

Resveratrol

About Resveratrol

- Resveratrol is a naturally occurring polyphenol found in a number of fruits and nuts, especially grapes and peanuts.
- Resveratrol is one of the most well-researched natural compounds, primarily investigated for its role in improving cellular health and its healthy aging and longevity effects. It was originally thought to explain the “French Paradox”; the resveratrol content of wine was considered responsible for the reduced incidence of obesity and cardiovascular disease observed among French people, despite a high-fat diet.¹
- Resveratrol is known to be a potent antioxidant, protecting cells against free radical (oxidative) stress. Not only is it an antioxidant itself, but it also activates many different molecular pathways in cells that provide additional protection. This additional antioxidant protection has been linked to cardioprotective, neuroprotective, and healthy aging effects.²⁻⁴
- Resveratrol has also been shown to activate a “longevity gene” known as SIRT1. In experimental models, SIRT1 activation has been linked to increased healthspan and longevity, improved cardiovascular function, and a reduced risk for many age-related conditions.⁵⁻¹¹
- Clinical trials have shown multiple benefits with resveratrol supplementation, including improvements in markers of oxidative stress and metabolism, brain function, and cardiovascular risk factors.¹²⁻¹⁵
- Bioclinic Naturals’ Resveratrol is extracted from red grapes grown in the Okanagan Valley of British Columbia and from Japanese knotweed.
- It contains 100% trans-resveratrol, considered the most bioavailable and stable form of resveratrol.^{16,17}

How to Use Resveratrol

- Take 1 capsule per day or as directed by a health care practitioner.

Cautions and Contraindications

- Consult a health care practitioner prior to use if you are pregnant or breastfeeding or if you are taking prescription medications as resveratrol may alter the effectiveness of these medications. Keep out of reach of children.

Drug Interactions

- Resveratrol is considered a weak inhibitor of CYP3A4/5 and CYP2E1, and may increase the plasma concentration of drugs metabolized by these enzymes, such as triazolam and carbamazepine.¹⁸⁻²⁰

PATIENT NAME: _____

PRACTITIONER NOTES:

Quick Tips for Optimal Health

- Dietary and lifestyle patterns have been shown to improve many age-related conditions.
- The Mediterranean diet is rich in vegetables, fruits, legumes, unrefined cereals, nuts, and olive oil while limiting dairy products, meat, poultry, and saturated fat. It has been associated with a lower risk for many age-related diseases, including neurodegenerative and cardiovascular diseases, as well as all-cause mortality.^{21,22}
- Many of the benefits of the Mediterranean diet have been attributed to its rich polyphenol content, including resveratrol.²³
- Although animal-based trials show that a low-calorie diet promotes longevity, it is not as well-established in humans. A low protein intake specifically may have negative consequences for older adults, such as loss of muscle strength and mass.²⁴ Nutrients influencing the same aging-associated cellular mechanisms could achieve the same benefits without the associated harm.²⁵
- Many lifestyle factors are clearly linked with aging and age-related diseases. Smoking, for example, is perhaps the most well-known risk factor for age-related diseases and has been shown to accelerate the aging process.²⁶
- In a large cohort, several lifestyle factors were associated with a greater age-related disease burden. Physical inactivity, smoking, poor sleep, and chronic stress were all associated with a higher disease burden.²⁷
- Lifestyle approaches may also complement each other. For instance, exercise is perhaps the most powerful tool for prolonging healthspan and lifespan and has also been shown to improve not only strength and flexibility but also sleep quality.^{28,29}

PRACTITIONER CONTACT INFORMATION:

References

1. Pastor, R.F., Restani, P., Di Lorenzo, C., et al. (2019). Resveratrol, human health and winemaking perspectives. *Crit Rev Food Sci Nutr*, 59(8), 1237-55.
2. Farkhondeh, T., Folgado, S.L., Pourbagher-Shahri, A.M., et al. (2020). The therapeutic effect of resveratrol: Focusing on the Nrf2 signaling pathway. *Biomed Pharmacother*, 127, 110234.
3. Seyyedehrahimi, S., Khodabandehloo, H., Nasli Esfahani, E., et al. (2018). The effects of resveratrol on markers of oxidative stress in patients with type 2 diabetes: A randomized, double-blind, placebo-controlled clinical trial. *Acta Diabetol*, 55(4), 341-53.
4. Zamanian, M.Y., Parra, R.M.R., Soltani, A., et al. (2023). Targeting Nrf2 signaling pathway and oxidative stress by resveratrol for Parkinson's disease: An overview and update on new developments. *Mol Biol Rep*, 50(6), 5455-64.
5. You, Y., & Liang, W. (2023). SIRT1 and SIRT6: The role in aging-related diseases. *Biochim Biophys Acta Mol Basis Dis*, 1869(7), 166815.
6. Nogueiras, R., Habegger, K.M., Chaudhary, N., et al. (2012). Sirtuin 1 and sirtuin 3: Physiological modulators of metabolism. *Physiol Rev*, 92(3), 1479-514.
7. Leal, D.P., Gonçalves, G.H.F., Tavoni, T.M., et al. (2022). The interplay of sirtuin-1, LDL-cholesterol, and HDL function: A randomized controlled trial comparing the effects of energy restriction and atorvastatin on women with premature coronary artery disease. *Antioxid*, 11(12), 2363.
8. Tang, B.L. (2016). Sirt1 and the mitochondria. *Mol Cells*, 39(2), 87-95.
9. Razick, D.I., Akhtar, M., Wen, J., et al. (2023). The role of sirtuin 1 (SIRT1) in neurodegeneration. *Cureus*, 15(6), e40463.
10. Gonçalves, G.H.F., Kuwabara, K.L., Faria, N.F.O., et al. (2023). Sirtuin 1 and vascular function in healthy women and men: A randomized clinical trial comparing the effects of energy restriction and resveratrol. *Nutrients*, 15(13), 2949.
11. Sun, Z., Zhao, S., Suo, X., et al. (2022). Sirt1 protects against hippocampal atrophy and its induced cognitive impairment in middle-aged mice. *BMC Neurosci*, 23(1), 33.
12. Thuang Zaw, J.J., Howe, P.R., & Wong, R.H. (2021). Long-term effects of resveratrol on cognition, cerebrovascular function and cardio-metabolic markers in postmenopausal women: A 24-month randomised, double-blind, placebo-controlled, crossover study. *Clin Nutr*, 40(3), 820-9.
13. Tomé-Carneiro, J., González, M., Larrosa, M., et al. (2012). Consumption of a grape extract supplement containing resveratrol decreases oxidized LDL and ApoB in patients undergoing primary prevention of cardiovascular disease: A triple-blind, 6-month follow-up, placebo-controlled, randomized trial. *Mol Nutr Food Res*, 56(5), 810-21.
14. García-Martínez, B.I., Ruiz-Ramos, M., Pedraza-Chaverri, J., et al. (2023). Effect of resveratrol on markers of oxidative stress and sirtuin 1 in elderly adults with type 2 diabetes. *Int J Mol Sci*, 24(8), 7422.
15. Batista-Jorge, G.C., Barcala-Jorge, A.S., Silveira, M.F., et al. (2020). Oral resveratrol supplementation improves Metabolic Syndrome features in obese patients submitted to a lifestyle-changing program. *Life Sci*, 256, 117962.
16. Gambini, J., Inglés, M., Olaso, G., et al. (2015). Properties of resveratrol: In vitro and in vivo studies about metabolism, bioavailability, and biological effects in animal models and humans. *Oxid Med Cell Longev*, 2015, 837042.
17. Singh, A.P., Singh, R., Verma, S.S., et al. (2019). Health benefits of resveratrol: Evidence from clinical studies. *Med Res Rev*, 39(5), 1851-91.
18. Gómez-Garduño, J., León-Rodríguez, R., Alemón-Medina, R., et al. (2022). Phytochemicals that interfere with drug metabolism and transport, modifying plasma concentration in humans and animals. *Dose-Response*, 20(3), 15593258221120485.
19. Hyrsova, L., Vanduchova, A., Dusek, J., et al. (2019). Trans-resveratrol, but not other natural stilbenes occurring in food, carries the risk of drug-food interaction via inhibition of cytochrome P450 enzymes or interaction with xenosensor receptors. *Toxicol Lett*, 300, 81-91.
20. Bedada, S.K., & Neerati, P. (2016). Resveratrol pretreatment affects CYP2E1 activity of chlorzoxazone in healthy human volunteers. *Phytother Res*, 30(3), 463-8.
21. Andreu-Reinón, M.E., Chirlaque, M.D., Gavrila, D., et al. (2021). Mediterranean diet and risk of dementia and Alzheimer's disease in the EPIC-Spain Dementia Cohort Study. *Nutrients*, 13(2), 700.
22. Dinu, M., Pagliai, G., Casini, A., et al. (2018). Mediterranean diet and multiple health outcomes: An umbrella review of meta-analyses of observational studies and randomised trials. *Eur J Clin Nutr*, 72(1), 30-43.
23. Russo, M.A., Sansone, L., Polletta, L., et al. (2014). Sirtuins and resveratrol-derived compounds: A model for understanding the beneficial effects of the Mediterranean diet. *Endocr Metab Immune Disord Drug Targets*, 14(4), 300-8.
24. Olaniyan, E.T., O'Halloran, F., & McCarthy, A.L. (2021). Dietary protein considerations for muscle protein synthesis and muscle mass preservation in older adults. *Nutr Res Rev*, 34(1), 147-57.
25. Giacomello, E., & Toniolo, L. (2021). The potential of calorie restriction and calorie restriction mimetics in delaying aging: Focus on experimental models. *Nutrients*, 13(7), 2346.
26. Wu, X., Huang, Q., Javed, R., et al. (2019). Effect of tobacco smoking on the epigenetic age of human respiratory organs. *Clin Epigenetics*, 11(1), 183.
27. Niebuur, J., Vonk, J.M., Du, Y., et al. (2023). Lifestyle factors related to prevalent chronic disease multimorbidity: A population-based cross-sectional study. *PLoS One*, 18(7), e0287263.
28. Ai, J.Y., Kuan, G., Juang, L.Y., et al. (2022). Effects of multi-component exercise on sleep quality in middle-aged adults. *Int J Environ Res Public Health*, 19(23), 15472.
29. Guan, Y., & Yan, Z. (2022). Molecular mechanisms of exercise and healthspan. *Cells*, 11(5), 872.