



Imuno TF[®] Complex

The definitive option to regulate immune defense

The Imuno TF® Complex

- Food Supplement with Transfer Factors
- Contains vitamin C, selenium, and zinc which contribute to the protection of cells from oxidative stress and to the normal function of the **immune system**.

The normal function of the immune system is the key for a health life

The immune system is a highly differentiated system and an interactive network in the human body that involves multiple cells (cellular response, e.g. macrophages and dendritic cells) and circulating molecules (humoral response, e.g. immunoglobulins) to create a unique defense mechanism.

If our immune system is healthy, the natural defenses are sufficient to eliminate pathogens and to prevent diseases. On the other hand, if our immune system is not healthy enough (due to bad eating habits, stress, sedentarism and others), our body is not able to eliminate pathogens in due time and diseases can appear (or be more severe, compared to a healthy person).

In addition, we live in a world that is every day more prone to put us in contact with infectious virus and other microorganisms, threatening our immune system and, consequently, our health.

Therefore, the normal function of the immune system is indeed the preponderant factor for healthy, disease-free life, and **Imuno TF® Complex** is a daily food supplement to help you.



The Imuno TF® Complex

The **Imuno TF® Complex** is a blend of carefully chosen ingredients that can play a role on the regulation of the immune responses through multiple pathways, contributing to a normal function of your immune system and also to the protection of cells from oxidative stress and to the reduction of tiredness and fatigue.

- Imuno TF®
- Cat's Claw bark extract (*Uncaria tomentosa*)
- Astaxanthin (from *Haematococcus pluvialis*)
- Zinc
- Selenium
- Vitamin D₃
- Vitamin C
- Ferulic acid
- Resveratrol (from *Polygonum cuspidatum*)
- Spirulina powder (*Spirulina platensis*)
- N-acetyl cysteine
- Glucosamine sulfate potassium chloride



Imuno TF® Complex: a complete food supplement

Imuno TF®

Ultra-purified and non-allergenic blend of oligo- and polypeptides known as transfer factors.¹⁻⁶ Regulates the immune response, increasing the natural defenses and avoiding overproduction of inflammatory and allergenic molecules.⁷⁻⁹

Uncaria tomentosa (Cat's claw)

Cat's claw has immunostimulant, antioxidant and anti-inflammatory activities.¹⁰ Moreover, it can decrease lipid peroxidation and reduce the level of reactive oxygen species¹¹ and presents activity against bacteria and virus.¹²⁻¹⁸

Astaxanthin

(from *Haematococcus pluvialis*)

Astaxanthin is often referred as a "super-antioxidant" molecule, because of its capacity to reduce free radicals and oxidative stress: 65 times greater than vitamin C, 54 times more than β -carotene, and 100 times more than α -tocopherol.¹⁹ Additionally, the molecule also presents immunomodulating activity.²⁰⁻²²

Zinc

Zinc is a crucial element for normal development and function of cells mediating nonspecific immunity, such as neutrophils and natural killer (NK) cells; therefore a good zinc status is recommended to support an effective immune function.^{23,24}

Selenium

Selenium can contribute to the normal function of the immune system through the stimulation of CD4⁺ Th1 and CD8⁺ lymphocytes, NK cells, and macrophage phagocytosis.²⁵ Selenium is also a potent antioxidant that contributes to the protection of cells from oxidative stress.²⁶

Vitamin D₃

Vitamin D₃ plays a role on the regulation (inhibition) of B cell proliferation and differentiation (B cells are recognized as key factors in inflammation, as they can secrete inflammatory cytokines).²³ As Vitamin D₃ exhibits anti-inflammatory properties, it could therefore potentiate innate immunity while controlling the potentially harmful inflammatory response. This immunoregulatory effect could in turn prevent hyperinflammatory response caused by respiratory tract infections.^{23,27-29}

Vitamin C

Vitamin C contributes to the normal functional of the immune system.³⁰ Vitamin C can increase lymphocytes B and T proliferation and differentiation at a controlled rate.³¹⁻³³ It can also potentially increase the activation of NK-cells, improving immune response against foreign invaders.³⁴

Ferulic acid

Ferulic acid induces various peroxidase enzymes (enzymes that neutralize hydrogen peroxidase, a reactive oxygen species) and promote synthesis of glutathione (antioxidant). It also provides potential protection against tissue damage (including lung) coming from excessive inflammatory response.²⁴

Resveratrol

(from *Polygonum cuspidatum*)

Resveratrol can inhibit the production of inflammatory factors and reduce NF- κ B, TNF- α , IL-1 and IL-6.³⁵⁻³⁷ Resveratrol can potentially increase the activation of NK-cells, improving immune response against foreign invaders.^{38,39}

Spirulina

Spirulina can potentially increase the activation of macrophages and NK-cells, improving immune response against foreign invaders,^{40,41} and of T-cells functions, promoting their activation and proliferation.^{23,42}

N-acetyl cysteine

N-acetyl cysteine might be expected to help to prevent and control RNA virus infections.²⁴

Glucosamine sulfate potassium chloride

Glucosamine might be expected to help to prevent and control RNA virus infections.²⁴



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Disclaimer

All statements in this document have not been evaluated by the Food and Drug Administration or the European Medicines Agency. **Imuno TF® Complex** refers to a dietary supplement and it is not intended to diagnose, treat, or cure any disease.

Consult a doctor or healthcare professional before use if you are taking any medications or are under medical supervision, pregnant or breast-feeding.

Discontinue use and consult a doctor if adverse reactions occur.

Keep out of reach of children.

Do not exceed the recommended daily dose.

Scientific Support

Detailed information on the mechanism of action and safety profile of the **Imuno TF® Complex** is available in the "**Imuno TF® Complex Scientific Brochure**", available upon request.

Fagron works in collaboration with universities and research centers around the world to strengthen the scientific backing of **Imuno TF® Complex**. We maintain a database of published literature which is used by our technical experts to provide tailor-made, well-researched answers on technical questions.

Please contact our scientific experts to get more details about the applications and technical benefits of **Imuno TF® Complex**.



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