



K H A R R A Z I A N
I N S T I T U T E

Kharrazian Institute – Course Syllabus

Chronic Inflammation Clinical Strategies and Treatment Applications

Course Title: Chronic Inflammation Clinical Strategies and Treatment Applications

General Schedule: Livestream May 11, 2024 from 9:00 am – 5:35 pm (6.5 hours)

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

Location: Online livestream and on-demand video replays after the livestream

Course Description

This course will review the clinical principles of chronic inflammation and its impact on health and disease. The endogenous and exogenous physiological web of inflammatory pathways in chronic illness will be reviewed and summarized. Clinical evaluation and strategies to address specific inflammatory pathways with diet, nutrition, and lifestyle medicine will be presented.

Learning Objectives:

1. Understand the pathophysiology of inflammatory pathways.
2. Understand exogenous and endogenous pathways of inflammation.
3. Understand how chronic inflammation impacts chronic disease expression.
4. Understand the principles of individualized medicine as it applies to chronic inflammation.
5. Understand how lifestyle medicine can impact inflammatory pathways.
6. Understand how various diets may impact inflammatory pathways.
7. Understand how nutraceuticals can be used to impact various inflammatory pathways.
8. Review how the medical history, physical exam, and laboratory tests can be used to evaluate inflammation.

9. Understand how to incorporate principles of lifestyle medicine, diet, and nutraceuticals to reduce chronic inflammation
10. Understand how to monitor inflammation and health after personalized interventional strategies.

Chronic Inflammation Course Schedule (6.5 hours of lectures)

9:00–10:00: The role of inflammation in chronic conditions

- Review of inflammatory immunology.
- The mechanisms of inflammation with chronic conditions.
- The impact of chronic inflammation on disease progression and recovery prevention.

This presentation will review the immunological pathways of inflammation and how these pathways play a role in disease progression and impaired recovery. The impact of chronic inflammation on vicious disease cycles will be presented. The progression of health and disease related to the activation of inflammatory pathways will be illustrated.

Break 10:00–10:15

10:15–11:15: Endogenous Pathways of Inflammation

- The role of mucosal immunity in inflammation.
- The role of innate and adaptive immunity in inflammation.
- The role of oxidative stress and cellular debris in systemic inflammation.
- The interplay of antioxidant and adaptive immune systems on modulation of inflammation.

This presentation will review specific immunological pathways of inflammation. These pathways include mucosal immunity, innate immunity, and adaptive immunity. The interplay between antioxidant and anti-inflammatory systems and endogenous pathways of inflammation will be discussed.

Break: 11:15–11:30

11:30–12:30: Exogenous Triggers of Inflammation

- The role of environmental pollutants and chemicals in inflammatory pathways.
- The role of reactive dietary proteins in inflammatory pathways.
- The role of pathogens and haptens in inflammatory pathways.
- The impact the psychoneuroimmunology on inflammatory pathways.
- The role of lifestyle factors in inflammatory pathways.

This presentation will review how environmental, dietary, immunological, and emotional factors can trigger inflammatory pathways. The role of lifestyle and its impact on modulating exogenous triggers of inflammation will be presented. The presentation will provide a comprehensive review of clinical variables that can play a role in the activation of inflammatory pathways.

Lunch 12:30–1:30

1:30–2:30: The Pathophysiological Web of Chronic Inflammation

- Activation of the NF- κ B vicious cycles in chronic inflammation.
- The impact of immunokines, cytokines, prostaglandins, and inflammatory proteins on systemic inflammation.
- The role of inflammatory pathways in atherosclerosis, bone loss, neurodegeneration, joint degeneration, obesity, and abnormal cellular signaling.

This presentation will review how vicious cycles develop in the immune system and lead to chronic and progressive activation of systemic inflammation. The upregulation of inflammatory pathways and priming of T-cells towards a proinflammatory state will be discussed. The role of chronic inflammation on diseases throughout the body will be presented in detail.

2:30–2:45 Break

2:45–3:45: Clinical Evaluation of Inflammatory pathways

- How to identify specific inflammatory pathways from medical history, physical examination, and specific laboratory tests.
- How to monitor resolution or activation of inflammatory pathways with diagnostic testing.

In this presentation, there will be a review of how to identify inflammatory pathways from medical history, physical examination, and specific laboratory tests. Evaluation of specific inflammatory proteins and acute phase reactants will be presented. Additionally, laboratory tests that are associated with variables that can activate inflammatory pathways will be discussed.

3:45–4:00 Break

4:00–5:00: Clinical Strategies for Chronic Inflammation

- Review of peer-reviewed literature on clinical strategies to dampen chronic inflammation.
- How to develop personalized diet, nutrition, and lifestyle medicine strategies to modulate case-specific inflammatory pathways.

This presentation will review evidence-based therapies that can modulate specific inflammatory pathways. Clinical strategies incorporating personalized approaches to

modulate chronic inflammation with diet, nutrition, and lifestyle strategies will be emphasized. Case examples and strategies to monitor patients throughout treatments will be discussed.

5:00–5:05 Break

5:05–5:20: Course Review

5:20–5:35: Questions