

Grapes and whole Grain Food Could Lower Risk of Heart Disease and Diabetes

Grapes (*Vitis* spp.) contain large amounts of phytochemicals or antioxidants (e.g. anthocyanins, resveratrol) which offer health benefits to humans (Figure 1). Recently scientists at the University of Michigan Health System^{1,2} found encouraging results that eating grapes (red, green and black) may help in lowering the risk of heart disease and diabetes. The research is based on experiments with rats where they were fed powdered form of a blend of green, red and black grapes. Rats which received grape enriched diet had lower blood pressure, better heart function, and reduced indicators of inflammation in the heart than rats who received no grape powder. The researchers believe that phytochemicals were active in protecting heart cells from damaging effects of metabolic syndrome in rats. The study demonstrates that a diet higher in phytochemical rich fruits such as grapes may benefit humans. [Note : Metabolic syndrome is a combination of medical disorders that increase the risk of developing cardiovascular disease and diabetes].



Figure 1. Red, green and black grapes. Eating grapes could lower heart disease, diabetes risk according to a research conducted at the Michigan University. The phytochemicals found in grapes are, flavonols, flavan-3-ols, anthocyanins, resveratrol, tannins. Resveratrol and anthocyanins are found mainly in the grape skins, which have both cardio protective and cancer preventive activities.

A number of epidemiological studies have suggested that the intake of whole-grain foods may reduce the risk of type II diabetes, metabolic syndrome and cardiovascular heart disease in both men and women. Whole-grain foods contain dietary fibre, vitamins, minerals, phytoestrogens and other substances of antioxidant properties which may have favourable effects on human health including improvement of glucose and lipid metabolism, insulin sensitivity, antioxidant activity and subclinical inflammation³. Recent research [involving scientists from Harvard Medical School and Harvard School of Public Health & School of Public Health USA and, Huazhong University, China] found that intakes of whole grain, cereal and bran (Figure 2) lowered the risk of death from cardiovascular disease and a reduction in death from all causes in women with type II diabetes mellitus. The study was based on a 26 year follow up with 7822 women with type II diabetes. The main findings of the research are that whole-grain and bran consumption (in particular bran) may improve metabolic profiles in diabetic patients. Therefore, there is potential benefit of whole grain intake in reducing death and cardiovascular risk in diabetic patients.

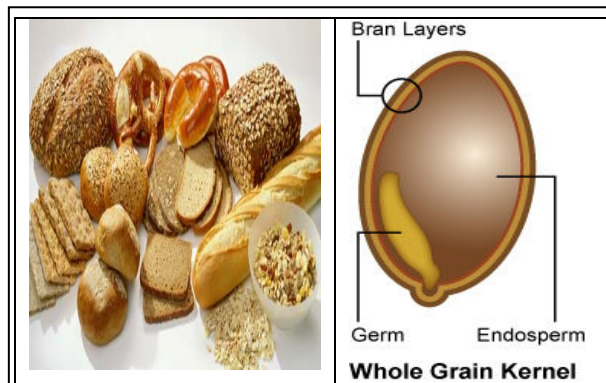


Figure 2 : Whole grain, bran intake lowered risk of death in diabetic women according to a latest issue of the Journal of the American Heart Foundation (May, 2010)⁴.

Note : Whole grains⁵ contain all three edible parts of a grain: the inner germ, the middle endosperm and the outer bran covering. This makes them rich in fibre, vitamins, minerals and a multitude of disease-fighting substances. By contrast, refined grains have most of their germ and bran removed during processing, resulting in a depletion of many of these nutritious compounds.

References

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