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## Resveratrol

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Resveratrol is sold as a nutritional supplement. In the lay press we are informed of its significant benefits on 'heart health', but where does the evidence lie?

**PREPARATIONS:** A product derived from various sources of resveratrol that is most commonly available in capsule form.

**ACTIVE CONSTITUENTS:** Resveratrol is a polyphenol. Commercially available formulations are predominantly derived from red grape skin, but may also contain turmeric, grape seed extract, pine bark, green tea, the herb *Polygonum cuspidatum* (Japanese knotweed), ascorbic acid, citrus bioflavonoids extract.

**MANUFACTURER CLAIMS:** Resveratrol is claimed to support energy naturally, joint mobility, muscle health, heart and vascular health, brain health, prostate and breast health, healthy ageing, cell protection. As an antioxidant it is suggested to support general wellbeing.

**EVIDENCE FOR EFFICACY:** There are 32 trials listed in the Cochrane Library, but no Cochrane Review is available. A 2011 systematic review by Vang et al. suggests evidence is not sufficiently strong to justify the routine use of resveratrol in humans.

**ADVERSE EFFECTS:** Evidence on long-term effects of resveratrol is limited to animal studies; only a few, short-term or acute exposure studies in humans have been reported. Mild diarrhoea, temporary rash and headache have been reported in the short term at the higher doses of 2.5 to 5 g/day.

**DRUG INTERACTIONS:** In theory, inactivation of CYP3A4 by resveratrol may cause clinically relevant drug interactions with CYP3A4 substrates. CYP3A4 is an enzyme involved in the metabolism of many drugs, which undergo deactivation by CYP3A4 either directly or by facilitated excretion from the body. There is a scarcity of clinical studies which profile drug interactions with resveratrol in human patients.

### Key references

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### Summary Message

Although animal data may appear to be promising, the literature in humans reports that the collective evidence is not sufficiently strong to justify a recommendation for the administration of resveratrol to humans, beyond the dose available from dietary sources.

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Herbal medicines are a popular health care choice, but few have been tested to contemporary standards. **POTION OR POISON?** summarises the evidence for the potential benefits and possible harms of well-known herbal medicines.