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## Crataegus special extract WS 1442: up-to-date review of experimental and clinical experiences

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### Abstract

Extracts and tinctures made from *Crataegus* spp. (Hawthorn) have been used as cardioprotective remedies since ancient times. WS 1442 special extract, manufactured by Dr. W. Schwabe Pharmaceuticals®, made from *Crataegus* spp. Leaves and flowers is one of the most studied and popular of preparations received from Hawthorn. It is integral, and most important active component of such herbal drugs as Crataegutt® novo 450, and CardioMax®. This standardized extract contains 18.75% oligomeric procyanidins (OPC), which have beneficial cardioprotective values and play a role as free-radicals scavengers, that protect the ischemic heart tissue from neutrophile elastase action successions. Moreover, WS 1442 also carries proven vasorelaxant activity, via affecting eNOS synthase, and prevents ischemic heart tissue swelling by influence on calcium signaling pathways, and thus detain hyperpermeability of endothelium. Actions of WS 1442 special extract were investigated in in vitro as well as in vivo studies including large clinical trials. In this review authors present current state of knowledge about possible beneficial effects of WS 1442 special extract on cardiovascular system.

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Chatterjee SS, Koch E, Jaggy H, Krzeminski T.

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Holubarsch CJF, Colucci WS, Eha J.

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