

Endocrine System - Common Medications

Diabetes Mellitus:

Body can no longer use insulin properly or the pancreas can no longer make it at all. There are four types: Type 1, Type 2, gestational, and other. Type 1 and Type 2 will be the focus.

Type 1:

- Mainly in younger patients, but can occur at any age
- Require insulin supplementation to live

Type 2:

- Generally older ages at time of diagnosis but can occur at any age
- Most common type
- Patients first have insulin resistance and later require insulin to live

Alpha-glucosidase inhibitors

Directions for use: Take with very first bite of every meal

Side Effects: Diarrhea, abdominal pain, flatulence. Side effects are worse at first but tend to improve with time

Generic (Brand)	Available Formulation
Acarbose (Precose)	Tablet
Miglitol (Glyset)	Tablet

Biguanide

Side Effects: Gas, bloating, diarrhea or constipation, nausea, abdominal pain. Management of side effects include taking IR tablet with food or can switch to XR, which is known to cause less GI side effects.

Drug-disease interaction: not recommended with kidney dysfunction. Should also be stopped if patient is going to receive IV contrast due to increased risk of kidney impairment Other: Often first line for Type 2 Diabetes, it does not cause hypoglycemia or weight gain

Generic (Brand)	Available Formulation
Metformin (Glucophage, Glucophage XR)	Tablet, ER tablet

Insulin

Storage: when not being used or when first received (either from manufacturer in pharmacy or when patient first takes home it should be stored in fridge) once product is opened it can be stored at room temperature, duration depends on exact product but in general for most insulins the duration is 28 days after opening

Appearance: clear or cloudy (depending on specific product) but make sure no solid chunks floating in the vial or pen

Administration: SQ or IV (IV is only as inpatient)

Side Effects: hypoglycemia, weight gain, injection site reactions

Subclass	Generic (Brand)	Available Formulation
Rapid Acting Onset: 5 min Duration: 2-4 hr	Insulin aspart (Novolog, FlexPen)	Vial, pen
	Insulin glulisine (Apidra, Apidra Solostar)	Vial, pen
	Insulin lispro (Humalog, Humalog Kwikpen)	Vial, pen
Short Acting Onset: 30 min Duration: 6-8 hr	Regular insulin (Humulin R or Novolin R)	Vial
Intermediate Acting Onset: 2-4 hr Duration: 18-24 hr	Insulin NPH (Humulin N, Novolin N)	Vial, pen
	<i>Mixed:</i> Insulin NPH/Regular insulin (Humulin 70/30 and Novolin 70/30)	Vial, pen
Long Acting Onset: 6 hr Duration: 24 hr Other: Provides continuous coverage	Insulin detemir (Levemir, Levemir FlexPen)	Vial, pen
	Insulin glargine (Lantus, Lantus Solostar)	Vial, pen

Meglitinides		
Directions for use: Requires food present in order to work and should be taken right before a meal. Side Effects: hypoglycemia, weight gain DDIs: Cannot use with sulfonylureas due to increased risk of hypoglycemia	Generic (Brand)	Available Formulation
	Repaglinide (Prandin)	Tablet
	Nateglinide (Starlix)	Tablet
Sulfonylureas		
Directions for use: Take before meals Side Effects: Hypoglycemia, weight gain DDIs: Use caution with other hypoglycemia-causing drugs Other: Can be used alone or in combination with other diabetic medications.	Generic (Brand)	Available Formulation
	Glimepiride (Amaryl)	Tablet
	Glipizide (Glucotrol, Glucotrol XL)	Tablet, ER tablet
	Glyburide (Diabeta, Micronase)	Tablet
Other classes: Amylin analogs, dipeptidyl peptidase-4 inhibitors, glucagon-like peptide 1 receptor agonists, thiazolidinediones		

Pituitary Gland Disorders		
Acromegaly or Gigantism:		
Caused by excessive growth hormone (GH) secretion by the pituitary gland Treatment : 1 st Line: Surgery to remove tumor causing excessive GH production 2 nd Line: Medications that control the effect of GH on the body	Generic (Brand)	Available Formulation
	Lanreotide (Somatuline)	Injection
	Octreotide (Sandostatin)	Injection, powder for injection

Adrenal Gland Disorders		
Cushing's Syndrome		
Adrenal gland has excess function resulting in high levels of glucocorticoids in the blood stream. Treatment: Surgery or medications that decrease glucocorticoid production	Generic (Brand)	Available Formulation
	Mitotane (Lysodren)	Tablet
	Ketoconazole (Nizoral)	Tablet, topical cream, shampoo
Addison's Disease		
Adrenal gland has low function resulting in deficiency of hormones normally produced by the adrenal glands, cortisol and/or aldosterone	Generic (Brand)	Available Formulation
	Hydrocortisone (Cortef) *Replaces cortisol	Tablet, topical cream/ointment/lotion
	Fludrocortisone (Florinef) *Replaces aldosterone	Tablet

Thyroid Gland Disorders		
Hyperthyroidism		
Too much thyroid hormone Treatment: surgery or medications	Generic (Brand)	Available Formulation
	Methimazole (Tapazole)	Tablet
	Propylthiouracil	Tablet
	Sodium Iodide, I ¹³¹ (Iodotope)	Capsule
Hypothyroidism		
Deficiency of thyroid hormone Treatment: hormone replacement	Generic (Brand)	Available Formulation
	Liothyronine (Cytomel)	Tablet, IV
	Levothyroxine (Levoxyl, Synthroid)	Tablet, powder for IV solution
	Dessicated thyroid hormone (Armour Thyroid)	Tablet