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INTRODUCTION – CURRENT HEALTH PROBLEMS IN THE LIGHT OF HUMAN NUTRITION SCIENCES

In this thematic issue of KOSMOS „*Current health problems in the light of human nutrition sciences*”, we want to present the current state of knowledge regarding the most urgent problems threatening health of the Polish population. These problems are all the more worrying, that the precarious situation grows rapidly affecting more and more people. This trend results from several directly related threats. Among them one of the most serious is the problem of obesity appearing in occurrence of the metabolic syndrome, as well as other eating disorders, e.g. anorexia leading to significant nutritional deficiencies and to the development of many somatic diseases. A serious threat to the health condition of Poles is a significant increase in the incidence of autoimmune diseases with little known etiology. One of the most common autoimmunological illnesses is the Hashimoto's disease, which affects younger and younger people. Infertility and sterility have become a serious health problem for several years. The reasons for this phenomenon are due not only to the harmful effects of environmental factors, but also to incorrect nutrition and life style. All these diseases obviously affect not only demography, but also have specific economic effects. A very serious demographic and economic problem, as well as social and health problem, is the rapid aging of the population.

This KOSMOS issue contains a series of review articles to bring the readers closer not only to the health problems mentioned above, but also to the modern knowledge about possible nutritional interventions aimed at the prevention of common diseases and effective dietotherapy supporting their treatment. Almost all articles were written by researchers from the Department

of Dietetics and the Department of Human Nutrition at the Faculty of Human Nutrition and Consumption Sciences of the Warsaw University of Life Sciences – SGGW.

The opening article by the undersigned invited editor of this issue, provides a brief remembrance of Professor Janusz Keller, who was the creator and long-time head of the Department of Dietetics, so that most of the employees of this chair, including the authors of articles, are his pupils.

It is well known that it is better to prevent worsening of health conditions than to treat a disease. This rule also applies to mental disorders, such as anorexia nervosa. The authors of the first article found that the occurrence of anorexia in a particular person can be predicted to a certain extent in order to undertake in advance preventive measures. Such a person has *anorexic readiness syndrome* – a set of symptoms that may indicate incorrect eating habits and wrong perception of its own body.

A serious threat, especially for young people, is the use of alternative diets, which are usually poorly balanced. Alternative diets differ from the traditional ones that they exclude or limit a many specific products. The main source of information about these diets has recently become the Internet, which should be treated however with a great criticism.

Autoimmune diseases are described in the subsequent two articles, including nutritional recommendations for people with Hashimoto and celiac diseases. In the next two ones, a model diet supporting fertility and a complementary therapy in the treatment of infertility are presented. In these reviews attention is also paid to the environmental and lifestyle factors that have a

significant impact on male fertility, indicating which of these factors can be modified and thus removed or significantly reduced. The Mediterranean diet could be an efficient and healthy alternative enhancing fertility, whereas Western diet showed adverse effects on fertility in women and men.

One of the articles includes dietary recommendations for athletes in the aspect of vitamin deficiencies, especially of folates. The authors of the following article write about fish and seafood consumption as an important element of a properly balanced diet. Generally, consumption of fish at least twice a week is recommended in order to prevent ischemic heart disease and cancer. However, due to the risk of contamination of these products by methylmercury and dioxin, for vulnerable groups (pregnant women, breastfeeding mothers and children), some restrictions on their consumption were introduced. The most recent literature on the beneficial, pro-healthy effects of cereal beta-glucans on human and animal organisms and their mechanisms of action is reviewed in a separate article.

The last four articles are devoted to the proper nutrition of the elderly Polish population, paying special attention to vitamin D supplementation, consumption of vegetables and fruits, and the most common nutrition errors made by the older people. In older people, a relatively common eye degenerati-

ve disease is the age-related macular degeneration, and one of the factors significantly affecting the risk of its development and reduction of progression is proper diet and increased supply of selected nutrients, such as lutein, zeaxanthin, antioxidant vitamins, zinc and some omega-3 fatty acids.

On behalf of all the authors, I would like to express a hope that presented issue of KOSMOS will prove interesting for the readers. It should be added that all the authors are experts on their fields, and their articles are based on the modern high level knowledge.

Last but not least, I would like to thank very much Professor Krystyna Skwarło-Sońta, Editor-in-Chief of KOSMOS, for making it possible to publish so many articles in a one thematic issue. I am particularly pleased to thank the Secretary of the Editorial Office, dr hab. Anna Wasik for the effort of editing the whole issue, patience and great kindness. Many thanks are also due to my PhD student Mr. Łukasz Kopiasz for help in formatting and conducting by OJS (Open Journal System) all the articles.

