

Module Two Course Syllabus
Gut-Brain Axis Clinical Strategies and Treatment Applications
Kharrazian Institute

Course Title:

Gut-Brain Axis Clinical Strategies and Treatment Applications

General Schedule: September 21 – 22 from 9 am – 5:30 pm

Instructor: Datis Kharrazian, PhD, DHSc, DC, MS, MMSc, DACNB, DACBN, FACN

Location:

Hilton Garden Inn Carlsbad Beach

6450 Carlsbad Blvd.

Carlsbad, CA

Course Description

This course will provide an extensive literature review of the brain-gut axis, the role of the vagal apparatus, and gastrointestinal cellular messengers that impact the brain. An evidence-based model incorporating diet, nutrition, and lifestyle medicine will be presented. Clinical applications of vagal exercises, diet, nutrition, and laboratory tests will be presented.

Learning Objectives:

1. Understand the bi-directional relationships between the gut and the brain
2. Review the brain-gut axis literature
3. Review of clinical diseases associated with the brain-gut axis
4. Understand the clinical concept of canalized and non-canalized pathways
5. Learn how to identify disruption of the brain-gut axis through patient history and exam
6. Learn diet, nutrition, and lifestyle strategies and neurological exercises to support brain-gut axis dysfunction
7. Learn laboratory markers to assess the gastrointestinal and blood-brain barriers

Module Two Program Schedule

Day 1 – September 21, 2019

9 am – 10:30 am: Review of the brain-gut axis and its role in diseases

- Review of the anatomical connections between the brain and the gut
- Review of chemical messengers between the gut and the brain
- Review of the bi-directional feedback system of the brain-gut axis

10:30 am – 11 am: Break

11 am – 12:30 pm: Review of the gut's impact on brain function

- Understanding how the microbiome impacts brain function
- The role of gut peptides, lipopolysaccharides, and cytokines in the brain-gut axis

12:30 pm – 1:30 pm: Lunch

1:30 pm – 3 pm: Review of the brain's impact on gut function

- Review of cerebral autonomic control
- Understanding how the vagal motor nucleus and other brainstem centers impact gut function

3 pm – 3:30 pm: Break

3:30 pm – 4:30 pm: Understanding the role of vagal exercises and brain activity on the brain-gut axis

- Therapeutic approaches to modulate cerebral autonomic and vagal plasticity
- General concepts of dysautonomia

4:30 pm – 5 pm: Break

5 pm – 5:15 pm: Review of Day 1

5:15 pm – 5:30 pm: Questions

Additional assignment: 1.5 hours at-home reading research paper and online exam questions

Day 2 – September 22, 2019

9 am – 10:30 am: Understanding the clinical relationships between the blood-brain barrier and the intestinal barrier

- Literature review of the relationships between the intestinal barrier and the blood-brain barrier
- Laboratory markers to evaluate the gut
- Laboratory makers to evaluate the blood-brain barrier

10:30 am – 11 am: Break

11 am – 12:30 pm: How to manage gastrointestinal conditions, Part 1

- The role of intestinal motility in health
- How to identify and support digestive enzyme insufficiency
- General concepts of intestinal permeability

12:30 pm – 1:30 pm: Lunch

1:30 pm – 3 pm: How to manage gastrointestinal conditions, Part 2

- Small-intestine bacteria overgrowth
- Intestinal autoimmunity
- Complex vicious cycles of the brain-gut axis

3 pm – 3:30 pm: Break

3:30 pm – 4:30 pm: Case studies

- Three case studies
- Clinical principles learned from case studies

4:30 pm – 5 pm: Break

5 pm – 5:15 pm: Review of Day 1

5:15 pm – 5:30 pm: Questions

Additional assignment: 1.5 hours at-home reading research paper and online exam questions