



# NP 120 Part I:

## Microbiota-Gut-Brain Axis and the Diet-Mental Health Relationship

\$299 USD  
24 CE/21.25 NCCs

**NP 120 Part I** is the first of the **two-course series** providing evidence-based education in the microbiota-gut-brain axis (MGBA). This course prepares you to complete NP 120 Part II, which together, provide the first comprehensive, **evidence-based, conceptual model connecting the MGBA with the diet-mental health relationship (DMHR) in nutritional psychology.**

You'll Learn how our microbiota interconnect the **components of the MGBA**, which include the gastrointestinal system, central nervous system, peripheral nervous system, autonomic nervous system, neuroendocrine system, enteric nervous system, the immune system, and vagus nerve, and influence the DMHR.

You'll learn about the historical discovery and development of the MGBA, beginning with Hippocrates, and review the primary research methods used to unravel its existence. You'll explore the gut microbiota and factors influencing its dynamic **composition, abundance, and diversity**. You'll explore the **gut barrier**, its anatomy and physiology, major functions, and role in the MGBA.

**Microbial metabolites** such as short-chain fatty acids (SCFAs) in MGBA communication, including their influence on immune modulation, inflammation, and brain function are introduced. Most importantly, you'll learn about how the MGBA influences psychological well-being and mental health outcomes.

CNP is approved by the American Psychological Association (APA) to sponsor Continuing Education for Psychologists, the California Association of Marriage and Family Therapists (Provider # 1000102) for LMFTs, LCSWs, LPCCs, and LEPs, RDs/DTRs under *Activity Type 742 Eligible Enduring* through the Commission on Dietetic Registration (CDR), and NCCs through the National Board of Certified Counselors (NBCC). CNP maintains responsibility for this program and its content.

### LEARNING OBJECTIVES

Identify three **major components** of the Microbiota Gut-Brain Axis (MGBA)

State two primary methods used in **MGBA research**

Describe three major factors influencing **microbiota composition and diversity** throughout the human lifespan

List three major functions of the **gut barrier**

Define eubiosis, dysbiosis, and intestinal permeability

List two components in 'top-down' (brain-to-gut) **signaling**

Define **microbiota-derived metabolites** and explain their role in MGBA communication

State the fastest and most direct **communication route** in MGBA communication

Identify two types of **neuro-immuno-endocrine signaling mechanisms** (NIEMs) within MGBA communication

Describe one potential **therapeutic intervention** targeting the microbiota-gut-brainaxis (MGBA)

### COURSE DEVELOPERS

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### COURSE POLICY

**Target Audience:** Mental health , nutrition and other professionals wanting to understand the **evidence-based connection between diet and mental health.**

NP 120 Part I is the second course in the **Introductory Certificate in Nutritional Psychology (NP 100 Series)**. No prerequisites are required however, it is a prerequisite for NP 120 Part II.

CE hours do not include meals or breaks. Course certificates are awarded upon successful completion of the course and it's evaluation. If students do not receive their certificate they can email [editor@nutritional-psychology.org](mailto:editor@nutritional-psychology.org). CNP maintains course records for 7 years.

This course is accessible for **4 months** (120 days) from the date of enrollment. The course itself cannot be downloaded, however, "**Module Download Kits**" with key information from each module can be downloaded while enrolled in the course.

**Questions, concerns, or grievances** may be directed to the course administrator, via the course messaging platform, or emailed to [editor@nutritional-psychology.org](mailto:editor@nutritional-psychology.org). Failing a timely resolution, learners may follow instructions in the course Conflict Resolution Procedure.

The one-time course fee payment is due at the time of enrollment and is considered non-refundable. Exception for a partial refund (up to 75%) will be considered should the learner have proof of severe circumstances leaving them unable to complete the course.

