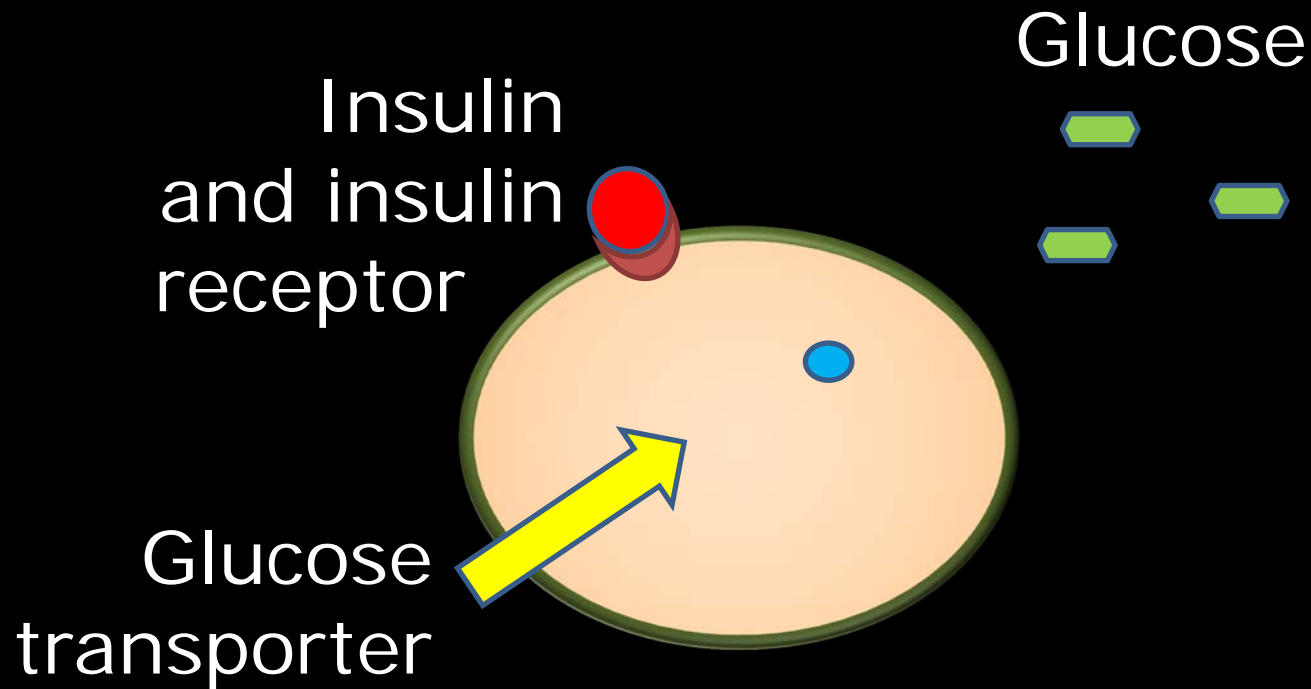


# Insulin attaches to the many 'hooks' or receptors on the cell surface

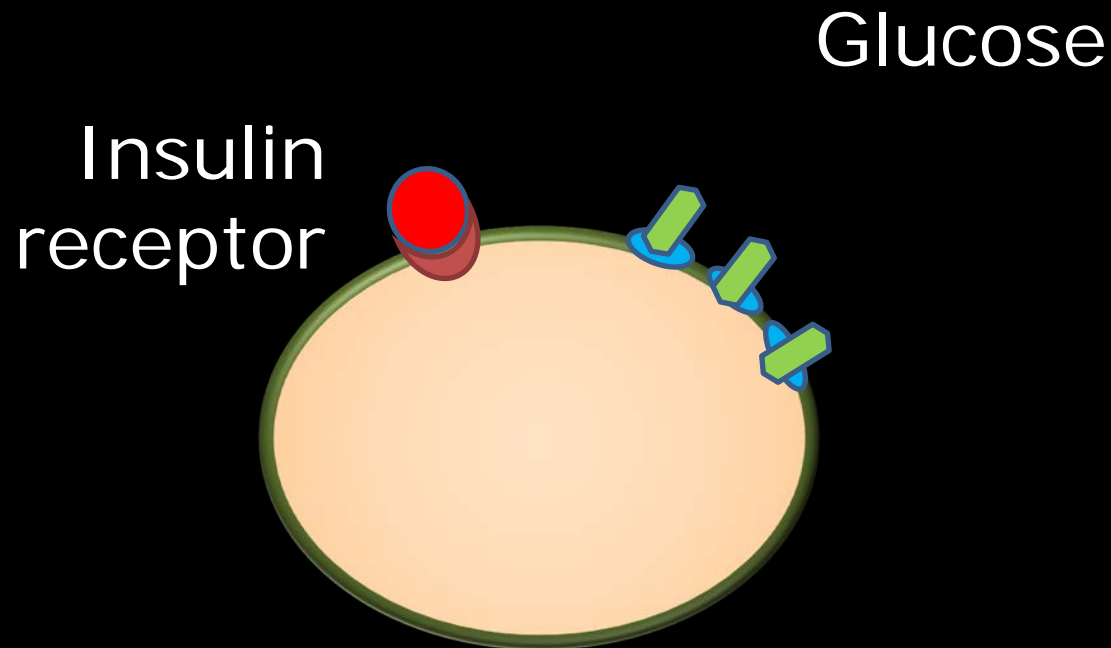




# When insulin binds to a Receptor, a signal is sent ...



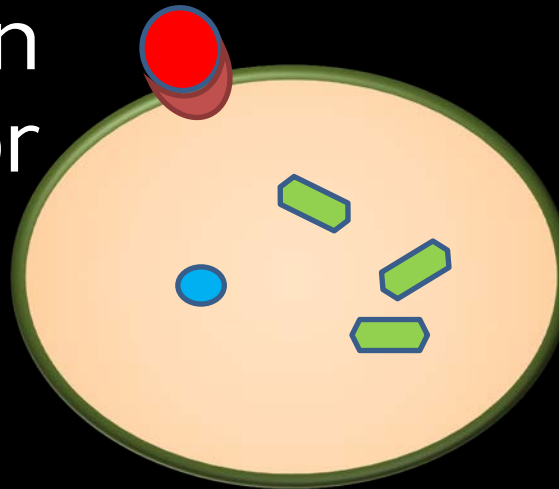
... to send transport molecules  
to the cell surface ...



... so that glucose can move  
into the cell

Insulin

Insulin  
receptor



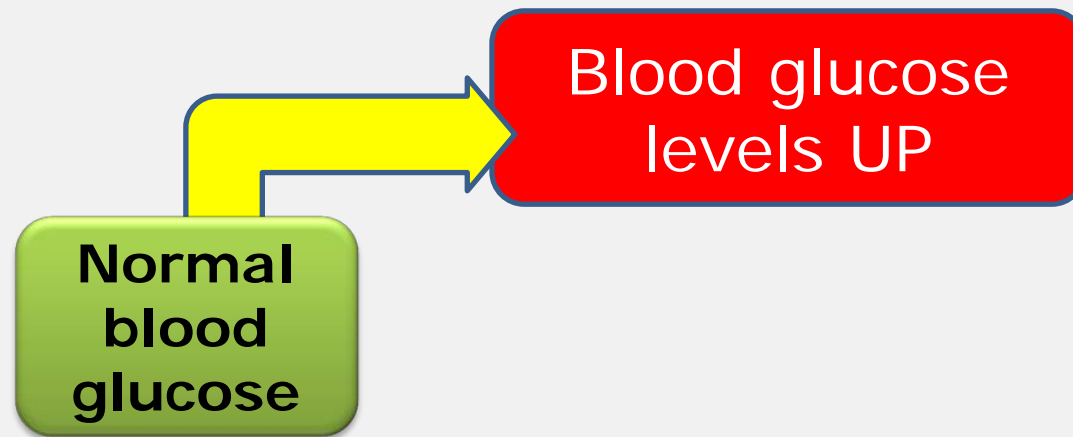
# Insulin in action

## Food versus no food

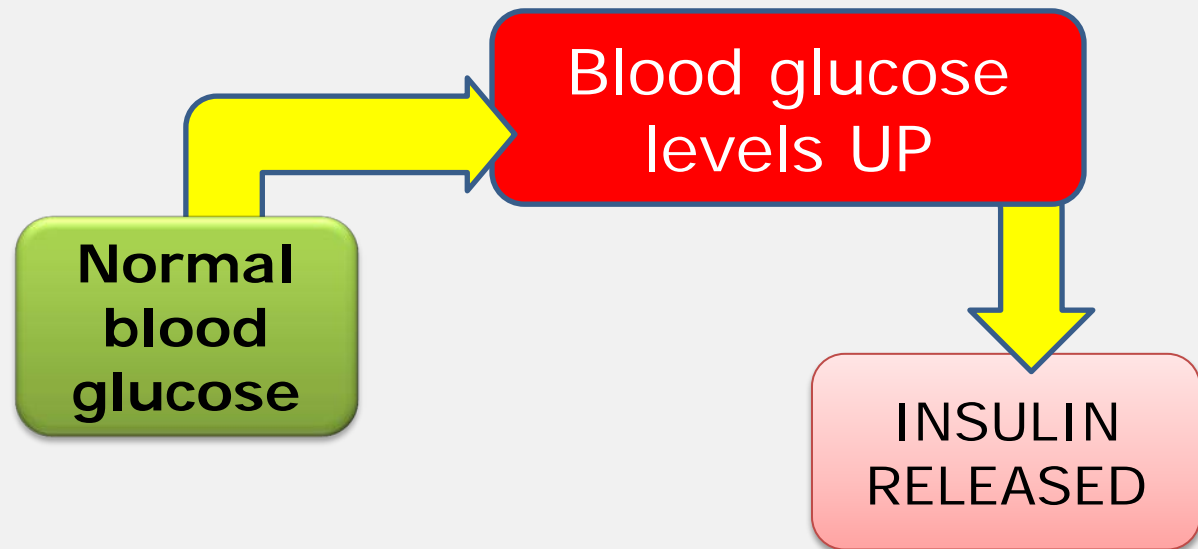
**Normal  
blood  
glucose**



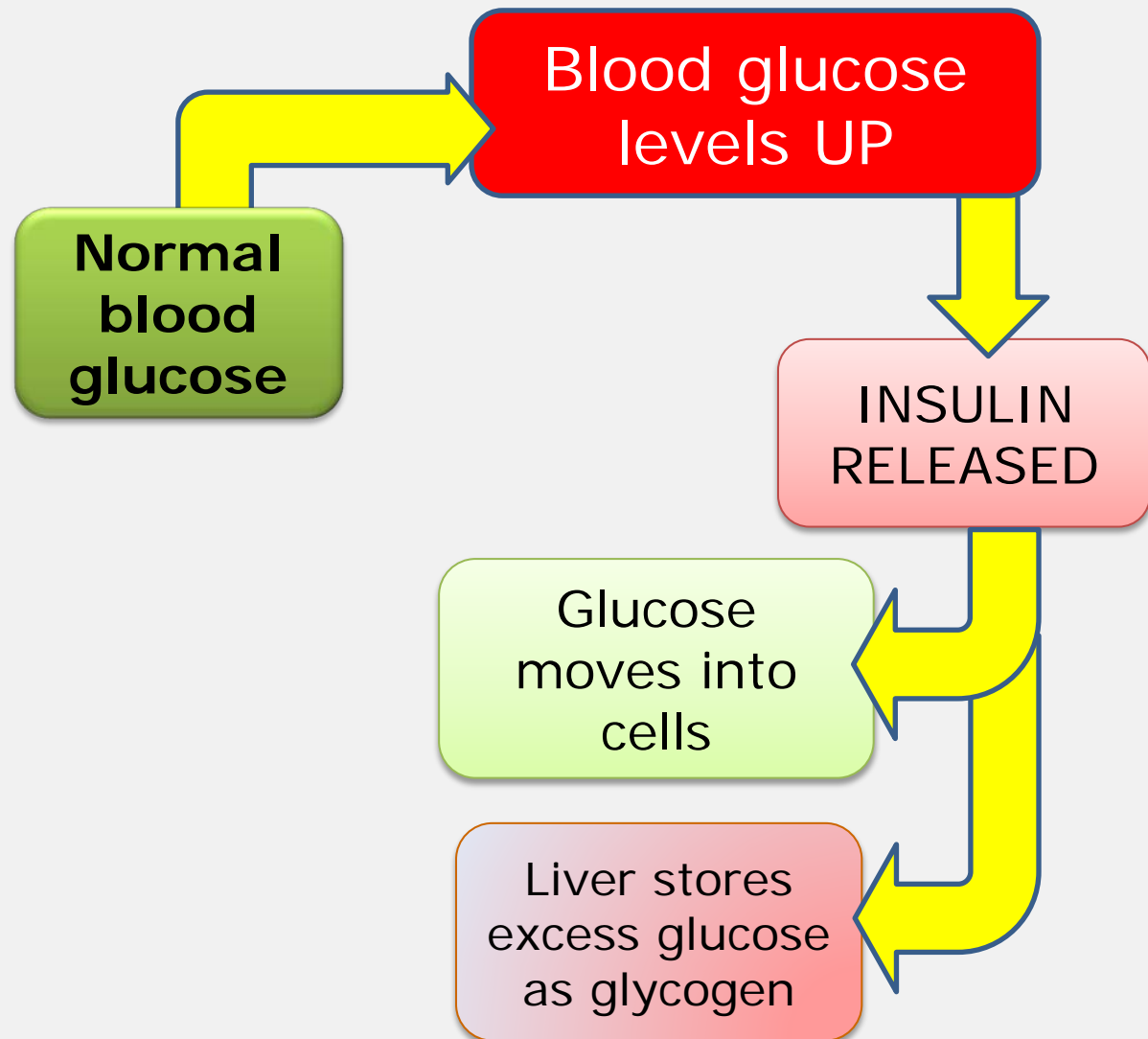
# EAT FOOD



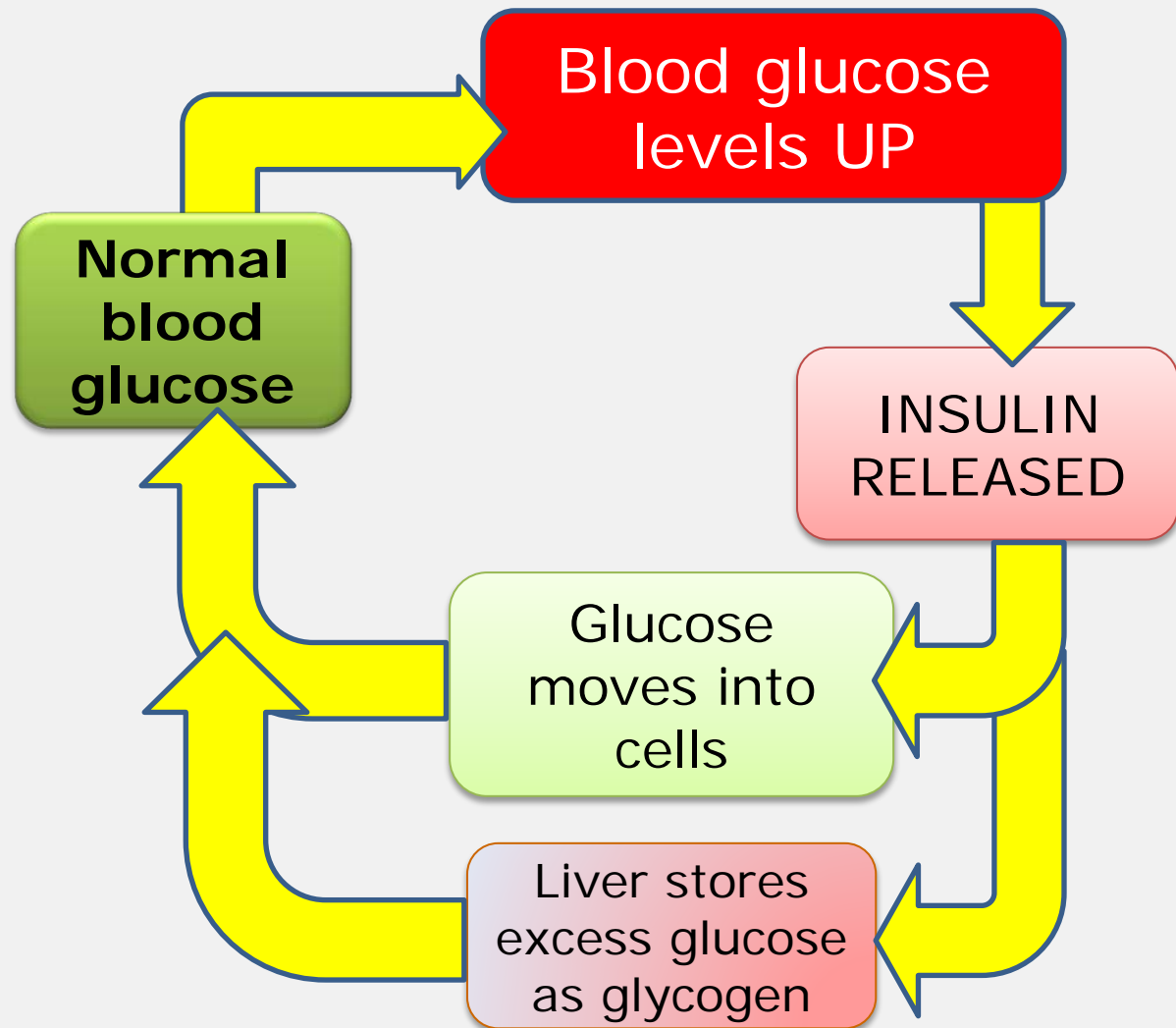
# EAT FOOD



# EAT FOOD



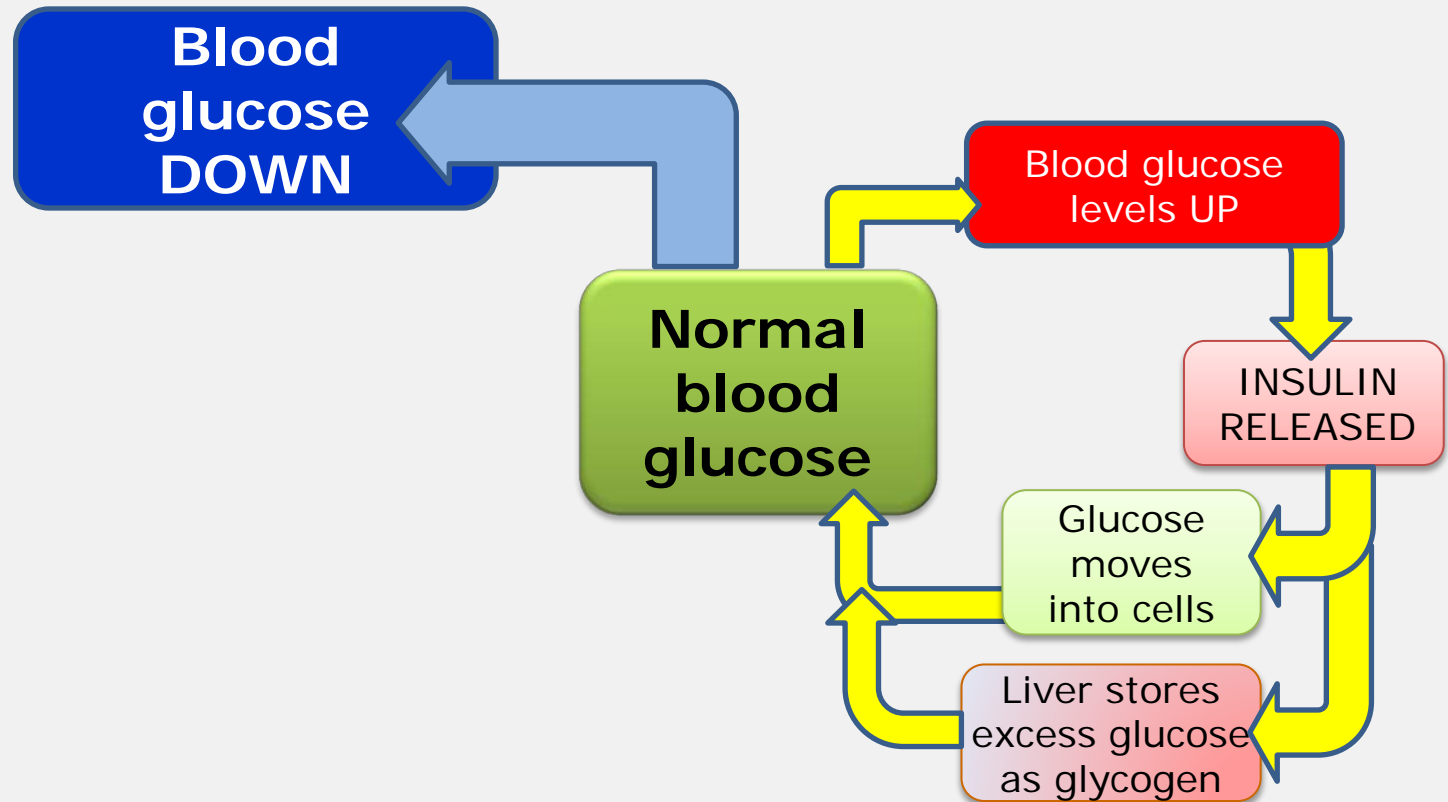
# EAT FOOD





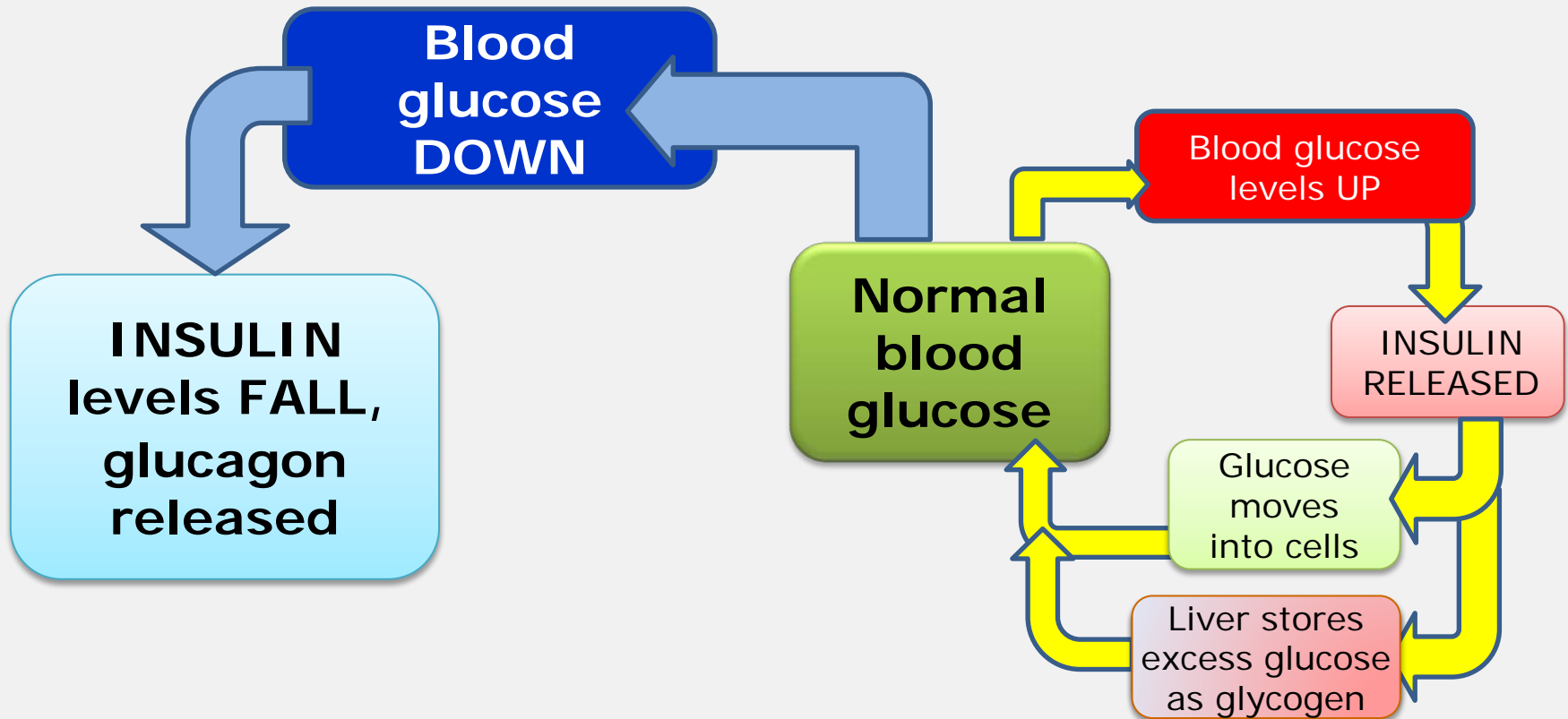
## NO FOOD

## EAT FOOD



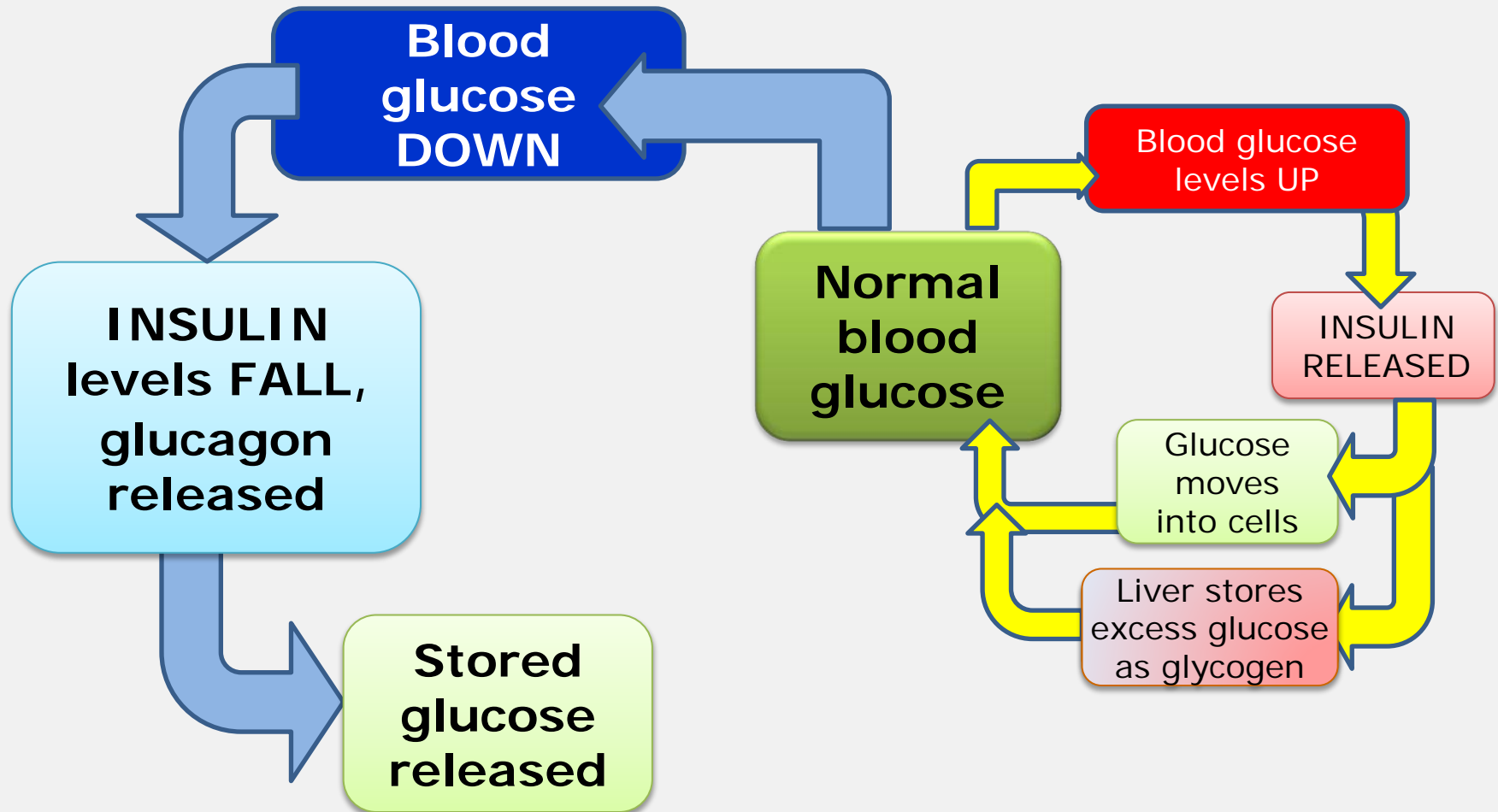
## NO FOOD

## EAT FOOD



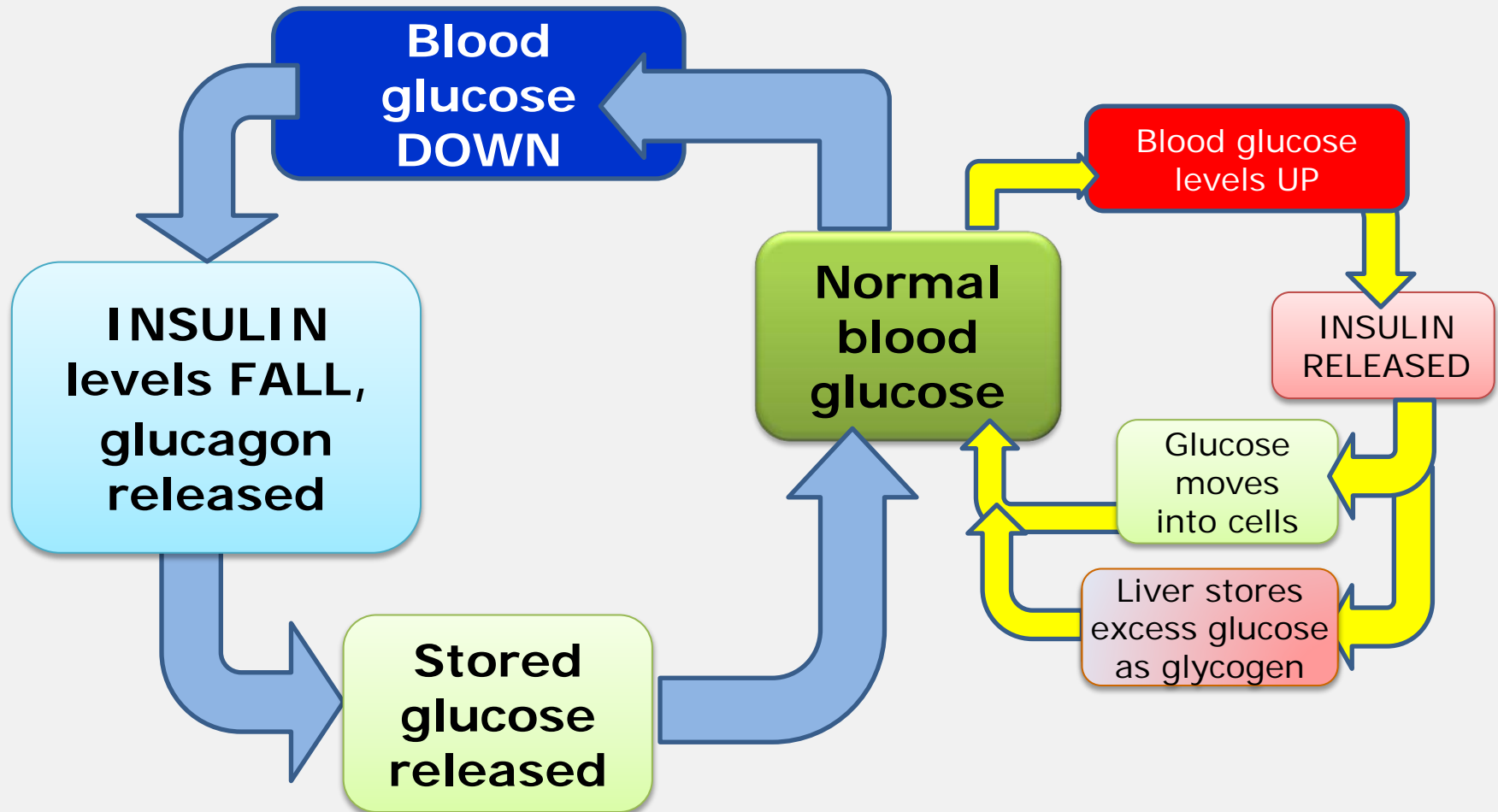
# NO FOOD

# EAT FOOD



## NO FOOD

## EAT FOOD





# Keeping blood glucose in balance

## NO FOOD

## FOOD

