



Curriculum

# Master in Clinical Psychoneuroimmunology



# Module 1

Introduction to Clinical Psychoneuroimmunology, Pinched Gut Syndrome, Low Grade Inflammation and Basic Diagnosis

## Content

For three days, you will be taken on a journey that connects all systems, organs, and the individual through neurology, psychology, endocrinology, biochemistry, physics and of course, immunology. In addition, two basic mechanisms that are central within training and for people with chronic diseases are addressed: the leaky barrier syndrome (skin, lungs, brain, and gut) and low-grade inflammation. On the third day you will learn how to make a PNI diagnosis so that you can start working immediately in practice.

## Learning objectives

Students will:

- Learn the principles of PNI as a science that links everything together.
- Develop an evolutionary mindset and apply it in your own life.
- Make connections between all the systems of the human body and between human beings and their environment. This knowledge translates into the ability to reduce symptoms to a series of basic mechanisms of action.
- Master the basic skills necessary to make a PNI diagnosis.
- Identify the possible presence of a leaky barrier and low-grade inflammation in your patients and treat those two entities with a basic protocol based on scientific evidence-based medicine within PNI.
- Learn how to use and integrate the 5 metamodels of health.

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# Module 2

Evolutionary medicine

## Content

This module deals with the evolutionary aspects that have made humans, plants, and other living things what we are today. Older known anthropogenic stressors such as infection, hunger, thirst, and climate change have led to innumerable adaptations in the field of our genome and in the way the genome functions (the epigenome).

New risk factors such as sedentary life, eating 6 times a day, mortgage stress and many other factors are so new to the genetically 'old: homo sapiens' that our health controller (read hypothalamus) has not (yet) found a solution for them. These new stressors cause a conflict with our genome, which is full of polymorphisms meant to survive under previous conditions; the same polymorphisms, along with epi-

mutations, are now the cause of most if not all chronic diseases suffered by modern humans, especially in the wealthy West, so those diseases can be considered evolutionary scars.

Genetics, epigenetics, polymorphisms, and evolutionary stressors are the topics of the first day. The second day deals with “how it works” and “why it works this way”, the most important questions within evolutionary clinical PNI. The third day translates all evolutionary knowledge into certain interventions in several very common conditions.

### Learning objectives

Students will:

- Look at clients from the point of view of why they function the way they do, from an evolutionary perspective.
- Learn the evolutionary mechanisms of action responsible for diseases today and use the tools to reset these mechanisms in patients.
- Identify diseases as evolutionary scars and use evolutionary interventions to treat people suffering from these conditions.
- Discover the meaning of the concept of Intermittent Living and apply several of the interventions in your own life.
- Learn to identify the evolving mechanism of action that the “error” is utilized by a patient (e.g., insulin resistance and cortisol resistance).
- Be presented with a list of functional parameters that allow them to identify a disorder of an evolving mechanism of action.

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## Module 3

Neuroendocrinology

### Content

This module explores how our body has learned to respond to homeostatic changes (i.e. stress) and how that response can either protect us or make us sick. The first day is dedicated to the sympathizer and the HPA axis. The remaining two days are dedicated to all the other axes that come from the homeostatic regulatory organ of all living animals on earth: the hypothalamus.

Stress is much more than a psycho-emotional burden. Factors such as changing ambient temperature, eating too often and lack of sleep are also stressors and require a reaction from one or more axes of the hypothalamus. Again, evolution will play an important role within this module, as our hypothalamus has remained almost identical over the last 250 million years, it means that modern life is very “foreign” to this organ.

**Learning objectives**

Students will:

- Learn about the difference between homeostasis and allostasis is used to identify hypothalamic axis disorders.
- Analyse the function of the hypothalamus using validated measurement instruments and functional parameters.
- Learn to treat clients with universal inflammation of the hypothalamus, as it is the cause of most, if not all, chronic non-infectious diseases.
- Use the concepts of physical and mental stress to guide clients with specific interventions.
- Learn to use several tests to determine patients' response to stress: the Trier Social Stress Test, the neuroglycopenia test, the autonomic reaction test, the cold stress test (CST) and the Maastricht associated stress test (MAST).

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## Module 4

The immune system

**Content**

This module will discuss the immune system in depth and its connection with disease. It aims to convey to students that the immune system is not a homogeneous system, but an organ consisting of 9 different components. The immune system is an organ that has become "selfish" due to evolutionary pressure, for the benefit of mankind. Today, this hypersensitive system is responsible for most, if not all, chronic non-communicable diseases.

**Learning objectives**

Students will:

- Learn how the various components of the immune system function and how these components affect disease and health.
- Learn to diagnose the presence of low-grade inflammation using validated measurement tools.
- Develop a treatment plan with PNI interventions (in the field of minimal nutrition, exercise, and reframing) for a client with an immune disorder to carry out.
- Learn to associate a syndrome with a particular immunological component.
- Learn to use clinical chemistry tests and functional parameters as tools.

## Module 5

Wound healing, pain and resoleomics

### Content

This module focuses on normal wound healing, the chronology of inflammation (unsuccessful wound healing), pain and how something does not resolve because inflammation cannot be terminated. Normal and pathological processes will be discussed and made applicable in practice. The application of the resoleomic concept is one of the most powerful, if not the most powerful, ways to help your clients suffering from chronic pain, often in a very short time. An important part of this module is the application of deep learning (neuropsychological education) and reframing techniques in people with chronic pain.

### Learning objectives

Students will:

- Learn to distinguish between functional disorders and musculoskeletal disorders.
- Learn to distinguish between physiological and pathological pain syndromes.
- Learn to perform the self-healing processes of the science of resoleomics.
- Learn to treat clients with yellow and red flag disorders using cPNI interventions.
- Explore Metamodels 2 and 4 (the five components + transgenerational aspects).

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## Module 6

Internal organs I

### Content

This module deals with the evolutionary aspects of the digestive and orofacial systems and their central role in human health as an immune and neurological barrier. This vision allows us to understand the why, what for, how and when of the development of these organs; their physiology and pathophysiology. And furthermore, it facilitates the detection of current risk factors and the design of interventions.

During the seminar we will build films of pathologies such as tonsillitis, periodontitis, bruxism, hypochlorhydria, intestinal hyperpermeability, food intolerances, SIBO, and inflammatory bowel pathology. We will focus on clinical guidance, diagnosis and interventions for their treatment.

### Learning objectives

- To know the deep physiology of the digestive system and the most frequent physiopathology from the point of view of evolutionary biology.

- To know tools for the diagnosis of the most frequent conditions affecting the orofacial system, stomach, duodenum, intestine and microbiome.
- Acquire tools for the treatment of the most common conditions affecting the orofacial system, stomach, duodenum, intestine and microbiome.

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## Module 7

### Selfish systems

#### Content

This module integrates the first six modules of the first year of study through the concept of selfish organs, namely the selfish brain, the selfish immune system, and the selfish metabolic system. We will discuss the strategies that have been used so far to maintain the various systems both anatomically and functionally.

Normally, the three systems should work together in harmony, whereas this cooperation is disturbed in people suffering from chronic diseases. The way one of the systems takes over dominance leads to certain disorders that are also known as selfish brain disorder, selfish immune system disorder or selfish metabolic system disorder. In addition, the methodology used to map disorders of the three systems will be discussed in depth.

Several disorders, including Hashimoto's, depression and burnout, will be specifically discussed using the five metamodels. From this module you will assume the role of therapist and treat at least three real patients. These patients are pre-selected for their complexity, which makes it possible for students to attempt to arrive at a diagnosis and treatment. In addition, the reproductive system has recently been introduced as selfish. Therefore, the HPG axis plays an important role in the last day of this module. Pre-menstrual syndrome and other disorders of the HPG axis are discussed both theoretically and practically and completed with a therapeutic protocol.

#### Learning objectives

Students will:

- Learn the three super-systems and the most common syndromes based on the clinical-chemical and functional parameters to which they belong.
- Treat patients by influencing one or more super-systems.
- Learn to use the five metamodels in the context of treating real patients.

## Module 8

### Diagnosis

#### Content

This module deals with the process of making a clinical PNI diagnosis. The process is based on the five metamodels that have both causal and therapeutic power. In addition, both functional and clinical chemical parameters are put into practice so that you learn how to map the disturbed mechanisms of action (pathophysiological processes) reliably and validly.

The third topic that plays an important role in these modules is how to formulate questions for anamnesis, summarized in communication skills. Through the combination of various diagnostic tools, we also come to the use of specific clinical PNI interventions, such as solution-focused letter therapy, intermittent interventions and mindfulness.

A final topic addressed during these modules is the method of using epidemiology. Epidemiological studies help to identify risk factors associated with a particular clinical picture.

#### Learning objectives

Students will:

- Perform a diagnostic process based on the 5 metamodels and 12 modes of action.
- Communicate in a solution-oriented manner and use techniques such as reframing and deep learning techniques.
- Choose and use the correct added tests to achieve an optimal probability diagnosis.
- Learn to use communication skills, research skills, and a variety of tools for cPNI diagnosis

## Module 9

### Internal organs 2 - All associated with the P of PNI

#### Content

This module deals with the evolution of internal organs during the Cambrian Revolution.

This immensely long ice age created the need for the formation of bones and all other internal organs. During the three intensive days, the function, physiology and pathophysiology of the skeleton and the digestive tract (including the liver and pancreas) are explored in detail. The last day is dedicated to the treatment of the most common diseases such as osteoporosis, osteoarthritis, pancreatic disorders (PID) and fatty liver. The therapies offered are not only based on nutrition, movement, and behaviour, but also on sexual activity, biorhythms and, if necessary, pharmacological interventions.

**Learning objectives**

Students will:

- Learn how the organs function, why they exist and how they are connected through the hypothalamic-pituitary axis.
- Learn to diagnose common internal organ diseases with valid measuring instruments.
- Learn to treat clients with neglected or hyperactivated organs with cPNI interventions that redistribute energy.
- Explore metamodel 5 (neglect and hyperactivity)

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## Module 10

Nutrition and movement

**Content**

This module deals with the impact of exercise and nutrition on health and disease. First, movement theory and the impact of sedentary life are explained in depth. Then emphasis is placed on movement as medicine as applied to people suffering from diseases such as high blood pressure, cardiovascular disease, autoimmune diseases, and diabetes.

An important theme during this module is not only that one should move, but also why people do not move enough and tend to live a sedentary life. The latter topic can only be addressed from an evolutionary perspective. Also, in this module there will be two real patients with disorders that pertain to the content of this module. Eventually you will learn how to combine nutrition and movement in such a way that together they form a powerful preventive and curative weapon.

**Learning objectives**

Students will:

- Develop an optimal nutrition and movement plan for a real patient that influences one or more mechanisms of action.
- Learn which universal exercise program positively influences each clinical picture.
- Learn what influences the mechanisms of action of nutrition, movement, and supplements.
- Learn to measure the condition of patients to establish an optimal training program combined with a nutrition program, as well as a measure of healing and care.
- Learn how to determine heart rate variability and thus the functioning of the para-sympathetic nervous system.



# Module 11

The P in PNI

## Content

This module is full of psychology and psychiatry from an evolutionary perspective. Nothing has as much influence on man as his thoughts and feelings. The way we are, think and feel is strongly influenced by our evolutionary background and many problems can be remembered.

During this module, much attention is given to evidence-based techniques from different psychological schools. From the identification of meta-emotions (guilt, shame) and meta-thoughts (for my problem there is no solution) techniques are chosen to change the meta-themes and get people moving again. Helplessness and hopelessness are two meta-problems that cause people to do nothing to improve their health. Tap into new avenues through reframing techniques and neuropsychological techniques, among other things, to give people a new option.

If you can undermine the hypothesis that caused the patient to get stuck, then the patient may at least begin to doubt his or her conviction. This will get the patient moving again.

## Learning objectives

Students will:

- Apply the correct psycho-techniques based on the five-component model and the concept of textual context.
- Identify and be able to change the meta-emotions and meta-thoughts in patients' minds, providing new resources.
- Set limits at the P level in cPNI. If you can no longer prompt your patient, you know that the patient needs help from someone else.

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# Module 12

Integration year II

## Content

This module will integrate two years of clinical PNI knowledge. Only integrated thinking can map our complex world and possibly bring about sustainable change. Learning to observe from more than three points of view, therefore, is a prerequisite for solving big problems. It is a prerequisite for knowing not only what should be changed, but also how it works (mechanisms of action) and why it works the way it does. According to the Pruimboom Institute, these three requirements for a philosophy are more than adequately met by cPNI.

### Learning objectives

Students will:

- Become a person who thinks, feels, behaves, and works psychoneuroimmunologically.
- Become a clinical PNI therapist who can map all meta-models, mechanisms of action and risk factors in many people suffering from different syndromes.
- Apply PNI interventions in a responsible manner and always with respect for their own personal and ethical boundaries.

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## Module 13

Neurodegeneration

### Content

This module is about the superorganism. The interaction between microbiota and man is so essential that it is nowadays assumed that all disorders, especially those of the brain, are largely caused by a pathologically functioning gut-microbiota-brain axis.

The physiology and pathophysiology of this axis is central to this module, both theoretically and practically. In addition, much attention will be paid to the social factor within the clinical PNI; the impact of socioeconomic status on the functioning of the “health manager” or also called “health governor”. The diseases described in the protocol are multiple sclerosis, Parkinson’s, Alzheimer’s, depression (5 different forms), autism and ADHD.

### Learning objectives

Students will:

- Learn all levels of the superorganism and treat clients at these levels.
- Learn that neurodegeneration and brain function disorders are the ultimate consequences of the risk factors of modern life.
- Induce neurogenesis in clients with neurodegeneration and/or brain function disorders through neuron-specific strategies that positively change mindsets.

## Module 14

Gender medicine, pediatrics and ageing

### Content

In this module we will discuss the individualization of clinical PNI in more detail, distinguishing between children, men and women, and the elderly. Epigenetics runs as a leitmotif throughout the course and will be the focus during this module. Although races do not really exist, the difference between children, men and women, and older people is so great that IBP clinical paediatrics, gender medicine, and IBP clinical geriatrics are a must to complete the training.

The knowledge you gain about the neurological, endocrinological, immunological and psychological differences between these four groups of people will help you work with them much more effectively. Every day a patient's treatment is put into practice. In short, it is paediatrics, gender medicine and geriatrics within and according to KPNI.

### Learning objectives

Students will:

- Communicate with clients based on differences in age, genotype, phenotype, and gender.
- Learn that mechanisms of action vary by age and gender and tailor your KPNI interventions accordingly.
- Treat chronic diseases with anti-aging interventions.
- Learn to use blood values that offer insight into the epigenetic state of the human being.
- Develop the ability to interact differently with a person from one of the four groups of people covered in this module.

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## Module 15

Personality, Religion and Spirituality

### Content

In this module, we explore evolutionary psychology and psychiatry, and its effect on bodily systems. Nothing has as much influence on man as his thoughts and feelings. The way we are, think and feel is strongly influenced by our evolutionary background and many problems can be remembered.

During this module much attention will be paid to evidence-based techniques such as cognitive behavioural therapy, mindfulness, and transgenerational psychology. Different psycho-techniques are trained and applied in practice, always after making a diagnosis at the neuropsychological and neuroanatomical level. In addition, personality analysis, both theoretical and practical, is central; personality chooses the disease. Essential to the application of P in PNI are all the above modules, although during these modu-

les you are already in psychology training. After all, what works is clinical psychoneuroimmunology and medicine.

### Learning objectives

Students will:

- Apply the correct psycho-technique based on the five-component model and the concept of textual context.
- Reformulate disorders caused by risk factors in modern life using knowledge of evolutionary patterns of behaviour.
- Learn to induce healing changes in the brain to fight various diseases
- Develop the ability to interact differently with a person from one of the four groups of people covered in this module.

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## Module 16

### Lifestyle Medicine

#### Content

During this module you will develop a unique lifestyle program based on the knowledge of why people don't move, eat well, sleep on time and sit a lot.

Current lifestyle projects focus primarily on nutritional regimens such as high-fat, low-carbohydrate diets and other dietary interventions that would, of course, work very well if people complied with the therapy.

This module not only explains how sitting too much makes people sick, but also why people do what they do. Based on this knowledge, a truly successful lifestyle program can be developed, which could prevent many diseases, including natural overweight, type 2 diabetes, but probably also Alzheimer's and many forms of cancer.

A lifestyle concept based on the intermittent lifestyle model is the end result of this module combined with all the other knowledge and practical skills you have acquired during the course.

### Learning objectives

Students will:

- Learn why people do not carry out lifestyle interventions, despite knowing the negative consequences of not moving, smoking, sitting too much, and eating too much.
- Use evidence-based lifestyle interventions in the correct form, frequency, and amount.
- Match the client's therapy with specific interventions based on knowledge of therapy adherence.

- Learn how to motivate people in the right way and thus make them loyal to lifestyle interventions.
- Learn how to use a series of nutrition charts (tools) for the development of a ketogenic state, which will bring the brain back to number 1 in the hierarchy of biological priorities, among other things.

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## Module 17

Organs II – all connected to the P of the PNI

### Content

This module deals with the organs that make up the metabolic system, i.e. the heart, lungs, and kidneys. The physiological functions are first discussed from an evolutionary point of view and then the pathophysiology is dealt with in depth. Metabolic disorders remain the leading cause of death and require a new perspective to ensure prevention.

Many metabolic organ diseases originate from chronic inflammation of the hypothalamus and dominate the selfish immune system. Knowledge of these interactions is essential to guide people with pulmonary and cardiovascular kidney disease. Central to this module is the functioning of the highly complex renin, angiotensin, and aldosterone system.

In addition, the skin is also treated as an organ within this module. Disorders such as psoriasis, eczema and neurodermatitis not only have an immunological, but also a metabolic component. The latter topic also serves as a precursor for the following module in which the child, among other things, plays a central role.

### Learning objectives

Students will:

- Learn how the organs function, why they exist and how they are connected through the hypothalamic-pituitary axis.
- Diagnose common diseases of the internal organs with valid measuring instruments.
- See clients who will have neglected or overactive organs and treat them with KPNI interventions that redistribute energy.
- Learn to use the RAA system biorhythm measurement tool.

# Module 18

Integration year III

## Content

Clinical Psychoneuroimmunology can easily be seen as a philosophy of life that connects food, movement and behaviour and is always based on evolutionary thinking.


Only a holistic way of thinking can map our very complex world and possibly bring about sustainable changes. The Greens want to protect nature, law and economics, and the animal party wants us to eat only plants. According to clinical PNI, everyone is right, and consensus is always possible.

Learning to observe from more than three points of view is therefore a prerequisite for being able to solve big problems. It is a prerequisite for knowing not only what needs to be changed, but also how it works (mechanisms of action) and why it works the way it does. According to Pruimboom Institute, these three requirements for a philosophy are more than adequately met by the cPNI.

## Learning objectives

Students will:

- Become a person who thinks, feels, behaves, and works psychoneuroimmunologically.
- Apply their knowledge and skills as a clinical PNI therapist on an individual, family, business and/or social level.



*"We recommend this course to anyone who is ready to advance their clinical practice to the next stage. Medical practitioners of all disciplines, as well as their patients, can benefit from this innovative medical approach."*

**Dr. Leo Pruimboom** - Director of the Pruimboom Institute





# Pruimboom Institute

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