

# Flex Therapist CEUs

## Multiple Sclerosis

**1. What is the primary characteristic that differentiates Primary Progressive Multiple Sclerosis (PPMS) from Relapsing-Remitting Multiple Sclerosis (RRMS)?**

- A. PPMS has distinct relapses and remissions, while RRMS has a continuous progression from onset.
  - B. PPMS is driven by inflammation, whereas RRMS is driven by neurodegeneration.
  - C. PPMS involves a continuous, gradual worsening of neurological function from the onset, while RRMS has periods of relapse and remission.
  - D. PPMS primarily affects young adults, while RRMS often affects older adults.
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**2. Which exercise intervention is most likely to improve the quality of life in patients with MS?**

- A. High-intensity interval training to increase muscle hypertrophy.
  - B. Aerobic exercise that enhances cardiovascular endurance.
  - C. Isometric exercises to improve muscle bulk.
  - D. Swimming based solely on individual preference with no structured routine.
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**3. In the context of MS, what role do astrocytes predominantly play when it comes to repairing damaged CNS tissue?**

- A. Astrocytes regenerate the myelin sheath effectively around damaged axons.
  - B. Astrocytes primarily create scar tissue (sclerosis) in damaged areas, which can affect nerve signal transmission.
  - C. Astrocytes remove damaged axons through phagocytosis.
  - D. Astrocytes facilitate remyelination through the release of neurotrophic factors.
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**4. Which cognitive impact is most commonly associated with worsening symptoms in MS over time?**

- A. Enhanced problem-solving skills.
  - B. Improved information processing speed.
  - C. Decreased memory retention and concentration difficulties.
  - D. Increased verbal fluency and recall abilities.
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**5. What is a key factor in diagnosing Relapsing-Remitting MS (RRMS) as opposed to Progressive-Relapsing MS (PRMS)?**

- A. RRMS patients never experience complete recovery between relapses.
- B. PRMS involves a steady progression of disability from the start, with intermittent relapses.

- C. RRMS is characterized by a continuous decline in function with no distinct relapses.
  - D. PRMS symptoms always improve completely between relapses.
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**6. Which of the following is a characteristic that differentiates a true relapse from a pseudo-relapse in multiple sclerosis?**

- A. True relapses involve new CNS lesions.
  - B. True relapses are triggered by factors like heat or illness.
  - C. Pseudo-relapses involve new CNS lesions.
  - D. Pseudo-relapses require hospitalization.
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**7. What is a possible consequence of worsening MS symptoms on brain structure?**

- A. Increased formation of synaptic connections.
  - B. Reduced inflammation.
  - C. Accumulation of lesions in the CNS.
  - D. Enhanced cognitive function.
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**8. Which of the following treatments is typically used to manage severe relapses that do not respond to corticosteroids in MS patients?**

- A. Plasma exchange
  - B. NSAIDs
  - C. Antidepressants
  - D. Gabapentin
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**9. How does regular exercise influence MS-related symptoms?**

- A. Increases fatigue and cognitive decline.
  - B. Improves endurance, strength, and flexibility.
  - C. Triggers new CNS lesions.
  - D. Makes heat sensitivity worse.
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**10. Using the McDonald Criteria, what is required for diagnosing MS in a patient with one clinical attack and evidence of one lesion?**

- A. Only dissemination in space (DIS) is required.
  - B. Only dissemination in time (DIT) is required.
  - C. Both DIS and DIT are required.
  - D. No further evidence is required.
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**11. Which assessment tool is utilized to measure the resistance felt by a clinician when passively moving a patient's limb through its range of motion to estimate spasticity severity?**

- A. Berg Balance Scale
  - B. Functional Independence Measure
  - C. Modified Ashworth Scale
  - D. Fatigue Severity Scale
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**12. In the context of multiple sclerosis (MS), what is the primary cause of foot drop observed during gait analysis?**

- A. Weakness in the hip flexor muscles
  - B. Weakness of the dorsiflexor muscles
  - C. Weakness in the ankle plantarflexor muscles
  - D. Weakness of the quadriceps muscles
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**13. When using the Timed Up and Go (TUG) test, which score indicates a high risk of falling?**

- A. Less than 10 seconds
  - B. 10 to 12 seconds
  - C. 13 to 14 seconds
  - D. 15 seconds or more
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**14. How does regular exercise benefit individuals with multiple sclerosis in terms of neuroplasticity?**

- A. By preventing muscle atrophy and promoting muscle growth
  - B. By reducing joint stiffness and improving flexibility
  - C. By enhancing the brain's ability to form new neural connections
  - D. By lowering the risk of cardiovascular disease
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**15. What assessment tool would a therapist likely use to evaluate the impact of multiple sclerosis on a patient's physical and psychological well-being over the past two weeks?**

- A. Modified Ashworth Scale
  - B. Multiple Sclerosis Quality of Life-54
  - C. Fatigue Severity Scale
  - D. Multiple Sclerosis Impact Scale (MSIS-29)
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**16. When designing an exercise program for individuals with Multiple Sclerosis (MS), it's important to consider:**

- A. Starting with high-intensity exercises to build endurance quickly
  - B. The individual's specific symptoms, such as fatigue and heat sensitivity
  - C. Focusing exclusively on aerobic exercises to improve cardiovascular health
  - D. Avoiding strength training to prevent muscle fatigue
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**17. Why is it crucial to include a warm-up and cool-down in the exercise regimen for people with MS?**

- A. It helps to maintain cardiovascular fitness and endurance.
  - B. It prepares the body for exercise and promotes recovery, reducing muscle stiffness and aiding recovery.
  - C. It ensures a high-intensity workout and increases muscle mass quickly.
  - D. It diminishes the need for adaptive equipment during workouts.
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**18. Which approach best describes the methodology for safely progressing exercise intensity in individuals with MS?**

- A. Start with moderate intensity and increase rapidly to build muscle strength quickly
  - B. Begin at a comfortable pace and gradually increase duration and intensity based on individual comfort levels and symptom management
  - C. Engage in high-impact aerobic activities from the beginning to gauge endurance levels
  - D. Avoid any progression in intensity to prevent symptom exacerbation
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**19. What are the benefits of combined endurance and resistance training for patients with MS?**

- A. It solely focuses on enhancing muscle mass and reducing the risk of falls
  - B. It primarily improves mood and mental well-being through the release of endorphins
  - C. It integrates cardiovascular health with muscle function improvement, enhancing overall physical well-being and participation in daily activities
  - D. It rapidly enhances muscle strength without the need for professional assistance
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**20. How should flexibility training be adapted for individuals with MS?**

- A. Focus on high-intensity stretching to improve joint flexibility rapidly
  - B. Avoid stretching muscles affected by spasticity to prevent injury
  - C. Utilize static and dynamic stretching techniques to improve range of motion, incorporating activities like yoga and Pilates
  - D. Skip any forms of flexibility training as it doesn't significantly impact physical function
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**21. Which type of muscle fiber adaptation is most likely to occur as a result of continuous cardiovascular exercise in individuals with multiple sclerosis?**

- A. Shift toward more oxidative muscle fibers like type I fibers
  - B. Increased proportion of glycolytic muscle fibers like type IIb fibers
  - C. Transition from type IIa to type IIx muscle fibers
  - D. Reduction in mitochondrial density within muscle fibers
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**22. How does continuous cardiovascular exercise contribute to overall physical function for individuals with multiple sclerosis?**

- A. By significantly increasing muscle mass and reducing fat
  - B. By shifting muscle fibers to glycolytic types for quick energy bursts
  - C. By enhancing muscle contractile properties and improving endurance
  - D. By reducing muscle hypertrophy and leading to muscle atrophy
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**23. In which way can Functional Electrical Stimulation (FES) improve mobility in individuals with MS?**

- A. By inhibiting muscle contractions to reduce overuse injuries
  - B. By activating muscles that do not respond adequately due to neurological impairments
  - C. By providing continuous passive motion without muscle activation
  - D. By primarily focusing on respiratory muscle strength
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**24. What modifications might be recommended for a patient with multiple sclerosis in the early stages to improve safety and independence at home?**

- A. Installing non-slip mats and grab bars in the shower
  - B. Introducing power wheelchairs with custom seating
  - C. Utilizing mechanical lifts for bed and chair transfers
  - D. Implementing voice-activated home automation systems
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**25. What benefit does incorporating Tai Chi provide for individuals with multiple sclerosis?**

- A. Enhances cardiovascular fitness through high-intensity movements
  - B. Strengthens upper body muscles through rapid movements
  - C. Promotes relaxation and improves balance through slow, controlled movements
  - D. Increases muscle mass primarily in the lower limbs
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**26. What role does a dietitian play in managing MS symptoms?**

- A. Suggesting modified food textures or nutrient-dense, easy-to-swallow options to address difficulty swallowing.
  - B. Providing exercise regimens to improve strength and flexibility.
  - C. Administering medications to control bladder dysfunction.
  - D. Conducting assessments to determine cognitive impairments.
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**27. Which of the following symptoms are commonly addressed by urologists managing MS patients?**

- A. Memory loss and attention difficulties.
- B. Lower extremity spasticity and muscle weakness.

- C. Urgency and urinary retention.
  - D. Fatigue and balance issues.
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**28. How does involving a multidisciplinary healthcare team benefit MS patients?**

- A. It ensures the patient receives a broad range of perspectives but may complicate decision-making.
  - B. It makes it easier for each specialist to work in isolation.
  - C. It addresses the full spectrum of the patient's needs through collaborative care.
  - D. It primarily focuses on the patient's physical symptoms rather than their cognitive and emotional needs.
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**29. How can exercise affect MS patients' quality of life?**

- A. It primarily improves cognitive function and memory.
  - B. It enhances endurance, strength, and flexibility, thus improving overall quality of life.
  - C. It is mainly used to manage bladder dysfunction.
  - D. It only benefits flexibility without impacting strength or endurance.
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**30. What assessment tools are essential for evaluating balance and mobility in MS patients?**

- A. Berg Balance Scale, Mini-Mental State Examination, and 6-Minute Walk Test.
  - B. Timed Up and Go (TUG) Test, Berg Balance Scale, and 6-Minute Walk Test.
  - C. Timed Up and Go (TUG) Test, Mini-Mental State Examination, and Timed 25-Foot Walk Test.
  - D. Berg Balance Scale, Timed 25-Foot Walk Test, and 6-Minute Walk Test.
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