

National Board of Chiropractic Examiners (NBCE) Practice Test (Sample)

Study Guide



Everything you need from our exam experts!

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SAMPLE

Questions

- 1. Which adjunctive therapy is most appropriate for management of a subacute grade II strain/sprain of the knee?**
 - A. Cold therapy**
 - B. Heat therapy**
 - C. Massage therapy**
 - D. Electrotherapy**
- 2. Which of the following is classified as an autoimmune disorder?**
 - A. Myasthenia gravis**
 - B. Rheumatoid arthritis**
 - C. Multiple sclerosis**
 - D. All of the above**
- 3. Which statement accurately characterizes C1 and C2 nerve roots?**
 - A. They are prone to injury during maintenance activities.**
 - B. They are responsible for lower limb movement.**
 - C. They are subject to compression in the IVF.**
 - D. They do not facilitate reflex actions.**
- 4. The progression of the vertebral subluxation complex due to significant spinal trauma is from intersegmental _____ to intersegmental _____.**
 - A. dysfunction / instability**
 - B. hypertension / hypotension**
 - C. movement / restriction**
 - D. tension / relaxation**
- 5. Exposure to excess heat is most detrimental to which type of patient?**
 - A. Patient with diabetes**
 - B. Patient with hypertension**
 - C. Patient with heart disease**
 - D. Patient with a respiratory condition**

- 6. The interpedicular distance of L1 compared to L5 is typically what?**
- A. Less than**
 - B. Greater than**
 - C. Equal to**
 - D. Variable**
- 7. What is the hallmark symptom of lactose intolerance?**
- A. Extreme fatigue**
 - B. Abdominal pain after dairy consumption**
 - C. Persistent fever**
 - D. Severe dehydration**
- 8. What skin condition is characterized by a 'butterfly' rash?**
- A. Psoriasis**
 - B. Rosacea**
 - C. Lupus erythematosus**
 - D. Eczema**
- 9. Which of these should be assessed when treating life-threatening conditions?**
- A. Airway, Breathing, Circulation**
 - B. Injury site, Pain level, Patient history**
 - C. Vital signs, Body temperature, Skin color**
 - D. Consciousness, Memory, Reflexes**
- 10. Which condition is typically monitored using an MRI for early detection?**
- A. Osteoarthritis**
 - B. Tethered Cord Syndrome**
 - C. Scoliosis**
 - D. Spinal Stenosis**

Answers

SAMPLE

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

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Explanations

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1. Which adjunctive therapy is most appropriate for management of a subacute grade II strain/sprain of the knee?

- A. Cold therapy**
- B. Heat therapy**
- C. Massage therapy**
- D. Electrotherapy**

In the context of managing a subacute grade II strain/sprain of the knee, electrotherapy is considered the most appropriate adjunctive therapy due to its multifaceted benefits in promoting healing and reducing pain. Electrotherapy, which includes modalities such as electrical stimulation, can help in reducing inflammation, alleviating pain, and accelerating the recovery process by increasing circulation to the affected area. This is particularly effective in the subacute phase when the body is transitioning from the acute inflammatory response to tissue repair and remodeling. In the subacute phase, the tissues are still vulnerable, and gentle stimulation of the tissue can enhance the mobilization of nutrients and the removal of waste products through improved blood flow. Additionally, electrotherapy can assist in muscle re-education and strength rebuilding, which is vital for regaining function in the knee joint after an injury. While cold therapy is often used in the acute phase to minimize swelling, and heat therapy can be beneficial for promoting relaxation and circulation, they may not provide the comprehensive reparative advantages that electrotherapy offers during the subacute phase. Massage therapy, while useful in relieving muscle tension and promoting relaxation, may not directly address the specific healing mechanisms required for a strain/sprain injury at this stage. Therefore, electrotherapy stands out

2. Which of the following is classified as an autoimmune disorder?

- A. Myasthenia gravis**
- B. Rheumatoid arthritis**
- C. Multiple sclerosis**
- D. All of the above**

Myasthenia gravis, rheumatoid arthritis, and multiple sclerosis are all classified as autoimmune disorders. An autoimmune disorder arises when the immune system mistakenly attacks the body's own tissues, believing them to be foreign invaders. Myasthenia gravis specifically affects the communication between nerves and muscles, leading to muscle weakness and fatigue. In this condition, antibodies attack the acetylcholine receptors at the neuromuscular junction, inhibiting muscle contraction. Rheumatoid arthritis primarily affects the joints, where it causes inflammation and pain due to the immune system attacking the synovium — the lining of the joints. This chronic inflammation can lead to joint damage and loss of function. Multiple sclerosis involves the immune system attacking the myelin sheath that covers nerve fibers in the central nervous system. This demyelination leads to various neurological symptoms, depending on the areas where the damage occurs. Since all three options represent distinct autoimmune mechanisms and disorders, the most accurate choice is that they all classify as autoimmune disorders. Thus, claiming only myasthenia gravis is classified as such is incomplete.

3. Which statement accurately characterizes C1 and C2 nerve roots?

- A. They are prone to injury during maintenance activities.**
- B. They are responsible for lower limb movement.**
- C. They are subject to compression in the IVF.**
- D. They do not facilitate reflex actions.**

C1 and C2 nerve roots, also known as the first and second cervical nerve roots, primarily innervate structures in the neck and are critical for functions related to head and neck movement and proprioception. When it comes to nerve root compression, particularly in the intervertebral foramen (IVF), C1 and C2 can indeed be affected, especially in conditions such as cervical spondylosis, herniated discs, or osteophyte formation, which can lead to radicular symptoms. The IVF is a crucial area where spinal nerves exit the vertebral column, and it is common for nerve roots to face compression due to various pathologies at this site. When pressured, these roots can exhibit neurological deficits, pain, and dysfunction, which emphasizes their vulnerability in that anatomical space. This characteristic makes option C the most accurate statement regarding the C1 and C2 nerve roots. The other statements do not accurately depict the characteristics of these nerve roots. They do not relate to lower limb movement or injury during maintenance activities, and they also facilitate reflex actions, which contrasts with what is suggested in the incorrect choice.

4. The progression of the vertebral subluxation complex due to significant spinal trauma is from intersegmental _____ to intersegmental _____.

- A. dysfunction / instability**
- B. hypertension / hypotension**
- C. movement / restriction**
- D. tension / relaxation**

The progression of the vertebral subluxation complex due to significant spinal trauma typically follows a pattern where intersegmental dysfunction leads to intersegmental instability. Initially, following trauma, the vertebrae may become dysfunctional due to improper alignment or movement restrictions, affecting how the segments interact and communicate with each other. This dysfunction can lead to altered biomechanics in the spinal region, which may progressively exacerbate the situation. As the dysfunction persists, the biomechanics of the spine can deteriorate further, ultimately resulting in instability. Instability indicates a loss of support that the spinal segments require to function properly, which is often accompanied by increased mobility of the segments beyond normal physiological limits. This instability can lead to more severe consequences, such as pain, further biomechanical issues, or even additional injuries. Understanding this progression is crucial for recognizing the significance of early intervention in chiropractic care following trauma to prevent the transition from dysfunction to more severe instability.

5. Exposure to excess heat is most detrimental to which type of patient?

- A. Patient with diabetes**
- B. Patient with hypertension**
- C. Patient with heart disease**
- D. Patient with a respiratory condition**

Exposure to excess heat poses significant risks for patients with heart disease. This population is particularly vulnerable because elevated temperatures can exacerbate existing cardiovascular issues. Heat can lead to increased heart rate and blood pressure, as the body works harder to cool itself. In patients with heart disease, the heart may already be under strain, and additional stress from heat can lead to dangerous complications, such as heart failure or arrhythmias. Moreover, patients with heart disease may already have compromised cardiac function. In hot conditions, their ability to regulate body temperature may be impaired due to reduced cardiovascular responsiveness. This can increase the likelihood of dehydration, which further strains the heart, leading to potential hospitalization or serious health crises. While diabetes, hypertension, and respiratory conditions can also be affected by heat exposure, the immediate risk of exacerbated cardiovascular events makes heart disease the most critical concern in this context.

6. The interpedicular distance of L1 compared to L5 is typically what?

- A. Less than**
- B. Greater than**
- C. Equal to**
- D. Variable**

The interpedicular distance refers to the distance between the pedicles of adjacent vertebrae. In the lumbar region, this distance tends to increase as you move down the spine from L1 to L5. The anatomical structure of the vertebrae is such that the interpedicular distance becomes wider lower in the lumbar spine. This is due to the increased load and demands placed on the lower lumbar vertebrae, requiring a broader supportive base. Therefore, when comparing L1 to L5, the interpedicular distance at L1 is typically less than that at L5. This anatomic feature is crucial for understanding the variations in spinal anatomy and the implications for conditions that affect lumbar stability, as well as for surgical considerations or interventions that may be performed in this region.

7. What is the hallmark symptom of lactose intolerance?

- A. Extreme fatigue
- B. Abdominal pain after dairy consumption**
- C. Persistent fever
- D. Severe dehydration

The hallmark symptom of lactose intolerance is abdominal pain after dairy consumption. This condition occurs when an individual has a deficiency of lactase, the enzyme responsible for breaking down lactose, a sugar found in milk and other dairy products. When lactose is not properly digested, it passes into the colon, where it is fermented by bacteria, leading to abdominal pain, bloating, gas, and other gastrointestinal discomforts. This characteristic symptom is directly linked to the consumption of dairy, making it a key indicator for diagnosing lactose intolerance. While fatigue, fever, and dehydration can occur in various other health conditions, they are not specific to lactose intolerance and do not represent the primary symptom related to the ingestion of lactose-containing foods. Thus, the presence of abdominal pain after consuming dairy products is a clear and definitive sign of this condition.

8. What skin condition is characterized by a 'butterfly' rash?

- A. Psoriasis
- B. Rosacea
- C. Lupus erythematosus**
- D. Eczema

The skin condition characterized by a 'butterfly' rash is lupus erythematosus. This rash typically appears across the cheeks and nose, resembling the shape of a butterfly, and is often associated with systemic lupus erythematosus (SLE), a chronic autoimmune disease that can affect multiple organ systems. The presence of this distinctive rash is an important clinical sign that aids in the diagnosis of lupus, as it is indicative of the body's immune system improperly attacking its own tissues. In SLE, the butterfly rash may flare up due to sun exposure, stress, or other triggers, providing insight into the patients' autoimmune response. Understanding the specific features of lupus erythematosus helps in differentiating it from other skin conditions that do not present with this characteristic rash.

9. Which of these should be assessed when treating life-threatening conditions?

A. Airway, Breathing, Circulation

B. Injury site, Pain level, Patient history

C. Vital signs, Body temperature, Skin color

D. Consciousness, Memory, Reflexes

The assessment of airway, breathing, and circulation is critical when treating life-threatening conditions because these three components are the foundational elements of life support and emergency response. In emergency care, ensuring that a patient's airway is clear is vital for preventing asphyxiation. Evaluating breathing helps to determine if the patient is capable of oxygenation, and assessing circulation is necessary to ensure that blood is effectively pumping through the body, delivering oxygen and nutrients to vital organs. Addressing these areas first is essential in stabilizing a patient's condition and can have immediate impacts on survival outcomes. Other options focus on different aspects of patient care but do not prioritize these life-sustaining functions that are crucial in emergencies.

10. Which condition is typically monitored using an MRI for early detection?

A. Osteoarthritis

B. Tethered Cord Syndrome

C. Scoliosis

D. Spinal Stenosis

Tethered Cord Syndrome is a condition that is especially well-suited for monitoring through MRI for early detection because it involves the abnormal attachment of the spinal cord to surrounding structures, which can lead to neurological impairments if not identified and addressed promptly. An MRI provides detailed images of the spinal cord and surrounding tissues, allowing for the visualization of any structural abnormalities, such as abnormal connections or the position of the spinal cord relative to vertebrae. Early detection is crucial in this condition as it enables timely intervention that can prevent further neurological damage and enhance patient outcomes. In contrast, while osteoarthritis, scoliosis, and spinal stenosis may also be evaluated using MRI, they often present with more gradual symptoms and can be diagnosed effectively through a combination of physical examination and conventional imaging techniques, such as X-rays. These conditions do not typically require the same level of urgency for early detection as Tethered Cord Syndrome does.