

## SUMMARY

The flavonoids are compounds of the plant origin. They have a significant importance for the plants. They entice pollinators, protect the plants against ultraviolet radiation and free radicals. The flavonoids are compounds derived from phenylchroman. The basic structure is formed from 2-phenylchroman. If the phenyl is located in the position 3, they are named isoflavans and if it is located in the position 4, they are named neoflavans. The flavonoids were, are and still will be studied from the point of their properties and effects and their probable using in the prevention and treatment of some diseases. In the present time they are used for their venopreventative effects. They are the components of food supplements, but also of the registered drugs that are used in phlebology, respectively they are combined with proteolytic enzymes. The results of the many studies show, that flavonoids have many various effects to live organism. They have significant antioxidant activity, have antiviral, antibacterial and antifungal activity, they act as antiinflammatory agents, have antiallergic effect, could decrease the blood pressure and the cholesterol level, act as inhibitors of many enzymes, have antimutagenic and anticancer effects. We also have information, that they have antidiabetic, antiadipogenic and many other properties, which could be used in the prevention or treatment of some diseases in the future. The flavonoids appear mainly in the food supplements. Oftenly there appears rutin in these preparations. It appears mainly in the preparations of multivitamins or in the preparations for treatment symptoms of venous insufficiency and attack of piles. There are relatively often found the citrus flavonoids in these preparations. They have the same using as rutin. Quercetin is not so often found in these preparations. The special group are isoflavonoids, that have benefit effect to women, which have menopausal problems. The flavonoids are mainly formed to tablets. Only isoflavonoids more occur in the capsules than in the tablets.

Klíčová slova: flavonoidy, kvercetin, rutin, izoflavonoidy, citrusové flavonoidy

Keywords: flavonoids, quercetin, rutin, isoflavonoids, citrus flavonoids