

From Survival to Recovery: Rebuilding Metabolism After Critical Illness

Test Questions

1. The “clinical visibility problem” in gut dysfunction refers to:
 - a. What we cannot directly measure (e.g. malabsorption/dissimilation) versus what we observe clinically
 - b. The lack of nutrition guidelines in critical illness
 - c. The inability to record gastric residual volumes in the ICU
 - d. The inability to measure ventilator settings accurately
2. The intestinal cross-talk concept describes partnership among:
 - a. Liver, pancreas, and gallbladder
 - b. Stomach, small intestine, and gut microbiota
 - c. Epithelium, immune tissue, microbiota
 - d. Neurons, glia, and muscle
3. Incidence of EFI in large ICU cohorts is approximately:
 - a. 5-10%
 - b. 12-15%
 - c. 24-30%
 - d. 50-60%
4. Post-Intensive Care Syndrome (PICS) includes which domains of impairment?
 - a. Mental impairment
 - b. Physical impairment
 - c. Cognitive impairment
 - d. All of the above for the patient plus mental impairment for family
5. Which nutrition planning approach is most appropriate for patients at risk of or recovering from PICS?
 - a. Focus primarily on meeting ICU calorie targets and discontinue nutrition support once the patient transfers to the ward.
 - b. Assume oral intake will be sufficient post-ICU and prioritize appetite return over nutrient delivery.
 - c. Implement a progressive, individualized nutrition rehabilitation plan that addresses ongoing inflammation, functional recovery, and barriers to intake
 - d. Delay structured nutrition intervention until the patient is discharged.

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6. Which process was shown to be most impaired in ICU patients despite similar amino acid availability compared with healthy controls?
 - a. Digestion
 - b. Absorption
 - c. Assimilation into skeletal muscle
 - d. Protein intake

7. Which best describes the concept of “resolution of inflammation”?
 - a. Passive decline in inflammatory mediators over time
 - b. Broad immunosuppression to reduce cytokine release
 - c. An active biologically regulated process restoring tissue homeostasis
 - d. Inhibition of immune cell recruitment

8. Specialized pro-resolving mediators (SPMs) are best described as:
 - a. Endogenously produced mediators derived from EPA and DHA
 - b. Dietary lipids directly consumed from fish oil
 - c. Anti-inflammatory drugs that block cytokine receptors
 - d. Steroid-like hormones produced by the adrenal gland

9. What is a key advantage of SPM-mediated inflammation resolution compared with traditional anti-inflammatory therapies?
 - a. Complete suppression of immune responses
 - b. Elimination of all inflammatory cells
 - c. Increased susceptibility to infection
 - d. Promotion of tissue repair without causing immunoparalysis

10. Omega-3 fatty acids and their downstream mediators influence inflammation through which of the following?
 - a. Single-pathway cytokine inhibition
 - b. Multi-level actions on endothelium, immune cells, gut barrier, and mitochondria
 - c. Exclusive action on muscle protein synthesis
 - d. Increased omega-6 eicosanoid production

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