

Proximate Composition of Grapes

DIETARY CONSTITUENTS	Per cent
Moisture	79.2 - 85.5
Protein	0.5 - 0.8
Fat	0.1 - 0.4
Fatty acids, saturated	0.114
Fatty acids mono unsaturated	0.014
Fatty acids poly unsaturated	0.102
Minerals	0.4 - 0.9
Fibre	0.9 - 3.0
Carbohydrates	10.2 - 16.5
Energy (K cal)	45.0 - 71.0
MINERALS AND VITAMINS	mg/100g
Boron	0.50
Calcium	14
Phosphorus	10
Iron	0.29
Magnesium	5
Potassium	191
Sodium	2
Zinc	0.040
Copper	0.040
Manganese	0.71
Selenium	0.2
Thiamine	0 - 0.04
Riboflavin	0 - 10.0
Niacin	0 - 0.30
Vitamin C (ascorbic acid)	3.0 - 6.50
Carotene	0 - 15.0
Pantothenic acid	0.022
Vitamin B-6	0.101
Folate	3.588
Vitamin A (IU)	92
Vitamin A (RE)	9.2
Vitamin E	0.313

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GRAPES FOR HEALTH



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Grow More Grapes for Healthy Tomorrow

Grape is one of the most widely consumed fruits of the world. It is consumed as fresh fruit as well as the processed forms like wine, juice, raisin, etc. Throughout the world, grape is considered as an important component of the healthy diet.

Ayurveda, the oldest treatise of traditional Indian medical science recommends grape juice and raisins for prevention and cure of a variety of



disorders. Draksharishta and Drakshasava are the drug formulations available in the market, which are essentially prepared from the fermented grape juice. These are widely recommended for the treatment of dry and productive cough, tuberculosis, bile juice disorders, anemia, hepatitis, etc.

Grape's medicinal properties are mainly due to the presence of phenolic compounds in the skin and seeds.

Grape for Youthfulness

Polyphenols viz. procyanidines, resveratrol, quercetin, etc., act as excellent antioxidants, which quench free radicals, inhibit UV radiation induced peroxidation activity and protect the human body cells from aging and damage. Its ability to bond with collagen promotes a youthful skin, cell health, elasticity and flexibility. New research indicate that resveratrol increases the activity of genes responsible for reduced conversion to fat cells and mobilisation of existing fat i.e. helps in controlling obesity.

Grape for Heart

Grape phenolics reduce human Low Density Lipoprotein (LDL) oxidation and inhibit platelet

aggregation reducing one's risk from coronary heart disease (CHD). It also contains zero cholesterol and very minute quantities of saturated fatty acids. Hence, eating grapes does not pose any threat to coronary system, rather it strengthens the heart. Consumption of red wine in moderate quantities is reported to increase the blood flow through small blood vessels and capillaries, thus reduces discomfort associated with high blood pressure. It also reduces the harmful effects of dietary saturated fats and causes food to be absorbed more slowly and hence prolongs the protective antisticky effect of antioxidants on the blood.



Grape as Anticarcinogen

Grape is the richest source of resveratrol - a well-known natural anti-carcinogen. It helps to turn off a protein in the body that prevents cancer cells from being killed. It has already shown promising results in inhibiting the growth of cancer cells in breast, oral cavity, liver, etc.

Pterostilbene, a structurally similar compound has also been identified to be another anticancer grape compound. research has shown that it can also lower blood glucose.

Recent study indicates that the antioxidants in grape protect against radiation fibrosis caused by the continuous release of free radicals, thus could avoid painful scarring associated with breast cancer treatment.

Anthocyanin pigments present in coloured varieties have been shown to suppress the growth of human tumor cells *in vitro* at a level of 5mg/L, which is a level found in grape wine.

Grape for Energy



Grape juice contains more than 80% water, in which the nutrient elements, sugar and natural acids are present in almost readily available form. Hence grape juice gets assimilated in body fluid immediately after consumption and thus acts as an excellent health

drink with instant source of energy.

Grapes are rich in boron, potassium and calcium which are necessary for bone formation and protects against osteoporosis.

Besides these advantages the grape also act as anti-ulcerative, anti-arthritis, anti-inflammatory and antiallergic.



It sloweth age, it strengtheneth youth, it helpeth digestion, it abandoneth melancholie, it relisheth the heart, it lighteneth the mind, it quickeneth the spirits, it keepeth and preserveth the head from whirling, the eyes from dazzling, the tongue from lispings, the mouth from snaffling, the teeth from chattering and the throat from rattling; it keepeth the stomach from wambling, the heart from swelling, the hands from shivering, the sinews from shrinking, the veins from crumbling, the bones from aching, and the marrow from soaking - 16th Century manuscript.