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PHARMACOLOGICAL, FARMODYNAMIC PROPERTIES OF ANTIOXIDANT DRUGS

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ABOUT ARTICLE

Key words: Antioxidant, oxidation, reaction, free radicals, lipid process, natural and synthetic antioxidants.

Abstract: This article describes antioxidants and their importance in biological life, how necessary they are for the human body, and their pharmaceutical properties.

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INTRODUCTION

The term "antioxidants" has long been in everyone's mouth, but there are many who do not know its meaning. These are very important elements, capable of binding free radicals and thus slowing down the oxidation process. What would seem terrible in oxidation? But it is these reactions that lead to rapid aging, disruption of regeneration and recovery processes. And this is where antioxidants come in. Natural antioxidants are the most important. The three most powerful of them, according to scientists, are cranberries, blackberries and blueberries (among the fruits). Vegetables include red beans, artichokes, and potatoes. Among the nuts, the first three places are: pecans, nuts and hazelnuts. At the same time, it should be taken into account that the general powerful antioxidant capabilities of foods do not always reflect them. real profit. The best antioxidants are antioxidants that are completely absorbed and used by the body.

Antioxidants have always caused a lot of controversy among scientists. Some people believe that this is a powerful anti - aging tool, others - the invention of scientists and pharmacists, and some-a potential cause. oncological diseases. So is it worth using them? And in general, what are they?

As mentioned above, almost all oxidation reactions are caused by free radicals, in other words, free-electron particles. They are dangerous because their electrons borrow from the structure of other atoms and try to complement themselves in pairs, and this is a direct cause of cell destruction. In addition, the electrons of the attacked cells try to restore their structure at the expense of other cells. Unfortunately, this is an endless process that cannot be stopped.

Blackberry is a very powerful antioxidant.

Naturally, over time, even the healthiest and strongest person begins to hurt. At first, the disease may not be serious and can be put aside, but then the disease will grow and sooner or later become chronic. Then diseases accumulate, a person not only ages quickly, but his life expectancy is significantly reduced, or he dies of a heart attack, stroke or oncology.

Reactions associated with free radicals are actually normal in the human body. And if the balance is maintained in providing the body with antioxidants, then violations, as a rule, do not occur, the cells and tissues of the organs are not damaged, and the health of the body is maintained normally.

To date, scientists know about 3,000 antioxidants. And their number is growing every day, but they are all constantly divided into three groups:

Fat-and water-soluble vitamins. The first, as the name suggests, participates in lipid processes and protects fatty tissues, while the second takes care of blood vessels, muscles and ligaments. Vitamins A and E, as well as beta-keratin, are the natural and most powerful antioxidants among fat-soluble, while vitamins C and B are water-soluble.

Bioflavonoides. These natural substances have a cleansing effect on free radicals, thereby preventing their formation and helping to eliminate toxic substances. These substances include catechin (an ingredient in red wine) and quercetin, which is abundant in all citrus fruits and green tea.

It is clear that many antioxidants are produced by the body itself. However, this only happens in cases where it has sufficient strength. If the body is weakened, then it is very important that such substances come with food. It is no secret that many vitamins, coenzyme, as well as succinic acid are a type of mitochondrial antioxidant-forming elements.

Mini power plants for mitochondria cells. As soon as the cell urgently needs energy, it "breaks" another mitochondrial rod and uses the energy released in the process. The more energy the cell needs, the more mitochondria there are. However, their number may decrease with age.

This causes an energy deficit for the cell, which can lead to its death. The trigger for such a reaction is oxidative stress. In addition, it can lead to mutation processes in the mitochondria, which, unlike cells, cannot recognize a malfunction during reproduction. Antioxidants in the diet help to properly protect the body in such cases.

By the nature of such substances, they are divided into natural and synthetic. Of course, the most optimal is the use of natural antioxidants, which mainly contain various plants. If we talk about synthetic antioxidants, then they usually contain drugs, all kinds of dietary supplements (for fairness, it should be noted that some dietary supplements can also consist of natural ingredients), as well as a sign of nutritional supplements"E".

Most often, synthetic antioxidants are used in products to reduce the intensity of oxidation reactions, for example, oil sprays, and they are absolutely useless for human health.

In addition, they can even cause serious damage that can lead to edema, asthma, allergies and atherosclerosis. Such consequences often occur in conditions when a person is used to eating refined foods.

Powerful antioxidants

Anthocyanins and flavonoids, which are rich in plants, have the strongest antioxidant properties. These are the elements that determine their color. Most of these substances are found in sour and sour-sweet fruits and vegetables of red, orange, black, blue and purple color. Bright green, yellow, dark green products also contain a lot of antioxidants of plant origin, but they are still inferior to the first group.

Of course, there is not always access to a wide range of vegetables and fruits, which is especially true for winter and early spring. But even in summer and autumn, many do not always eat foods rich in antioxidants in the right amount. To be honest, the quality of products, as well as the content in them are useful substances, decreases from year to year. It is at such moments that it will be quite appropriate to resort to the above-mentioned dietary supplements.

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