Functional Nutrition Approaches to Gut Health
20 CPEU Module accredited by Nutrition Mission®

Topics Covered
1. Good Health Starts in the Gut         10. IBD – Crohn’s and Colitis
2. Microbiome Part 1                   11. IBS
3. Microbiome Part 2                   12. SIBO
4. What Can Go Wrong                   13. Candida
5. FODMAP Intolerance                 14. Gut Immune System
6. GERD                               15. Stress Gut Brain Interactions
7. Celiac Disease                     16. Histamine Intolerance

Curriculum Outline
1. Good Health Starts in the Gut
   • Overview
   • Associated Content
   • The Mouth, Esophagus, Stomach, Small Intestine, Large Intestine, Pancreas, Liver, Microbiota, Enteric Nervous System
   • Enzymatic Digestion and Absorption
   • Microbial Production of Nutrients
   • 5 R Program Introduction
   • Clinician Takeaways

2. Microbiome Part 1
   • Overview
   • The Microbiota in Infancy
   • Associated Content
   • The Microbiota’s Influence on Metabolism, Health, and Disease
   • Commensal, Symbiotic, Pathogenic
   • The Importance of Diversity
   • Probiotics
   • Prebiotics
   • Clinician Takeaways

3. Microbiome Part 2
   • Overview
   • Associated Content
   • Contributors to Dysbiosis
   • Bacterial Association with Medical Conditions, causative/preventive
   • Immune Regulation
   • Neurological/Gut-Brain Axis
   • Probiotic Supplementation- specific strains for specific conditions
   • Fecal Microbiota Transplant (FMT)
   • Impact of Diet
   • Clinician Takeaways
4. What Can Go Wrong? Overview
   • Overview:
     o FODMAP Intolerance
     o Gastroparesis
     o GERD
     o Celiac Disease
     o Non-Celiac Gluten Sensitivity
     o Increased Intestinal Permeability
     o IBD
     o IBS
   • Contributing Factors
   • Therapy
     o DIGIN
     o Testing
     o 5R- Remove, Replace, Reinoculate, Repair, Rebalance
   • Clinician Takeaways

5. FODMAPs Intolerance
   • Description
   • Signs and Symptoms
   • Contributing Factors
   • FODMAP Foods/Hidden FODMAPs
   • Testing
   • Therapy
   • 5 R Program for FODMAP Intolerance
   • Low FODMAP Diet Overview
   • Clinician Takeaways

6. GERD
   • Description
   • Signs and Symptoms
   • Contributing Factors
   • Testing
     o GERDQ
   • Therapy
   • Nutrition Therapy for GERD
   • 5R Program for GERD
   • Clinician Takeaways
7. Celiac Disease
   • Description
   • Signs and Symptoms
   • Contributing Factors
     o Genetic Susceptibility, Gliadin Environmental Factors, GI Permeability
   • Testing
   • Therapy
   • Nutrition Therapy for Celiac Disease
   • 5R Program for Celiac Disease
   • Clinician Takeaways

8. Non-Celiac Gluten Sensitivity (NCGS)
   • Description
   • Gluten Related Disorders- NCGS, Celiac Disease, Wheat Allergy
   • Associated Conditions
   • Signs and Symptoms
   • Clinical Manifestations of NCGS
   • Contributing Factors
   • Testing
   • Therapy
   • Nutrition Therapy for NCGS
   • 5R Program for NCGS
   • Clinician Takeaways

9. Intestinal Permeability
   • Description
   • Elements that Influence the Intestinal Barrier
   • Tight Junctions
   • Zonulin, Modulator of Intestinal Permeability
   • Signs and Symptoms
   • Associated Conditions
   • Contributing Factors
   • Testing
   • Therapy for Leaky Gut
   • Anti-Inflammatory Diet
   • 5R Program for Leaky Gut
   • Clinician Takeaways
10. IBD Crohn’s and Colitis
   • Description
   • Signs and Symptoms
   • Characteristics and Complications
   • Contributing Factors
     o Genetic Polymorphisms’ Influence on Development and Exacerbation of IBD
     o Dietary Components
     o Medications Linked to Microscopic Colitis
   • Microbiota and IBD
   • Alterations in the Microbiome and Metabolome during IBD
   • Intestinal Permeability in IBD
   • Testing
   • Therapy
   • Nutrition for IBD
   • 5R Program for IBD
   • Clinician Takeaways

11. Irritable Bowel Syndrome
   • Description
   • Signs and Symptoms
   • Rome IV Criteria for IBS diagnosis
     o IBS Subtype Criteria
     o Bristol Stool Form Scale
   • Characteristics and Complications
   • Potential Comorbidities
   • Contributing Factors
   • Gut-brain, Neuroendocrine, Neuroimmune Interactions
   • Immune Activation and Inflammation
   • Stress and IBS
   • Diet and IBS
   • FODMAPs
   • GI Microbiota Composition in IBS
   • Probiotic Therapy
   • Testing
   • Therapy
   • Nutrition for IBS
   • 5R Program for IBS
   • Clinician Takeaways
12. SIBO
   • Description
   • Signs and Symptoms
   • Contributing Factors and Consequences
   • Common comorbidities  
     o IBS
   • Testing
   • Therapy
   • Nutrition for SIBO, FODMAPs, SCD
   • Antimicrobials
   • 5 R Program for SIBO
   • Clinician Takeaways

13. Candida
   • Description
   • Signs and Symptoms
   • Contributing Factors and Consequences
   • Testing
   • Controlling Candida albicans Pharmaceuticals  
     o Natural Anti-Fungals
   • Nutrition for Candida Overgrowth
   • 5 R Program for Candida
   • Clinician Takeaways

14. Gut Immune System
   • Overview
   • The Innate and Adaptive Immune System
   • MALT and GALT
   • Microbiota and Immunity
   • Inflammation and Immunity
   • Nutrition and Immunity
   • Clinician Takeaways

15. Stress and Gut-Brain Interactions
   • Overview
   • Associated Content  
     o Stress
     o Neurotransmitter/Hormone effect on GI Tract
   • Neuroendocrine Modulation of Stress
   • Stress and GI Immune Function
   • Stress and the Microbiota-Gut-Brain Axis
   • Psychobiotics
   • Functional Gastrointestinal Disorders and Stress
   • Clinical Nutrition Intervention
   • Therapy
16. Histamine Intolerance
   • Description
   • Roles of Histamine in the Body
   • Histamine Intolerance (HIT)
     o DAO, HNMT
   • Signs and Symptoms
   • Contributing Factors and Consequences
   • Histamine in Foods
   • Histamine Production by Bacteria
   • Endogenous Histamine
   • Testing
   • Therapy/Histamine Restricted Diet
   • DAO Supplementation
   • 5R Program for HIT
   • Clinician Takeaways

17. Functional GI Testing
   • Overview- GI Symptoms/Disorders Warranting Testing
   • Indications for Colonoscopy or Imaging Studies
   • Diarrhea/Categories of Diarrhea
   • Dysbiosis
     o Tests, Rationale, Symptoms, Science and Supportive Data
   • Specific Tests- Rationale, Symptoms, Science and Supportive Data
     o Breath Testing
     o Candida Overgrowth Testing
     o Celiac Disease Workup
     o Food Allergy Testing
     o Food Sensitivity Testing
     o GERD Workup, Gastric pH Test
     o IBD Workup
     o Intestinal Permeability Testing
     o IBS Workup/2016 Rome IV Criteria Nutrition Focused Physical Exam Organic Acids Testing
     o Stool Analysis
   • Clinician Takeaways
18. Supplementation
   • Overview
   • What are Nutrition Supplements?
   • Why are Nutrition Supplements Needed?
   • Who Needs Supplements?
   • Regulation and Quality Control
     o CGMPs, Third Party Certification
   • Nutrient Requirements and Guidelines
   • Supplement Categories and Forms
   • Choosing Nutritional Supplements
   • Supplement Sources
   • Magnesium Stearate
   • Chelated Minerals and Mineral Absorption
   • What to Include/What to Exclude
   • FAQs by Patients Regarding Supplementation
   • Clinician Takeaways
   • 5R Supplementation Recommendations-Replace, Reinoculate, Repair