
GASTROINTESTINAL TRACT
Core Defect
Decreased incretin effect
PANCREATIC ALPHA CELL
Core Defect
Increased glucagon secretion
ADIPOSE TISSUE
Core Defect
Increased lipolysis
PANCREATIC BETA CELL
Core Defect
Decreased insulin secretion
KIDNEY
Core Defect
Increased glucose reabsorption
CORE DEFECTS IN T2 DIABETES[1]
LIVER
Core Defect
Increased heptic glucose production
MUSCLE
Core Defect
Decreased glucose uptake
BRAIN
Core Defect
Neurotransmitter dysfunction

TREATMENT OPTIONS FOR HYPERGLYCEMIA

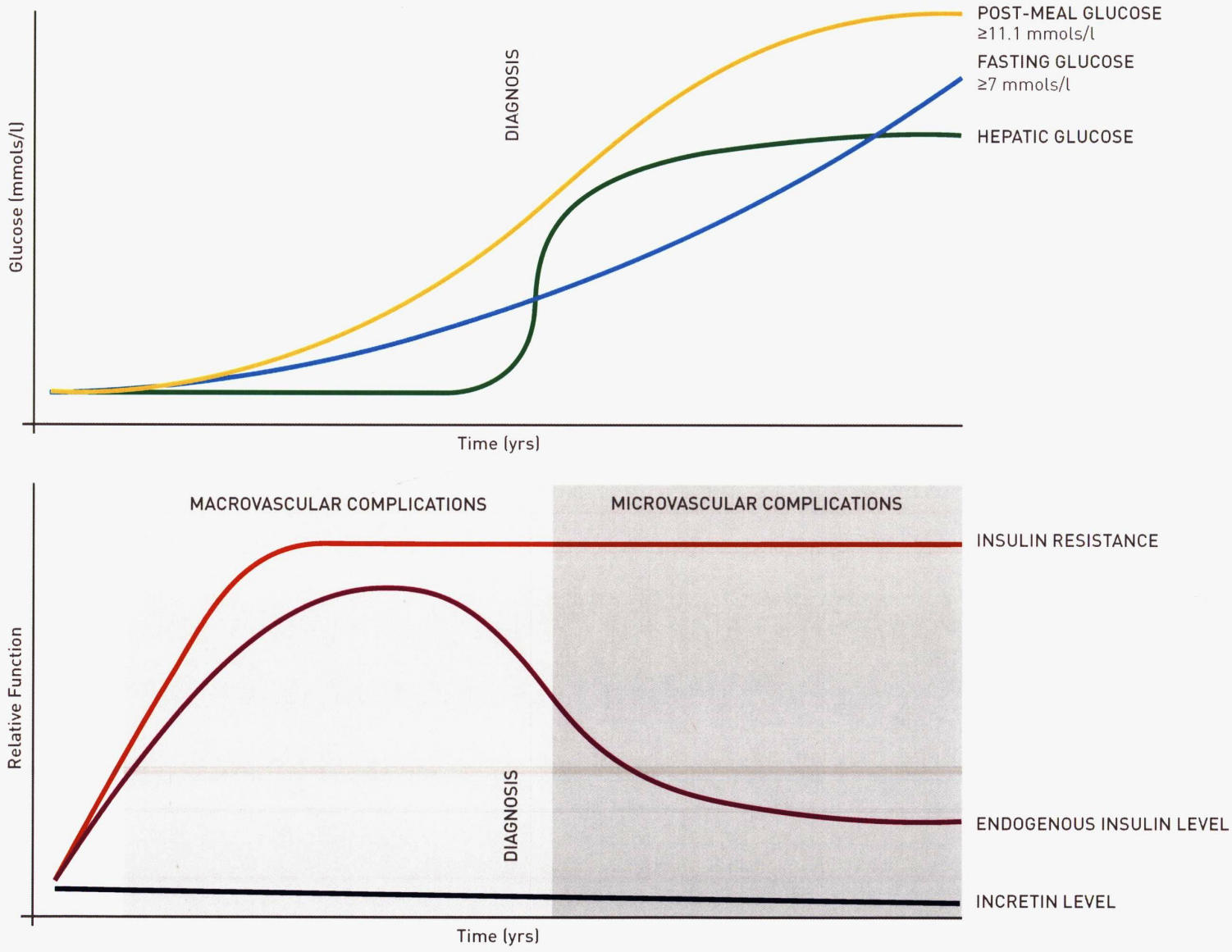
CLASS[2*]	PRIMARY PHYSIOLOGICAL ACTION(S)[2]	CORE DEFECTS[1]							
		KIDNEY	PANCREATIC ALPHA CELL	LIVER	MUSCLE	PANCREATIC BETA CELL	G.I.TRACT	ADIPOSE TISSUE	BRAIN
Biguanides	• ↓ Hepatic glucose production								
Sulfonylureas	• ↑ Insulin secretion								
Thiazolidinediones (TZDs)	• ↑ Insulin sensitivity								
DPP-4 Inhibitors (Dipeptidyl Peptidase-4 Inhibitors)	• ↑ Insulin secretion (glucose-dependent) • ↓ Glucagon secretion (glucose-dependent)								
SGLT2 Inhibitors (Sodium-Glucose Cotransporter-2 Inhibitors)	• Blocks glucose reabsorption by the kidney, increasing glucosuria								
GLP-1 Receptor Agonists (Glucagon-Like Peptide-1 Receptor Agonists)	• ↑ Insulin secretion (glucose-dependent) • ↓ Glucagon secretion (glucose-dependent) • Slows gastric emptying • ↑ Satiety								
Insulins	• ↑ Glucose disposal • ↓ Hepatic glucose production • Other								

1. DeFronzo. RA. From the triumvirate to the ominous octet: a new paradigm for the treatment of type 2 diabetes mellitus. *Diabetes*. 2009;58:773-795.
2. Inzucchi SE. Bergenstal RM, Buse -JB, et al. Management of hyperglycemia in type 2 diabetes, 2015: a patient-centered approach. *Diabetes Care*. 2015;38:140-149.

* This tool is intended to provide an overview of T2DM drugs and is not specific to only one product within the class. It is not intended to make any express or implied comparison among products. Classes shown are from the ADA Guidelines Chart and are not all T2DM classes available to treat hyperglycemia.

Lilly | DIABETES

HISTORY & PROGRESSION OF TYPE 2 DIABETES



Chung, S.T et al, Diabetologia, 2015; 58(3): 596-603.
Linker E, Humphreys C. Insulin resistance and the metabolic syndrome. In: Rakel D. *Integrative Medicine*. 3rd Ed. Philadelphia, PA: Elsevier Saunders. 2012:284-296.