



Natural cell protection

FOR A STRONG IMMUNE SYSTEM,
MORE VITALITY, AND A HEALTHY HEART

High-quality, pure plant concentrate with
fermented soy extract, glucan, micronutrients
and **organic acerola extract**

Why prevention is so important

Often our protein and calorie intake is sufficient, and can even be too high. Yet despite this, scientific research proves that our supply of micronutrients (vitamins, trace elements, mineral nutrients) is still too low. Energy surplus – yet a lack of nutrients

There are several reasons for this:

- + High stress levels in one's professional and personal life, as well as excess strain for those involved in sporting activities
- + Lack of time in every-day life means that fast food and convenience food sources are easily substituted for a healthier diet. As a result, fruits and vegetables and the healthy preparation of micronutrient rich meals fall by the wayside.
- + Chronic diseases (which have been on a steady increase in recent years) require a micronutrient rich diet
- + Nutrient intake from regular foods becomes less and less sufficient with age and meals need to be supplemented with micronutrients.
- + Heavy metal pollutants in our soil have resulted in a lower nutrient ratio in fruits and vegetables.

PREVENTION IS IMPORTANT –
THE EARLIER YOU BEGIN ENSURING
YOUR BODY IS GETTING ENOUGH
MICRONUTRIENTS THE MORE
EFFECTIVE YOUR IMMUNE SYSTEM
WILL BE IN THE FUTURE

PraëCell stands for optimal prevention

Only a well-functioning immune system can ensure good health at an advanced age.

Praecell:

- + provides cells with a sufficient supply of nutrients, including vitamins and important trace elements
- + is rich in natural antioxidants
- + protects from free radicals
- + supports the immune system
- + helps prevent the processes of premature aging
- + helps protect cell components
- + supports bone metabolism
- + supports the regular and healthy function of the heart
- + supports a healthy and normal cholesterol level
- + strengthens the body's defenses
- + PraëCell – an important contribution to your health



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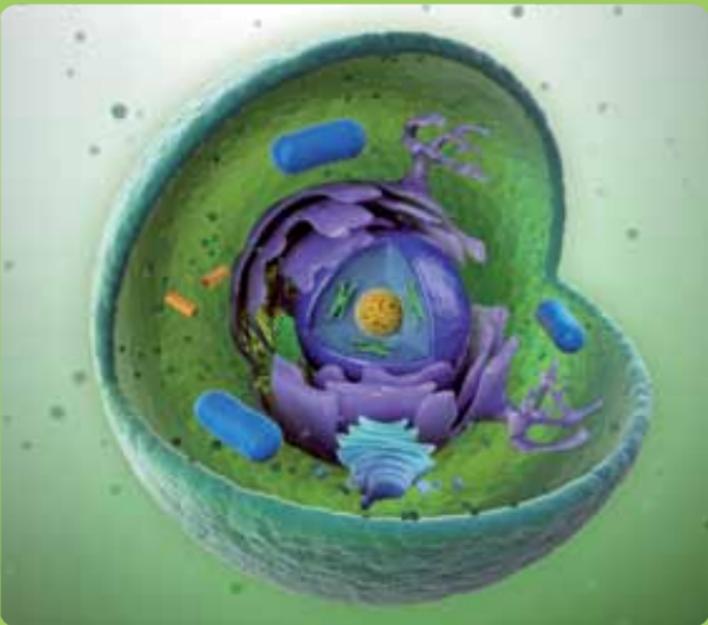
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Significance of the cell

A cell is the smallest viable component of our body. It is the basic element of the human organism in which all life processes, including stimulus processing, progeny, heredity and metabolism, take place. The human body consists of over 50,000 billion cells with roughly 220 different types of cells and tissue. Each second, millions of body cells die and are replaced with new ones. Controlled cell division is the most important process to ensuring the health of the human body. Yet before cell division can occur the genetic information, or DNA, of the older cell or "mother cell" needs to be transferred to the new cell or "daughter cell". Once this DNA duplication has occurred, the mother cell dies and cell division is in process.



- 1. Nucleus:** control center of the cell that contains DNA (a thread of about 2- μm in each body cell that bears the complete genetic information)
- 2. Cytoplasm:** gel-like substance residing within a thin pellicle (or cell membrane)
- 3. Cell membrane:** regulates what enters and exits the cell e.g. nutrients enter, waste material exits
- 4. Mitochondria:** cellular power plants

Cell division, specifically the body's capability to remove old or defective cells, is essential. Scientifically, this process is called "programmed cell death" or apoptosis. However, if there is a defect during the programming of cells that die during this process, bad or abnormal cells can develop, such as cancer cells.

Cells contain DNA that functions according to its genetic make-up (as chromosomes in the nucleus). This can be described as a construction plan for the body which determines how each cell should function. The cells within the different organs are programmed, both according to their function and their life span—and generally, our body renews itself within approximately 120 days.

In order for the cells to cope with the functions they are assigned, they have to be provided with nutrients they need. These include carbohydrates, fats, proteins, fibers, vitamins, mineral nutrients, and micronutrients. In addition, the cells related to one's immune system need specific substances, and these are, among others, selenium, zinc, vitamin C and vitamin D3.



Our body's own protective systems

+ Immune system

Our immune system is highly complex and its main function is to take care of pathogenic agents such as bacteria, viruses, and fungi. However, it also functions to take care of abnormal cells (such as cancerous cells). As a result, it is comprised of various antibodies that are specific to each immune system function, which include both the B and T cells. B cells function to mark the antigens, so that the phagocytes and natural killer cells recognize the antigens and know to dispose of them. To ensure this process to function properly, nutrients including vitamins and microelements, and others, are needed in adequate quantities.

+ Mitochondria – energy generation of the cell

The presence of Mitochondria is an important component of the cell and can be described as the cell's power plant, serving as its energy generator. Mitochondria are responsible for building adenosine triphosphate (ATP). ATP is considered the premium gasoline for our cells. A variety of enzymes need to be created in order to generate ATP, for which the body needs nutrients such as vitamins and microelements. In addition to regular food intake, dietary supplements are often required to ensure adequate amounts of vitamins and microelements.

+ Free radicals – preventive cell protection

Free radicals (ROS) are unstable and highly reactive oxygen molecules that are imbalanced and can often become very aggressive. They are able to attack most of the body's cells, damaging its DNA, as well as the proteins and fats present in the body—this can lead to diseases. To protect the body from these attackers, the immune system needs antioxidants to be externally delivered to the body (the organism). This aims to restore balance between the free radicals and the antioxidants in order for our bodies to function optimally. A lack of antioxidants to defend the organism means that the body is susceptible to disease.

An unhealthy diet with an insufficient intake of fruit and vegetables as well as exposure to environmental pollutants including smog, UV exposure and physical and mental stress, are contributing factors to harmful free radicals becoming aggressive. The resulting condition is called "oxidative stress". Scientists advocate that "oxidative stress" is one of the main causes of diseases such as arteriosclerosis, cardiovascular disease as well as neurodegenerative diseases such as Alzheimer's, cancer and rheumatic disease. The presence of aggressive free radicals can also be responsible for premature aging.

During periods of exerted effort that increases ones demand on the body, the concentration of free radicals can multiply up to 20 times—placing the body in a state of increased oxidative stress. A number of natural substances or phytochemicals, including vitamins such as vitamin C and microelements such as selenium can greatly help to repress the development of harmful free radicals.



INDEPENDENT SCIENTIFIC
STUDIES PROVE THAT THE
NATURAL **PROPERTIES**
CONTAINED IN PRAECËLL
ARE HIGHLY EFFECTIVE
AND AID THE BODY'S
IMMUNE SYSTEM.

What makes PraëCell so valuable?



The natural substances contained in PraëCell have the potential to substantially support the body's own protective systems in their tasks:

- + Fermented soy extract
- + Natural acerolaextract
- + Selenium
- + Vitamin D3
- + Vitamin K1, K2
- + Zinc
- + Beta-glucan made of yeast



Properties of the components contained in PraëCell

+ Soy extract – fermented multiple times

The soybeans that are used to make PraëCell are cultivated in an altitude of 1,600 meters and mature for an additional two months to ensure that their high nutritional value is maintained and guaranteed. The soy extract used in PraëCell goes through a unique patented fermentation procedure that ensures it is used in its optimal bioavailable form. Soybeans contain essential components including isoflavones as well as protease inhibitors, saponines, and more. These substances are considered “phytonutrients” and contain strong antioxidant and anti-cancerous properties. Numerous epidemiologic studies have revealed that certain cancers and cardiovascular diseases are rare in parts of Asia compared to Western countries, due to a soy-based diet. Numerous studies have attributed these positive effects to soy:

- + Positive impact on bone metabolism
- + Helps to reduce cholesterol
- + Supports health of cardiovascular system
- + Supports activities of our immune system
- + Natural prevention against cancer

+ Organic acerola extract

Acerola originates in South- and Central America and is also known as the "West Indian cherry." It is a red fruit with a sour taste that is extremely rich in natural vitamin C. Vitamin C is not naturally produced by the body and needs to be regularly supplied to the body through nutritious food intake. Organic acerola provides 30 times more vitamin C than a lemon, and its organic extract differs greatly from synthetically produced ascorbic acid or vitamin C supplements as it contains many other natural plant substances that simultaneously aid the body's function. Vitamin C supports the following processes:

- + Normalization of cholesterol levels
- + Healthy production of energy and lipid metabolism
- + Collagen cultivation
- + Important for the body's own produced defense system
- + A balanced nervous system



+ Beta-glucan

Glucans made from yeast are especially vital essentials. These glucans are a reliable and effective supplement to aid optimal immune system function and help maintain a healthy cholesterol level. Glucans activate macrophages* that protect the body from antigens and diseases. The body's immune system processes roughly one million genetic manipulations per second in order to continually monitor the body's cells and presence of foreign cells. It is crucial to maintain balance in the immune system. This includes avoiding unnecessarily boosting the system, so that it is not able to attack its own cells (an important regenerative function), which can also lead to autoimmune diseases such as diabetes and rheumatism. Glucans are vital to the body as they optimize the immune system without unnecessary over-stimulation. Glucans provide:

- + Optimization of the immune system
- + Decrease cholesterol levels
- + Blood sugar control
- + Reduction of cardiac disease risk (coronary circulation)

***Macrophages** (a certain type of white blood cells) are immune modulators that exist everywhere in the human body. They recognize foreign organisms (bacteria- or parasite-infected cells as well as abnormal cells and tumor cells). Their specific function is to recognize and kill infected and abnormal cells.



+ Selenium – cell protection – immune system – thyroid

The best available biological form of selenium is selenomethionine. Selenium is a vitally important microelement that derives its name from the moon goddess "Selene". Organically bound selenium is a central component of aliments such as yeast, garlic, mushrooms, offal, and fish. A sufficient supply of selenium ensures the body can carry out important tasks, and since it does not need to be metabolized by the body, the presence of Selenomethionine is immediate upon intake.

Western farmland is a region that experiences a shortage of naturally present selenium. This is due to an increased content of heavy metal pollutants in the soil that prohibits plants from absorbing sufficient amounts of selenium. A selenium shortage in the human body is more widespread than generally recognized, especially for people in high pressure situations. High pressure situations imply people involved in heavy manual work, under stress, experiencing chronic indigestion as well as alcoholics. It can also however affect vegetarians and vegans. Recent research has proven direct connections between selenium shortage and specific diseases. The main functions of selenium are:

- + It protects body cell components as well as DNA from oxidative damage
- + It optimizes normal thyroid function
- + It supports the immune system

+ Vitamin D

Vitamin D is an extremely important nutrient for our bones. It often takes the form of vitamin D3 (or cholecalciferol) that aids the differentiation of bone stem cells, the regulation of calcium levels, and metabolism of minerals such as calcium and phosphate that contribute to the body's regeneration as well as bone structure. Vitamin D is crucial to the differentiation and maturation of cells, including the T cell*, in the immune system.

The body or organism produces less vitamin D with age. This, in addition to older people generally being exposed to less natural sunlight, means that increasing attention needs to be paid to ensure sufficient vitamin D intake. During menopause, women often susceptible to vitamin D deficiency, this can lead to osteomalacia as well as osteoporosis. Recent research relates vitamin D deficiency to a number of diseases including high blood pressure, infections, cancer, arthropathy, and diabetes. The major functions of vitamin D include:

- + Support of bone health
- + Support of the immune system

T-cells are immune cells. The intensity of immune cells must continually maintained in order to, on the one hand destroy cancerous cells and pathogens, and on the other repress autoimmunity responses against normal tissue. As a result, the postproduction and maturation of T cells must be kept constant.

+ Vitamin K

Vitamin K is a liposoluble vitamin that is important for blood clotting, for a healthy cardiovascular system, and directly contributes to the body's structure, its regeneration processes, as well as bone health. Scientists from Heidelberg observed nearly 25,000 participants between the ages of 35 and 64 years over a period of 10 years and found that a high intake of vitamin K2 decreased the risk of early death (American Journal of Clinical Nutrition). Vitamin K aids:

- + bone health
- + a healthy cardiovascular system
- + prevention of carcinosis



+ Zinc

Zinc is one of the indispensable (essential) trace elements. It plays a key role in metabolizing sugar, lipids, and proteins. Zinc is also equally important for cell growth and the development of genetic material, aiding crucial functions in our immune system as well as in our hormone metabolism. A metaanalysis of 15 published studies showed an alleviating and shortening effect on the common colds as well as flu. Zinc is not stored in the body and thus needs to be supplied to the body on a regular basis. Zinc:

- + is indispensable to many of the body's enzymes
- + plays a central role in metabolism
- + functions as an active antioxidant
- + is important for the metabolism, e.g. in zinc-insulin complex



Nutrition facts and intake recommendation

Nutrition facts	2 capsules	% ADI*
Energy	71kJ/17kcal	
Protein	2.2 g	
Carbohydrates	0.5 g	
Fats	0 g	
AAcerola extract[®] thereof Vitamin C	730 mg 180mg	225%
Glucan[®] (beta 1,3/1,6)	280 mg	
Soy extract, fermented (ZhenHua [®]) thereof Isoflavone thereof Vitamin K	120 mg 25 mg 90 mcg	120%
Zinc	10 mg	100%
Selenium (Selenomethionin)	55 mcg	100%
Vitamin D3 D3 (Colecalciferol)	7.5 mcg	150%

*ADI = accepted daily intake

Ingredients: acerola extract (maltodextrin) // glucan (yeast beta 1.3/1.6) // extract from fermented soy // zinc (zinc gluconate) // selenium (selenomethionin) // vitamin D3 (cholecalciferol)

Fillers: : vegetable magnesium salts from fatty acids // vegetable calcium phosphate

Capsule: hydroxypropylmethylcellulose (HPMC) // Gellan

Intake recommendation: 1-2 capsules daily, taken with plenty of liquid.

Health warning: the indicated ADI must not be exceeded. Dietary supplements may not be used as a replacement for a varied diet. Keep out of the reach of children!

PraëCell – an important contribution to your health

Many people do not follow a balanced diet due to stress and the pressure of a busy lifestyle. As a consequence, the body lacks certain essential nutrients. Dietary supplements can help to fill this supply gap and remedy nutrient shortage, to ensure that important functions are able to maintain your health.

To lead a healthy life pay attention to:

- + Regular exercise
- + A healthy, wholefood, low-fat diet that contains plenty of fruit and vegetables to avoid being overweight.
- + Abundant hydration (at least 1.5l of liquid per day) of water, herbal teas or unsweetened fruit juices
- + Avoid unnecessary stress or employ effective stress management techniques

PraëCell uses/is:

- + Exclusive high-quality natural ingredients
- + High manufacturing standards, and is manufactured according to GMP
- + Cultivated soy beans, NEVER genetically manipulated soy beans (IQCT certificate)
- + A patented multiple-fermenting process
- + Gluten- and lactose-free
- + Anenteric-coated cellulose capsule (vegetarian capsule // gelatin-free)



PraëCell offers:

- + Optimal cell protection
- + Health and vitality throughout ageing
- + Compensation for vitamin, mineral- and microelement deficiencies
- + Strong antioxidant properties to control free radicals
- + Support of the immune system



For further information and to place your order:
www.praecell.com/en

