

MELATONIN U HRANI I DODACIMA PREHRANI

Maida Šljivić, Asmir Budimlić
Tuzlafarm Tuzla

Sažetak

Melatonin je hormon koji nalazimo u svih živih bića. To je N-acetil-5-metoksitriptamin. Hemijski se sintetizira iz 5-metoksiindol-3-acetonitrila, 5-metoksitriptamina ili iz više reaktivnih indola. Kod čovjeka biosinteza ide u epifizi, maloj žlijezdi u mozgu. Kao prekursor za biosintezu melatonina služi aromatična aminokiselina triptofan koja je i prethodnik biosinteze serotonina. U radu su objašnjene i funkcije melatonina, s naročitim osvrtom na njegovu funkciju u cirkadijskom ritmu sna. Navedene su i objašnjene i druge uloge melatonina u čovječijem organizmu kao što su imunološke, antioksidativne i druge. Melatonin, kao prirodna komponenta živih organizama se nalazi u mnogim vrstama životnih namirnica. Dokazano je njegovo prisustvo u omotaču crnog grožđa, sjemenkama mnogih žitarica, jagodama, bananama, maslinovom ulju, orasima, pivu i drugim namirnicama. Često se melatonin može u primjeni naći kao dodatak prehrani, pa su opisani načini primjene, doziranje, očekivani i nus efekti primjene melatonina kao supplementa. Potreban je poseban oprez kod korištenja dodataka melatonina imajući u vidu da je 1 mg čak tri puta više od uobičajene koncentracije melatonina u tijelu.

Summary

Melatonin is a hormone which is found in all living organisms. It is N-Acetyl-5-Methoxytryptamine. It is chemically synthesised from 5-Methoxyindole-3-Acetonitrile; 5-Methoxytryptamine; or from a number of reactive indoles. In humans, biosynthesis occurs in pineal gland, a small gland in the brain. Aromatic amino acid tryptophan, which is also a precursor of synthesis of serotonin, serves as a precursor for synthesis of melatonin. This study explains other functions of melatonin as well, with a particular attention to its function in circadian sleep rhythm. Other roles of melatonin in humans, such as immunological, antioxidative and other functions, have been mentioned and explained in this study. Melatonin, as a natural component occurring in living organisms, is also found in many types of food. Its presence has been proven in skin of black grapes, seeds of many grains, strawberries, bananas, olive oil, nuts, beer and other food. Melatonin can be frequently found in food supplements, so that methods of use, dosage, expected and side effects of use of melatonin as a supplement have been described. Caution is recommended when using melatonin as a supplement, considering that 1 mg of melatonin supplement contains even three-fold the amount of the usual concentration of melatonin in a body.