



Drug-Herb Interactions with Medications for the Heart

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The use of herbal supplements has become more common over the years, owing to the availability of a wide variety of products and the accessibility to information that endorses their benefits. Some patients also turn to herbal supplements in the hope of avoiding conventional medicines. With the wide prevalence of cardiovascular conditions such as hypertension, coronary heart disease and congestive heart failure, the potential interactions between herbal products and the drugs used in these conditions need to be considered for the individual patient.

A number of drug-herb interactions with antihypertensives have been documented.

- Dangshen has been reported to antagonise the effects of propranolol, potentially leading to an attenuated antihypertensive effect.
- Ephedra is a sympathomimetic herb and is associated with increased blood pressure as well as reports of tachycardia, stroke, myocardial infarction and sudden death. This herb may also cause coronary spasm and may negate the effects of antianginal therapy.
- Elevated plasma levels of nifedipine have been observed in patients using ginkgo biloba. Patients may experience excessive reductions of blood pressure and possibly, increased adverse effects from nifedipine therapy.
- Ginseng may cause elevated blood pressure as a side effect, negating the effects of some antihypertensives.

- St John's wort may interfere with calcium channel blockers via modulation of P-glycoprotein. When studied with nifedipine, it was found to reduce nifedipine plasma levels.

Herbal therapies have also shown potential interactions with anticoagulants, such as warfarin, and antiplatelet agents, such as clopidogrel and aspirin. Supplements containing borage seed oil, fenugreek, feverfew, garlic, ginger, ginkgo biloba, turmeric or high doses of vitamin E (more than 400 IU daily) may increase the INR or the tendency of bleeding. Chinese herbs like dangshen and dong quai may produce additive anticoagulant effects due to the presence of coumarin derivatives. On the other hand, coenzyme Q10, ginseng and St John's wort may decrease the effectiveness of the anticoagulant or antiplatelet agent.

Interactions with lipid-lowering drugs usually implicate the statins. Chinese red yeast rice contains a compound similar to lovastatin, which may have additive properties of lipid-lowering as well as adverse effects such as rhabdomyolysis and liver enzyme elevation. St John's wort induces CYP3A4 enzymes and may decrease the levels of atorvastatin, lovastatin and simvastatin, thus reducing their pharmacological effects. Due to its potential to induce CYP2C9 enzymes as well, the herb may theoretically decrease levels of fluvastatin and rosuvastatin.



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