

Dunphy Endocrine and Metabolic Problems Practice Test (Sample)

Study Guide



Everything you need from our exam experts!

This is a sample study guide. To access the full version with hundreds of questions,

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Don't worry about getting everything right, your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 - 45 minutes). Review a handful of questions, reflect on the explanations, and take breaks to retain information better.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning.

7. Use Other Tools

Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly — adapt the tips above to fit your pace and learning style. You've got this!

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Questions

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- 1. What symptoms might indicate the presence of hypercalcemia?**
 - A. Confusion and seizures**
 - B. Nausea, vomiting, fatigue, and kidney stones**
 - C. Weight gain and loss of hair**
 - D. Rapid heart rate and high blood pressure**

- 2. What is the role of glucagon in blood sugar regulation?**
 - A. Promotes glycogen storage in the liver**
 - B. Increases blood glucose levels by promoting gluconeogenesis and glycogenolysis**
 - C. Facilitates glucose uptake into cells**
 - D. Inhibits the release of insulin**

- 3. Which food is suitable for someone with gout?**
 - A. Asparagus.**
 - B. Beans.**
 - C. Broccoli.**
 - D. Mushrooms.**

- 4. In a patient with diabetic ketoacidosis, which signs and symptoms are typically observed?**
 - A. Hypoglycemia and glycosuria**
 - B. Decreased respiratory rate with shallow respirations**
 - C. Ketonuria and polyuria**
 - D. Polydipsia and an increased blood pH**

- 5. What is a common complication of diabetes mellitus?**
 - A. Gastroesophageal reflux disease**
 - B. Neuropathy**
 - C. Hypoglycemia**
 - D. Obesity**

6. Which demographic is most likely to experience decreased insulin sensitivity related to obesity?

- A. Older adults**
- B. Children**
- C. Young adults under 30**
- D. Teenagers**

7. What is the primary pathological irregularity associated with diabetes mellitus type 1?

- A. Nonfunctioning beta cells.**
- B. Insulin resistance.**
- C. Overproducing beta cells.**
- D. Elevated free fatty acids in the plasma.**

8. Which hormone is primarily responsible for regulating the female menstrual cycle?

- A. Testosterone**
- B. Estrogen and progesterone**
- C. Insulin**
- D. Cortisol**

9. A common presenting symptom of Cushing syndrome related to the gastrointestinal system is:

- A. Duodenal ulcer**
- B. Peptic ulcer**
- C. Esophageal varices**
- D. Gastritis**

10. What is a common effect of obesity on metabolic health?

- A. Increased insulin sensitivity**
- B. Decreased risk of type 2 diabetes**
- C. Higher likelihood of metabolic disorders**
- D. Stable blood sugar levels**

Answers

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1. B
2. B
3. C
4. C
5. B
6. A
7. A
8. B
9. B
10. C

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Explanations

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1. What symptoms might indicate the presence of hypercalcemia?

- A. Confusion and seizures
- B. Nausea, vomiting, fatigue, and kidney stones**
- C. Weight gain and loss of hair
- D. Rapid heart rate and high blood pressure

Hypercalcemia, which is an elevated level of calcium in the blood, can lead to a range of symptoms due to its effects on various body systems. Nausea and vomiting are commonly reported digestive symptoms, while fatigue often arises from the impact of high calcium levels on muscle function and energy metabolism. Additionally, hypercalcemia can lead to the formation of kidney stones as excess calcium is filtered and concentrated in the urine, precipitating stone formation. This combination of symptoms is characteristic of hypercalcemia and highlights how elevated calcium levels can disrupt normal physiological processes. The other symptoms listed in the other options may not specifically correlate with hypercalcemia or are too broad and could relate to other conditions. For instance, confusion and seizures are often associated with severe disturbances in electrolyte balance, but they are not the hallmark symptoms of hypercalcemia. Weight gain and hair loss are typically associated with other endocrine disorders, such as hypothyroidism. Lastly, while rapid heart rate and high blood pressure can result from various metabolic dysregulations, they are not directly indicative of hypercalcemia. Understanding the specific symptoms, such as those included in the correct answer, helps in accurately identifying hypercalcemia during clinical assessment.

2. What is the role of glucagon in blood sugar regulation?

- A. Promotes glycogen storage in the liver
- B. Increases blood glucose levels by promoting gluconeogenesis and glycogenolysis**
- C. Facilitates glucose uptake into cells
- D. Inhibits the release of insulin

Glucagon is a hormone produced by the alpha cells of the pancreas, and its primary role in blood sugar regulation is to increase blood glucose levels. It achieves this mainly through two mechanisms: gluconeogenesis and glycogenolysis. Gluconeogenesis is the process of synthesizing glucose from non-carbohydrate sources, such as amino acids and glycerol, which occurs primarily in the liver. This process serves to increase the availability of glucose in the bloodstream, especially during periods of fasting or intense physical activity. Glycogenolysis refers to the breakdown of glycogen, which is a stored form of glucose in the liver and muscle tissues. When blood sugar levels decline, glucagon stimulates the liver to convert glycogen back into glucose and release it into the bloodstream, thereby elevating blood glucose levels. By enhancing both gluconeogenesis and glycogenolysis, glucagon plays a crucial role in maintaining energy balance and ensuring that the body has a sufficient supply of glucose during times when it is needed, such as between meals or during strenuous exercise. This regulatory function is essential for preventing hypoglycemia and supporting overall metabolic health.

3. Which food is suitable for someone with gout?

- A. Asparagus.
- B. Beans.
- C. Broccoli.**
- D. Mushrooms.

Broccoli is suitable for someone with gout because it is low in purines, which are compounds that can contribute to increased levels of uric acid in the blood and exacerbate gout symptoms. Gout is characterized by the accumulation of uric acid crystals in the joints, leading to painful inflammation. Foods that are low in purines are generally recommended for individuals managing this condition, allowing for better control over uric acid levels. While asparagus, beans, and mushrooms do contain purines, broccoli is a healthier vegetable option for gout sufferers due to its nutritional profile and lower purine content. This makes broccoli not only a safe choice but also a beneficial addition to a diet focused on reducing the risk of gout attacks.

4. In a patient with diabetic ketoacidosis, which signs and symptoms are typically observed?

- A. Hypoglycemia and glycosuria
- B. Decreased respiratory rate with shallow respirations
- C. Ketonuria and polyuria**
- D. Polydipsia and an increased blood pH

In a patient with diabetic ketoacidosis (DKA), the presence of ketonuria and polyuria is a hallmark of the condition. DKA occurs when the body starts breaking down fat for energy due to a lack of insulin. This process results in the production of ketones, which spill over into the urine, leading to ketonuria. Additionally, because of the high levels of glucose in the blood caused by insufficient insulin, the kidneys attempt to excrete this excess sugar, which results in polyuria—frequent urination. This urination, coupled with the loss of fluids and electrolytes, often leads to significant dehydration, resulting in increased thirst (polydipsia). The other options presented describe conditions that do not align with the pathophysiology of DKA. Hypoglycemia and glycosuria are not characteristic signs in DKA since patients typically experience hyperglycemia. Decreased respiratory rate and shallow respirations are contrary to what occurs in DKA; instead, patients usually present with Kussmaul respirations, which are deep and rapid as the body attempts to compensate for metabolic acidosis. An increased blood pH is also not expected, as DKA is marked by metabolic acidosis, leading to

5. What is a common complication of diabetes mellitus?

- A. Gastroesophageal reflux disease
- B. Neuropathy**
- C. Hypoglycemia
- D. Obesity

Neuropathy is a common complication of diabetes mellitus and occurs due to prolonged high blood glucose levels, which can damage nerves throughout the body. Diabetic neuropathy often affects the extremities, leading to symptoms such as tingling, pain, and loss of sensation. This condition can also impact the autonomic nervous system, resulting in issues with digestion, heart rate, and blood pressure regulation. Understanding the mechanisms behind diabetic neuropathy is important for managing blood glucose levels effectively and preventing this complication. It emphasizes the need for regular monitoring and control of diabetes to minimize the risk of nerve damage and subsequent complications.

6. Which demographic is most likely to experience decreased insulin sensitivity related to obesity?

- A. Older adults**
- B. Children
- C. Young adults under 30
- D. Teenagers

The demographic most likely to experience decreased insulin sensitivity related to obesity is older adults. As individuals age, various physiological changes occur, which can impact insulin sensitivity. These changes include alterations in body composition, such as increased fat mass and decreased lean muscle mass, which can lead to a greater degree of insulin resistance. Additionally, older adults often have a higher prevalence of comorbid conditions such as hypertension and dyslipidemia, which can further exacerbate insulin resistance. Furthermore, older adults may also have a decline in pancreatic beta-cell function, which impairs their ability to secrete insulin effectively in response to glucose. This decreased ability to manage blood sugar levels is compounded by the presence of obesity, making older adults particularly susceptible to conditions like type 2 diabetes. In contrast, while children, teenagers, and young adults under 30 can also experience insulin sensitivity issues related to obesity, the prevalence and severity tend to be less pronounced in those younger populations. In these groups, the body often has a greater capacity for metabolic adaptation, and the mechanisms driving insulin sensitivity can differ from those observed in aging adults.

7. What is the primary pathological irregularity associated with diabetes mellitus type 1?

- A. Nonfunctioning beta cells.**
- B. Insulin resistance.**
- C. Overproducing beta cells.**
- D. Elevated free fatty acids in the plasma.**

The primary pathological irregularity associated with diabetes mellitus type 1 is the destruction of insulin-producing beta cells in the pancreas. In this autoimmune disorder, the body's immune system mistakenly attacks and destroys the beta cells, resulting in little to no insulin production. This lack of insulin leads to high blood glucose levels, as insulin is essential for facilitating the uptake of glucose into cells for energy. The condition is characterized by the absence of functional beta cells, which directly impacts glucose metabolism and homeostasis. The destruction of these cells typically occurs in childhood or adolescence, which is why type 1 diabetes is often referred to as juvenile diabetes. In contrast to this disorder, conditions such as insulin resistance, which is more characteristic of type 2 diabetes, involve the body's cells failing to respond effectively to insulin, but the beta cells may still be functioning, at least initially. Overproduction of beta cells would not apply here, as type 1 results from their destruction, not overproduction. Elevated free fatty acids can occur in various metabolic conditions but are not the primary pathological factor in type 1 diabetes.

8. Which hormone is primarily responsible for regulating the female menstrual cycle?

- A. Testosterone**
- B. Estrogen and progesterone**
- C. Insulin**
- D. Cortisol**

The female menstrual cycle is primarily regulated by the hormones estrogen and progesterone. These two hormones play crucial roles in the various phases of the menstrual cycle. At the beginning of the cycle, estrogen is released from the developing follicles in the ovaries, which promotes the thickening of the endometrial lining in preparation for a potential pregnancy. As the cycle progresses and ovulation occurs, a spike in luteinizing hormone triggers the release of the egg, and progesterone levels start to rise, further preparing the endometrium for implantation. If pregnancy does not occur, progesterone levels fall, leading to the shedding of the endometrial lining, which is experienced as menstruation. In contrast, other hormones listed do not play the same direct regulatory roles in the menstrual cycle. Testosterone is primarily associated with male characteristics and reproductive functions, insulin is crucial for glucose metabolism, and cortisol is a stress hormone that affects various bodily functions, including metabolism and immune response, but is not directly involved in the regulation of the menstrual cycle.

9. A common presenting symptom of Cushing syndrome related to the gastrointestinal system is:

- A. Duodenal ulcer**
- B. Peptic ulcer**
- C. Esophageal varices**
- D. Gastritis**

Cushing syndrome, characterized by excess cortisol in the body, can lead to various gastrointestinal complications due to the hormone's effects on the gastrointestinal tract. One significant manifestation is the increased risk of peptic ulcers. Cortisol has several effects, including increased gastric acid secretion and decreased mucosal defense mechanisms, which can contribute to the formation of ulcers. Peptic ulcers encompass both gastric and duodenal ulcers, and the elevated cortisol levels can lead to increased irritation and damage to the gastric lining, causing ulceration. Additionally, prolonged exposure to high levels of glucocorticoids can impair the healing of existing ulcers and promote the development of new ones. Understanding the relationship between Cushing syndrome and peptic ulcers underscores the importance of monitoring patients for gastrointestinal symptoms. In contrast, while duodenal ulcers can occur, they are more specifically categorized under the broader term of peptic ulcers. Conditions such as esophageal varices and gastritis, while pertinent to gastrointestinal health, do not have a direct and common link to the excess cortisol seen in Cushing syndrome as peptic ulcers do.

10. What is a common effect of obesity on metabolic health?

- A. Increased insulin sensitivity**
- B. Decreased risk of type 2 diabetes**
- C. Higher likelihood of metabolic disorders**
- D. Stable blood sugar levels**

The correct choice highlights a well-documented relationship between obesity and metabolic health. Obesity is commonly associated with a higher likelihood of metabolic disorders, which include conditions such as type 2 diabetes, hypertension, and dyslipidemia. This is largely due to the way excess body fat, particularly visceral fat, affects the body's ability to manage insulin and regulate blood sugar levels. In individuals who are obese, fatty tissue can lead to the development of insulin resistance, which is a key factor in the onset of type 2 diabetes. The accumulation of fat also has significant impacts on lipid metabolism and can contribute to an increased risk of cardiovascular diseases. Overall, the presence of obesity creates a complex interplay of hormonal and biochemical changes that predispose individuals to multiple metabolic disorders. The other choices suggest outcomes that are not typically associated with obesity. For instance, increased insulin sensitivity is more characteristic of leaner individuals or those with a healthy body composition. A decreased risk of type 2 diabetes and stable blood sugar levels are also unlikely in the context of obesity, where inflammation and hormonal imbalances can lead to unstable glucose control. Thus, the association of obesity with a higher risk of metabolic disorders is supported by extensive clinical and epidemiological research.

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

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We wish you the very best on your exam journey. You've got this!

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