

Alimental Excellence of Grapes, Prunes and Raisins for a Salubrious and tranquil Body Physiology

Vikram S. Chauhan*¹ Manisha Mavai², Rajendra Inaniyan³, Priyanka Bishnoi⁴, Raaz K. Maheshwari⁵

¹ Department of Botany, SBRM Govt. College, Nagaur, Rajasthan, India

² Department of Physiology, AIIMS, Jodhpur, India

³ Department of Mathematics, SBRM Govt. College, Nagaur, Rajasthan, India

^{4&5} Department of Chemistry, SBRM Govt. College, Nagaur, Rajasthan, India

*¹ Email: vikkysingh2000@yahoo.com

ABSTRACT

In contemporary times, human body systems are proximately always working in variants of stresses. Such stresses are gifts of our modern life styles, which gives us many diseases known as life style diseases. Regrettably, we cannot evade them consummately, but we can counteract them by having salubrious victual habits. Fruits, for example, grapes in this manuscript, are one of best natural souvenir to us. Its products such as wine, prunes and raisins are withal fabulously enriched with numerous prebiotic phytochemicals. This review recapitulates some of the health effects of grapes and its processed foods.

Key words: Resveratrol; CVD; Flavanoids; ROS; Prebiotic

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INTRODUCTION

Since, antediluvian times, we human beings are struggling to gain a salubrious and tranquil life. As we all have been auricularly discerning about that if you opt to live healthy, and then go for salubrious victuals. In today's era people are so much concerned about their health, but still suffering from numbers of degenerative diseases. There are so many reasons for that one of the most consequential cause is peregrinating away from natural sources of victuals and depending upon other sources like canned pabulum, junk foods, etc. Nature has provided us a numerous number of salubrious and nutritious edible aliment stuffs. It's quite infeasible to discuss about all, this review manuscript concerning with a few of these prebiotic sources such as grapes, raisins and prunes.

NUTRITIONAL APPLICATIONS OF GRAPES (*Vitis vinifera*)

It is a minutely minuscule but very salubrious berry fruit, having enormous numbers of beneficiaries. Its botanical designation is *Vitis vinifera*. The fruit is utilized in both forms as fresh and in processed forms such as wine, grape juice, molasses and raisins. Grapes contain a prodigious plethora of resveratrol, a very vigorous antioxidant phytoalexin molecule [1]. Resveratrol is chiefly present in the fruit skin and seeds. Fresh grapes contain 50-100 mg of resveratrol/gram. The fruit is widely utilized in making wine. Amount of resveratrol is present in wine, is fundamentally depends upon how long skin was there during the process.

The comparison of the qualities of red wine and white wine elucidates that red wine has been proven to be more salutary in nature. Wine and grapes contain polyphenolic compounds. These compounds are secondary metabolites of plants, and they are modified by various ways like hydroxylation, glycosylation and acylation. Most common flavanoids found in grapes and wines are caffeic acid, myricetin, rutin, catechin, quercetin and epicatechin. Oil that is yare after mashing of grape seeds is utilized in resplendency products or in cosmetics. This seed oil contains vitamin E (Tocopherols), high amounts of phytosterols and many polyunsaturated fatty acids such as linoleic acid, oleic acid and α -linolenic acid.

HEALTH AND ALIMENTAL EFFECTS FOR WELLBEING

Asthma, an obstructive respiratory disease with solemn effects during expiration. Grapes can be acclimated to give assuagement in asthma. Grapes are kenneled to contain oligomeric proanthocyanidins (OPCs), which have anti-inflammatory activities. It is proposed that such molecules lower leukotriene levels and eosinophil counts in blood and increment lung capacities. It also enhances the interferon levels. So it has proposed that customary intake of grapes as dietary supplement can provide symptomatic mitigation to asthma patients.

Different elements are required for congruous magnification of bones and their vigor [2]. Copper, iron, and manganese are present in a very appreciable amount in grapes and they reported to fortify the bone. Manganese, being an astronomically consequential element for the bones is found in grapes in substantial amounts. Grapes are proven to increment retention of calcium within bone. Due to this effect, grapes increment the cortical thickness and breaking vigor of bones and so it is recommended to the patients groups who are susceptible to osteoporosis and age cognate bone thinning.

Heart quandaries are becoming very mundane now days; there are many reason for that but lamentable dietary habits and sedentary life style are major cause of prevalence of these ailments. Grapes have a very vigorous antioxidant property, as they contain flavanoids and resveratrol. By the virtue of their antioxidant nature, they negate the effects of reactive oxygen species (ROS). These ROS damage body cells and enhances LDL cholesterol deleterious effects. It has reported by some epidemiological studies that moderate levels of intake of alcohol especially red wine lowers the jeopardy of CVDs like myocardial infarction, angina and coronary heart diseases. There are vigorous experimental and epidemiological denouements that flavanoides and resveratrol are main active agents for such protective activity. The polyphenols increases the serum levels of HDL and lowers the same for LDLs. Such correlation between alcohol intake and lower prevalence of such disease among the population groups which consume conventional but moderate amount of red wine is sometimes called as "*French paradox*". The death frequency in France due to CVDs is quite low despite high smoking habits. Flavanoids avert peroxidation of LDLs by scavenging ROS. Nitric oxide (NO) which is a potent vasodilator agent derived from vascular endothelium, is withal reported to increment in replication to polyphenols in many in vitro studies. Resveratrol increases NO engenderment and reduces platelets aggregation [3]. Red wine and alcohol have proven roles in reducing platelet aggregation and thereby protract clotting time. Resveratrol inhibit protein kinase C (PKC), consequently inhibit genes responsible for vasoconstriction and angiogenesis.

Grapes contain laxative agents like sugars, organic acids and insoluble cellulose [4]. They all have a general laxative effect, hence, palliates constipation. The fiber content of grapes is also adequate. Insoluble fiber remains intact as it moves through the intestines, fortifying the formation of bulk that engenders healthy stools.

Recently it has been proven in some in vivo studies on rats in demonstrated that grapes withal play a paramount role as anti-carcinogenic due to their antioxidant and anti-inflammatory properties. Their role is categorically preventive against breast cancers. The magnification of cancers causing mediators is inhibited by some chemical substances present in grapes like anthocyanins and proanthocyanidins. Resveratrol acts as cancer chemopreventive agent. Like other drugs such as non steroidal anti-inflammatory drugs (NSAIDs) such as indomethacin, aspirin, piroxicam, and sulindac which act to inhibit cyclooxygenase (COX) and resultant engenderment of prostaglandins [6]. Such inhibition is reported to leads an increase obviation to cancers [5].

Nutritional applications of Prunes & Raisins

Apart from the fresh form of grape there is another form of grape, dry grape, called as "*Munakka*" or "Prunes". This *munakka* is prepared by drying of fresh grape in a special manner. It is a dry form of grape, but when we come to its health effects, these are countless. The dry fruit has rough skin on the outer covering, a sticky chewy textured pulp and a hard seed on the inside. It is astonishing to know that it is not only protective for heart, GIT, bones, but it also improves male fertility and hemoglobin level. In some studies raisins are shown to lower the postprandial insulin response and modulate sugar absorption. They also modulate some of the oxidative biomarkers, and promote satiety through acting on leptin and ghrelin. Raisin is satiating, cancer preventive and excellent skin tonner. It is also a very good source of dietary fiber. Prunes are rich in phenolic compounds (184 mg/100 g) such as neochlorogenic and chlorogenic acids [7]. Prunes have sorbitol that is good for the bowl movements and a natural laxative compound known as diphenyl isatin.

Nutrients (per 100 g, about 10 to 12 prunes)

Calories – 240

Protein – 2.18g

Fiber – 7.1g;
 Ca – 43mg
 Fe –0.93mg
 Mg–41mg
 K–732mg
 B–0.3mg;
 Niacin–1.9mg
 Riboflavin–0.18mg
 Vitamin K–59.5mcg
 Vitamin A–781 IU

Raisins have good amount of catechins, which work as antioxidants in blood. After discussing about fresh grape and its dry form prunes, we now discern another form of grape, which is additionally utilized as *dry fruit* or raisin (including “sultanas” and “currants”). It is utilized in many manners either as it is commixed as an ingredient in saccharine dishes or consumed directly with milk or water. In fact, it is a very good super-session of milk. A very unique effect is to give mitigation from alcoholism. Liquor dispirits the activity of neurons while raisins aliment them and make feels one to be fresh and genial. Masticating of 10-15 gram of raisins is beneficial when someone is grave to alcohol. The persons may avail to dispense its addiction.

Health promoting effects of Prunes & Raisins

Prunes are very good supplementary, which is used in an anemic condition. These are a rich source of different vitamins and irons that we need, to improve our health specially to correct our blood picture. Raisins also contain high amount of iron which makes them suitable to cure anemia.

Raisins are sweet and having a cool effect on the body, hence, alleviate acidity. Prunes are highly alkaline in nature, therefore it improves gastric acidity. Constipation, yet another very common health problem, can be relief from simply by consuming prunes and raisins, because they contain high amount of dietary fibers. Malic acid is present in prunes and raisins which makes the passage of stool easier [8].

Prunes provide Ca, K, Mg and vitamin K, an essential component for proper growth and strength of bone. Boron, another important element that is required for bones, is present in high amount in prunes. Boron helps regulate mineral metabolism and optimizes estrogen levels, which in turn increases calcium absorption in bones [9]. Additionally, boron helps convert vitamin D to its active form, which helps the osteoblasts cells to utilize calcium for bone formation.

Prunes contain ω - 3 fatty acid and other nutrients required by our heart. Their antioxidant content is very high, it helps to prevent oxidation of cholesterol in the body and protect the heart from different disorders. High K content of prunes (745 mg/100 g) is also beneficial for cardiovascular health [10]. Prunes are additionally very good blood purifier.

CONCLUSION

The benefits of grapes, raisins and prunes do not culminate up here. It is just the commencement to introduce their qualities, so we should utilize all the opportunities that nature has provided us to be salubrious. We should amend our eating inclinations and should not anticipate for any miracle remedy or treatment.

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