



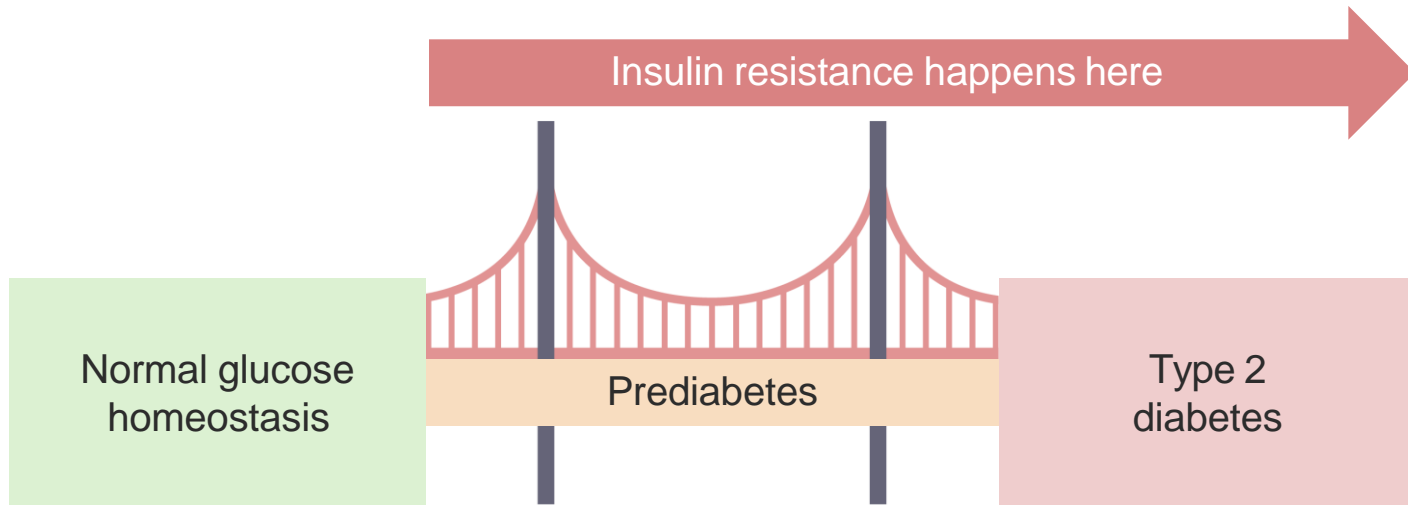
# Diabetes

What Is Insulin Resistance?



It's an early warning sign!

# Prediabetes



Long-term damage can occur to the body, heart, and blood vessels before diagnosis.

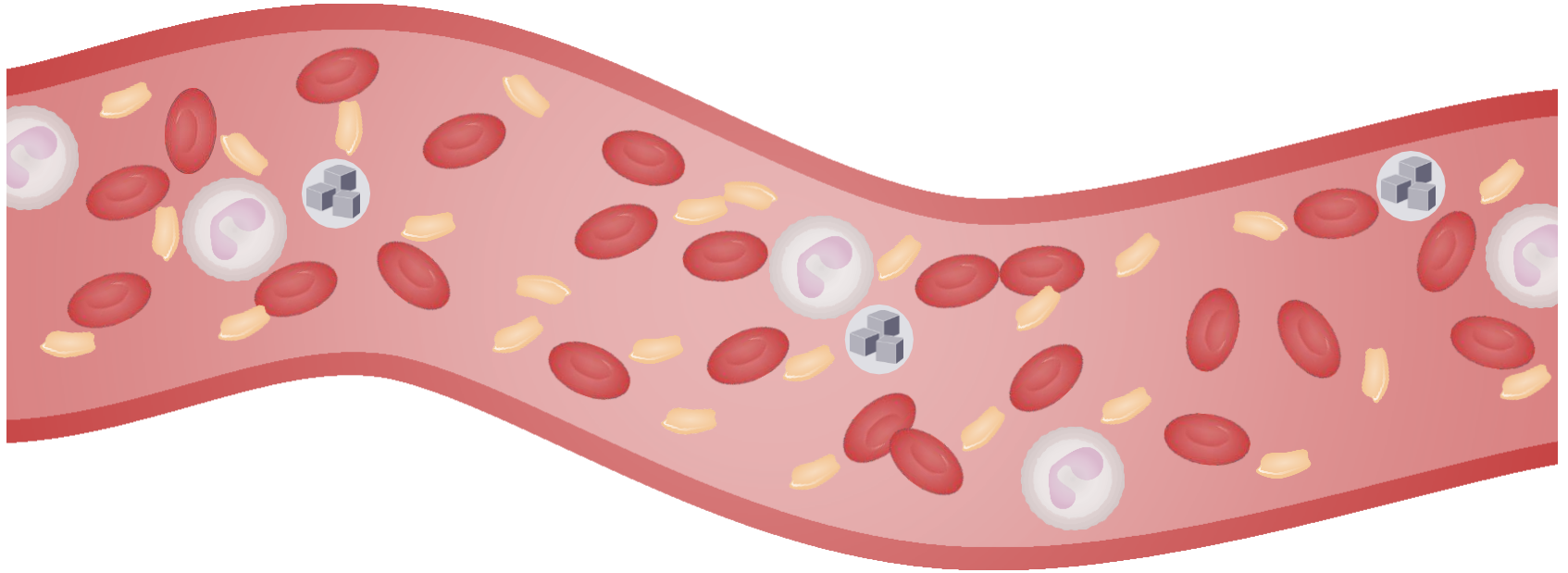
# Resistance Is Futile.....

## Key points:

1. Insulin is present – even elevated.
2. Cells can't use the insulin to absorb glucose for energy.
3. Blood sugar rises, and rises.

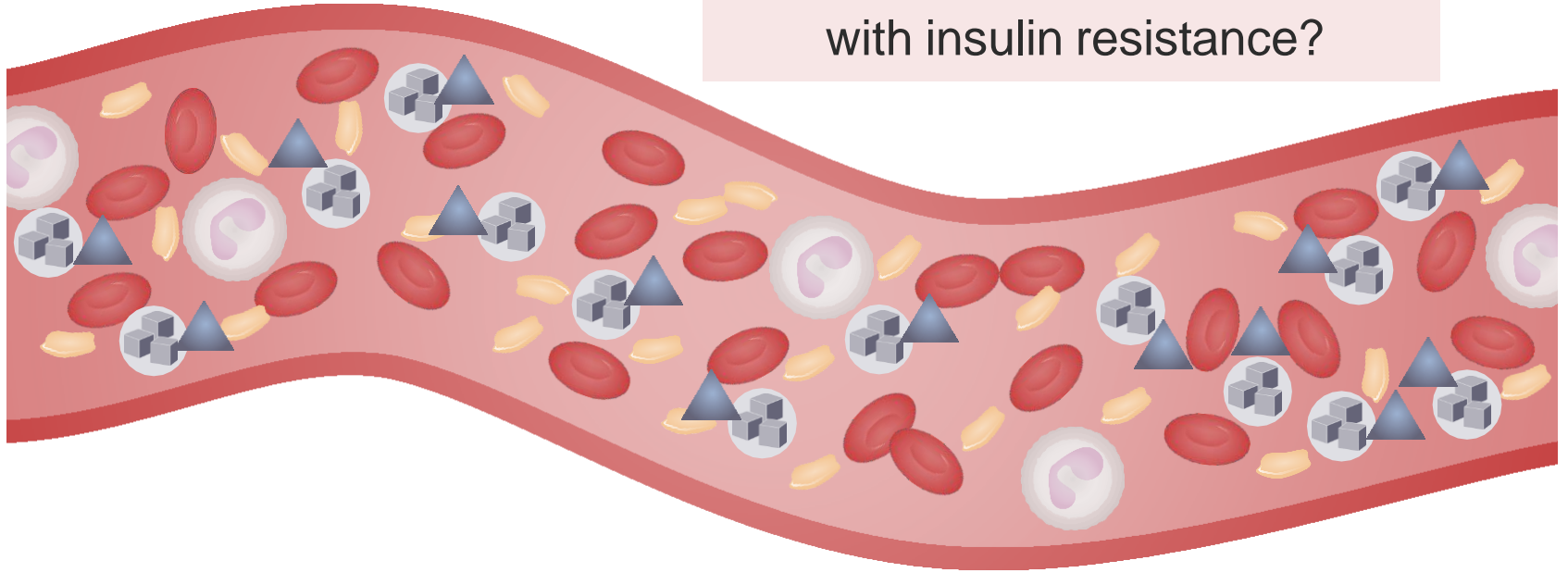


# Let's Break this Down

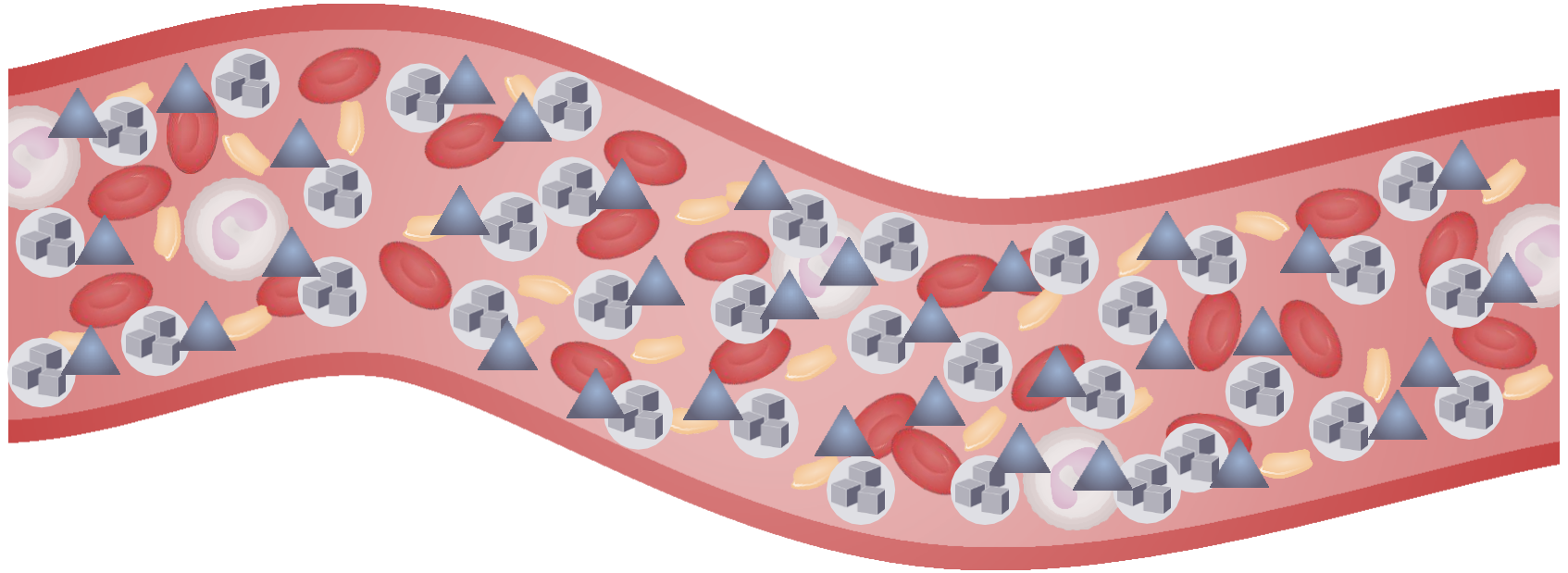


# Glucose After a Meal

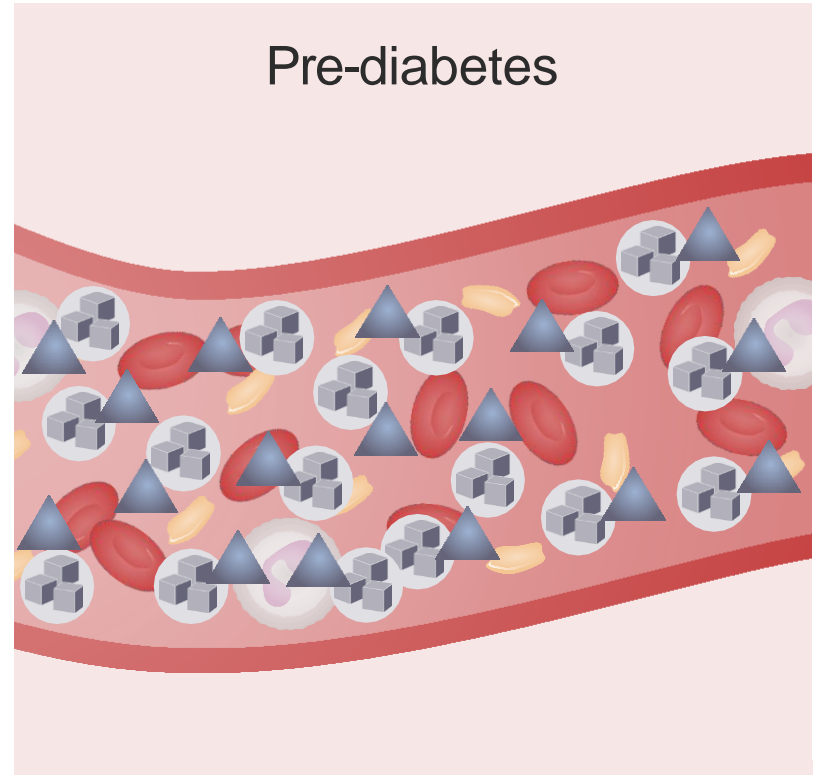
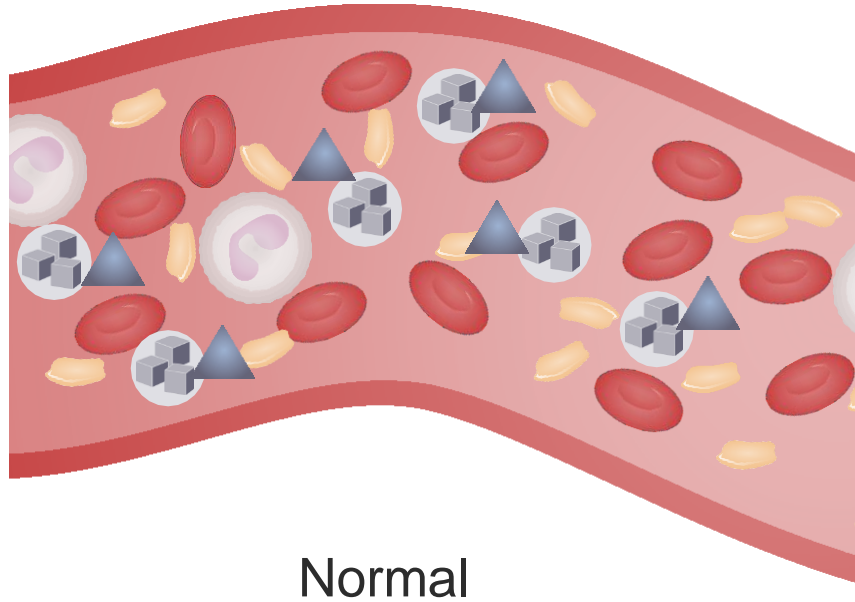
So what's different for a client with insulin resistance?



# Glucose After a Meal

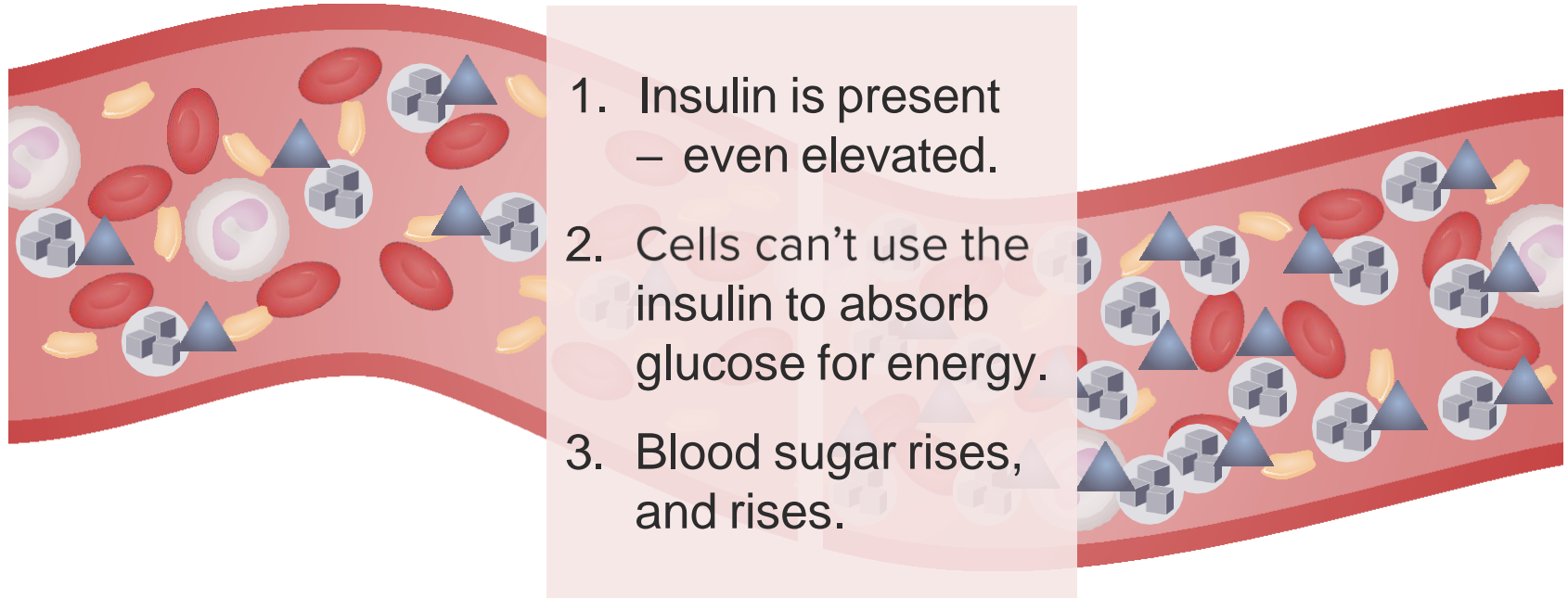


# Compare Insulin Levels





## Resistance Is Futile...





What do you think are the 2 main effects on the metabolism of glucose when insulin usage isn't effective?

# Results of Ineffective Glucose Utilization



Increase in glucose production

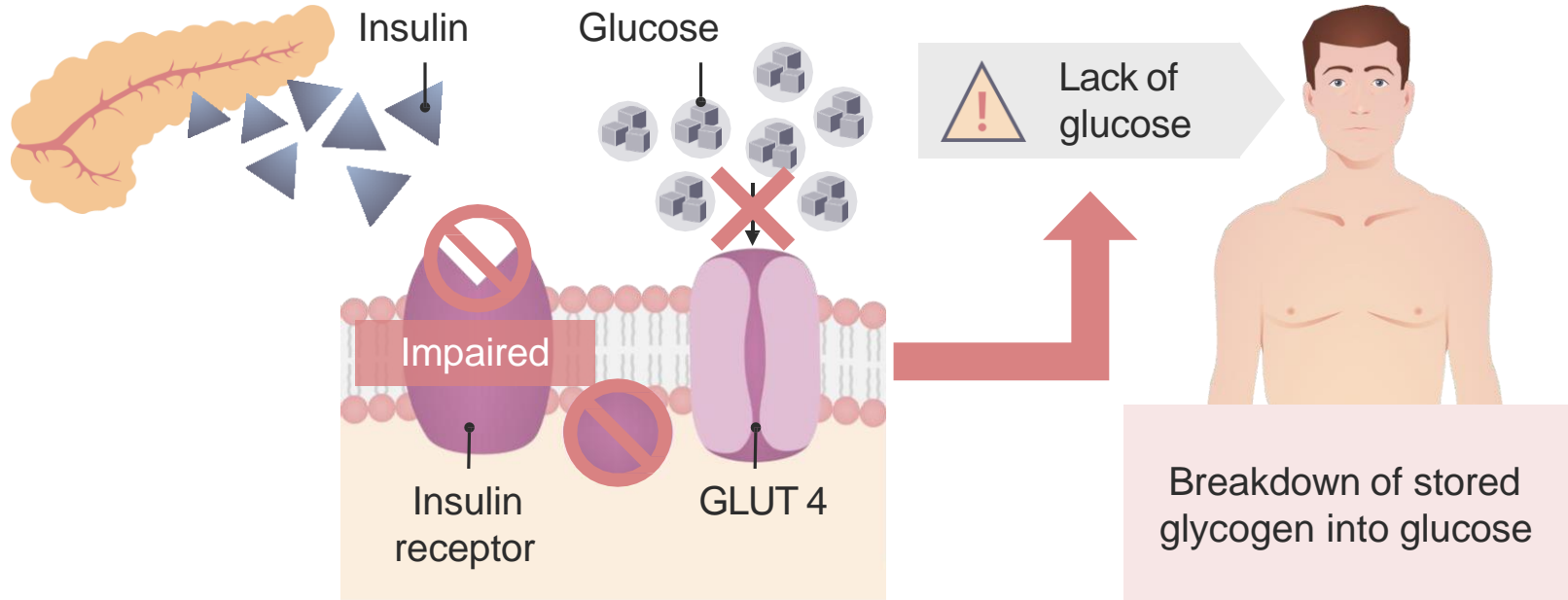


Decrease in glucose utilization



# Why Is There an Increase in Glucose Production?

The cells in your muscles, fat, and liver don't respond as well (resistant) to the normal functions of insulin.



# Results of Ineffective Glucose Utilization



Increase in glucose production

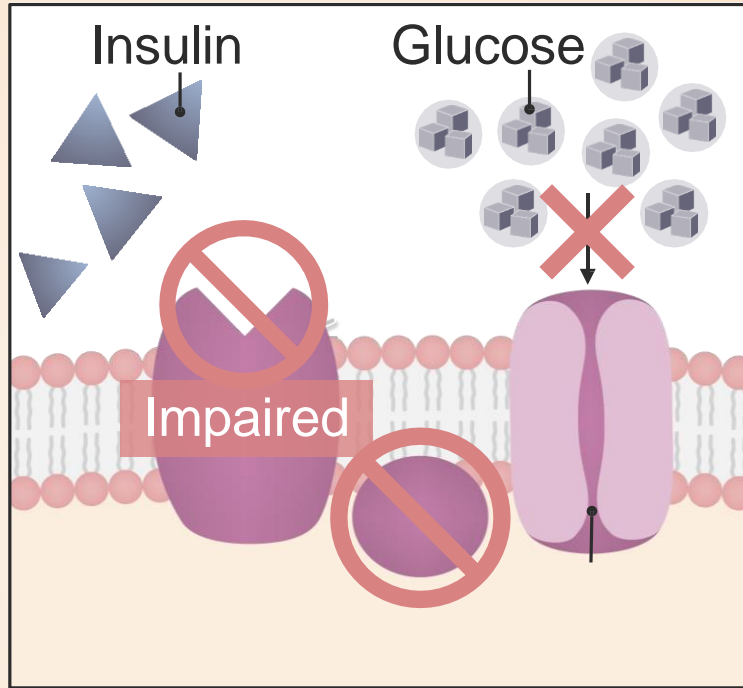


Decrease in glucose utilization



**High risk of complications**





What causes insulin resistance?

# Modifiable vs. Non-modifiable



Lifestyle



Associated medical conditions or events

VS

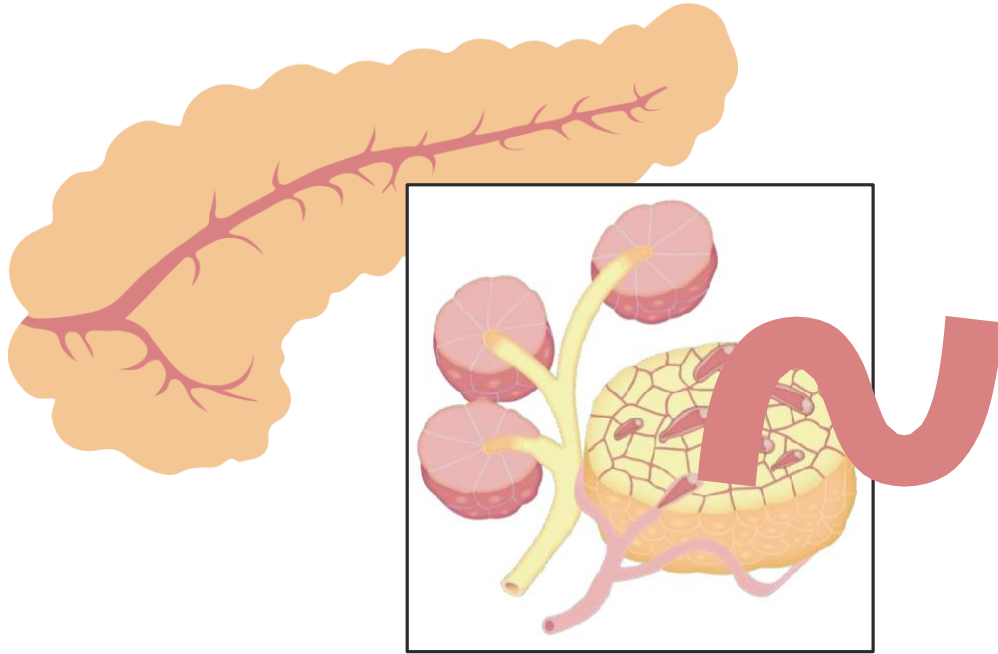


Race/ethnicity



Family history

# The Road to Type 2 Diabetes



Beta cells (can secrete some insulin).

Insulin resistance is likely present.

Lifestyle choices can impact progression of disease.



# We Can Help... But Do We Really?



Excess body weight  
(especially belly fat)



Smoking



Lack of  
regular exercise



Not enough sleep

Being empathetic and having therapeutic relationships with clients  
can encourage them to take small steps towards better health.



Nurses are modifiers.

# Help Them Take The Next Step

Suggest simple changes to diet and food choices.



Find ways to help increase activity.



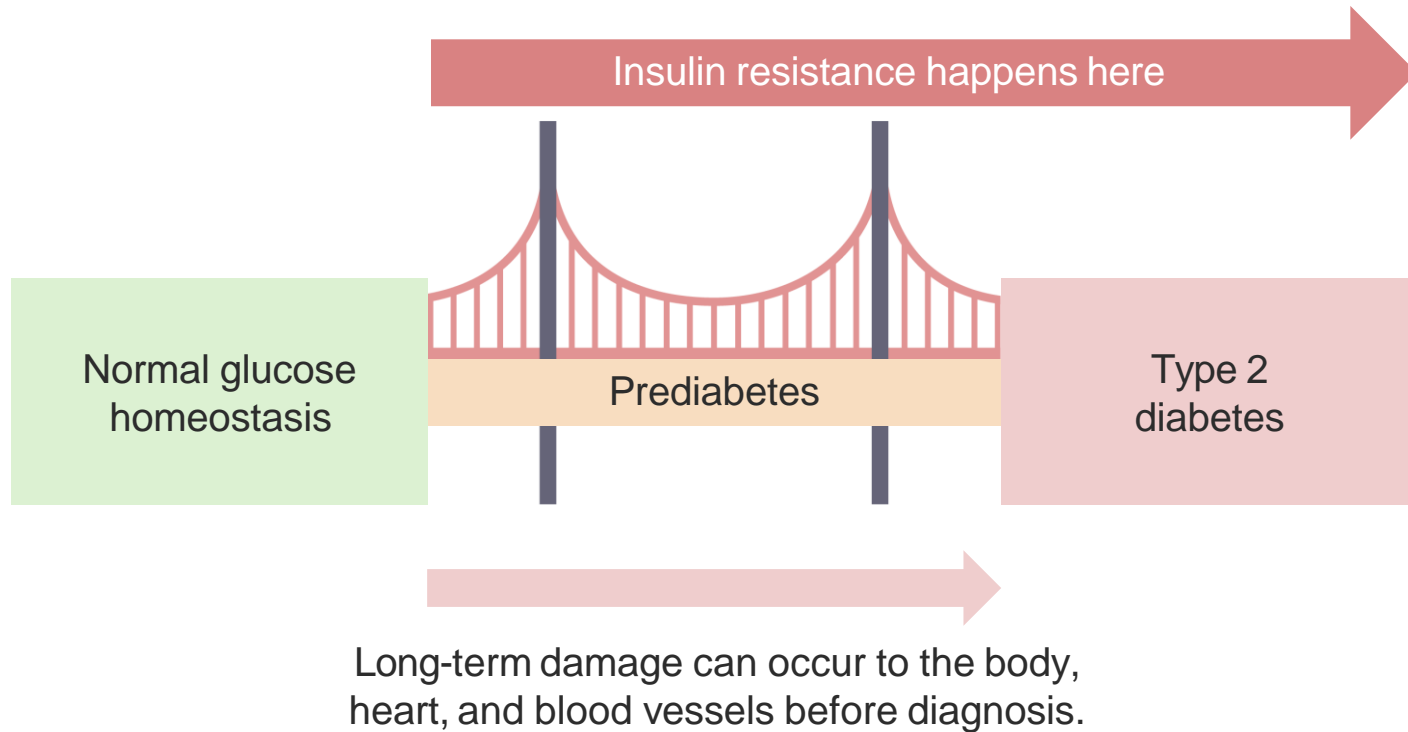
Work towards decreasing the amount of smoking.



Help them identify new patterns to increase sleep.



# Nurses Can Help Reduce Risk Factors



## In a Nutshell

- ✓ Insulin resistance is present in prediabetes and is a warning sign of the development of type 2 diabetes.
- ✓ The insulin receptors are impaired in insulin resistance, so the cells do not recognize insulin and are not as effective in taking in glucose as an energy source into the cells.
- ✓ Glucose production increases, and glucose utilization decreases.
- ✓ Nurses can facilitate slowing the progression to type 2 diabetes by helping clients take the next step toward a healthier lifestyle.

