

The Incretin Concept: A Case-study Approach to Glycemic Control in Type 2 Diabetes

This program is located at <http://esymposia.ashp.org/cemornings>



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There are 11 questions associated with this self-assessment test.

1. The percentage of patients with type 2 diabetes who have at least one serious diabetes-related complication is estimated at:
 - a. 5%
 - b. 15%
 - c. 60%
 - d. 90%
2. Healthcare costs for people with diabetes and cardiovascular disease are:
 - a. Significantly higher when compared to patients without cardiovascular disease.
 - b. Significantly lower when compared to patients without cardiovascular disease.
 - c. Significantly lower in patients 55-64 years of age.
 - d. Expected to fall significantly within the next 10 years.
3. By the time type 2 diabetes is diagnosed, the disease typically has been present for approximately:
 - a. 90 days.
 - b. 6 months.
 - c. 5 years.
 - d. 9 years.
4. As A1C decreases toward the target value, which of the following phenomena occurs?
 - a. The contribution of postprandial plasma glucose increases and the contribution of fasting plasma glucose decreases so that the contribution of PPG exceeds that of FPG.
 - b. The contribution of postprandial plasma glucose decreases and the contribution of fasting plasma glucose increases so that the contribution of FPG exceeds that of PPG.
 - c. The contribution of postprandial plasma glucose increases and the contribution of fasting plasma glucose decreases so that the contribution becomes roughly equal.
 - d. The contribution of postprandial plasma glucose and fasting plasma glucose remain the same and are roughly equal.
5. Key points to consider when selecting pharmacotherapy for patients with type 2 diabetes include which of the following?
 - a. Insulin pump therapy should be evaluated as initial monotherapy for patients with pre-diabetes.
 - b. Fasting glucose levels are evaluated, rather than postprandial glucose levels.
 - c. The duration of the disease and the degree of A1C-lowering effect required to achieve goal.
 - d. Physician's preference for route of medication administration.

6. Therapeutic inertia in patients with type 2 diabetes refers to:
 - a. Patient failure to adhere to the prescribed treatment regimen.
 - b. Patient failure to self-monitor blood glucose and adjust drug therapy accordingly.
 - c. Physician failure to advance therapy when required.
 - d. Progressive loss of β -cell function and response to drug therapy.

7. The incretin effect refers to the stimulatory effect of gut hormones known as incretins on pancreatic secretion of insulin in response to food, and this effect is diminished in patients with type 2 diabetes compared with healthy individuals.
 - a. True.
 - b. False.

8. Which of the following effects is exhibited by glucagon-like peptide-1 (GLP-1) but NOT by glucose-dependent insulinotropic polypeptide (GIP)?
 - a. Stimulates insulin response from beta cells in a glucose-dependent manner.
 - b. Inhibits insulin response from beta cells in a glucose-dependent manner.
 - c. Inhibits glucagon secretion from alpha cells in a glucose-dependent manner.
 - d. Stimulates glucagon secretion from alpha cells in a glucose-dependent manner.

9. The mechanism of action of DPP-4 inhibitors includes all of the following EXCEPT:
 - a. Inhibition of the degradation of GLP-1 and GIP.
 - b. Inhibition of endogenous insulin secretion.
 - c. Stimulation of endogenous insulin secretion.
 - d. Increased levels of GLP-1 and GIP, especially in response to meals.

10. With which of the following diabetes therapies have the DPP-4 inhibitors sitagliptin and vildagliptin been used most extensively to produce beneficial effects on A1C values?
 - a. Insulin and metformin.
 - b. Sulfonylureas and thiazolidinediones.
 - c. Insulin and sulfonylureas.
 - d. Sulfonylureas and metformin.

11. Which of the following is a consideration in dosing sitagliptin?
 - a. Timing with respect to meals.
 - b. Moderate renal impairment ($\text{CrCl} \geq 30 \text{ mL/min}$ to $<50 \text{ mL/min}$).
 - c. Moderate hepatic impairment.
 - d. Illness that precludes eating, resulting in hypoglycemia.