

Grapes and Health: The Science

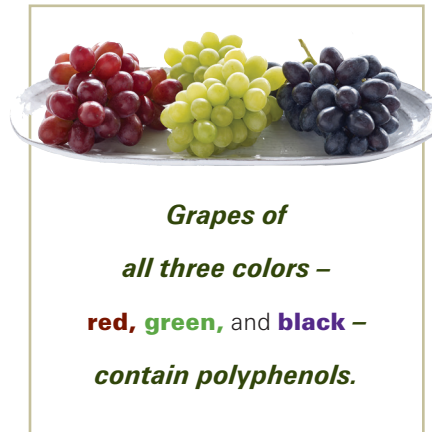
Fresh grapes are prized for their taste, convenience, versatility — and emerging health benefits. Over 20 years of research links grapes to a wide variety of health-promoting activities in the body. Importantly, many studies have shown positive health impacts with normal amounts of grapes — between 1 ¼ to 2 ½ cups per day.

Polyphenol Powerhouse

Grape polyphenols are credited with delivering the health benefits of grapes. In fact, grapes contain over 1600 natural compounds, including antioxidants and other polyphenols.

Polyphenols:

- ▶ Protect the health and function of our cells
- ▶ Promote antioxidant activity
- ▶ Influence cell communications that affect many biological processes in the body



Small but Mighty: How Grapes Support Good Health

Eating grapes may help counter the harmful inflammation and oxidative stress that can lead to many chronic diseases. Additional benefits may involve influencing cell messaging, such as promoting nitric oxide production to relax blood vessels. Highlights of the research include:

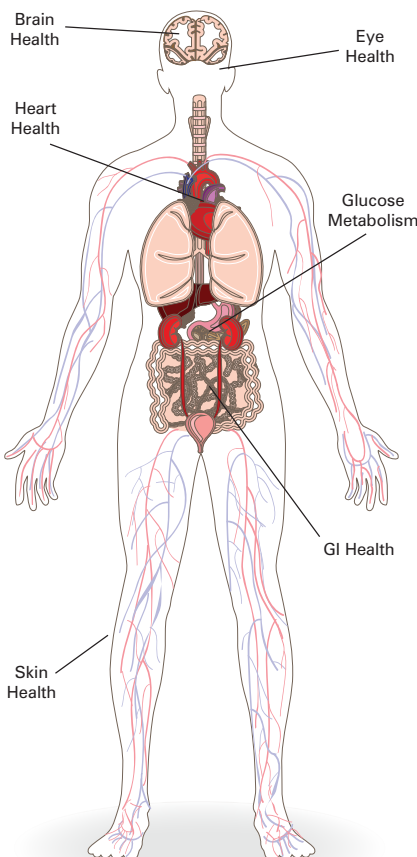
For a more detailed review of the research, the in-depth summary of *Grapes and Health: A Monograph* is available. Request a copy at HealthResearch@GrapesfromCalifornia.com.

Brain Health: In a human study, consuming grapes every day helped protect against metabolic decline in Alzheimer’s related areas of the brain.ⁱⁱⁱ In a lab study looking at stroke, grapes protected neurons and helped reduce inflammation and oxidative damage in the brain.

Heart Health: Grapes’ beneficial impact on heart health is well-established, and studies have shown that grapes may promote healthy circulation and blood pressure, support healthy lipid levels, counter oxidative stress and inflammation, and reduce platelet aggregation and plaque formation.ⁱ

Emerging research shows promising links to many other areas of health.ⁱⁱ

Skin Health: In a recent human study, consuming grapes daily protected against UV-induced damage to skin.^{vii} A recent lab study showed that a grape-enriched diet inhibited skin tumor incidence and delayed the onset of tumor growth associated with UVB light exposure.^{viii}



Eye Health: Studies suggest that grapes protect the retina’s structure and function via antioxidant and anti-inflammatory actions and can also inhibit harmful blood vessel growth in the eye.^{vi}

Immune Health: Grape polyphenols support the health and function of the body’s cells by promoting antioxidant and anti-inflammatory activities, as well as serving as a source of hydration. Studies on resveratrol, a grape polyphenol, have shown it to positively influence immune function.

Colon Health: Consuming grapes inhibited target genes responsible for tumor growth in the colon, protecting healthy tissue.^{iv,v} The impact of grapes on the gut microbiome is a promising new area of research, with more to come.

Grapes and Diabetes: With a low glycemic index, grapes are a healthy choice for a diabetic diet. A recent study found that grapes were one of four fruits associated with reduced risk of type 2 diabetes.^{ix}

ⁱ Pezzuto, J.M. (Ed.). (2016) *Grapes and Health*. Switzerland: Springer International Publishing. doi: 10.1007/978-3-319-26995-3.
ⁱⁱ Ibid.
ⁱⁱⁱ Lee, J.K., Torosyan, N., Silverman, D.H. (2017). Examining the impact of grape consumption on brain metabolism and cognitive function in patients with mild decline in cognition: A double-blinded placebo-controlled pilot study. *Experimental Gerontology*, 87 (Pt A), 121-128.
^{iv} Nguyen, A.V., Marinez, M., Stamos, M.J., Moyer, M.P., Planutis, K., Hope, C., Holcombe, R.F. (2009). Results of a phase I clinical trial examining the effect of plant-derived resveratrol and grape powder on Wnt pathway target gene expression in colonic mucosa and colon cancer. *J. Cancer Mgt and Research*, 1, 25-37.
^v Holcombe, R.F., Martinez, M., Planutis, K., Planutiene, M. (2015). Effects of a grape-supplemented diet on proliferation and Wnt signaling in the colonic mucosa are greatest for those over 50 and with high arginine consumption. *Nutr. J.* 14:62.
^{vi} Bulloj, A., Finnemann, S.C. (2016). Grapes and vision. In J.M. Pezzuto (Ed.) *Grapes and Health* (pp. 213 -235). Springer.
^{vii} Oak, A.S., Elsayed, M., Shafi, R., et al. (2020, May). Dietary grape intake protects against UV damage in humans by augmenting DNA repair. Society for Investigative Dermatology (SID) Virtual Annual Meeting 2020.
^{viii} Singh, C.K., Mintie, C.A., Ndiaye, M.A., Chhabra, G., Dakup, P.P., Ye, T., Yu, M., Ahmad, N. (2018). Chemoprotective effects of dietary grape powder on UVB radiation-mediated skin carcinogenesis in SKH-1 hairless mice. *J Invest Dermatol.* 1-10.
^{ix} Muraki, I., Imamura, F., Manson, J.E., Hu, F.B., Willett, W.C., van Dam, R.M., Sun, Q. (2013). Fruit consumption and risk of type 2 diabetes: results from 3 prospective longitudinal cohort studies. *BMJ* 2013; 347:f5001.