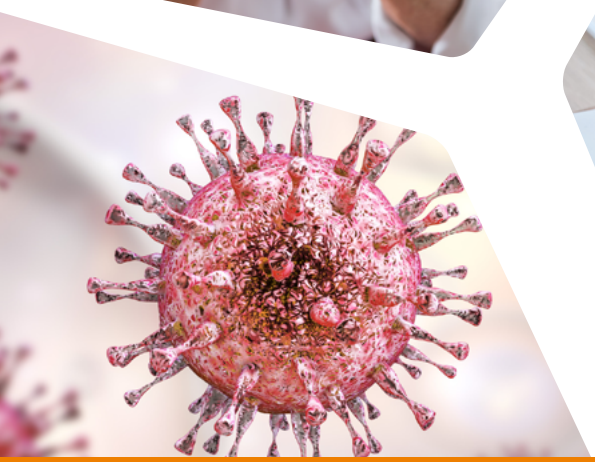
Micro-immunotherapy
International Medical Experience

Get started with **micro-immunotherapy**

Handbook



Document strictly reserved for health professionals.
The information contained in this brochure is based on the clinical experience and practice of doctors of the international associations of micro-immunotherapy (AEMI, IFMi, MeGeMIT).

This document is a **resource designed to support the training process of the health professional** who is starting to use micro-immunotherapy for the first time. It compiles basic guidelines for the practical use of micro-immunotherapy formulas, **based on the accumulated clinical experience of the practitioners** who are part of the international micro-immunotherapy associations (AEMI, IFMi and MeGeMIT).

The information contained in this document is therefore general and indicative and constitutes a simplified version of the application of certain formulas. The sections on fields of application include non-exhaustive lists of the main conditions that can be treated with micro-immunotherapy. These contents should therefore be used by the health professional as a guide, **always adapting their recommendation according to their own criteria, the patient's clinical condition and laboratory test results.** Recommendations made to a patient remain at all times the responsibility of the health professional.

To complete their training process, practitioners can find further information on micro-immunotherapy, as well as examples of its application and training courses in the web-based micro-immunotherapy professional area.

Recommendations to your patient

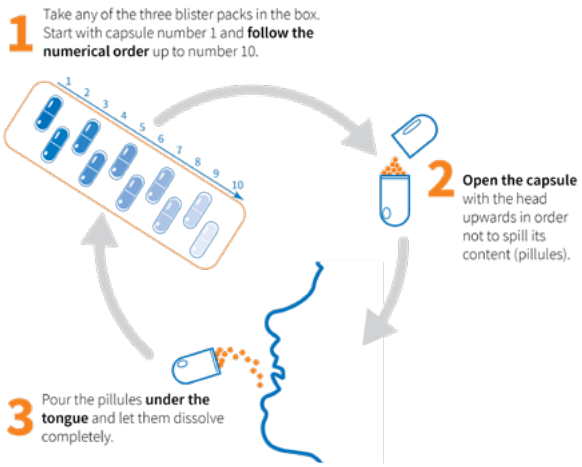
As with any treatment, it is important to explain to the patient why you are recommending micro-immunotherapy, what is the usual pharmaceutical form of the formulas that are available in clinical practice, and how they should be taken so as to avoid any doubts about their use. Below are some aspects that are important to remind your patient of:

The micro-immunotherapy formulas detailed in this document are available in the form of medicines and are therefore sold exclusively in pharmacies.

Intake characteristics:

- The medicines are usually presented in the form of coloured capsules, numbered from 1 to 10 in each blister. The patient can start with any of the blister packs, always with capsule number 1, and continue with the following capsules in numerical order.
- **Important:** The capsules must not be swallowed. Each capsule contains globules inside. The capsule should be opened to pour its content under the tongue until dissolved.
- If the recommended dosage is more than 1 capsule per day, the patient should be instructed to space the intakes over the course of the day, at least 2 hours apart, and always follow the numerical order.
- If the patient has been recommended to take more than one formula on the same day, the patient should also be instructed to follow the numerical order for each of them.

Micro-immunotherapy formulas are customarily taken on an empty stomach in the morning, although they can be taken at another time, always separated from meals/drinks: generally 20 minutes before or 20 minutes after. Also, formulas aimed at upregulating immunity are generally not recommended to be taken later than 6:00 PM so as not to interfere with sleep.



Special populations

Given the use of low doses, micro-immunotherapy formulas are generally well tolerated by all types of patients.

Some precautions for use and advice for special patient profiles are given below:

Children and infants:

- Good tolerability
- There are no specific contraindications for use in children.
- In infants: it is advisable to dissolve the pillules in a little water and then administer with a spoon.

Elderly:

- Good tolerability
- There are no specific contraindications for use in the elderly.

Athletes:

- Some micro-immunotherapy formulas may contain substances considered as doping substances according to anti-doping legislation (e.g. EPO or other erythropoiesis-stimulating factors). Therefore, it is important to check WADA regulations or contact the manufacturer before prescribing the medicine to competitive athletes.

Pregnant women and breastfeeding:

- During pregnancy, treatments aimed at upregulating the immune system should be avoided, especially in the months of highest risk (1st and 3rd trimester). In pregnant women, it is therefore important to assess the risk/benefit ratio of the treatment before recommending micro-immunotherapy (e.g. for genital herpes).
- On the other hand, current clinical experience has not revealed any complications derived from the intake of micro-immunotherapy during breastfeeding.

Transplant patients:

- In general, immunostimulatory treatments are not recommended for transplant patients. It is therefore advisable to assess the risk/benefit of the treatment in this type of patient before recommending any of the micro-immunotherapy formulas. In any case, it is always recommended that the transplant follow-up practitioner assesses the convenience of the treatment.

Contraindications

Micro-immunotherapy medicines are contraindicated in case of hypersensitivity to any of the active substances or to any of the excipients contained in the medicine.

Any questions? Use **HelpMi,** our clinical assessment service, to clear your doubts during your training process.

Some benefits of micro-immunotherapy treatments

They are not symptom-oriented. They address the cause of the imbalance to re-establish altered immune signalling and influence the patient's ability to respond.

They are compatible with the intake of other medication and/or supplementation. However, it is advised to avoid conflicting recommendations .
*(e.g. recommending formulas aimed at upregulating immunity while prescribing immunosuppressants).

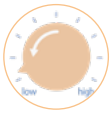
They can be used both for treatment and prevention.

They can be prescribed to elderly and/or polymedicated patients, and are of particular interest when alternative treatments are limiting or inconvenient.

They are not directed at blocking or stimulating a reaction, but at regulating immunity towards a balanced optimum.

They can be used in patients of all age groups and are generally well-tolerated.

They are easily taken sublingually, ensuring adherence to treatment.



They rarely produce unwanted side-effects and can be used on a long-term basis since they are based on low doses of immune mediators.

Inflammatory clinical conditions, with focus on bone and joint disorders

Formula **ARTH**

Clinical situation

Fields of application

Bone and joint inflammatory conditions:

- Of musculoskeletal origin (e.g. arthrosis, arthritis, rheumatoid arthritis, Quervain's tenosynovitis, low-back pain, ankylosing spondylitis, temporomandibular joint disorder).
- Of traumatic origin (e.g. tissue injury, fracture, knee, hip, muscular or ligament sports injuries, tendinopathies).
- Other cases of interest (e.g. periodontitis, mandibular osteitis).

Any other disease associated with acute or subacute inflammation (e.g. infections).

Associated symptoms

Depending on the condition, the following symptoms may be present:

- General malaise.
- Redness.
- Swelling.
- Pain (e.g. muscular, articular, abdominal).
- Stiffness / reduced mobility.
- Fever.
- Fatigue.

Immunoregulatory objectives

- Reduce inflammation and alleviate pain:
  - Prevent the overexpression of inflammatory mediators such as interleukin 1 (IL-1) and tumour necrosis factor alpha (TNF-a).
  - Reduce the inflammatory infiltrate.
- Counteract tissue dysfunction:
  - Halt structural damage and loss of function.
  - Contribute to regaining mobility.
- Favour the resolution of inflammation and prevent chronification.

According to the experience of doctors of the International Associations of Micro-immunotherapy (MeGeMIT, AEMI and IFMi)

Clinical practice

Formula **ARTH**

Acute and subacute inflammation	**2-4** 	*per day*	Until symptoms improve
Chronic inflammation	**1-2** 	*per day*	For 3-4 months

Value of treatment

- It can be used safely in long treatment regimes and in chronic inflammation.
- No associated intestinal disorders or antiplatelet effects.
- It can be used in polymedicated patients (e.g. under hypertensive, anti-diabetic or oral anticoagulant treatment).
- It does not cause habituation.
- It can be used in patients with liver disorders, at risk of gastric ulcer, hypertensive or with renal insufficiency.
- No reported interactions with other anti-inflammatory treatments (NSAIDs, COXIBs, opioids, corticosteroids), analgesics (paracetamol), or symptomatic slow-acting treatments (SYSADOAs) such as chondroitin sulphate and glucosamine sulphate.
- It can help reduce the intake of and dependence on other high-impact medications such as NSAIDs, corticosteroids or immunosuppressants.
- It can be used before and after surgery, when the use of other anti-inflammatory treatments is subject to limitations.
- It can be used in patients allergic or intolerant to certain NSAIDs.
- It can be used in patients with dysphagia.

Composition of the formula ARTH

Interleukin 1	10 or 17 CH
Interleukin 2	10 or 12 CH
Tumour necrosis factor alpha	10 or 17 CH
Specific nucleic acid SNA®-HLA I	10 or 18 CH
Specific nucleic acid SNA®-HLA II	10 or 18 CH
Specific nucleic acid SNA®-ARTH	10 or 18 CH

Practical tip

- *Besides helping to reduce the inflammatory process, it is important to treat the underlying causes of inflammation. Otherwise, despite the administration of anti-inflammatory treatments, there may be blockages in the healing process.*

Inflammatory clinical conditions, with focus on metabolic and systemic disorders

Formula **INFLAM**

	Fields of application	Associated symptoms
Clinical situation	Disorders associated with chronic (low-grade) inflammation, soft tissue inflammation and/or systemic and metabolic disorders: ▶ Of metabolic origin (e.g. diabetes, metabolic syndrome). ▶ Of autoimmune origin (e.g. Hashimoto's, inflammatory bowel disease, endometriosis). ▶ Other diseases associated to inflammatory mechanisms (e.g. chronic infections, hypertension, chronic fatigue syndrome, long COVID, soft-tissue inflammation, low-grade chronic inflammation).	Depending on the condition, the following symptoms may be present: ▶ Chronic pain (e.g from injury, autoimmune disorders, central sensitization, degeneration). ▶ Redness. ▶ Swelling. ▶ Stiffness / reduced mobility. ▶ Fever. ▶ Fatigue.
Immunoregulatory objectives	▶ Reduce inflammation and alleviate pain: • Inhibit proinflammatory pathways by downregulating TH1 cytokines. • Reduce the inflammatory infiltrate. ▶ Stimulate anti-inflammatory pathways by upregulating TH3 cytokines and maintaining the activity of TH2 cytokines. ▶ Prevent harmful metabolic effects of chronic processes.	

According to the experience of doctors of the International Associations of Micro-immunotherapy (MeGeMIT, AEMI and IFMi)

Clinical practice

Formula **INFLAM**

Acute episodes	**3-4** 	*per day*	Until symptoms improve
Background therapy	**1** 	*per day*	For 3-6 months

Value of treatment

- It can be used safely in long treatment regimes.
- No associated intestinal disorders or antiplatelet effects.
- It can be used in polymedicated patients or patients on oral anticoagulants.
- It can be used in patients with liver disorders, at risk of gastric ulcer, hypertensive or with renal insufficiency.
- It does not cause habituation.
- No reported interactions with other anti-inflammatory treatments (NSAIDs, COXIBs, opioids, corticosteroids), analgesics (paracetamol) or symptomatic slow-acting treatments (SYSADOAs) such as chondroitin sulphate and glucosamine sulphate.
- It can help reduce the intake of and dependence on other high-impact medications such as NSAIDs, corticosteroids or immunosuppressants.
- It can be used before and after surgery, when the use of other anti-inflammatory treatments is subject to limitations.
- It can be used in patients allergic or intolerant to certain NSAIDs.
- It can be used in patients with dysphagia.

Composition of the formula INFLAM

Interleukin 1	17 CH
Interleukin 1 receptor antagonist	3 CH
Interleukin 2	9 CH
Interleukin 4	7 CH
Interleukin 6	9 CH
Interleukin 8	9 CH
Interleukin 10	4 CH
Interleukin 13	9 CH
Ciliary neurotrophic factor	17 CH
Leukeimia inhibitory factor	17 CH
Oncostatin M	9 CH
Platelet derived growth factor	5 CH
Prostaglandin E2	200 K
Rantes	17 CH
Transforming growth factor beta	5 CH
Tumour necrosis factor alpha	17 CH
Specific nucleic acid SNA®-INFLAMa-01	18 CH
Specific nucleic acid SNA®-INFLAMb-01	18 CH

Practical tip

- *Besides helping to reduce the inflammatory process, it is important to treat the underlying causes of inflammation. Otherwise, despite the administration of anti-inflammatory treatments, there may be blockages in the healing process.*

Chronic inflammatory bowel diseases

Formula **MICI**

Clinical situation

Fields of application

- Inflammatory bowel diseases.
  - Irritable bowel syndrome.
  - Crohn's disease.
  - Ulcerative colitis.
- Leaky gut syndrome with intestinal inflammation.

Associated symptoms

Depending on the condition, the following symptoms may be present:

- Abdominal pain.
- Diarrhoea.
- Rectal bleeding.
- Fatigue.
- Weight loss.
- Nausea.
- Vomiting.
- Bloating.
- Constipation.
- Tenesmus.

Immunoregulatory objectives

- Re-establish the balance between the signalling pathways involved in the development or persistence of inflammatory processes.
- Limit the TH1 response by downregulating the activity of cytokines such as IL-1 and TNF-a.
- Favour the activity of TH2 and TH3 anti-inflammatory cytokines (IL-4, IL-10).
- Repair mucosal tissues in the gut.

Clinical practice

Formula **MICI**

Background therapy	**1**  *day*	*Duration according to medical criteria*

According to the experience of doctors of the International Associations of Micro-immunotherapy (MeGeMIT, AEMI and IFMi)

Value of treatment

- It is not only directed at alleviating acute flare-ups, but by readjusting the immune pathways involved in gut-derived inflammation it contributes to sustainably re-establish balance in the intestinal milieu.
- No associated intestinal disorders or antiplatelet effects.
- It can be used in polymedicated patients or patients on oral anticoagulants.
- It can be used in patients with liver disorders, at risk of gastric ulcer, hypertensive or with impaired renal function.
- No reported interactions with other anti-inflammatory treatments (NSAIDs, COXIBs, opioids, corticosteroids) or analgesics (paracetamol), as well as symptomatic slow-acting treatments (SYSADOAs) such as chondroitin sulphate and glucosamine sulphate.
- It can be combined with other treatment approaches such as micronutrient supplementation (e.g. vitamin D, B-complex vitamins, zinc, magnesium) and probiotic/prebiotic treatment.

Of particular interest in:

- Depressive patients with underlying gut-brain axis dysregulation.
- Patients with inflammatory autoimmune diseases of the intestine.

Composition of the formula MICI

Interleukin 1	27 CH
Interleukin 2	9 CH
Interleukin 4	9 CH
Interleukin 6	9 CH
Interleukin 8	17 CH
Interleukin 10	5 CH
IInterleukin 1 receptor antagonist	3 CH
InterCellular adhesion molecule	27 CH
Interferon gamma	17 CH
Transforming growth factor beta	9 CH
Tumour necrosis factor alpha	27 CH
Prostaglandin E2	200 K
Specific nucleic acid SNA®-HLA II	18 CH
Specific nucleic acid SNA®-MICIa-01	18 CH
Specific nucleic acid SNA®-MICIb-01	18 CH

Osteoporosis and other osteoarticular disorders

Formula **OSTEO-N**

	Fields of application	Associated symptoms
Clinical situation	▶ Fractures. ▶ Osteopenia. ▶ Osteoporosis (primary osteoporosis, postmenopausal type I and age-related type II, and secondary osteoporosis). ▶ Diseases associated with high risk of developing osteoporosis (e.g. rheumatoid arthritis, chronic obstructive pulmonary disease COPD, Crohn's disease, ulcerative colitis, celiac disease, type I diabetes). ▶ Intake of medication affecting bone metabolism (e.g. glucocorticoids, L-thyroxine, phenytoin, omeprazole, warfarin). ▶ Periodontal disease. ▶ Implant surgery (pre- and post-operative support). ▶ Other conditions associated with bone degeneration or abnormal bone metabolism.	Depending on the condition, the following symptoms may be present: ▶ Loss of movement. ▶ Oedema / hematoma. ▶ Fractures / micro fractures (hip, wrist, vertebrae, vertebral compaction). ▶ Back pain. ▶ Joint pain. ▶ Loss of height. ▶ Stooped / hunched posture. ▶ Gingivitis, dental hypersensitivity, loose teeth. ▶ Weakness.
Immunoregulatory objectives	▶ Dampen inflammation and reduce osteoclastogenesis (bone resorption). ▶ Stimulate osteoblastogenesis (bone formation). ▶ Remineralise and restore bone metabolism.	

According to the experience of doctors of the International Associations of Micro-immunotherapy (MeGeMIT, AEMI and IFMi)

Clinical practice

Formula **OSTEO-N**

Supportive treatment in bone fractures	**1-2**	*per day*	For 6 weeks or more
Osteoporosis, osteopenia	**1**	*per day*	Background therapy
Periodontal disease	**1**	*per day*	For 3-6 months (in combination with the formula INFLAM)
Implant surgery (pre- and post-operative support)	**10**	*per day*	For 3-6 months

Value of treatment

- It specifically addresses the inflammatory processes associated with excessive bone resorption modulating them toward a protective balance, thus:
  - It can help improve bone healing and slow down the loss of bone mass.
  - It can help reduce the risk of fractures.
- No reported interactions with other medications affecting bone metabolism (e.g. glucocorticoids, analgesics, antiresorptive medication, bone anabolic agents, oestrogen therapy).
- It can be used in combination with supplementation of essential micronutrients such as vitamin D, K, A, calcium, zinc, magnesium.
- It can be used both for treatment and prevention, in case of diseases with associated risk of developing osteopenia / osteoporosis, or intake of medication affecting bone metabolism.

Of particular interest in:

- Elderly and polymedicated patients.
- Patients with chronic and/or autoimmune diseases.

Composition of the formula OSTEO-N

Interleukin 1	17 CH
Interleukin 6	17 CH
Tumour necrosis factor alpha	17 CH
Interleukin 11	15 CH
Molgramostim	15 CH
Natrium Silicofluoricum	3 CH
Bone morphogenetic protein-2	5 CH
Bone morphogenetic protein-4	5 CH
Deoxyribonucleic acid	5 CH
Ribonucleic acid	5 CH
Transforming growth factor beta	5 CH
Insulin Growth Factor 1	9 CH
Specific nucleic acid SNA®-OSTEOa-02	18 CH
Specific nucleic acid SNA®-OSTEOb-0	18 CH

Allergies

Formula **ALERG**

Clinical situation

Fields of application	Associated symptoms
▶ Allergic rhinitis. ▶ Pollinosis. ▶ Tree or grass pollen allergy. ▶ Asthma. ▶ Atopic dermatitis (eczema).	Depending on the condition, the following symptoms may be present: ▶ Sneezing. ▶ Nasal discharge and obstruction. ▶ Conjunctivitis symptoms: gritty eyes, redness, tearing, itching. ▶ Shortness of breath. ▶ Chest tightness. ▶ Coughing. ▶ Trouble sleeping. ▶ Asthenia. ▶ Wheezing. ▶ Pruritus. ▶ Dry, cracked skin.

Immunoregulatory objectives

- Re-establish the balance between proinflammatory TH1, proallergic TH2 and regulatory TH3 cells.
- Decrease the production of IgE.
- Counteract mast cell degranulation.
- Prevent tissue infiltration by eosinophil granulocytes.

According to the experience of doctors of the International Associations of Micro-immunotherapy (MeGeMIT, AEMI and IFMi)

Formula **ALERG**

Prevention of seasonal allergies	**1**  *per day*	For 2 months before the season starts
Acute episodes	**3-4**  *per day*	Until symptoms improve, then reduce dosage to 2 capsules / day
Background therapy	**1**  *per day*	

Value of treatment

- It is directed at regulating the underlying misdirected inflammatory response, thus:
  - It can alleviate the symptoms of acute episodes, but as well
  - It can help reduce the frequency and intensity of allergic episodes in the long run.
- No reported interactions with other medications such as antihistamines, corticosteroids, dermocorticoids, steroid tablets or creams.
- It can help reduce the intake of and dependence on other high-impact medications such as antihistamines or corticosteroids.
- It can be used in patients with renal insufficiency.
- It is a well-tolerated treatment and generally does not produce undesired side effects.

Of particular interest in:

- Patients with seasonal allergies.

Composition of the formula ALERG

Interleukin 1	17 CH
Interleukin 4	17 or 27 CH
Interleukin 5	17 CH
Interleukin 6	17 CH
Interleukin 10	17 CH
Interleukin 12	9 CH
Interleukin 13	17 CH
Tumour necrosis factor alpha	17 CH
Transforming growth factor beta	5 CH
Pulmo Histaminum	15 CH
Specific nucleic acid SNA®-HLA II	18 CH

Immunodeficiency states, whether or not associated with acute, chronic or recurrent infections

Formula **EID**

	Fields of application	Associated symptoms
Clinical situation	▶ Recurrent ENT infections in children and adults (colds, flues, pharyngitis, tonsillopharyngitis, laringitis, anginas, otitis…). ▶ Recurrent lower respiratory tract infections (bronchitis, pneumonitis…). ▶ Recurrent urinary tract infections (cistitis, vaginal mycosis). ▶ COVID-19. ▶ Opportunistic infections. ▶ Other states associated with immunodeficiency (Long COVID, viral reactivations, chronic infections, lymphopenia…). ▶ Prevention of winter infections.	Depending on the condition, the following symptoms may be present: ▶ Flu symptoms (fever, chills, muscle pain, nasal congestion and discharge…). ▶ Sore throat. ▶ Swollen lymph nodes. ▶ General malaise. ▶ Feeling of weakness, fatigue. ▶ Discomfort or pain during urination.
Immunoregulatory objectives	▶ Support innate and adaptive immunity in infection control: • Maintain immune surveillance by favouring TH1 pathways. • Increase macrophage phagocytic activity. • Maintain balance between mucosal, humoral and cellular immunity. ▶ Counteract the mechanisms that alter or inactivate the antimicrobial defence. • Favour the secretion of proinflammatory cytokines. ▶ Prevent immune overactivation and the development of pathologies secondary to the infection.	

According to the experience of doctors of the International Associations of Micro-immunotherapy (MeGeMIT, AEMI and IFMi)

Clinical practice

Formula **EID**

Acute infections	**2-3**	*per day*	Until symptoms improve
Supportive treatment	**1**	*per day*	For 3-6 months, depending on the clinical course
For prevention (winter infections)	**1**	*per day*	1-3 months (from October to February)
Background therapy	**10**	month	One blister a month until the end of winter

Value of treatment

- It can be used both in the context of viral as well as bacterial and parasitic infections.
- It can be used both for prevention and treatment, e.g. in the context of winter infections.
- No reported interactions with antipyretics, antibiotics, analgesics or antiviral medication.
- By rebalancing immunity, it can help alleviate symptoms such as fatigue or exhaustion, as well as prevent other complications from infection and associated immunosuppression.
  - It can help reduce the number of infectious episodes in patients suffering from recurrent infections*.
  - It can help reduce the frequency of antibiotic treatment.
  - It can help reduce the recovery time.

Of particular interest in:

- Patients suffering from recurrent infections.
- Children starting kindergarten.

- Athletes suffering from recurrent infections.
- After hospital stays and trauma (situations generally associated with immunosuppression, with quantitative cell loss).
- After treatments inhibiting cell proliferation, such as immunosuppressive treatments, corticotherapy, chemotherapy.

Composition of the formula EID

Interleukin 1	5 or 10 CH
Interleukin 2	5 or 10 CH
Interleukin 5	6 or 10 CH
Interleukin 6	6 or 10 CH
Interferon gamma	6 or 10 CH
Transforming growth factor beta	10 or 30 CH
Tumour necrosis factor alpha	5 or 10 CH
Deoxyribonucleic acid	8 or 10 CH
Ribonucleic acid	8 or 10 CH
Specific nucleic acid SNA®-HLA I	10 or 18 CH
Specific nucleic acid SNA®-HLA II	10 or 18 CH
Specific nucleic acid SNA®-EID	10 or 18 CH

Practical tip

- *If not, it is recommended to rule out diagnostically a potential reactivation of herpesviruses such as the Epstein-Barr virus (EBV).*

Immune support in situations of psychological distress and immunosenescence

Formula **MISEN**

Clinical situation

Fields of application	Associated symptoms
▶ Anxiety disorders. ▶ Personal and professional stress or burnout. ▶ Emotional trauma (loss). ▶ Family hardship (e.g. separation, migration). ▶ Professional hardship (e.g. bullying, dismissal). ▶ Stress associated with time pressure (e.g. exams, work overload). ▶ Immune support in elderly patients (immunosenescence). ▶ Depressive mood.	Depending on the condition, the following symptoms may be present: ▶ Sadness, distress. ▶ Anxiety, panic attacks. ▶ Adrenal fatigue. ▶ Poor memory and concentration. ▶ Fear, irritability. ▶ Muscle tension. ▶ Gastric distress. ▶ Increased respiration rate. ▶ Palpitations. ▶ Sweating. ▶ Repeated thoughts, actions. ▶ Sleep disorders.

Immunoregulatory objectives

- Prevent immune wear and exhaustion associated with chronic stress and senescence whilst increasing immunocompetence.
- Re-establish altered immune signalling by acting on the inflammatory mediators involved and oxidative stress.
- Balance glucocorticoid levels by acting on the cortisol/DHEA ratio and compensating for the inflammatory effects promoted by increased cortisol levels.
- Modulate the decrease in telomerase and favour cellular regeneration.

According to the experience of doctors of the International Associations of Micro-immunotherapy (MeGeMIT, AEMI and IFMi)

Clinical practice

Formula **MISEN**

Supportive treatment	**1**	*per day*	For 3-6 months
Background therapy	**10**	month	One blister / month

Value of treatment

- It can be used both for treatment and prevention. For example, to prevent the development of secondary pathologies from state-anxiety, such as infections, or to prevent accelerated ageing promoted by factors associated with psychological distress.
- No reported interactions with anxiolytics, antidepressants, sleep aids or selective serotonin reuptake inhibitors.
- It does not cause a rebound effect on treatment discontinuation.
- It does not produce tachyphylaxis / habituation.
- By regulating immune signalling and the inflammatory effects associated with increased cortisol, it can relieve the symptoms linked to persistent stress (e.g. anxiety, irritability, fatigue, digestive disorders), which translates into increased energy levels and improved mood.

Of particular interest as:

- Immune support in elderly patients.

Composition of the formula MISEN

Interleukin 2	7 or 10 CH
Epidermal growth factor	7 or 10 CH
Dehydroepiandrosterone	3 or 10 CH
Dimethyl Sulfoxide	3 or 10 CH
Ribonucleic acid	9 or 10 CH
Specific nucleic acid SNA®-HLA I	10 or 18 CH
Specific nucleic acid SNA®-HLA II	10 or 18 CH
Specific nucleic acid SNA®-MISEN	10 or 18 CH

Depressive disorders

Formula **DEP**

Clinical situation

Fields of application	Associated symptoms
▶ Depressive mood. ▶ Mild depression. ▶ Burnout. ▶ Inflammatory fatigue / Sickness behaviour syndrome.	Depending on the condition, the following symptoms may be present: ▶ Sadness and discouragement. ▶ Anhedonia. ▶ Irritability. ▶ Weight change. ▶ Sleep disorders. ▶ Changes in psychomotor behaviour. ▶ Fatigue. ▶ Back pain. ▶ Headache and poor concentration. ▶ Feelings of worthlessness and guilt. ▶ Suicidal thoughts. ▶ Loss of interest and pleasure in activities. ▶ Anxiety and panic attacks.

Immunoregulatory objectives

- Balance the HPA axis
- Reduce inflammation and re-establish TH1-TH2-TH3 balance to promote tissue repair and neuroprotection.
- Regulate tryptophan metabolism
- Promote neuroregeneration and neuroplasticity

According to the experience of doctors of the International Associations of Micro-immunotherapy (MeGeMIT, AEMI and IFMi)

Clinical practice

Formula **DEP**

Acute episodes of stress, burnout or depression	**2-3**  *per day*	Until symptoms improve
Background therapy	**1**  *per day*	For 2-6 months, then reduce to 1 capsule / day for 10 days / month

Value of treatment

- It can be used in long treatment regimes and generally produces no undesired side effects.
- It can be used in polymedicated patients, as there are no reported interactions with other treatments (e.g. anxiolytics, antidepressants).
- No reported interactions with other treatments such as anxiolytics, antidepressants, sleep aids or selective serotonin reuptake inhibitors.
- It can help reduce the intake of other medications (e.g. antidepressants) in cases of mild to moderate depression.
- It does not cause a rebound effect on treatment discontinuation.
- It does not produce tachyphylaxis / habituation.
- By regulating immune signalling and the inflammatory effects associated with increased cortisol, it can relieve the symptoms linked to persistent stress (e.g. anxiety, irritability, fatigue, digestive disorders), which translates into increased energy levels and improved mood.

Of particular interest :

- As preventive treatment in patients with a chronic inflammatory background and associated risk of neuroinflammatory effects.
- In patients resistant to certain antidepressants or rejecting other treatments.

Composition of the formula DEP

Interleukin 1	27 CH
Interleukin 2	9 CH
Interleukin 4	5 CH
Interleukin 6	17 CH
Interleukin 10	9 CH
Interleukin 12	17 CH
Neurotrophin 3	4 CH
Erythropoietin	4 CH
Interferon gamma	27 CH
Corticotropin releasing factor	27 CH
Tumour necrosis factor alpha	27 CH
Neurotrophin 4	4 CH
Transforming growth factor alpha	4 CH
Transforming growth factor beta	4 CH
Specific nucleic acid SNA®-DEPa-02	18 CH
Specific nucleic acid SNA®-DEPb-02	18 CH
Specific nucleic acid SNA®-DEPc-02	18 CH

Disorders associated with mitochondrial dysfunction

Formula **MIREG**

Clinical situation

Fields of application	Associated symptoms
▶ Persistent post-infectious physical exhaustion (e.g. Long COVID, chronic mononucleosis). ▶ Chronic fatigue syndrome. ▶ Muscle fatigue. ▶ Neurodegenerative disorders (e.g. Parkinson's, Alzheimer's, multiple sclerosis). ▶ Depression and anxiety disorders. ▶ Multiple chemical sensitivity. ▶ Cardiometabolic imbalances (diabetes, metabolic syndrome, cardiomyopathy). ▶ Other chronic, autoimmune or degenerative diseases associated with inflammation, oxidative stress and lack of energy.	Depending on the condition, the following symptoms may be present: ▶ Lack of energy, fatigue not relieved by rest. ▶ Difficulty in doing usual tasks. ▶ Exercise intolerance. ▶ Mental exhaustion (slowness of thought, attention problems, difficulty in decision-making). ▶ Loss of strength and flexibility.

Immunoregulatory objectives

- Prevent immune exhaustion / deficiency by modulating inflammation and oxidative stress
- Regulate uncontrolled immune activation associated with mitochondrial dysfunction
- Balance mitochondrial metabolism

Clinical practice

Formula MIREG

Supportive treatment	**1** 	*per day*	Duration according to medical criteria

According to the experience of doctors of the International Associations of Micro-immunotherapy (MeGeMIT, AEMI and IFMi)

Value of treatment

- It allows to specifically treat immune factors that promote mitochondrial dysfunction and create a vicious circle exacerbating the inflammatory process.
- It can be used in combination with supplementation of essential nutrients and antioxidants such as coenzyme Q10, vitamins C, E, K, B-complex vitamins, alpha-lipoic acid, L-carnitine, acetylcysteine, zinc, selenium, as well as Omega 3 intake and nutritional therapy. It can also be combined with analgesics or anti-inflammatories.
- By regulating mitochondrial function and improving energetic balance, it can relieve symptoms such as asthenia, lack of energy, among others.

Of particular interest in:

- Patients with chronic, autoimmune or neurodegenerative diseases.
- In case of imbalances in the activation of effector responses *

Composition of the formula MIREG

Interleukin 1	10 or 27 CH
Interleukin 2	10 or 27 CH
Interleukin 5	10 or 27 CH
Interleukin 6	10 or 27 CH
Tumour necrosis factor alpha	10 or 27 CH
Transforming growth factor beta	10 or 15 CH
Prostaglandin E2	3 or 10 CH
Deoxyribonucleic acid	10 or 18 CH
Ribonucleic acid	10 or 18 CH
Specific nucleic acid SNA®-HLA I	10 or 18 CH
Specific nucleic acid SNA®-HLA II	10 or 18 CH
Specific nucleic acid SNA®-MIREG	10 or 18 CH

Practical tip

- *Mitochondria are intimately involved in the processes of cell proliferation, activation and differentiation, in which immune cells require a change in their metabolism and modify their energy demands.*

Herpes simplex virus type I or II infections

Formula **HERP**

Clinical situation

Fields of application

- Recurrent cold sores.
- Recurrent genital herpes.
- Herpetic keratitis.
- Gingivostomatitis.
- Cutaneous infections due to herpes.
- Anal and perianal disorders.
- Other cases of herpes simplex I and II reactivation.

Associated symptoms

Depending on the condition, the following symptoms may be present:

- Rash: vesicles or blisters in the affected area.
- Pain or burning.
- Itching, tingling.
- Fever.
- General malaise or chills.
- Headache.
- Red eye, tearing, foreign body sensation, light sensitivity.

Immunoregulatory objectives

- Favour immune surveillance and the antiviral response, promoting cellular immunity and the production of interferon type I.
- Limit viral replication and its spread to other cells.
- Control the persistent infection, preventing immune overactivation and the development of diseases secondary to the infection.

Clinical practice

Formula **HERP**		
Acute infection (outbreak)	**2-4**  *per day*	Until symptoms disappear
Supportive treatment	**1**  *per day*	Continue with the formula for 3-6 months after the outbreak

According to the experience of doctors of the International Associations of Micro-immunotherapy (MeGeMIT, AEMI and IFMi)

Value of treatment

- It does not merely control the viral infection, but also aims to support natural immunity in infection control, favouring immune surveillance.
- No reported interactions with antiviral medication (aciclovir, valaciclovir, famciclovir), astringent and disinfectant topical treatments (hydrocolloid dressings, tea tree oil, etc.)
- It can help reduce the frequency of antiviral treatment.

Of particular interest in:

- Patients that suffer from recurrent herpes. Patients often report a lower frequency of relapses, as well as milder outbreaks of shorter duration.
- In immunosuppressed patients, where prolonged treatment with certain antivirals may favour the risk of selection of resistant or less sensitive strains.
- In patients in whom other treatments have limitations, such as patients with renal insufficiency, or when there is a risk of hepatotoxicity.
- To prevent the occurrence of cold sores in susceptible individuals, when significant sun exposure is anticipated, or prior to cosmetic facial procedures.

Composition of the formula HERP

Deoxyribonucleic acid	8 or 10 CH
Ribonucleic acid	8 or 10 CH
Specific nucleic acid SNA®-HLA I	10 or 18 CH
Specific nucleic acid SNA®-HLA II	10 or 18 CH
Specific nucleic acid SNA®-HER 1	10 or 18 CH
Specific nucleic acid SNA®-HER 2	10 or 18 CH

Varicella-zoster herpesvirus (VZV) infections

Formula **ZONA**

Clinical situation

Fields of application	Associated symptoms
▶ Chickenpox in children. ▶ Herpes zoster in adults. ▶ Post-herpetic neuralgia. ▶ Other cases of varicella-zoster virus reactivation.	Depending on the condition, the following symptoms may be present: ▶ Rash: vesicles in the affected areas. ▶ Pain. ▶ General malaise or chills. ▶ Fever. ▶ Headache. ▶ Burning, itching. ▶ Swollen lymph nodes.

Immunoregulatory objectives

- Favour immune surveillance and the antiviral response, promoting cellular immunity and the production of interferon type I.
- Limit viral replication and the spread to other cells.
- Control the persistent infection, preventing immune overactivation and the development of pathologies secondary to the infection.

Clinical practice

Formula **ZONA**

Acute infection (outbreak)	**2-4**	*per day*	Until symptoms disappear
Supportive treatment	**1**	*per day*	Continue with the formula for 3-6 months after the outbreak

According to the experience of doctors of the International Associations of Micro-immunotherapy (MeGeMIT, AEMI and IFMi)

Value of treatment

- It does not merely control the viral infection, but also aims to support natural immunity in infection control, favouring immune surveillance *.
- It can help limit the extent of the skin rash and its spread to other areas of the nervous system.
- It can help prevent complications resulting from a persistent infection, such as postherpetic neuralgia.
- No reported interactions with analgesics (paracetamol), antiviral medication (aciclovir, valaciclovir, famciclovir, brivudine), neuroactive agents or antihistamines (ebastine), as well as local anaesthetics such as lidocaine cream or capsaicin skin patches.

Of particular interest:

- In elderly and/or polymedicated patients.
- To treat pain, inflammation and muscle pain following the herpes outbreak.
- In the face of reactivation, which often occurs after vaccination.

Composition of the formula ZONA

Interleukin 2	7 or 10 CH
Interferon alpha	7 or 10 CH
Deoxyribonucleic acid	8 or 10 CH
Ribonucleic acid	8 or 10 CH
Specific nucleic acid SNA®-HLA I	10 or 18 CH
Specific nucleic acid SNA®-HLA II	10 or 18 CH
Specific nucleic acid SNA®-ZONA	10 or 18 CH

Practical tip

- *Varicella-zoster virus reactivation is always indicative of a significant lowering of defences, whereby it is important to pay attention to it*

Skin warts

Formula **VERU**

Clinical situation

Fields of application	Associated symptoms
▶ Common warts, plantar and flat.	▶ Raised lesions (papules) with multiple or isolated skin-coloured or pinkish wart-like surfaces on the hands, fingers or soles of the feet. ▶ Generally painless, although mild pain may occur.

Immunoregulatory objectives

- ▶ Favour immune surveillance, promoting cellular immunity and antigen presentation.
- ▶ Limit viral replication and its spread to other cells.
- ▶ Control the persistent infection, limit associated chronic inflammation and the development of pathologies secondary to the infection.

Clinical practice

Formula **VERU**			
Acute infection	**1** 	*per day*	Until symptoms disappear

According to the experience of doctors of the International Associations of Micro-immunotherapy (MeGeMIT, AEMI and IFMi)

Value of treatment

- It does not merely control the viral infection, but also aims to support natural immunity in infection control, favouring immune surveillance.
- It can help reduce skin lesions and prevent recurrences.
- It can help prevent the need for extirpation treatments.
- No reported interactions with keratolytics (alicylic acids), decongestant sprays and other forms of cryotherapy, lasers, electrocoagulation, retinoic acid.

Of particular interest in:

- Patients with multiple or recurrent skin warts or resistant to other treatments.

Composition of the formula VERU

Interleukin 1	10 or 17 CH
Interleukin 2	10 or 17 CH
Interferon alpha	10 or 17 CH
Ribonucleic acid	8 or 10 CH
Specific nucleic acid SNA®-HLA II	10 or 18 CH
Specific nucleic acid SNA®-VERU	10 or 18 CH

Practical tip

- *Depending on the HPV genotype, good outcomes in stubborn skin warts have been reported with the formula PAPI as well.*

Human papillomavirus (HPV) infections

Formula **PAPI**

Clinical situation

Fields of application	Associated symptoms
▶ Condylomata acuminata. ▶ Squamous intraepithelial lesions (cervical dysplasia). ▶ Prevention in case of risk of neoplasia (CIN II, CIN III). ▶ Cervical, anal, vaginal, penile, oropharyngeal cancer. ▶ Common warts, plantar and flat (in case of resistance to the formula VERU).	Depending on the condition, the following symptoms may be present: ▶ Mild pain. ▶ Warts (anogenital, cutaneous). ▶ Itching in genital organs. ▶ Increased vaginal discharge. ▶ Bleeding during sexual intercourse.

Immunoregulatory objectives

- Favour immune surveillance, promoting cellular immunity and antigen presentation.
- Limit viral replication and its spread to other cells.
- Control the persistent infection, limiting the associated chronic inflammation and the development of pathologies secondary to the infection.

Clinical practice

Formula PAPI

Anogenital warts	**1**	*per day*	Until symptoms improve. Do not forget partner treatment
Cervical dysplasia	**1**	*per day*	For 6 months or more (depending on medical criteria)
Risk of neoplasia (CIN II, III)	**1**	*per day*	6-9 months

According to the experience of doctors of the International Associations of Micro-immunotherapy (MeGeMIT, AEMI and IFMi)

Value of treatment

- It does not merely control the viral infection, but also aims to support natural immunity in infection control, favouring immune surveillance.
- It can help reduce skin lesions, prevent recurrences and associated complications.
- It can be used before and after extirpation treatment.
- It can be used in conjunction with surgery, cryotherapy, antifungal agents, imiquimod, sinecatechins, photodynamic therapy.
- In cervical infections, it can help improve cytology results and prevent complications resulting from persistent infection, such as neoplasia.
- It can be used to treat the partner as well.

Of particular interest in:

- Women over 25 years of age with HPV-positive cervical dysplasia, since from this age the probability of spontaneous remission decreases and they have a higher risk of developing cervical cancer.
- As support for patients who refuse the recommended conisation for personal reasons.
- As support in case of uncertain cytological results, during watchful waiting until the next examination.

Composition of the formula PAPI

Interleukin 1	10 or 17 CH
Interleukin 2	10 or 17 CH
Interferon alpha	10 or 17 CH
Cyclosporin A	7 , 10 or 17 CH
Ribonucleic acid	10 or 18 CH
Specific nucleic acid SNA®-HLA II	10 or 18 CH
Specific nucleic acid SNA®-PAPI	10 or 18 CH

Practical tip

- *It is recommended to check for Chlamydia if patients are not responsive to treatment.*

Cognitive support

Formula **MEM-SENIOR**

Clinical situation

Fields of application	Associated symptoms
▶ Age-associated memory impairment ▶ Poor concentration ▶ Infection-derived “brain fog” ▶ As part of prevention of cognitive disorders ▶ Medication-induced memory loss ▶ Exam preparation	▶ Difficulty remembering past events ▶ Mixing up words / aphasia ▶ Attention deficits ▶ Difficulties with writing ▶ Problems with logical associations

Immunoregulatory objectives

- Compensate for immunodeficiency and neurotrophic factor deficiencies (BDNF, CNTF).
- Dampen inflammation and reduce oxidative stress.
- Promote neuroprotection, neuroplasticity and neuroregeneration.
- Prevent the onset or development of neurodegenerative diseases.

Clinical practice

Formula **MEM-SENIOR**

Maintenance therapy	**1** 	*per day*	For at least 6 months

According to the experience of doctors of the International Associations of Micro-immunotherapy (MeGeMIT, AEMI and IFMi)

Value of treatment

- It specifically addresses the neuroinflammatory processes associated with cognitive impairment modulating them toward a protective balance, thus:
  - It can help improve cognitive performance.
  - It can slow down age-related cognitive decline.
- It can be used in combination with supplementation of essential micronutrients such as vitamin D, calcium or omega 3s...

Of particular interest in:

- To prevent age-related memory loss.

Composition of the formula MEM-SENIOR

Interleukin 1	9 CH
Interleukin 2	17 CH
Interleukin 6	5 CH
Interleukin 12	9 CH
Interleukin 13	4 CH
Brain derived neurotrophic factor	5 CH
Ciliary neurotrophic factor	4 CH
Epidermal growth factor	7 CH
Erythropoietin	4 CH
Fibroblast growth factor-basic	5 CH
Glial derived neurotrophic factor	5 CH
Insulin growth factor 1	7 CH
Interferon beta	3 CH
Leukemia inhibitory factor	5 CH
Nerve growth factor	4 CH
Neurotrophin 3	5 CH
Neurotrophin 4	5 CH
Platelet derived endothelial cell growth factor	5 CH
Pregnenolone sulfate	3 CH
Transforming growth factor beta	5 CH
Tumor necrosis factor alpha	9 CH
Specific nucleic acid SNA®-MEM-SENIORa-01	18 CH
Specific nucleic acid SNA®-MEM-SENIORb-01	18 CH

Alzheimer's disease

Formula **MdA**

Clinical situation

Fields of application	Associated symptoms
▶ Alzheimer's disease ▶ Dementia (early stage)	▶ Mild stage: Progressive cognitive decline, mild forgetfulness of names or recent events intensifying with disease progression. ▶ Moderate stage: Behavioural, gestural, language and recognition disorders, need for assistance with certain activities. ▶ Severe stage: Memory of past events and information disappears, dementia, loss of autonomy.

Immunoregulatory objectives

- Dampen inflammation, reduce oxidative stress and limit neurodegeneration.
- Promote neuroprotection and neuroregeneration.
- Modulate the amyloid beta metabolism.
- Improve memory performance and mental well-being.

Clinical practice

Formula MdA

Maintenance therapy	**1** 	*per day*	For at least 6 months

According to the experience of doctors of the International Associations of Micro-immunotherapy (MeGeMIT, AEMI and IFMi)

Value of treatment

- By specifically targeting the neuroinflammatory mechanisms involved in neurodegeneration and upregulating neuroprotective pathways:
  - It can help slow down the progression of dementia and the development of associated disorders.
  - It can improve mental well-being
- It can be used in long treatment regimes and generally produces no undesired side effects.
- No reported interactions with other medications such as donepezil, rivastigmine, galantamine or memantine.
- It can be used in polymedicated patients.

Composition of the formula MdA

Interleukin 1	9 CH
Interleukin 2	9 CH
Interleukin 6	7 CH
Interleukin 13	5 CH
Glial derived neurotrophic factor	5 CH
Brain derived neurotrophic factor	5 CH
Ciliary neurotrophic factor	4 CH
Tumor necrosis factor alpha	9 CH
Erythropoietin	3 CH
Fibroblast growth factor-basic	5 CH
Nerve growth factor	7 CH
Insulin growth factor 1	4 CH
Neurotrophin 3	5 CH
Neurotrophin 4	5 CH
Beta-N-methylamino-L-alanine	27 CH
Substance P	4 CH
Neuropeptide Y	7 CH
Beta-amyloid-protein	9 CH
Somatostatin	4 CH
Deoxyribonucleic acid	8 CH
Ribonucleic acid	8 CH
Specific nucleic acid SNA®-HLA I	18 CH
Specific nucleic acid SNA®-HLA II	18 CH
Specific nucleic acid SNA®-MdAa-01	18 CH
Specific nucleic acid SNA®-MdAb-01	18 CH

This document is based on the accumulated clinical experience of practitioners of the International Micro-immunotherapy Associations. This material may undergo variations in the future and may be completed thanks to the experience of more practitioners.

If you would like to learn more about the different applications of micro-immunotherapy, you will find more training materials in the Professional Area of Micro-immunotherapy International Medical Experience.

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