

Effects of Saffron and Crocin on the Human's Health: A Review Article Study

Nasrin Mehdipour* and Shahriyar Ghanbari
Shiraz university of Medical Sciences, Iran

Many nations have used saffron to cure numerous diseases for centuries. Saffron activities include anti-convulsive, anti-ischemic, anti-genotoxic, antidote, anti-Alzheimer, hypolipidemic, anti-inflammatory and antioxidant effect. Saffron also offers protective effects against cardiovascular diseases, diabetes, Parkinson's disease, depression, cancer and tumor activity, atherosclerosis and other diseases.

The anticancer effects of saffron are mainly due to crocin. Escribano et al showed that crocin in comparison with crocetin, picrocrocin and safranal has more anticancer potency and is able to induce apoptosis in human cancer cells in vitro.

Crocine and crocetin have significant anticancer activities in breast, lung, pancreatic and leukemic cells.

Methods: A search was carried out using Scopus, MEDLINE and Web of Science databases and local references without date restriction. The keywords for the search were: *Crocus sativus*, saffron, crocin, crocetin, cardiovascular, women health and immune system.

Results: Saffron displayed a dose-dependent repressive effect only against human malignant cells in in vitro colony-forming test system. All isolated carotenoid ingredients of saffron demonstrated cytotoxic activity against in vitro tumor cells.

In Iranian traditional medicine, saffron can improve complexion and can be used for the treatment of erysipelas. In Greek traditional medicine, it can refresh facial skin and is used to relieve liver from the dominance of bile and to cure acne, skin diseases and wounds. Also, it can make the body look more youthful and brighter.

Several studies indicate that saffron's constituents have been proven to be effective against a wide range of common disorders including coronary artery disease, stomach disorders, hypertension, learning and memory impairment, dysmenorrhea and premenstrual syndrome (PMS). Furthermore, saffron or its main constituents have shown remarkable activity against some neurodegenerative diseases that nowadays affect significant percentages of the general population such as Alzheimer's disease (AD), Parkinson's disease (PD) depression and schizophrenia. Saffron neutralizes gastric acid, cleanses the stomach, increases digestion of food, strengthens liver and stomach and decreases appetite.

Conclusion: Recent studies show that many of the positive effects of saffron have been established using in vitro or in vivo animal studies. The specified mechanisms of anticancer effects of saffron are not clear, but it seems that carotenoids exhibit biological activities as antioxidants, modulation of sigma-1 receptors, affect cell growth regulation, inhibition of topoisomerase II and modulate gene expression and immune response.

Further clinical research to elucidate the potential benefits or detrimental effects of saffron or crocin in humans is recommended.

Notes: