



جامعة الإمام عبد الرحمن بن فيصل  
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مستشفى الملك فهد الجامعي  
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# Hypoglycemic drugs



# 1) Biguanides

## How do they work?

- Biguanides work by making the body more sensitive to insulin as well as decrease sugar produced by the liver.

## How they taken?

- Metformin (Glucophage): available in tablet form taken by mouth with food.

## What are the common side effects?

- Nausea, diarrhea, abdominal pain, vitamin B12 deficiency.



## 2) Sulfonylureas

### How they work?

- Sulfonylureas stimulate the pancreas to produce more insulin.

### How they taken?

- Glibenclamide, Glimepiride, Gliclazide:  
Available in tablet form taken by mouth with food.

### What are the common side effects?

- Low blood sugar, weight gain.



### 3) Glitazones

#### How they work?

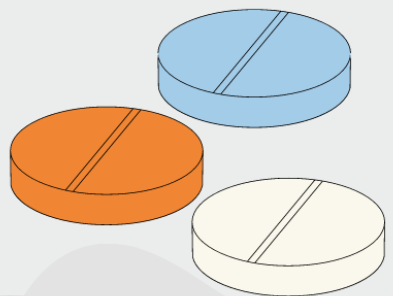
- Glitazones work by making the body more sensitive to insulin.

#### How they taken?

- Pioglitazone (Actos): Available in tablet form taken by mouth.

#### What are the common side effects?

- Fluid retention, weight gain, osteoporosis.



## 4) Gliptins

### How they work?

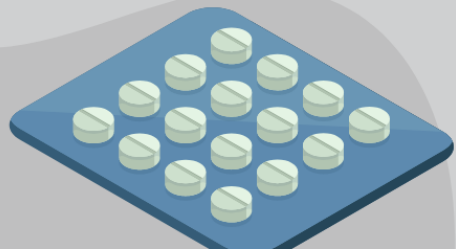
- Gliptins work by increasing the efficiency of a hormone called incretin which in turn stimulates the pancreas to produce more insulin.

### How they taken?

- Sitagliptin (Januvia), Linagliptin (Trajenta): Available in a tablet form taken by mouth.

### What are the possible side effects?

- Pancreatitis, joint pain, headache.



## 5) Glucagon-like peptide (GLP) 1 analogue

### How they work?

- GLP-1 analogues work by mimicking the action of the natural incretin hormone which stimulates the pancreas to produce more insulin.

### How they taken?

- Liraglutide (Victoza), dulaglutide (Trulicity), semaglutide (Ozempic): Available as injections given into the fatty part of the skin (the thigh, abdomen, or upper arm).
- Semaglutide (Rybelsus): Available in tablet form taken by mouth at least 30 minutes before food.

### What are the possible side effects?

- Nausea, vomiting, diarrhea, pancreatitis.



## 6) Sodium-glucose transporter (SGLT) 2 inhibitors

### How they work?

- SGLT- 2 inhibitors work by preventing the kidneys from reabsorbing sugar into the blood and thus helping to get rid of excess sugar in the urine.

### How they taken?

- Dapagliflozin (Farxiga), Empagliflozin (Jardiance), Canagliflozin (Invokana): Available in tablet form taken by mouth.

### What are the possible side effects?

- Frequent urination.
- urogenital tract infection.











Resources and references:

All illustrations used are from Canva.com

Review and audit:

The content of this booklet has been reviewed by Specialists of  
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