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Chamberlain University College of Nursing

BIOS 252: Anatomy and Physiology II

Professor Horn

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Scenario/Summary

A 30 -year-old female with multiple sclerosis (MS) has come for a routine check-up with her neurologist. Her first signs and symptoms were several years earlier. The symptoms were not concerning as they were only tingling sensations that were mild discomforts. Those feelings also went away. It became worrisome when the sensation transitioned into pain and tingling. She began to lose coordination during each cycle, and over time, she never fully recovered from the previous flare.

Deliverables

1. **What cellular structure is degenerating and rebuilding in MS?**

In multiple sclerosis (MS), the myelin sheath is the principal cellular component that degenerates and regenerates. The myelin sheath is a fatty layer that protects and insulates nerve fibers (axons) in the central nervous system (CNS), which includes the brain and spinal cord.

2. **Does this explain the progression we see with the signs and symptoms? Explain why.**

Yes, the destruction and repair of the myelin sheath account for the evolution of MS signs and symptoms. Here's why.