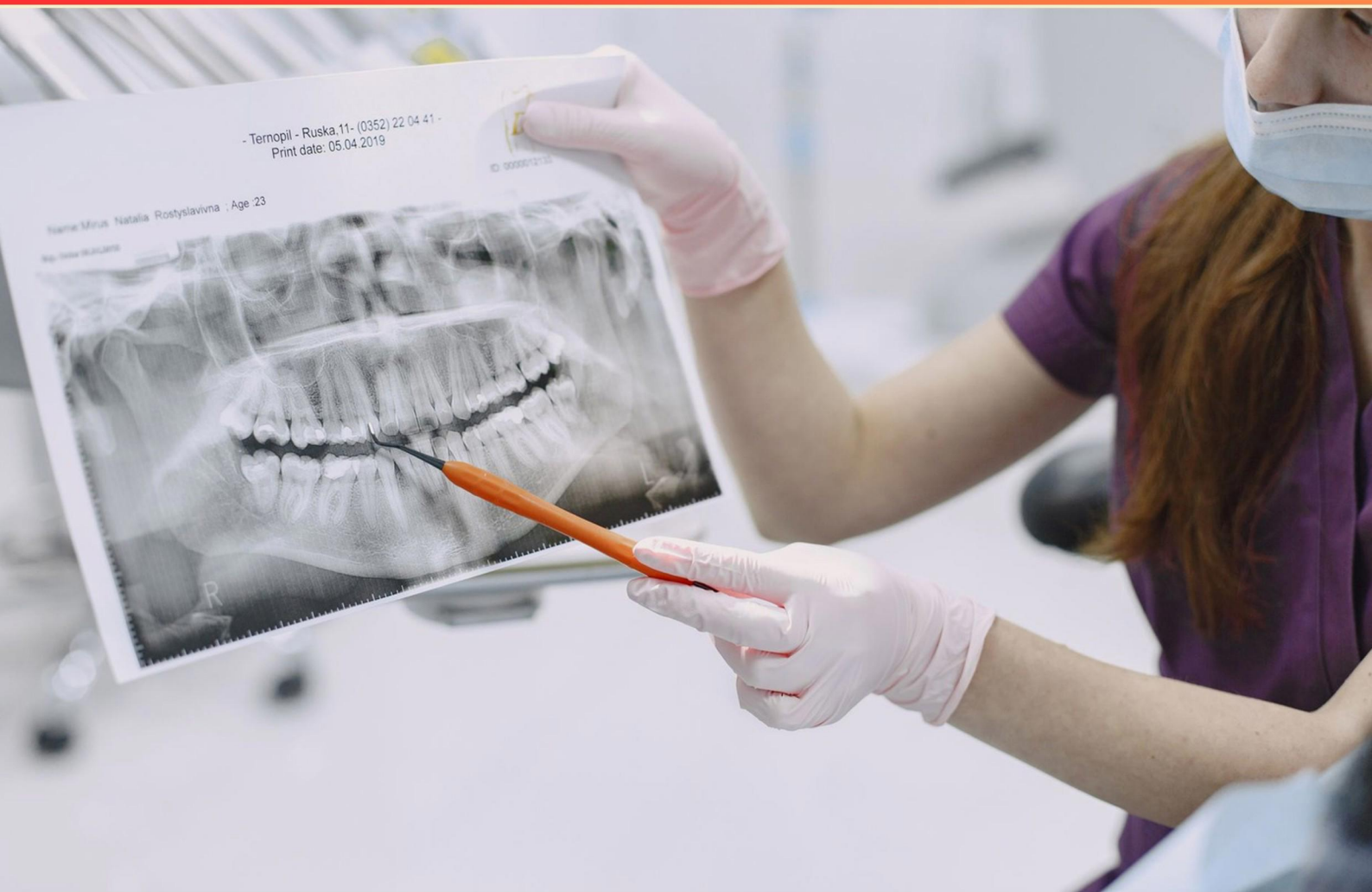


# EVIDENCE-BASED DENTISTRY (EBD) EXAM 1 PRACTICE TEST (SAMPLE)

## STUDY GUIDE



## SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR  
THE FULL VERSION STUDY GUIDE

<https://ebdexam1.examzify.com>



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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. 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.

## 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. 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!

## Questions

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- 1. Which element of PICO is the outcome?**
  - A. Population
  - B. Intervention
  - C. Comparison
  - D. Outcome
  
- 2. To make inferences from a sample, researchers rely on which?**
  - A. Statistics
  - B. Descriptive summaries
  - C. Opinions
  - D. Random chance
  
- 3. In PICO, what does 'C' stand for?**
  - A. Population
  - B. Intervention
  - C. Comparison
  - D. Outcome
  
- 4. A bell-shaped, symmetric distribution is called which of the following?**
  - A. Skewed Right Distribution
  - B. Skewed Left Distribution
  - C. Uniform Distribution
  - D. Normal Distribution
  
- 5. Which term describes distortion caused by a third factor associated with both exposure and outcome?**
  - A. Bias
  - B. Chance
  - C. Confounding
  - D. Selection Bias

**6. Which statement best describes the factors that influence the quality of a study?**

- A. Sampling
- B. Participation
- C. Measurement
- D. Sampling, participation, and measurement

**7. What is the mean?**

- A. The median value
- B. The sum divided by the number of observations
- C. The mode
- D. The range

**8. Do meta-analyses have a methods section?**

- A. No
- B. Yes, including description of search and quality assessment
- C. They describe only data extraction
- D. Yes, the methods section mirrors a systematic review and adds a summary statistic that combines data across studies

**9. Relative risk compares risk of an outcome in which groups?**

- A. Exposed vs unexposed groups
- B. Cases vs controls
- C. Time periods
- D. Different populations

**10. Which study context is appropriate for animal and laboratory studies?**

- A. Lab research
- B. Clinical trials in academic settings
- C. Community-based research
- D. Practice-based research

## **Answers**

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

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## **Explanations**

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## 1. Which element of PICO is the outcome?

- A. Population
- B. Intervention
- C. Comparison
- D. Outcome**

*The outcome is what you measure to determine the effect of the intervention on the participants. It represents the result or endpoint you're interested in evaluating—such as disease incidence, symptom change, functional status, adverse events, or patient-reported measures like quality of life. In a PICO question, the population defines who is studied, the intervention is what is applied, the comparison is what you're against, and the outcome is the measured result you use to judge effectiveness or safety. For example, in a study of fluoride varnish to prevent dental caries in children, the population is children, the intervention is applying fluoride varnish, the comparison is no varnish or standard care, and the outcome would be the incidence of caries (or progression) after a set period.*

## 2. To make inferences from a sample, researchers rely on which?

- A. Statistics**
- B. Descriptive summaries
- C. Opinions
- D. Random chance

*Statistics provide the formal tools to estimate population parameters and to draw inferences from a sample while accounting for sampling variability. From a sample you can calculate values like the mean or proportion, then use inferential methods to generalize to the population and quantify uncertainty with confidence intervals or hypothesis tests. Descriptive summaries describe the sample but don't by themselves generalize; opinions aren't scientific tools for inference; and while random chance affects what a sample shows, the methods that quantify and manage that uncertainty come from statistics.*

## 3. In PICO, what does 'C' stand for?

- A. Population
- B. Intervention
- C. Comparison**
- D. Outcome

*C stands for Comparison—the alternative against which the intervention is evaluated. This defines what you're comparing the treatment to, such as standard care, a placebo, no treatment, or another intervention. By specifying a comparison, you can determine whether the new approach offers any additional benefit (or harm) relative to the chosen alternative. For example, a question might compare scaling and root planing plus antibiotics to scaling and root planing alone; here the comparison is the SRP-alone approach. Remember that PICO uses Population and Intervention to define who and what is being tested, and Outcome to describe what you're measuring, with Comparison providing the baseline against which results are judged.*

**4. A bell-shaped, symmetric distribution is called which of the following?**

- A. Skewed Right Distribution
- B. Skewed Left Distribution
- C. Uniform Distribution
- D. Normal Distribution**

*The bell-shaped, symmetric pattern is the normal distribution. It's centered around the mean with a single peak, and the same shape on both sides, so observations close to the mean are most common and extreme values become progressively less likely in a balanced way. This symmetry means the mean, median, and mode line up at the center, and the spread is described by the standard deviation. Many statistical methods assume data are normally distributed because this shape leads to useful properties like predictable percentages within add-on intervals (the 68–95–99.7% rules) and straightforward z-score calculations. Skewed right or left would show tails longer on one side, not a symmetric bell curve, and a uniform distribution would be flat with no central peak. So the description best matches the normal distribution.*

**5. Which term describes distortion caused by a third factor associated with both exposure and outcome?**

- A. Bias
- B. Chance
- C. Confounding**
- D. Selection Bias

*Confounding happens when a separate variable is related to both the exposure and the outcome, creating a distortion in the observed association. That third factor can make the exposure appear more or less associated with the outcome than it truly is, because the effect you see is partly or wholly due to this other variable. It's not about random chance or issues in data collection or study design in general (which describe bias in broader terms) and it isn't about selection problems that arise from who participates. A common example is age: if older individuals are more likely to have the exposure and also more likely to have the outcome, age can confound the observed relationship unless you adjust for it. To address confounding, researchers use methods like randomization, restricting the study to certain subgroups, matching, stratification, or multivariable analysis to adjust for the confounder.*

**6. Which statement best describes the factors that influence the quality of a study?**

- A. Sampling
- B. Participation
- C. Measurement

**D. Sampling, participation, and measurement**

*The quality of a study hinges on how well the design controls for sampling, participation, and measurement. Sampling affects whether the study results reflect the target population; using representative or random samples reduces selection bias and improves generalizability, while biased or unrepresentative samples limit how widely you can apply the findings. Participation matters because who agrees to participate and who stays in the study influences potential nonresponse and attrition biases; higher participation and lower dropout help maintain internal validity and reduce bias. Measurement quality is about how accurately and consistently the data reflect the true values; using validated instruments, standardized data collection protocols, examiner calibration, and blinding when possible minimizes measurement error and misclassification, supporting both validity and reliability. If any of these areas are weak, study quality is compromised because biased sampling, biased participation, or faulty measurements can distort results regardless of other strengths. Therefore, considering sampling, participation, and measurement together provides the most complete assessment of study quality.*

**7. What is the mean?**

- A. The median value

**B. The sum divided by the number of observations**

- C. The mode
- D. The range

*The mean is a measure of central tendency that represents the average value of a data set. It is found by adding every observation and then dividing by how many observations there are, i.e., the sum of all values divided by the number of observations. For example, with values 2, 4, and 6, the mean is  $(2 + 4 + 6) / 3 = 4$ . This distinguishes it from the median (the middle value when data are ordered) and the mode (the most frequent value) and from the range (the difference between the largest and smallest values). Keep in mind the mean can be influenced by outliers in skewed data.*

**8. Do meta-analyses have a methods section?**

- A. No
- B. Yes, including description of search and quality assessment
- C. They describe only data extraction

**D. Yes, the methods section mirrors a systematic review and adds a summary statistic that combines data across studies**

*A meta-analysis includes a methods section that describes how the review was conducted and how the data were analyzed, because it combines results from multiple studies into a single quantitative estimate. The key is that the methods section covers the systematic search and study selection, data extraction, and quality/appraisal procedures, but it goes further by outlining the statistical approach used to pool results across studies. This pooling yields a summary statistic (such as a pooled mean difference or pooled odds ratio) that synthesizes the data from all included studies. So, the methods section not only mirrors the systematic-review process but also specifies how data are quantitatively combined to produce the overall estimate. It's not just about searching or data extraction, and it's not accurate to say there is no methods section, or that only data extraction is described.*

## 9. Relative risk compares risk of an outcome in which groups?

A. Exposed vs unexposed groups

B. Cases vs controls

C. Time periods

D. Different populations

*Relative risk is a measure of how much more or less likely an outcome is to occur in people who have been exposed compared with those who have not. It compares two groups defined by exposure status: the exposed group and the unexposed group, using the incidence of the outcome in each. For example, if the outcome occurs in a higher proportion of the exposed group than the unexposed, the relative risk is greater than 1, indicating a positive association between exposure and the outcome; if it's about the same, the relative risk is 1, and if it's lower in the exposed group, the relative risk is less than 1, suggesting a protective effect. This concept is best estimated in cohort studies where exposure is known before the outcome develops. Why the other ideas don't fit as the definition: cases vs controls is about the odds of exposure among cases versus controls, which yields an odds ratio rather than a relative risk. Time periods can compare outcomes over time or among different time frames but don't inherently compare risk between exposed and unexposed groups. Different populations contrasts baseline risks across groups or settings, not the risk difference attributable to a specific exposure within the same study.*

## 10. Which study context is appropriate for animal and laboratory studies?

A. Lab research

B. Clinical trials in academic settings

C. Community-based research

D. Practice-based research

*When conducting animal and laboratory studies, the appropriate setting is a dedicated lab research context. This environment provides the controlled conditions, specialized equipment, and biosafety and ethical oversight needed for in vitro and animal experiments, allowing precise manipulation of variables and safe, rigorous data collection before any human work. In contrast, clinical trials involve human participants, community-based research engages broader populations in real-world settings, and practice-based research occurs within actual patient care settings, so they are not suitable for the foundational work of animal and lab investigations.*

## 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](mailto:hello@examzify.com).

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

<https://ebdexam1.examzify.com>

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

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