Letter to *California Agriculture* journal and full response, October-December 2011

See: https://californiaagriculture.org/issue/9560

Dear Editors,

Red wine is considered good for us! What about Concord grape juice (nonfermented)? Has it similar benefits as a medicine or any benefits as a medicine? I've been drinking it for years.

George Peabody, age 93
Placerville, California

Dear Mr. Peabody,

As with many good questions, the best answers are sometimes complicated or at the least require some provision for nuance and caveats. For example, Concord grape juice does contain substances with important health benefits (1, 2). For example, Concord grape juice, contains relatively high amounts of flavonoids and related substances that may function in cell signaling and/or modulation of reactive oxidants important to health and even blood flow (3). The nuances and caveats, however, are required when one makes specific or direct comparisons to the health-related attributes of other berries, juices, and fermented products, such as wine. The answer also requires that the criteria used for comparisons be chosen wisely. For example, in the past, making comparisons based solely on tests for chemical “antioxidant” activity, although an important measurement, often placed too much emphasis on this chemical property, in contrast to a given biological property (3). For many foods and food-related substances, the chemical antioxidant potential may be only a minor contributor to the overall health-related benefits associated with its consumption (3, 4). Moreover, for each of us, there are a number of variables that are difficult to control, such as genetic background and courses of action set in place in early development (e.g. epigenetic relationships).

It can also be inferred from your question that you are asking whether the putative positive health effects of nonfermented grape juice are equivalent to those of wine. The best answer (again with some nuances and caveats) is that wine can provide some additional health benefits. Moderate alcohol intake has been reported to have positive health attributes independent of the biofactor content or composition of the beverage consumed, although arguably the degree of protection is again influenced by caveats, such as age, gender, and drinking patterns (5).

Lastly, we note that you have lived for more than nine decades. In this regard, one can surmise that you have made some prudent dietary and environmental decisions. Of course, an obvious uncontrolled variable/caveat from a health perspective was that fate was favorable in its choice of parents and grandparents for you. Fortunately, with respect to the consumption of nonfermented grape juice or wine, both have the capacity to contribute in a positive manner to the complex milieu we define as a healthful life.

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3. Kris-Etherton PM, Lefevre M, Beecher GR, Gross MD, Keen CL, Etherton TD. Bioactive compounds in nutrition and health-research methodologies for establishing biological function: the antioxidant and anti-inflammatory effects of flavonoids on atherosclerosis. Annu Rev Nutr 2004; 24:511-38.
4. Hollman PC, Cassidy A, Comte B, Heinonen M, Richelle M, Richling E, Serafini M, Scalbert A, Sies H, Vidry S. The biological relevance of direct antioxidant effects of polyphenols for cardiovascular health in humans is not established. J Nutr 2011; 141:989S-1009S.
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