

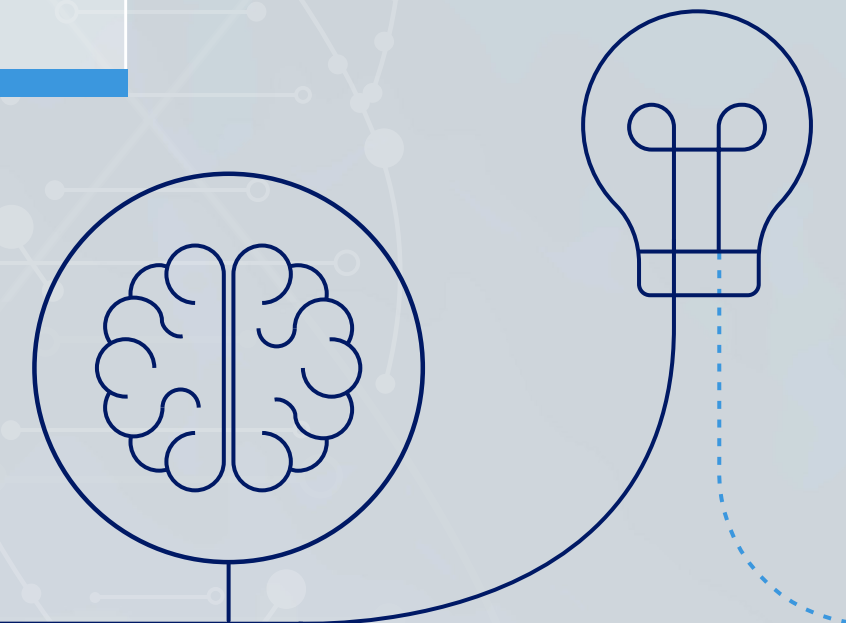
Time to put your knowledge to the test!

Welcome to the **Module 2** quiz on **biology of amylin secretion**. This is your chance to apply what you have learned and see how well you understand the material

The quiz consists of **5 questions** in total

Please start by pressing the button on the right. Good luck!

START >



Question 1

Which statement about amylin is **true**?

- A.** Amylin is secreted only from the pancreatic β cells
- B.** Amylin is mainly secreted from the pancreatic β cells, but can also be produced in other organs such as the stomach and the brain
- C.** Amylin is mainly secreted from the pancreatic β cells, but can also be produced in other organs such as the brain, kidneys and thyroid gland
- D.** Amylin is mainly secreted from the pancreatic β cells and the prefrontal cortex

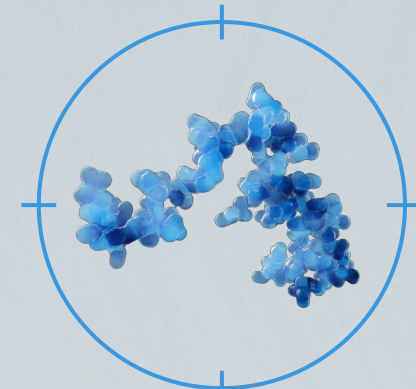
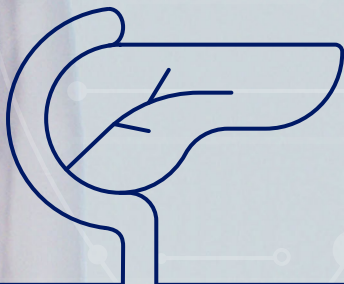
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Question 1

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C. Amylin is mainly secreted from the pancreatic β cells, but can also be produced in other organs such as the brain, kidneys and thyroid gland

D. Amylin is mainly secreted from the pancreatic β cells and the prefrontal cortex

Your answer is incorrect

Amylin is mainly secreted from the pancreatic β cells, but may also be produced by endocrine cells of the stomach and sensory neurons in the dorsal root ganglia

Lutz TA. *Appetite* 2022;172:105965; Mulder H et al. *Gastroenterology* 1994;107:712–9; Mulder H et al. *J Neurosci* 1995;15:7625–32; Rees TA et al. *J Headache Pain* 2024;25:36.

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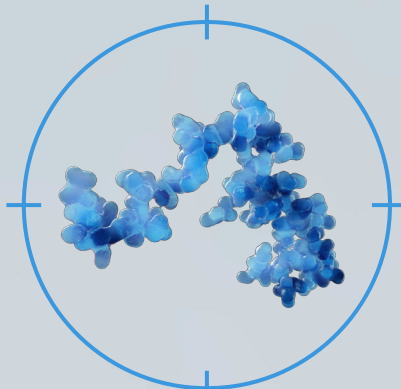
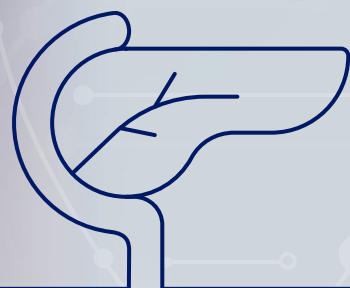
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- D. Amylin is mainly secreted from the pancreatic β cells and the prefrontal cortex

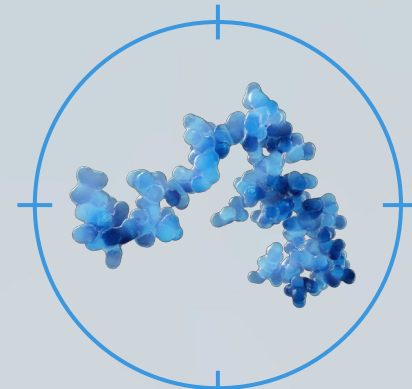
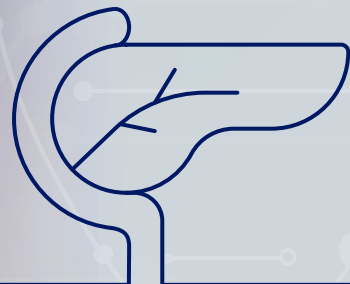


Your answer is correct!

Amylin is mainly secreted from the pancreatic β cells, with evidence that it can be produced by endocrine cells of the stomach and sensory neurons in the dorsal root ganglia

Lutz TA. *Appetite* 2022;172:105965; Mulder H et al. *Gastroenterology* 1994;107:712–9; Mulder H et al. *J Neurosci* 1995;15:7625–32; Rees TA et al. *J Headache Pain* 2024;25:36.

NEXT >



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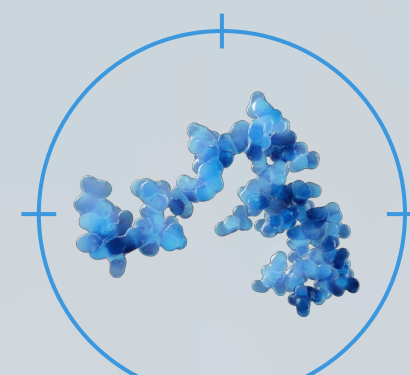
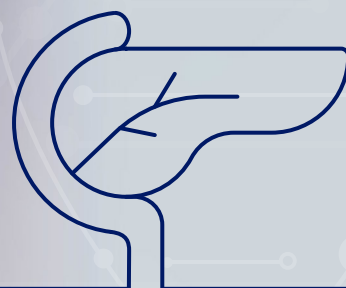
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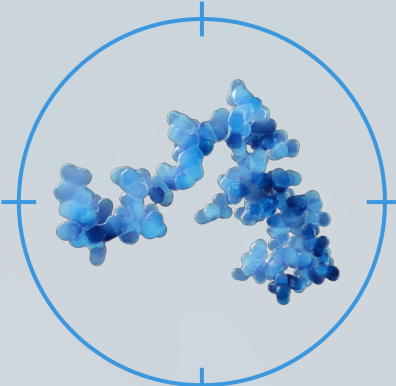
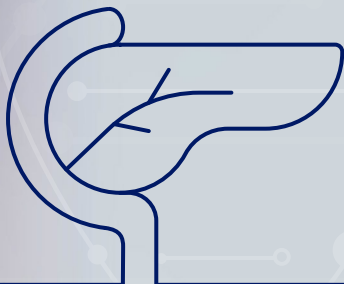
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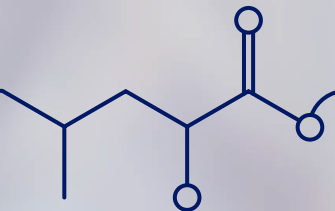
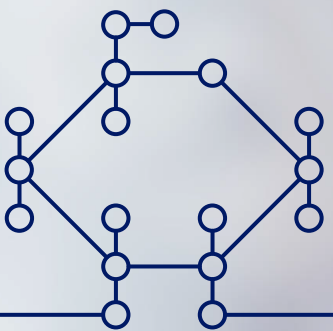
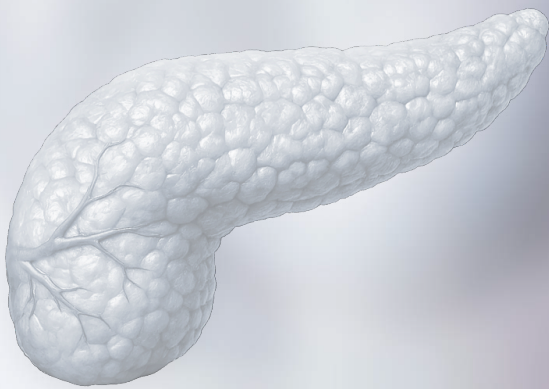
Question 2

Which of the following **cannot** directly stimulate amylin and insulin secretion?

A. Fatty acids

B. Glucose

C. Amino acids



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Question 2

Which of the following **cannot** directly stimulate amylin and insulin secretion?

A. Fatty acids

B. Glucose

C. Amino acids



Your answer is correct!

Fatty acids cannot stimulate amylin and insulin secretion in the absence of glucose

White PJ et al. *Nat Rev Endocrinol* 2025;21:397–412.

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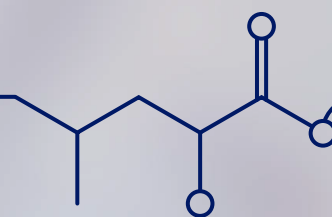
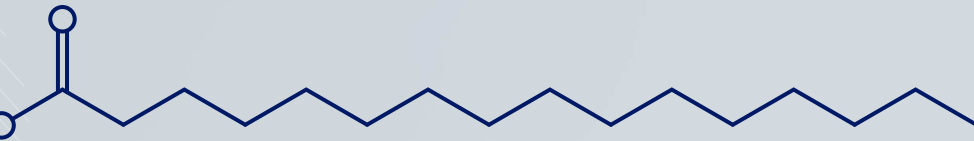
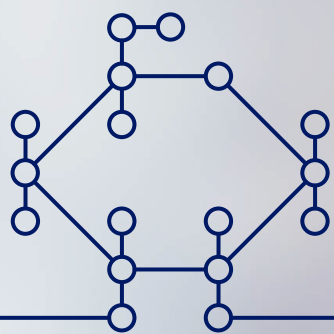
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Question 2

Which of the following **cannot** directly stimulate amylin and insulin secretion?

A. Fatty acids

B. Glucose

C. Amino acids



Your answer is incorrect

Glucose is the primary stimulus for amylin and insulin secretion

White PJ et al. *Nat Rev Endocrinol* 2025;21:397–412; Rohli KE et al. *Biomolecules* 2022;12:335; Cluck MW et al. *Pancreas* 2005;30:1–14; Alam T et al. *Diabetes* 1992;41:508–14; Moore CX, Cooper GJ. *Biochem Biophys Res Commun* 1991;179:1–9.

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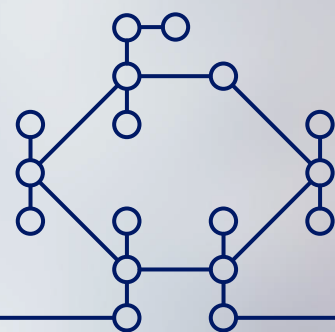
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Question 2

Which of the following **cannot** directly stimulate amylin and insulin secretion?

A. Fatty acids

B. Glucose

C. Amino acids



Your answer is incorrect

Amino acids such as glutamine, leucine, arginine, and glycine may directly induce secretion from β cells, regardless of glucose availability

White PJ et al. *Nat Rev Endocrinol* 2025;21:397–412; Rohli KE et al. *Biomolecules* 2022;12:335; Cluck MW et al. *Pancreas* 2005;30:1–14; Alam T et al. *Diabetes* 1992;41:508–14; Moore CX, Cooper GJ. *Biochem Biophys Res Commun* 1991;179:1–9.

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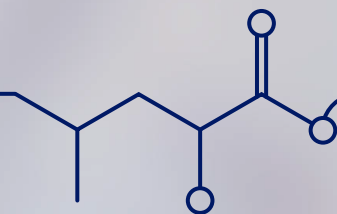
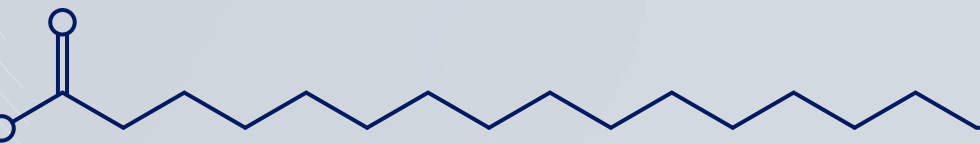
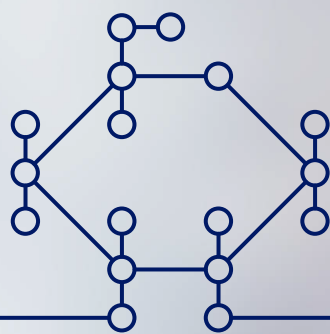
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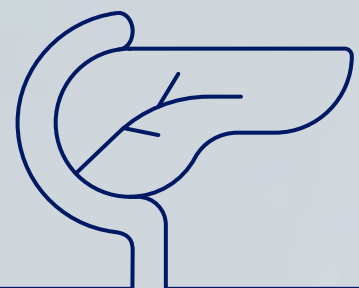
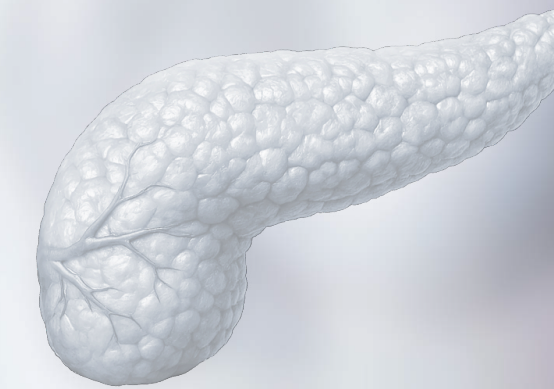
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Question 3

Which hormones may stimulate the secretion of amylin and insulin from β cells?

- A.** Only glucagon-like peptide-1 (GLP-1) hormone
- B.** Nutrient-stimulated secretion of amylin and insulin cannot be modulated by other hormones
- C.** Cholecystikinin (CCK), glucose-dependent insulintropic polypeptide (GIP), glucagon-like peptide-1 (GLP-1), and pituitary adenylate cyclase-activating polypeptide (PACAP), among other hormones



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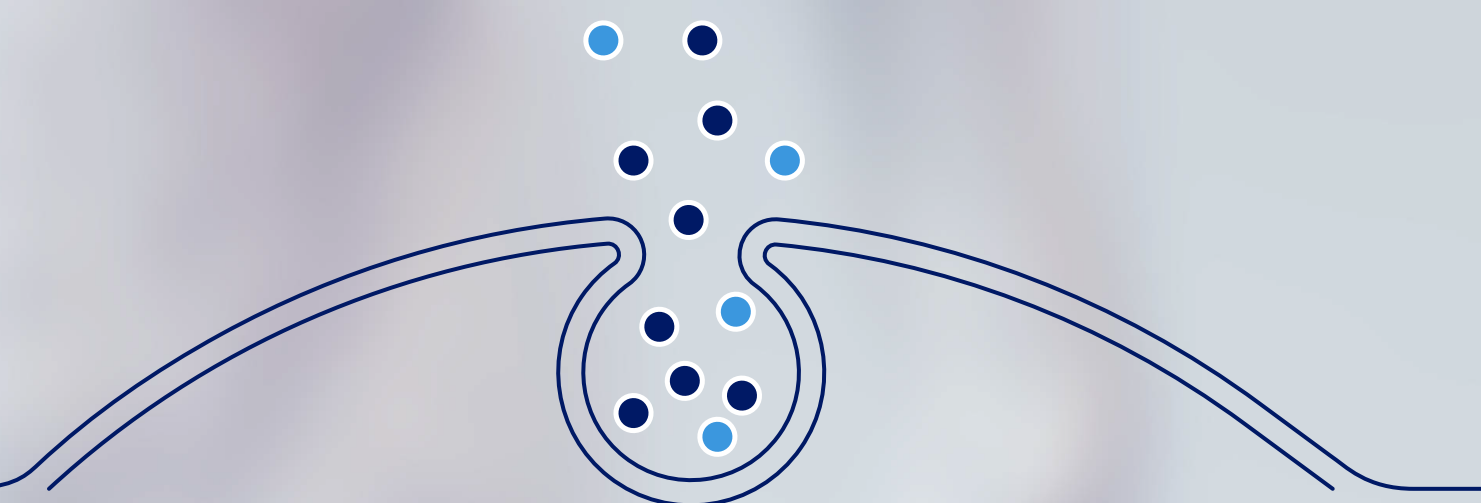
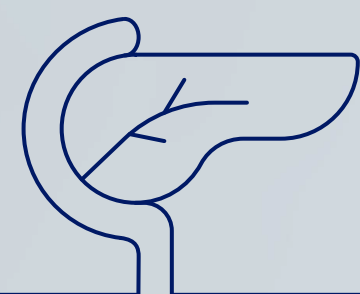
Your answer is incorrect

Amylin and insulin secretion are affected by a variety of hormones including glucagon-like peptide-1 (GLP-1), as well as others including cholecystokinin (CCK), glucose-dependent insulintropic polypeptide (GIP), and pituitary adenylate cyclase-activating polypeptide (PACAP)

Cluck MW et al. *Pancreas* 2005;30:1–14; Moore CX, Cooper GJ. *Biochem Biophys Res Commun* 1991;179:1–9; White PJ et al. *Nat Rev Endocrinol* 2025;21:397–412.

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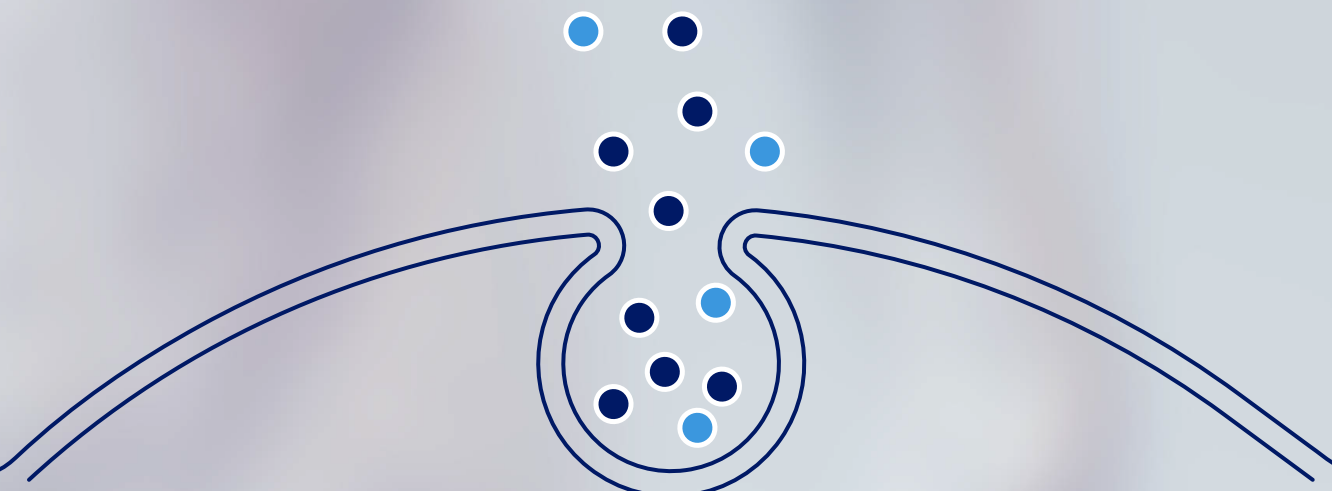
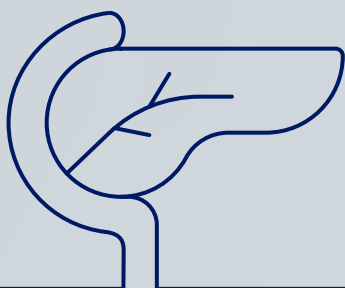
Your answer is incorrect

Nutrient-stimulated amylin and insulin secretion is also affected by other hormones, including cholecystokinin (CCK), glucose-dependent insulintropic polypeptide (GIP), glucagon-like peptide-1 (GLP-1), and pituitary adenylate cyclase-activating polypeptide (PACAP), as well as other factors

Cluck MW et al. *Pancreas* 2005;30:1–14; Moore CX, Cooper GJ. *Biochem Biophys Res Commun* 1991;179:1–9; White PJ et al. *Nat Rev Endocrinol* 2025;21:397–412.

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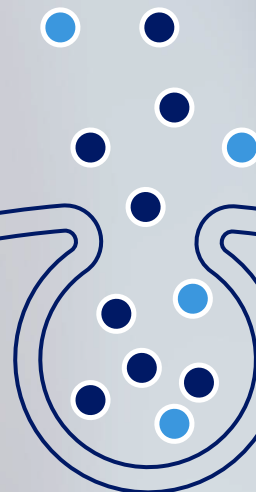
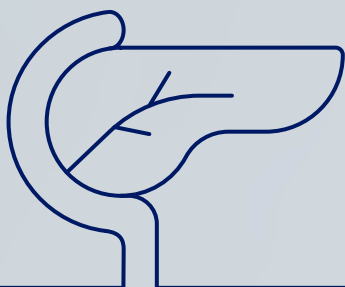


Your answer is correct!

Cholecystokinin (CCK), glucose-dependent insulintropic polypeptide (GIP), glucagon-like peptide-1 (GLP-1), and pituitary adenylate cyclase-activating polypeptide (PACAP) stimulate amylin and insulin secretion

Cluck MW et al. *Pancreas* 2005;30:1–14; Moore CX, Cooper GJ. *Biochem Biophys Res Commun* 1991;179:1–9; White PJ et al. *Nat Rev Endocrinol* 2025;21:397–412.

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Question 4

What effect does somatostatin have on amylin and insulin secretion?

A. Little to no effect

B. Inhibits secretion

C. Stimulates secretion



Question 4

What effect does somatostatin have on amylin and insulin secretion?

A. Little to no effect

B. Inhibits secretion

C. Stimulates secretion

Your answer is incorrect

Somatostatin does have an effect on amylin and insulin secretion: it inhibits secretion of amylin and insulin

Cluck MW et al. *Pancreas* 2005;30:1–14; Moore CX, Cooper GJ. *Biochem Biophys Res Commun* 1991;179:1–9; White PJ et al. *Nat Rev Endocrinol* 2025;21:397–412.

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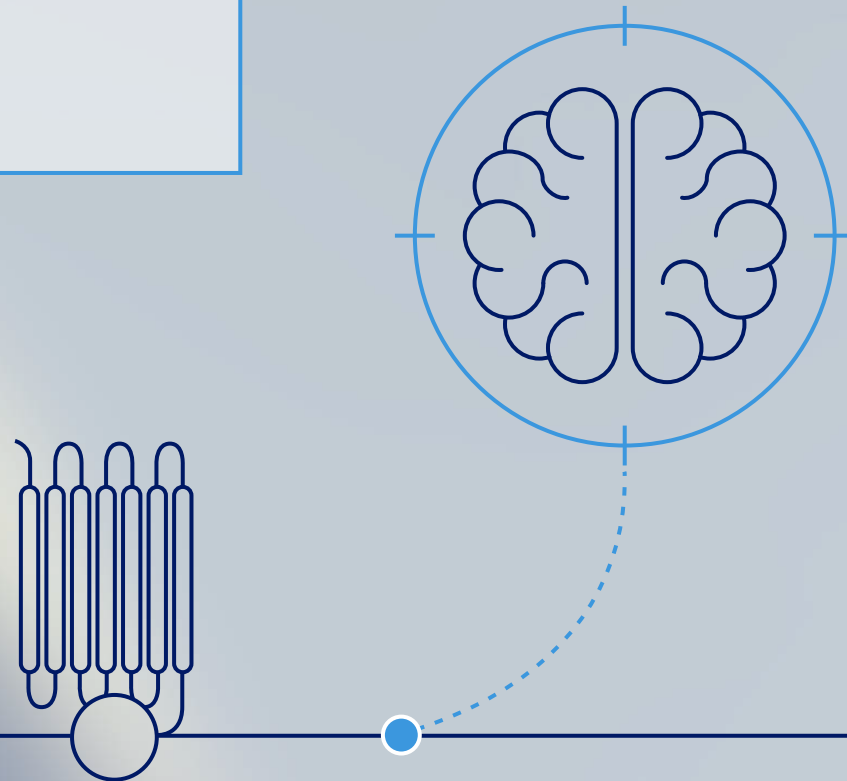
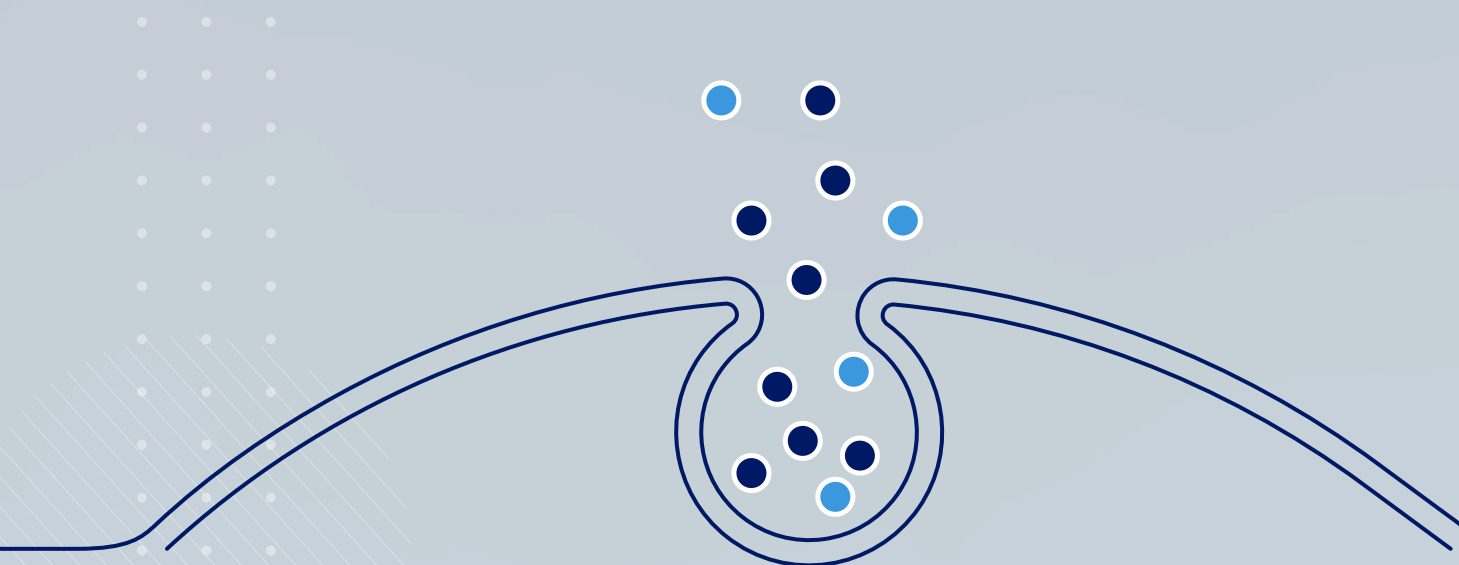
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Question 4

What effect does somatostatin have on amylin and insulin secretion?

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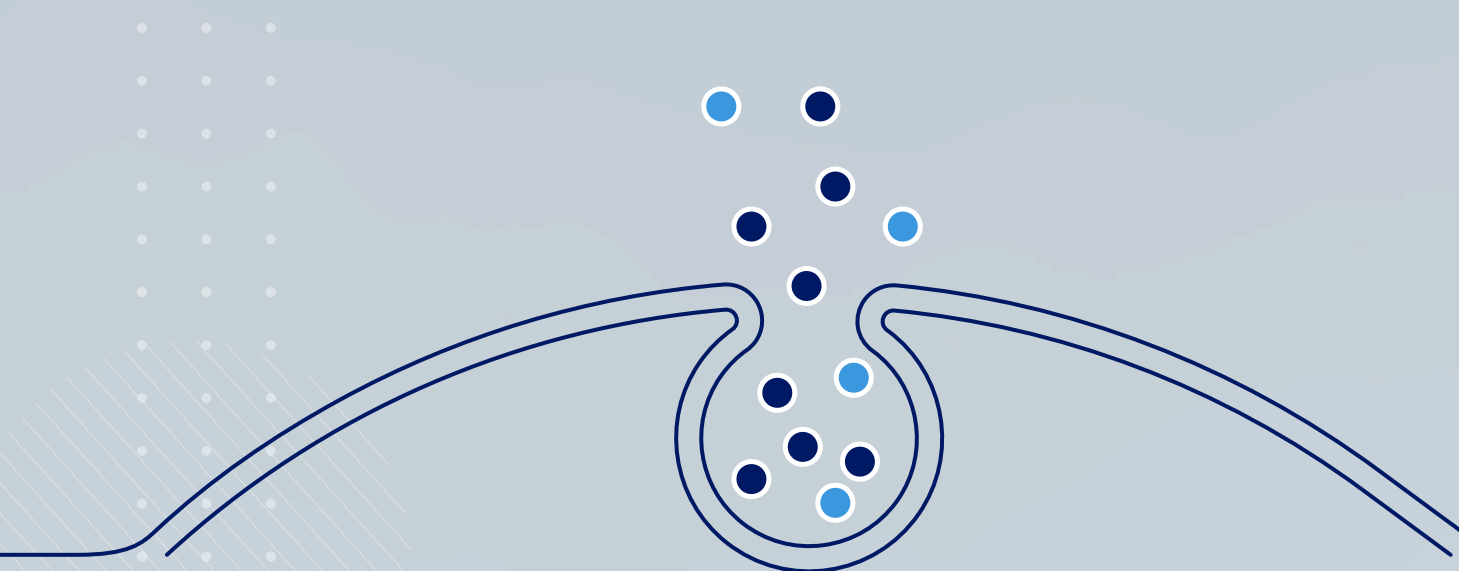


Your answer is correct!

Somatostatin inhibits amylin and insulin secretion

Cluck MW et al. *Pancreas* 2005;30:1–14; Moore CX, Cooper GJ. *Biochem Biophys Res Commun* 1991;179:1–9; White PJ et al. *Nat Rev Endocrinol* 2025;21:397–412.

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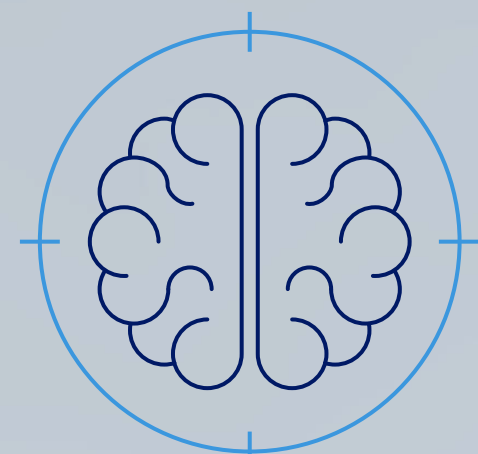
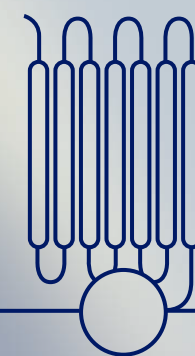
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Question 4

What effect does somatostatin have on amylin and insulin secretion?

A. Little to no effect

B. Inhibits secretion

C. Stimulates secretion

Your answer is incorrect

Somatostatin does NOT stimulate secretion of amylin and insulin, but instead inhibits amylin and insulin secretion

Cluck MW et al. *Pancreas* 2005;30:1–14; Moore CX, Cooper GJ. *Biochem Biophys Res Commun* 1991;179:1–9; White PJ et al. *Nat Rev Endocrinol* 2025;21:397–412.

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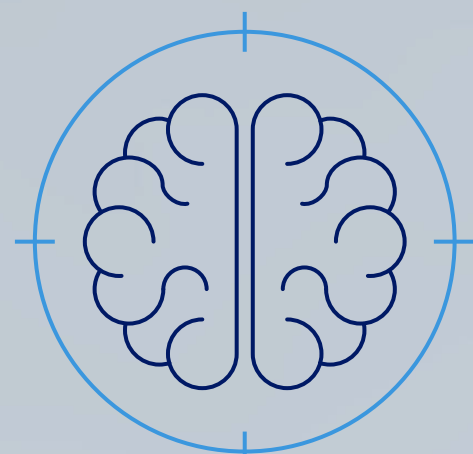
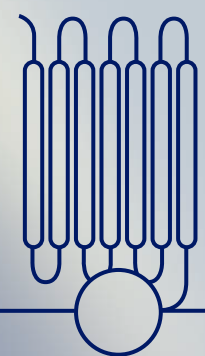
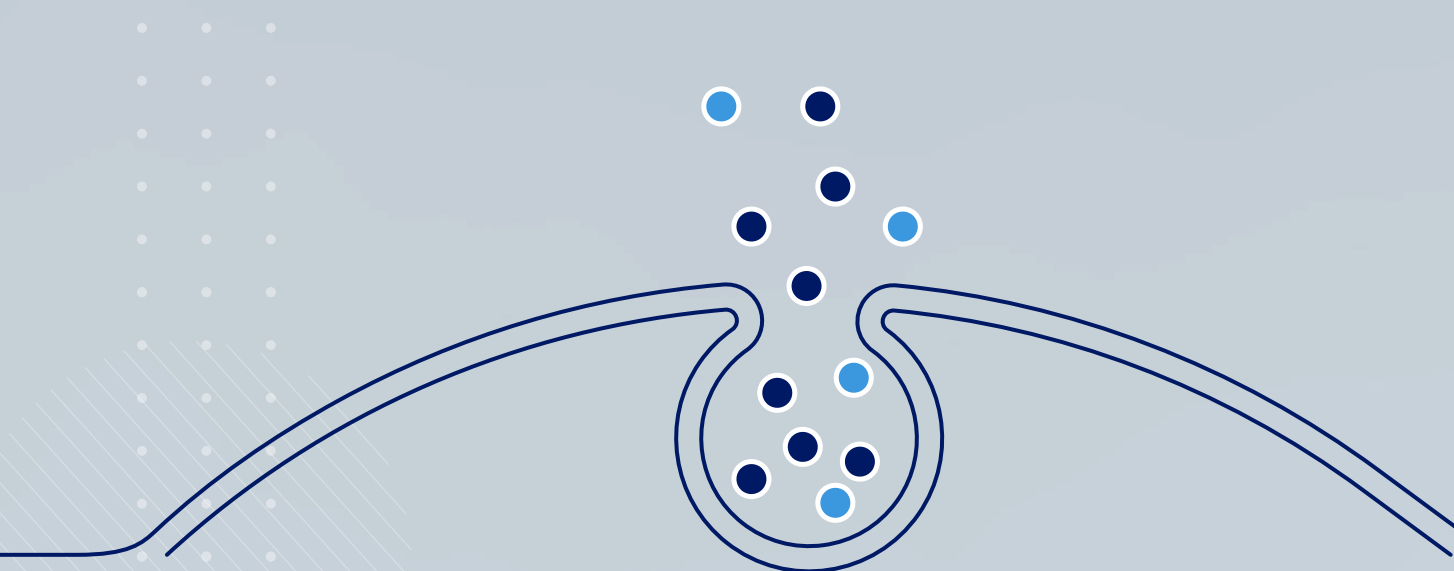
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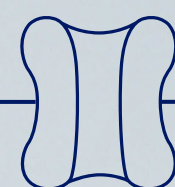
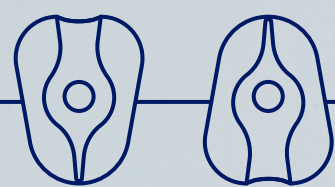


Question 5

True or false: The effects of incretins and other hormones are mediated via G-protein-coupled receptor-mediated signaling affecting the “amplifying” pathways

A. True

B. False



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Question 5

True or false: The effects of incretins and other hormones are mediated via G-protein-coupled receptor-mediated signaling affecting the “amplifying” pathways

A. True

B. False

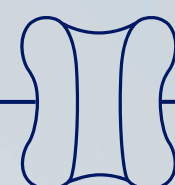
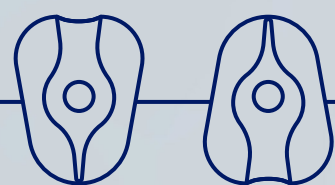


Your answer is correct!

The effects of incretins and other hormones are mediated via G-protein-coupled receptor-mediated signaling affecting the “amplifying” pathways

Cluck MW et al. *Pancreas* 2005;30:1–14; Alam T et al. *Diabetes* 1992;41:508–14; White PJ et al. *Nat Rev Endocrinol* 2025;21:397–412.

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Question 5

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A. True

B. False

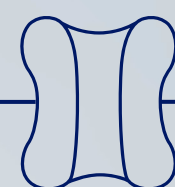
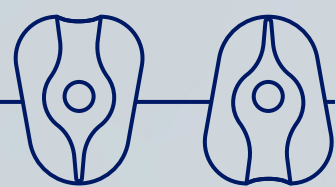
Your answer is incorrect

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You have completed the quiz!

Module 2: Biology of amylin secretion

