

# Orthopaedic Nurses Certification Board (ONCB) Metabolic/Inflammatory/Tumor Practice Exam (Sample)

## Study Guide



**Everything you need from our exam experts!**

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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. What is often indicated by the presence of monosodium urate crystals?**
  - A. Arthritis**
  - B. Gout**
  - C. Osteoporosis**
  - D. Bone tumors**
- 2. What symptom may also accompany systemic lupus erythematosus aside from joint pain?**
  - A. Hair loss**
  - B. Weight gain**
  - C. Elevated blood pressure**
  - D. Abdominal pain**
- 3. What is the role of cytokines in inflammation?**
  - A. Cytokines promote cellular repair**
  - B. Cytokines act as signaling proteins that mediate immune responses**
  - C. Cytokines only cause pain**
  - D. Cytokines are responsible for the production of red blood cells**
- 4. What essential function do osteocytes serve in bone metabolism?**
  - A. They initiate the formation of new bone cells**
  - B. They maintain bone tissue and relay signals for bone remodeling**
  - C. They absorb and store excess calcium**
  - D. They stimulate the production of collagen in cartilage**
- 5. What medication can enhance the effectiveness of nonsteroidal anti-inflammatory drugs in a patient with fibromyalgia?**
  - A. Corticosteroid**
  - B. Antimalarial agent**
  - C. Salicylate**
  - D. Tricyclic antidepressant**

**6. Which condition is characterized by severe muscle weakness and difficulty in climbing stairs?**

- A. Polymyalgia rheumatica**
- B. Rheumatoid arthritis**
- C. Polymyositis**
- D. Giant cell arteritis**

**7. Which of the following is NOT a typical treatment for fibromyalgia?**

- A. Exercise programs**
- B. Bisphosphonates**
- C. Antidepressants**
- D. Stress management techniques**

**8. Identify a risk factor for developing inflammatory arthritis.**

- A. High physical activity levels**
- B. Obesity**
- C. Increased vitamin D intake**
- D. Low-stress lifestyle**

**9. In a patient suspected of having ankylosing spondylitis, what symptom is most commonly observed?**

- A. Pain in shoulder that is aggravated by repetitive movements**
- B. Tender joints in feet and lower back with restricted back motion**
- C. Popping sounds with movement, and palpable nodules**
- D. Fever, elevated white blood cell count, and pain with compression**

**10. What is the defining characteristic of fibromyalgia?**

- A. Localized joint pain**
- B. Widespread musculoskeletal pain associated with fatigue, sleep, and mood disturbances**
- C. Bone fractures without trauma**
- D. Persistent fever and weight loss**

## **Answers**

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

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## **Explanations**

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**1. What is often indicated by the presence of monosodium urate crystals?**

- A. Arthritis**
- B. Gout**
- C. Osteoporosis**
- D. Bone tumors**

The presence of monosodium urate crystals is strongly associated with gout. Gout is a type of inflammatory arthritis that occurs due to the accumulation of uric acid in the blood, leading to the formation of these crystals. When uric acid levels become excessively high, it can result in crystals being deposited in the joints and surrounding tissues, which triggers an intense inflammatory response and the characteristic painful swelling of gout flares. The specific identification of monosodium urate crystals in joint fluid or tophi (which are deposits of crystals in soft tissue) is a key diagnostic feature for confirming gout. This connection between these crystals and the condition helps clinicians distinguish gout from other types of arthritis that may have similar symptoms but do not involve the same crystal formation. Therefore, recognizing the presence of monosodium urate crystals as indicative of gout is crucial in guiding appropriate treatment and management of the condition.

**2. What symptom may also accompany systemic lupus erythematosus aside from joint pain?**

- A. Hair loss**
- B. Weight gain**
- C. Elevated blood pressure**
- D. Abdominal pain**

Systemic lupus erythematosus (SLE) is a complex autoimmune disease that can affect multiple organ systems and often presents a range of symptoms. One common symptom associated with SLE, in addition to joint pain, is hair loss. This hair loss may occur due to the disease itself or as a side effect of the medications used to manage SLE. In SLE, alopecia can manifest in various forms, including patchy hair loss (alopecia areata) or diffuse thinning, and is often a concerning symptom for patients. This symptom is particularly relevant to SLE as it reflects the autoimmune nature of the disease where the immune system erroneously attacks healthy tissues, including hair follicles. Understanding this symptom can help in identifying and managing the broader impacts of lupus on patients' quality of life. Awareness of hair loss as a symptom is essential for healthcare providers, as it may require additional emotional support and discussion about treatment options.

### 3. What is the role of cytokines in inflammation?

- A. Cytokines promote cellular repair
- B. Cytokines act as signaling proteins that mediate immune responses**
- C. Cytokines only cause pain
- D. Cytokines are responsible for the production of red blood cells

The role of cytokines in inflammation is primarily that they act as signaling proteins that mediate immune responses. Cytokines are produced by various cells in the immune system and play crucial roles in cell signaling during the inflammatory process. When tissues are injured or infected, cytokines are released to signal neighboring cells, modulate the immune response, and help regulate various physiological processes involved in inflammation. This includes attracting immune cells to the site of injury or infection, promoting the activation of these cells, and facilitating communication between them, which ultimately contributes to the healing process. The other perspectives on cytokines do not encapsulate their primary function accurately. For example, while cytokines can promote cellular repair and influence pain sensations, their fundamental role is centered around signaling and coordinating immune responses. Additionally, cytokines are not directly responsible for the production of red blood cells, as that process is primarily regulated by other factors such as erythropoietin. Thus, understanding the signaling role of cytokines is essential in grasping their critical function in inflammation and the overall immune response.

### 4. What essential function do osteocytes serve in bone metabolism?

- A. They initiate the formation of new bone cells
- B. They maintain bone tissue and relay signals for bone remodeling**
- C. They absorb and store excess calcium
- D. They stimulate the production of collagen in cartilage

Osteocytes play a crucial role in bone metabolism primarily through maintenance of bone tissue and communication regarding bone remodeling. These cells are derived from osteoblasts that become embedded within the bone matrix during the formation of bone. Once they are established in this position, osteocytes extend their long, thin processes through tiny channels in the bone known as canaliculi, allowing them to communicate with other bone cells. Their primary function involves sensing mechanical stress and changes in the bone environment. When mechanical strain occurs, osteocytes can send signals to both osteoblasts and osteoclasts, thereby regulating the activity of these cells to either promote bone formation or resorption. This signaling is essential for maintaining the delicate balance of bone remodeling, which is critical for adapting bone structure and strength according to physical demands. In contrast, the other options do not accurately reflect the role of osteocytes. While osteoblasts are responsible for initiating new bone cell formation and osteoclasts are involved in bone resorption, osteocytes primarily focus on maintenance and communication rather than direct formation or absorption of substances like calcium or collagen. Therefore, the essential function of osteocytes in bone metabolism is their ability to maintain bone tissue and relay important signals necessary for remodeling processes.

**5. What medication can enhance the effectiveness of nonsteroidal anti-inflammatory drugs in a patient with fibromyalgia?**

- A. Corticosteroid**
- B. Antimalarial agent**
- C. Salicylate**
- D. Tricyclic antidepressant**

Tricyclic antidepressants can play a significant role in enhancing the effectiveness of nonsteroidal anti-inflammatory drugs (NSAIDs) for patients with fibromyalgia. This condition is characterized by widespread pain and often accompanied by other symptoms such as fatigue, sleep disturbances, and cognitive difficulties. The underlying mechanisms of fibromyalgia involve both central and peripheral sensitization to pain, and tricyclic antidepressants, such as amitriptyline, have analgesic properties that address these mechanisms. They work by inhibiting the reuptake of neurotransmitters like serotonin and norepinephrine, which helps modulate pain perception and improve sleep quality. When used in conjunction with NSAIDs, tricyclic antidepressants can provide a synergistic effect, enhancing pain relief and overall management of fibromyalgia symptoms. This combined approach allows for potentially lower doses of each medication, minimizing side effects while maximizing therapeutic benefits. Additionally, the improved sleep quality due to tricyclic antidepressants can contribute to better pain control, as sleep disturbances often exacerbate fibromyalgia symptoms. Other medications listed, such as corticosteroids, antimalarial agents, and salicylates, do not have the same supportive role in the management of fibromyalgia and do not necessarily enhance the effectiveness.

**6. Which condition is characterized by severe muscle weakness and difficulty in climbing stairs?**

- A. Polymyalgia rheumatica**
- B. Rheumatoid arthritis**
- C. Polymyositis**
- D. Giant cell arteritis**

Polymyositis is characterized by progressive muscle weakness and inflammation, particularly affecting skeletal muscles. One of the hallmark symptoms of this condition is difficulty in performing tasks that require proximal muscle strength, such as climbing stairs or lifting objects. This arises due to the targeted atrophy and inflammation of the muscle fibers, leading to significant weakness. In contrast, conditions like polymyalgia rheumatica primarily involve muscle pain and stiffness rather than weakness, and rheumatoid arthritis, while it can involve joint pain and swelling, does not specifically lead to muscle weakness as a primary symptom. Giant cell arteritis is a vessel-targeted inflammation that can lead to headaches and jaw claudication, primarily affecting older adults, but again does not involve specific muscle weakness. Therefore, the distinct presentation of proximal muscle weakness in polymyositis makes it the correct choice for this question.

**7. Which of the following is NOT a typical treatment for fibromyalgia?**

- A. Exercise programs**
- B. Bisphosphonates**
- C. Antidepressants**
- D. Stress management techniques**

Fibromyalgia is a condition characterized by widespread musculoskeletal pain, fatigue, and other symptoms such as sleep disturbances and cognitive difficulties. The management of fibromyalgia typically includes a multidisciplinary approach aimed at reducing pain and enhancing quality of life. Exercise programs are a fundamental component of treatment for fibromyalgia. Regular physical activity helps improve strength, flexibility, and endurance, and can significantly alleviate symptoms. Given the condition's focus on pain and fatigue, tailored exercise programs are often encouraged. Antidepressants, particularly those classified as serotonin-norepinephrine reuptake inhibitors (SNRIs) or tricyclic antidepressants, are commonly prescribed to help manage fibromyalgia symptoms. These medications can improve mood and assist in pain modulation, making them an integral part of treatment. Stress management techniques are also vital in the management of fibromyalgia. Patients often experience heightened stress levels, which can exacerbate pain and other symptoms. Techniques such as mindfulness, cognitive behavioral therapy, and relaxation exercises help patients cope better with their condition. In contrast, bisphosphonates are primarily used to treat osteoporosis and certain bone conditions but have no established role in treating fibromyalgia. Their mechanism focuses on inhibiting bone resorption and improving bone density, which does not align with the management needs of

**8. Identify a risk factor for developing inflammatory arthritis.**

- A. High physical activity levels**
- B. Obesity**
- C. Increased vitamin D intake**
- D. Low-stress lifestyle**

Obesity is recognized as a significant risk factor for developing inflammatory arthritis. When a person is obese, excess body weight contributes to increased mechanical stress on weight-bearing joints, which can promote wear and tear over time. Additionally, adipose tissue produces pro-inflammatory cytokines, which can exacerbate inflammation in the body and play a role in the pathogenesis of various types of inflammatory arthritis, such as rheumatoid arthritis and psoriatic arthritis. This chronic state of inflammation can lead to joint damage and further complications, making obesity a key area of concern in the prevention and management of inflammatory arthritis. High physical activity levels, in general, are associated with better health outcomes and can actually help mitigate the risk of many chronic diseases, including certain forms of arthritis. Increased vitamin D intake is beneficial for bone health and overall immune function, potentially providing protective effects against inflammatory processes. A low-stress lifestyle contributes positively to overall health and well-being, further reducing the risk of inflammatory conditions. Therefore, obesity stands out as a clear and direct risk factor for inflammatory arthritis development.

**9. In a patient suspected of having ankylosing spondylitis, what symptom is most commonly observed?**

- A. Pain in shoulder that is aggravated by repetitive movements**
- B. Tender joints in feet and lower back with restricted back motion**
- C. Popping sounds with movement, and palpable nodules**
- D. Fever, elevated white blood cell count, and pain with compression**

The most commonly observed symptom in a patient suspected of having ankylosing spondylitis is tenderness in the joints of the feet and lower back, along with restricted range of motion in the back. Ankylosing spondylitis is a type of inflammatory arthritis that primarily affects the spine, leading to back pain and stiffness. Patients often experience inflammatory back pain, which typically improves with physical activity and worsens with rest. As the condition progresses, it can lead to fusion of the vertebrae, significantly reducing spinal flexibility. The tenderness in the lower back and associated joint involvement is a hallmark of this condition. The restricted motion can manifest in various ways, including difficulty in achieving full extension of the spine, inducing discomfort during everyday activities. In contrast, the other symptoms listed, while potentially associated with different conditions, are not as characteristic of ankylosing spondylitis. For instance, pain in the shoulder from repetitive movements is more likely associated with conditions affecting the shoulder joint, and popping sounds with movement may indicate joint instability or damage unrelated to spondylitis. Similarly, systemic symptoms like fever and elevated white blood cell count are more typical of inflammatory or infectious processes, rather than specific symptoms of ankylosing spondylitis.

**10. What is the defining characteristic of fibromyalgia?**

- A. Localized joint pain**
- B. Widespread musculoskeletal pain associated with fatigue, sleep, and mood disturbances**
- C. Bone fractures without trauma**
- D. Persistent fever and weight loss**

The defining characteristic of fibromyalgia is widespread musculoskeletal pain that is often accompanied by fatigue, sleep disturbances, and mood issues such as depression or anxiety. This condition is primarily known for its broad pain distribution throughout the body, which can be accompanied by tenderness in specific areas known as trigger points. Unlike conditions that present with localized joint pain, fibromyalgia's impact is extensive, affecting multiple regions simultaneously, which contributes to the patient's overall discomfort and emotional well-being. Additionally, the overlapping symptoms of fatigue and disturbances in sleep and mood further emphasize the systemic nature of fibromyalgia, distinguishing it from other orthopedic or rheumatic disorders that may not present with such a range of associated symptoms.

# 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://oncb-metabolic.examzify.com>**

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

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