

A guide to optimize the quality of life

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Our bodies are steadily changing because millions of its cells divide during every second of our lives. Old cells, such as intestinal and immune cells, need to be constantly replaced by new ones. Every cell multiplication starts with the doubling of its genetic material which requires nucleotides, a group of molecules that, when linked together, form the building blocks of DNA or RNA. A massive amount of more than 3 billion nucleotides is required to replicate one single cell. Since this process is a very time consuming and metabolically taxing task, the cell can only begin to divide after its genetic material is properly duplicated. In certain instances, this process may take too long for the immune system to adequately and rapidly react to a threat by foreign invaders such as harmful bacteria or viruses. Since these pathogens can multiply faster than cells, they can cause much harm to the body if they are not stopped during the early stage of infection. Therefore, the speed by which the immune system reacts is crucial in determining whether or not we get sick. Because the production of nucleotides takes so long, the intake of exogenous nucleotides can increase the reaction time of the immune system and, thus, be of great importance to our health and wellbeing.

1. Improving the body defense

The hectic pace of our lives these days can lead to ever-increasing stress which, in turn, results in a greater tax on our immune system. In times of high stress load, the concentration of cortisol and adrenalin rises. These substances have an inhibitory action on the immune system which diminishes its defense power.

In a stress situation, the body itself is protected against infections by high energy turnover and stress hormones. But, upon relief of stress, the concentration of stress hormones decreases, and the protective effect against infection falls apart. But, while the immune system is still inhibited by the effect of the stress hormones, bacteria and viruses can multiply without restraint. So, a resulting illness may not be far off.

The supplementation of nucleotides decreases stress hormones and reduces suppression of the immune system. Additionally, the nucleotides support its recovery and timely response. Therefore, the body is less susceptible to infections at any time, which includes the periods when we value our health the most – our time of rest and recreation.

2. Enjoying relaxation

Today, in our hectic lives, we frequently have to multi-task and we are overwhelmed with information and responsibilities. Decisions need to be made immediately, and time for rest and recreation is more infrequent. However, relaxation and entertainment are precious commodities for rejuvenating the body and mind. Unfortunately, we often get sick during times when we most need a well-deserved vacation. Taking supplementary nucleotides helps us to avoid illness so that we may fully enjoy the treasured moments of relaxation which our bodies urgently need to revitalize.

3. Fostering health

Do you know that the intestine, the immune system and the brain are connected? If you would like to pamper yourself long-term and enjoy good health, then you should care about the proper function of the gut.

There is a saying that “good health starts in the gut”. The gut has a surface area of about 400 m² and contains 100 trillion bacteria, which is ten times more than the total number of body cells. Therefore, it needs a strong defense system. You can imagine the gut as a tube which winds through the body. However, the immense amount of bacteria in the gut which support digestion can be extremely dangerous to health if they managed to enter other parts of the body. The gut wall, therefore, needs an ingenious system to prevent the intrusion of bacteria and noxious substances from leaking into the body while it still allows the transfer of nutrients which the body vitally needs. The gut wall consists of a mucosal layer, which deactivates bacteria while allowing nutrients to pass through, and a cell wall, which contains special defense cells that repulse undesirable substance, but supports the active uptake of nutrients. The gut wall contains a whole army of immune cells, which produces antibodies to inactivate and destroy bacteria, viruses and fungi. The gut cells have the extremely short life span of only 5 to 6 days and need to be constantly replaced. This cell regeneration needs to be very efficient; otherwise small gaps can develop in the gut wall through which bacteria can infiltrate which can lead to irritations and inflammations. Only a continuous, high cell multiplication rate can ensure and maintain the proper function of the gut. The need for such rapid cell division accentuates the fact that the body’s own production of nucleotides is grossly inadequate. Only additional nucleotides from food can help meet this demand to ensure that cell gaps do not occur. Unfortunately, foods that are high in nucleotide content, like liver, kidney and tripe which contain high amounts of nucleotides, are no longer a common dietary staple. Today, most common foods have relatively poor nucleotide content. Therefore, regularly taking nucleotide supplements becomes very important for optimal gut function. Additionally, nucleotides also support the formation of digestive enzymes which contribute to good digestion.

4. Optimizing the gut flora

It is increasingly obvious that gut microbiota influences metabolic, immunologic and neural function in the body. A well balanced gut flora regulates the development and function of both the gut as well as the central nerve system. The newest research shows that a healthy gut flora positively influences our wellbeing, improves the immune system and also influences body weight. Some people have a diverse gut flora and some, up to 40% of the population, have a uniform gut population. People with a uniform gut flora are more often over-weight and suffer more of insulin resistance or a dysfunction of fat metabolism. In people with a diverse gut flora, bifidobacteria and lactobacilli are dominant. In people with a uniform gut flora, bacteroides, parabacteroides and ruminococcus are dominant. Bifidobacteria and lactobacilli are not able to produce the nucleotides themselves and need to absorb them from food. As already mentioned, modern foods contain fewer nucleotides. An additional intake of nucleotides promotes a varied gut flora and, thus, supports weight control and wellbeing.

5. Preserving beauty

The term “beauty” is widely interpreted. However, generally, “beauty” is associated with being healthy and vital. In a healthy and vital body, all its organs optimally collaborate. However, organs and cells must be sufficiently supplied with proper nutrients and the cell components they need for peak function and cell proliferation. This can be guaranteed by a sufficient bodily inventory of nucleotides. This assures that while under extraordinary stress, injury or disease, damage to the body may be more rapidly repaired.

Gaining energy

People's daily stress causes fatigue, weariness and weakness. Short term stress can mobilize significant energy, but without sufficient energy, long-lasting stress can lead to chronic fatigue and eventual burn-out. In order to avoid this, phases of rest and relaxation and a healthy and strong immune system are crucial to ensure that such times can be enjoyed without getting sick. But, in order to guarantee an optimal supply of energy, the prerequisites are good digestion, an efficient means to burn carbohydrates and fats and a strong cardiovascular system to transport the energy to the organs, muscles and other vital parts of the body.

As mentioned before, both good digestion and an optimally functioning immune system are dependent on a sufficient supply of nucleotides. It is relatively unknown that nucleotides are the only transport system of energy in the body. The universal energy unit of the body is the nucleotide ATP, Adenosine-Tri-Phosphate, which supplies our organs and muscles with sufficient energy to ensure that they can competently perform their tasks.

Therefore: without nucleotides, there is no energy!

6. Improving performance

Performance is defined as the potential of a person to perform physical or mental actions. Whether the potential can be reached or not depends of the physical, psychic and mental state of the individual.

Physical performance is clearly dependent on available energy. The more the available energy, the higher the performance. But performance also depends on the functionality of the organs and muscles and, therefore, on the sufficient supply of nucleotides.

Mental capacity is of enormous relevance to your life, as it contributes to your overall success both professionally and privately. Increasing professional and social strain requires that cognitive functions, like memory, perception, concentration and the handling of information are at peak function at all times. This is only assured if the brain is optimally supplied by oxygen and energy.

Red blood cells are responsible for the oxygen transport in the body. The production of red blood cells depends on a sufficient supply of nucleotides. More nucleotides produce more red blood cells which, consequently, provide increased oxygen to the brain and results in enhanced mental capacity.

7. Preserving mental flexibility

Until recently, it was presumed that the human brain could not replace its dead cells. But, the newest research showed that brain cell can indeed be replaced. This means that in the brain, the formation of new cells is a continuous process, and that such cell regeneration is highly dependent on a constant supply of nucleotides. Nucleotides, therefore, play an integral part in brain function and, primarily, in its flexibility. Trials have shown that the mental capacity of seniors can be improved by nucleotide supplementation.

8. Achieving contentment

People react to the encumbrances of daily life with anxiety and trepidation. As we think about and discuss our problems and fears, we exacerbate our worries and concerns. This frequently results in an emotional downward spiral whereby we amplify our small problems into larger dilemmas.

We can often overcome this condition and improve our outlook on life by enjoying a walk or run in a pleasant or beautiful natural environment. It was discovered that a speedy walk increases the supply of oxygen to the brain by 20%. So, by simply doing this, we will improve brain function and stimulate other metabolic activities. We gain more energy again as life's burdens seem to fade away.

Nucleotides support both the transport of oxygen and energy, as well as the function of the brain which, in turn, helps us to more easily find practical solutions to some of our daily problems. Or, in other words, nucleotides help us to regain peace of mind.

As indicated, nucleotides are involved in nearly all bodily functions. A shortage of nucleotides will, slowly but surely, impede metabolic function in the body, diminish immune function, retard gut activity and decrease brain function. Because of our modern life styles which cause increasing stress levels, the need for an additional supply of nucleotides also increases. Unfortunately, the body's own production of nucleotides as well as their reduced availability in contemporary food, no longer meets the body's ever-increasing demand.

The intake of exogenous nucleotides in a convenient and suitable way will support you in your attempt to optimize your quality of life