

EC PHARMACOLOGY AND TOXICOLOGY

Editorial

Back to the Future: Low-intensity Factors

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Currently, the phenomenon of the high sensitivity of the organism to diverse environmental influences of very low strength attracts more and more attention.

Consequently, the study of relatively safe and therefore very attractive for use in the treatment and mostly prophylaxis low-intensity factors (LIFs) possessing minor to moderate effects on the body, may be considered as quite important area of research.

The examples of LIF include homeopathy (despite conflicting views on its scientific basis), herbal medicine, acupuncture, mineral water consuming, spa procedures, etc., that are widely used especially for the prophylaxis of various diseases and during rehabilitation treatment.

In some cases, the body's physiological responses and therapeutic effects of LIFs on chronic diseases are even superior to those of high-intensity factors (HIFs) such as pharmacological agents, thus indicating on a fundamentally different mechanisms of action of such influences.

LIFs proved their efficacy at chronic diseases, since, differently from HIFs they usually cause minor or no complications. Unfortunately, the effect of action is delayed and reveals itself only after several weeks or even months of use, in contrast to HIF quickly giving the clinical result. These differences have predetermined the preferential use of LIFs for chronic diseases, and HIFs for acute ones.

Such differentiation is typical for Eastern and Western medicine. The latter is characterized by a high degree of instrumental examination and treatment of patients with pharmacological agents that usually represent single and sole active ingredient with known molecular structure isolated from natural source or obtained by artificial chemical synthesis.

Despite of proven rapid efficacy in emergencies, HIFs may cause toxic/allergic complications that negate the success of treatment. Differently, the Eastern medicine use LIFs, such as acupuncture, various types of massage, pharmaceutical assets of those substances and products that people commonly use as food: parts of plants or animal bodies, the water from natural sources and even different soil minerals. It is important to emphasize that these remedies have complex multi-component composition. However, in recent years, a reliable increase in the number of toxic and allergic complications due to the use of modern pharmacological agents, on one hand, and the obvious success of Eastern medicine, on the other, directly or indirectly led to the increasing penetration of methods and means of the latter in western medicine.

One consequence of this integration process has been the widespread use of natural plants and mineral products with one sole difference: in case of ancient oriental medicine biologically active components are usually consumed in the natural form, whereas in modern western medicine we have so-called dietary supplements, that are often obtained using modern chemical technologies.

Thus, on the border of two traditional areas of treatment and prevention medicine (pharmacology and nutrition) the third rapidly developing area came into sight.

This is an extensive field of therapeutic and prophylactic use of biologically active food additives - dietary supplements. Importantly, dietary supplements as a rule represent natural food components - micronutrients that have pronounced physiological/pharmacological effects on the body and its basic regulatory and metabolic processes.

Modern dietary supplements take us back to those ancient times when the edible substances were both food and medicine.

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