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[Klin Onkol](#). 2011;24(3):171-9.**[Selenium and cancer: from prevention to treatment].**

[Article in Slovak]

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jela.broznanova@savba.sk**Abstract**

Selenium (Se) is an essential dietary component for all animals, including human beings, that is regarded as a protective agent against cancer. Although the mode of its anticancer action is not yet fully understood, several mechanisms, such as **antioxidant** protection through selenoenzymes, stimulation of DNA repair, and apoptosis in tumor prestages have all been proposed. Despite the unsupported results of the last "SELECT" trial, the cancer-preventing activity of Se has been demonstrated in a majority of epidemiological studies. Moreover, recent studies suggest that Se has a potential to be used not only in cancer prevention but also in cancer treatment, where in combination with other anticancer drugs or radiation it may increase the efficacy of cancer therapy. In combating cancer cells, Se acts as a prooxidant rather than an **antioxidant**, inducing apoptosis through the generation of oxidative stress. Thus, inorganic Se compounds, having high redox potency, represent a promising option in cancer therapy.

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