

# 21st Century Approach to Musculoskeletal Conditions -- The Gut-Spine Connection

By Robert G. Silverman, DC, DACBN, DCBCN, MS, CCN, CNS, CSCS, CIISN, CKTP, CES, HKC, FAKTR

## Outline:

### **30 minutes: Dr. Rob's Gut Matrix**

The evolving field of gut health is one of the most exciting developments in Functional Nutrition. In this module, attendees will get a solid understanding of the gut microbiome and its importance:

- New insights into how our microbial community affects health and disease
- Nutritional strategies for gut health (7R Program)
- Gut reaction: restoring digestive health through nutrition

### **30 minutes: The human microbiome—new insights into how our microbial community affects health and disease: Assessing antigenic intestinal permeability**

- Epithelial cell damage
- Tight junction breakdown
- Gut dysbiosis
- Systemic LPS infraction
- LPS antibodies vs. levels
- LPS and muscle pain
- Blood-brain permeability markers:
  - Ig + IgA
  - IgM

### **30 minutes: Strategies to initiate the positive impact of gut health on the musculoskeletal system:**

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- Basic physiology and nutritional support for a musculoskeletal injury
- Medicine's new direction—how injuries to fascia and extracellular matrix are critical components in describing disease etiology

## **Intestinal permeability's effect on joint health:**

- Osteoarthritis
- Spinal joints
- Rheumatoid arthritis
- Peripheral nervous system
- Biochemical and mechanical pathways are evaluated, and research-oriented nutritional and movement protocols are presented.