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# POTENTIAL BENEFITS OF PHYTIC ACID IN HUMAN HEALTH

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Phytic acid (phytate) is defined as a hexaphosphate of myo-inositol, is almost contained in the plant particularly mature seeds such as cereal grains and legumes, fruits and vegetables. Phytic acid is declared as an antinutritive material. It has the ability to strongly chelate with cations such as calcium, magnesium, zinc, copper, iron and potassium to form insoluble salts. Due to the fact that it adversely affects the absorption and digestion of these minerals, the daily intake of phytic acid for humans on vegetarian diets have to be average 2000-2600 mg. Apart from negative effects, phytic acid has various therapeutic effects on human health. Its consumption provides protection against a variety of cancers (colon cancer, breast cancer, cervical cancer, prostate cancer etc). This effect is mediated through antioxidation properties of phytic acid, interruption of cellular signal transduction, cell cycle inhibition and enhancement of natural killer cells activity. It uses against diabetes mellitus, atherosclerosis and coronary heart disease and reduces kidney stone formation, HIV-1 and heavy metal toxicity. Also phytic acid has hypocholesterolemic, hypolipidemic, anti-aging, antidepression, anti-inflammatory effects. But information related with dosage for humans of providing beneficial effects is limited. As conclusion, phytic acid has many positive effects on health, although it is known to date more than antinutritive properties. The health effects, the dosage for humans of eliciting positive or negative effects and the optimal dosage for clinical therapies of phytic acid should be the subject of many recent studies and bias about it should be eliminated.

Keywords: Antinutritive material, health, phytic acid

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