

FITOESTROGENI U MENOPAUI – DOBROBITI I RIZICI**Mira Mikulić*, Milica Atanacković Krstonošić**

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Fitoestrogeni su raznovrsna grupa nesteroidnih polifenola biljnog porekla, koji mogu da ispolje estrogenu/antiestrogenu aktivnost. Pored toga, oni su značajni antioksidansi, a mogu da učestvuju u kontroli signala tokom deobe i rasta ćelija, kao i u genskoj ekspresiji. Soja se smatra najvažnijim izvorom fitoestrogena u ljudskoj ishrani, ali oni se mogu naći i u lanenom i suncokretovom semenu, jagodama, grožđu, dudu, susamu, lucerki, crvenoj detelini, grašku itd. Kao dokaz njihovog blagotvornog dejstva uglavnom se navode epidemiološke studije koje ukazuju na to da su neprijatne menopauzalne tegobe, kao i učestalost nekih hormon-zavisnih oboljenja, mnogo manje izraženi kod žena u Aziji u odnosu na žene zapadnih zemalja, što se upravo povezuje sa ishranom bogatom fitoestrogenima. Smatra se da oni mogu da utiču pozitivno i na lipidni status, kognitivne funkcije i metabolizam kostiju (1). Međutim, kliničke studije daju oprečne rezultate, pa se individualne razlike u metabolizmu i sastavu crevnog mikrobioma navode kao glavni faktori koji utiču na dobrobit od unosa fitoestrogena. Pogotovo se ističe značaj biološki aktivnih metabolita fitoestrogena (npr. ekvol) koji nastaju aktivnošću određenih sojeva bakterija u crevima (2). Danas, zbog sve većeg broja ljudi na veganskoj ili vegeterijanskoj ishrani, povećava se unos ovih biološki aktivnih jedinjenja u Evropi i Americi, pa je neophodno ukazati i na moguće rizike koje nosi visoka izloženost. Takođe, na tržištu postoji značajan broj dijetetskih suplemenata na bazi fitoestrogena, koji se preporučuju kao prirodna alternativa hormonskoj terapiji tokom menopauze, ali sadržaj i bioraspoloživost aktivnih materija kod ovih preparata mogu biti diskutabilni (3).

Literatura

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PHYTOESTROGENS IN MENOPAUSE – BENEFITS AND RISKS

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Phytoestrogens are a diverse group of non-steroidal polyphenols of plant origin, which can exhibit estrogenic/antiestrogen activity. They are also important antioxidants, and can participate in signaling control in cell division and growth, and gene expression. Soy is considered the most important source of phytoestrogens in the human diet, but they are also found in flax and sunflower seeds, strawberries, grapes, mulberry, sesame, alfalfa, red clover, peas etc. Epidemiological studies are cited as evidence of their beneficial effects, because they indicate that unpleasant menopausal symptoms and the frequency of some hormone-dependent diseases, are much less pronounced in Asian women compared to women in Western countries, which is associated with a phytoestrogen rich diet. It is believed that they can have a positive effect on lipid status, cognitive functions and bone metabolism (1). However, clinical studies provide conflicting results, and individual differences in metabolism and composition of the gut microbiome are pointed out as the main factors affecting the benefit of phytoestrogen intake. The importance of biologically active phytoestrogen metabolites (e.g. equol) which are produced by the activity of certain bacteria strains in the intestines is especially emphasized (2). Today, due to the growing number of people on a vegan or vegetarian diet, the intake of these biologically active compounds is increasing in Europe and America, so it is necessary to point out the possible risks of high exposure. Also, there is a significant number of dietary supplements based on phytoestrogens on the market, which are recommended as a natural alternative to hormone-replacement therapy during menopause, but the content and bioavailability of active substances in these preparations can be disputed (3).

References

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