

Resveratrol

COMMON NAME: Resveratrol

SCIENTIFIC NAME: Trans-3,5,4' -trihydroxystilbene

NOT RECOMMENDED - EVIDENCE

LEVELS OF EVIDENCE



Recommended:

Several well-designed studies in humans have shown positive benefit. Our team is confident about its therapeutic potential.



Recommended with Caution:

Preliminary studies suggest some benefit. Future trials are needed before we can make a stronger recommendation.



Not Recommended - Evidence:

Our team does not recommend this product because clinical trials to date suggest little or no benefit.



Not Recommended – High Risk:

Our team recommends against using this product because clinical trials to date suggest substantial risk greater than the benefit.

Evaluated Benefits

No evidence of efficacy or not indicated

Source

Resveratrol is identified in over 70 plant species, including nuts, grapes, peanuts, pine trees, and certain vines, as well as in red wine.

Indications/Population

High cholesterol/hyperlipidemia and metabolic syndrome

Mechanism of Action

Resveratrol may act as an HMG-CoA reductase inhibitor, downregulating hepatic HMG-CoA reductase mRNA expression, the rate-limiting enzyme in sterol biosynthesis.

AMP-activated protein kinase (AMPK) is a sensor of cellular energy status and a key controller in the regulation of whole-body energy homeostasis. Resveratrol plays an integral role in lipid metabolism by switching on the oxidative process for fatty acids and by inhibiting the synthesis of lipids through activation of AMPK.

Resveratrol induces the expression of the ApoA-1 gene, increasing HDL cholesterol levels.

Resveratrol effects depend on one of the racemic stereoisomers and are inhibited by the other stereoisomer. Exposure to air immediately causes stereoisometric conversion and equilibration, thus rendering nonsystemic administration problematic and not beneficial. No study has demonstrated a consistent benefit for humans.

Side Effects

High doses of resveratrol (2.5–5 grams daily) have caused gastrointestinal discomfort and diarrhea.

Dosing

1,000–2,000 mg daily divided BID in systemic (nonoral) administration

Drug Interactions/Cautions

Antiplatelet effects and risk for interaction with warfarin
Inhibits cytochrome P450 enzyme and drug metabolism

Notes

A diet high in resveratrol has been postulated as the mechanism behind the French paradox (high lipid diet, lower heart attack risk), but this paradox has largely been debunked.

References

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