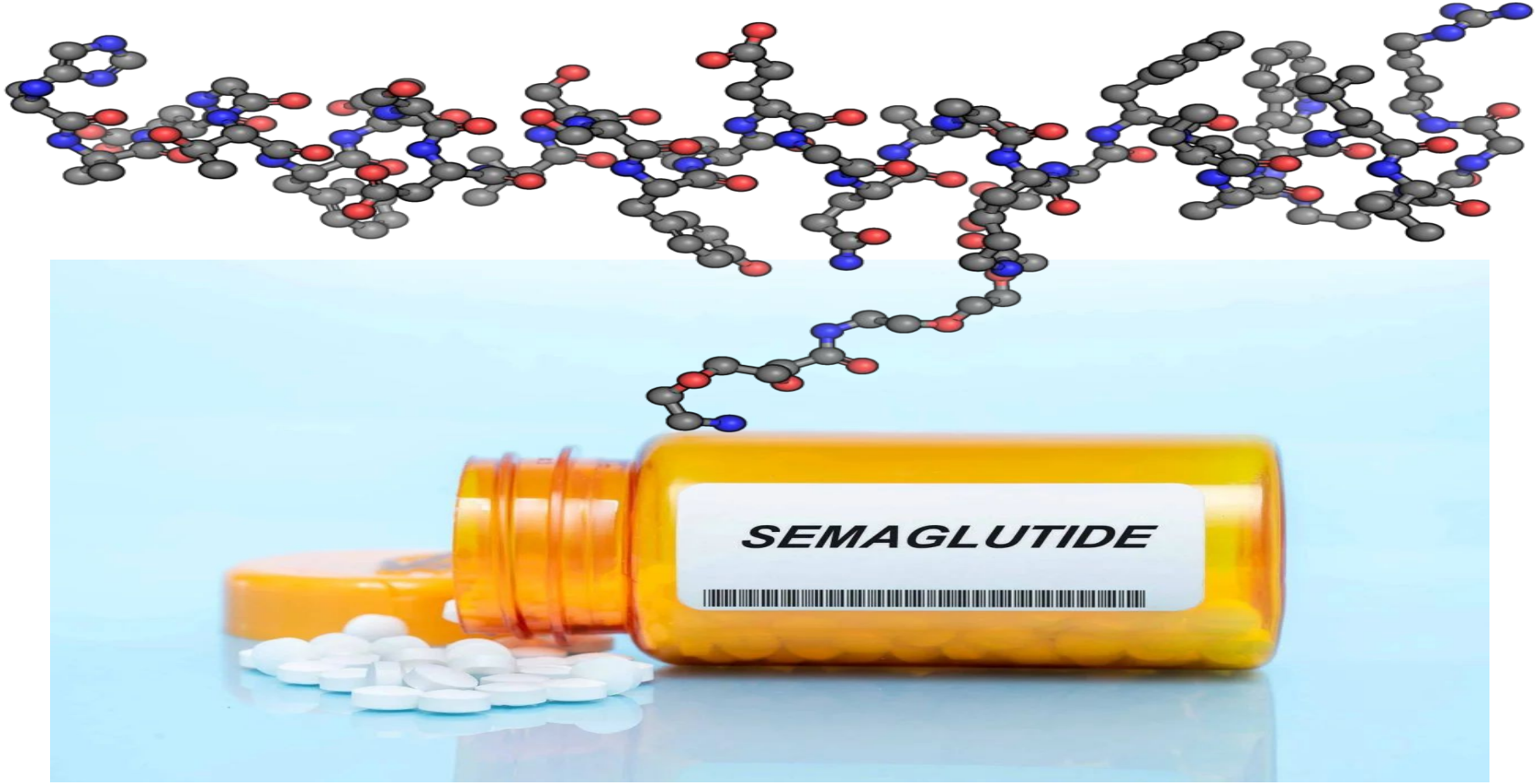

SEMAGLUTIDE

What is diabetes?

Diabetes is a condition that happens when your blood sugar (glucose) is too high. It develops when your pancreas doesn't make enough insulin or any at all, or when your body isn't responding to the effects of insulin properly. Diabetes affects people of all ages. Most forms of diabetes are chronic (lifelong), and all forms are manageable with medications and/or lifestyle changes.

What are the types of diabetes?

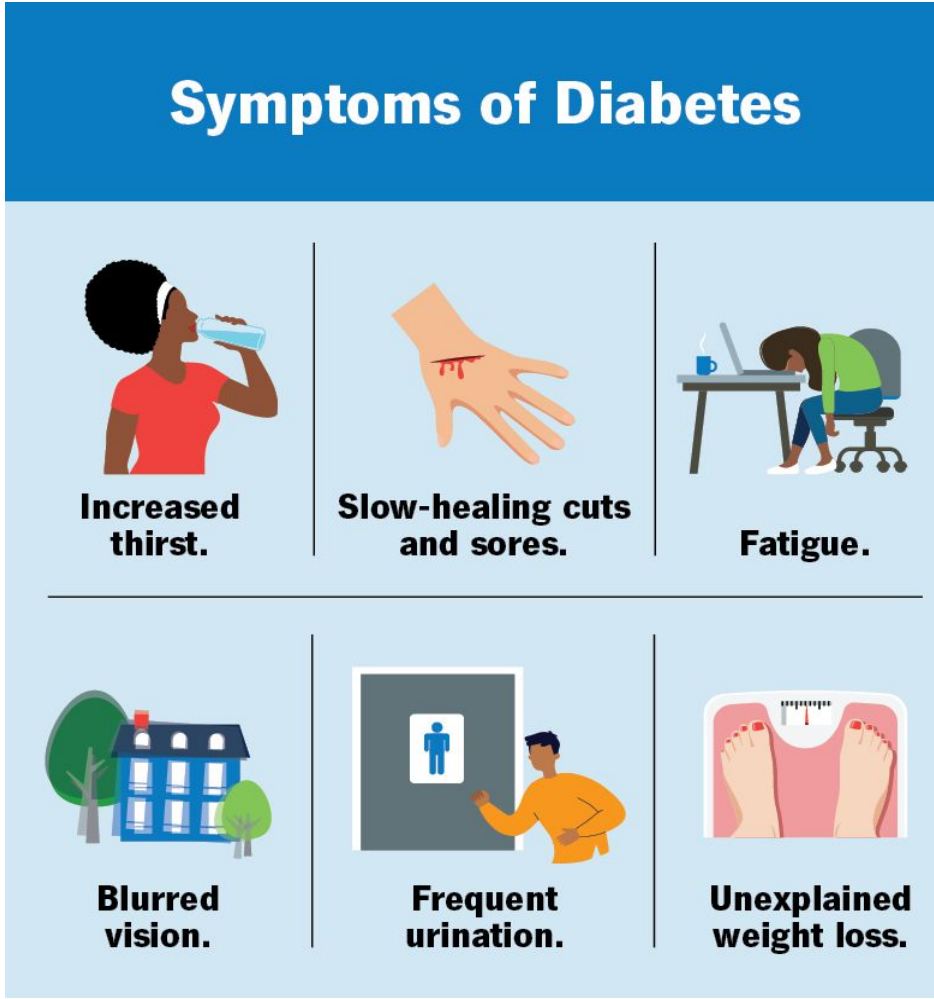
There are several types of diabetes. The most common forms include:

- Type 2 diabetes: With this type, your body doesn't make enough insulin and/or your body's cells don't respond normally to the insulin (insulin resistance). This is the most common type of diabetes. It mainly affects adults, but children can have it as well.
- Prediabetes: This type is the stage before Type 2 diabetes. Your blood glucose levels are higher than normal but not high enough to be officially diagnosed with Type 2 diabetes.
- Type 1 diabetes: This type is an autoimmune disease in which your immune system attacks and destroys insulin-producing cells in your pancreas for unknown reasons. Up to 10% of people who have diabetes have Type 1. It's usually diagnosed in children and young adults, but it can develop at any age.
- Gestational diabetes: This type develops in some people during pregnancy. Gestational diabetes usually goes away after pregnancy. However, if you have gestational diabetes, you're at a higher risk of developing Type 2 diabetes later in life.

How common is diabetes?

Diabetes is common. Approximately 37.3 million people in the United States have diabetes, which is about 11% of the population. Type 2 diabetes is the most common form, representing 90% to 95% of all diabetes cases.

About 537 million adults across the world have diabetes. Experts predict this number will rise to 643 million by 2030 and 783 million by 2045.

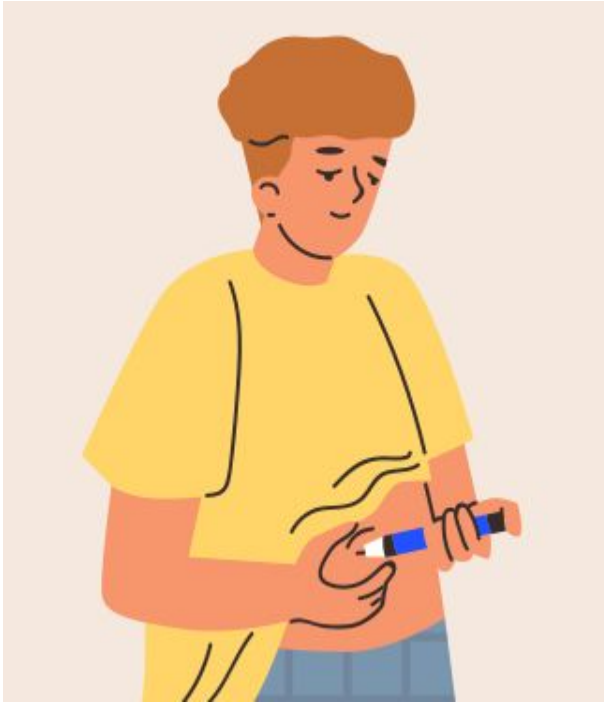


What is semaglutide?

Semaglutide is used for weight loss in specific patients, and also to lower blood sugar levels, and to reduce the risk of major cardiovascular events such as heart attack or stroke in certain patients. Semaglutide is the active ingredient in Ozempic, Wegovy, and Rybelsus. Semaglutide is a GLP-1 agonist that works by increasing insulin release, lowering the amount of glucagon released, delaying gastric emptying, and reducing appetite.

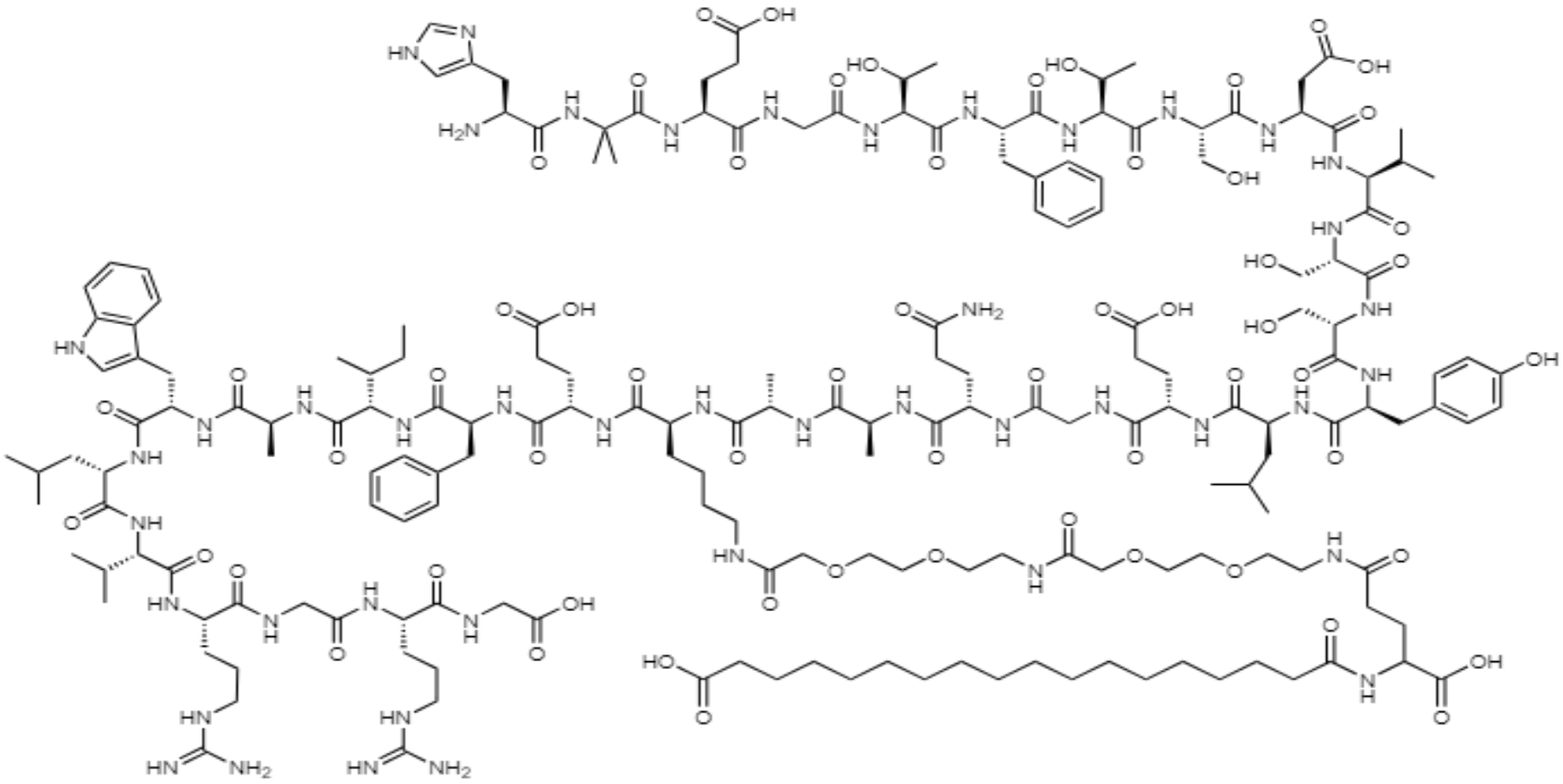
How does semaglutide work?

Semaglutide works to lower high blood sugar by increasing the amount of insulin that is released, lowering the amount of glucagon released and by delaying gastric emptying. Semaglutide also controls appetite and so helps you reduce the amount of food that you want to eat. Semaglutide is a glucagon-like peptide-1 (GLP-1) agonist.

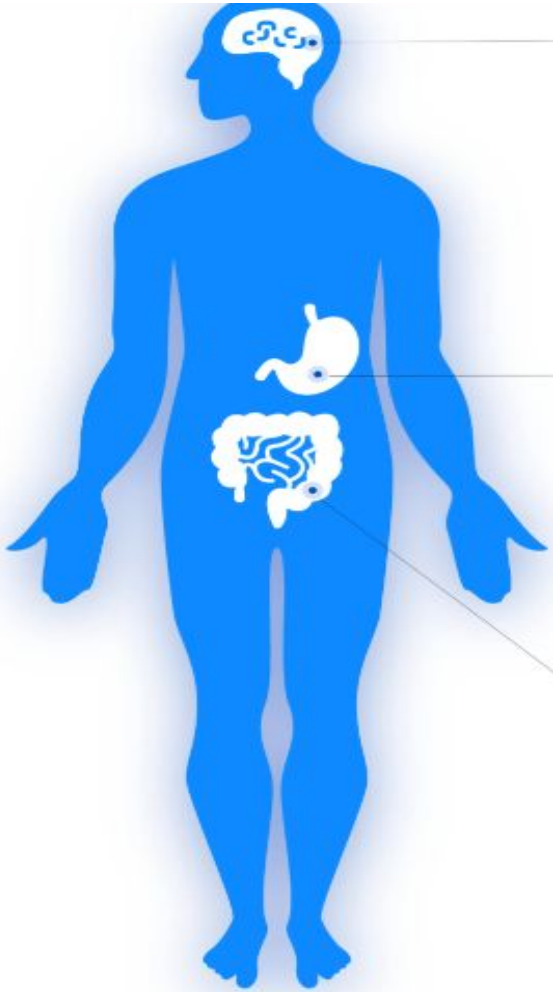


Brand of semaglutide	Ozempic	Wegovy	Rybelsus
Form	subcutaneous injection	subcutaneous injection	tablet
Strength	0.25 mg or 0.5 mg dose pen, 1 mg dose pen, 2mg dose pen.	0.25 mg dose pen, 0.5 mg dose pen, 1 mg dose pen, 1.7 mg dose pen, 2.4 mg dose pen	3mg tablet, 7mg tablet, 14mg tablet
Dose	weekly	weekly	daily
Uses	Used to help **control blood sugar** levels in type 2 diabetic patients, it is used together with diet and exercise. It is also used to **reduce the risk of major cardiac events** such as heart attack and strokes in type 2 diabetic patients who already have cardiovascular disease.	Used for **weight loss** for patients who have an initial BMI (body mass index) of 30kg/m2 or greater or patients who have a BMI of 27kg/m2 or greater and also have least one weight-related condition, such as high blood pressure, type 2 diabetes and high cholesterol. It is use together with diet and exercise. Used to **reduce the risk of heart attack, stroke, and cardiovascular death** in adults who are obese or overweight and have cardiovascular disease. It is used with a reduced-calorie diet and increased physical activity.	Used to help **control blood sugar** levels in type 2 diabetic patients, it is used together with diet and exercise.

STRUCTURE OF SEMAGLUTIDE



MECHANISM OF ACTION



Appetite Regulation

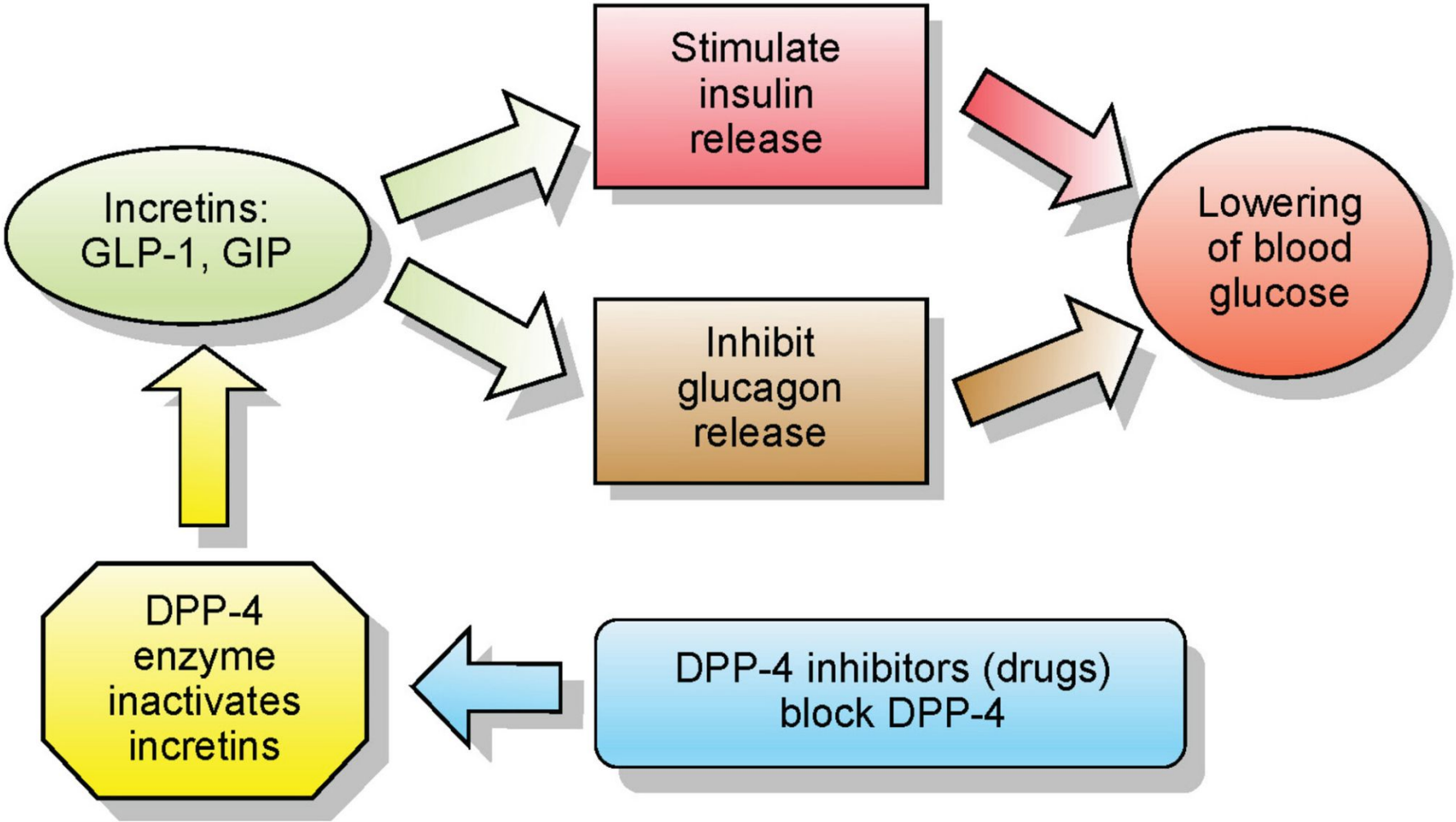
- Reduces hunger signals
- Promotes satiety, lessening food intake
- Curbs cravings, aiding in weight management

Insulin Secretion

- Boosts insulin release post-meal
- Helps lower blood glucose levels
- Enhances pancreatic response to sugar

GLP-1 Production

- Mimics natural gut hormone action
- Triggered by nutrient intake
- Integral for glucose homeostasis


Stimulate insulin release
Incretins: GLP-1, GIP
Lowering of blood glucose
Inhibit glucagon release
DPP-4 enzyme inactivates incretins
DPP-4 inhibitors (drugs) block DPP-4


Thank You !