

# **Prunes or Plums – Which Has More Benefits?**

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#### STORY AT-A-GLANCE

- > Once known as prunes, dried plums are now the more palatable name for the fruit that, whether fresh or dried, contains numerous compounds that impart amazing health advantages
- Studies show that a single serving or about five dried plums may help prevent bone loss in older, osteopenic postmenopausal women
- > Plums are loaded with flavonoid polyphenolic antioxidants, primarily lutein and cryptoxanthin, as well as neochlorogenic and chlorogenic acid, but the nutrients are highly concentrated in the dried fruits
- > The vitamin C is destroyed when plums are dried, but they become significantly higher in other antioxidants and contain significantly higher concentrations of most of the other nutrients found in the fresh fruit

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If you know anyone with osteoporosis, you may be familiar with some of the more overt signs, such as broken bones, weak grip strength or back pain. People with this condition may develop a "stooped" posture or even become shorter because their bones are literally being compressed.

There's good news, though, as a study revealed dramatic and positive effects from dried plums. Scientists found that "dried plum not only protects against but more importantly

reverses bone loss in two separate models of osteopenia," another name for bone loss and the forerunner of osteoporosis.

Osteoporosis affects both males and females, although more women than men. One study describes it as a "debilitating disorder" exacerbated by age:

"As the demographic shift to a more aged population continues, a growing number of men and women will be afflicted with osteoporosis and a search for potential non-pharmacological alternative therapies for osteoporosis is of prime interest.

Aside from existing drug therapies, certain lifestyle and nutritional factors are known to reduce the risk of osteoporosis.

Our [three]-month clinical trial indicated that the consumption of dried plum daily by postmenopausal women significantly increased serum markers of bone formation, total alkaline phosphatase, bone-specific alkaline phosphatase and insulin-like growth factor-I by 12, 6, and 17%, respectively.<sup>11</sup>

Ironically, several drugs taken for osteoporosis taken for five years or more have been shown to actually cause esophageal cancer, according to an Oxford study.<sup>2</sup> However, in exploring non-pharmacological alternative therapies, researchers discovered dried plums may not only protect against, but reverse, the condition.

Researcher Bahram H. Arjmandi, Ph.D., from Florida State University, said that over his entire career, he'd examined many fruits, including figs, dates, strawberries and raisins, but none of them come close to having the effect on bone density that dried plums or prunes have.

He added that in terms of bone health, this particular food is exceptional.<sup>3</sup> Studies show that a single serving of dried plums may help prevent bone loss in older, osteopenic postmenopausal women as well as the previous recommendation of two servings, equating 100 grams or eight to 10 dried plums.<sup>4</sup>

## **Plum History and Description**

Closely related to apricots, peaches and almonds, plums are an ancient fruit that experts believe may have originated in China, but were cultivated by Alexander the Great in Mediterranean regions by around 65 B.C.

Plums are about the size of limes, but that's the only similarity. They're dark purple (some have a golden tinge) with smooth, rather dull skins and sweet, delectable flesh inside, wrapped around a single, large pit, the main criteria for a drupe. Prunes are simply dried plums, the latter name thought to be more palatable.

All prunes are plums, but the reverse is not always the case. The high sugar content in plums allows them to be dried without fermentation. Further, like all dried fruit, dried plums are dehydrated by natural-drying, sun-drying and the use of dehydrators. Medical Daily clarifies:

"So if dried plums are just plums with the water taken out of them, why do they lower our colon cancer risk while fresh plums don't? Not only does dried plum retain both soluble and insoluble fiber from its original form, but it also contains more sorbitol than fresh plums."<sup>5</sup>

Far more than just a tasty snack, these juicy little fruits are loaded with flavonoid **polyphenolic antioxidants**, primarily lutein and cryptoxanthin, as well as neochlorogenic and chlorogenic acid, which can help prevent cell damage from oxidation of lipid molecules.

All cell membranes, including those in your brain, are mainly composed of fat-containing lipids, found to inhibit LDL cholesterol oxidation and making them a significant factor in helping prevent chronic disease.<sup>6</sup>

# A Comparison of Nutritional Attributes Between Plums and Prunes

Plums contain 26% of the reference dietary intake (RDI) in vitamin C; 13% in vitamin K; and 11% in vitamin A, or retinol, as well as iron, potassium, thiamine, riboflavin and calcium, plus vitamin B6 and niacin to metabolize one of their most serious drawbacks: high natural sugar and carbohydrate content.

As for prunes, a 1-cup serving gives you 87% of the RDI of vitamin K. The Guardian notes that soluble fiber helps slow down the absorption of glucose, which stabilizes blood sugar levels.<sup>7</sup>

Because prunes are a concentrated source of the nutrients and phytonutrients found in plums, their antioxidant potential is six times that of the fresh fruit. Prunes are also significantly higher in antioxidants than many other dried or fresh fruits or vegetables. Comparing the two, Healthy Eating observes:

"Although most of the vitamin C in plums is destroyed during the drying process, prunes contain significantly higher concentrations of most of the other nutrients found in the fresh fruit.

One cup of pitted prunes provides 129 percent, 36 percent, 27 percent and 9 percent of the daily recommendations for vitamin K, potassium, vitamin A and iron, respectively. Vitamin K is vital to the function of several proteins involved in blood coagulation, and vitamin A promotes healthy vision."<sup>8</sup>

These vitamins, minerals and phytonutrients have several benefits throughout your entire body, including your skin and improved vision due to the high iron, of which a deficiency can cause hair loss.

## Fiber: Good for Gut Health and Colorectal Cancer Prevention

Bone health isn't the only benefit of this oft-neglected fruit, though. Studies indicate dried plums can lower your risk of colon cancer.

One factor that helps give plums and prunes such high marks in this category is fiber, crucial for moving food along smoothly through your colon for elimination, but also the natural chemicals sorbitol and isatin, both helpful for relieving constipation. These three ingredients are why prunes have the (earned) reputation as a laxative. Media outlet Chatelaine notes that fiber:

"Helps to ... [optimize] cholesterol by soaking up excess bile in the intestine and then excreting it. Bile is made from cholesterol in the liver in order to digest fat.

When the body excretes bile along with the fiber from prunes and plums, the liver must use cholesterol in the body to make more bile thereby lowering the amount in circulation in the body. Soluble fiber may also inhibit the amount of cholesterol manufactured by the liver in the first place.<sup>19</sup>

Plums contain 2 grams of fiber in a 1-cup serving, which also helps produce beneficial gut microbiota. One of the big differences between fresh and dried plums is that the dried version contains 12 grams of fiber, which, compared to fresh plums, is about half of the RDI needed for an entire day (although I believe about 50 grams per 1,000 calories consumed is ideal).

According to Alimentary Pharmacology and Therapeutics, prunes are even more effective than psyllium as a laxative.<sup>10</sup> Plus, the sorbitol pulls moisture into your digestive tract to help bring about a bowel movement.<sup>11</sup> That's where its effectiveness as a colorectal cancer preventive comes in.

#### **More Benefits From Plums and Prunes**

An online resource called Colon Cleansing and Constipation recommends stewed prunes to alleviate constipation, or infrequent bowel movements. Eating them regularly can help prevent subsequent stomach pain and hemorrhoids. All of these can become serious enough to necessitate surgery.

Aside from skin cancers, colorectal cancer is the third most common cancer in the U.S. It encompasses both rectal and colon cancer, which together have stricken around 140,000 people in the U.S., and more than 50,000 die from it every year, according to the American Society for Gastrointestinal Endoscopy.<sup>12</sup> Medical Daily mentioned one study that found eating dried plums can help lower your risk for colon cancer by maintaining good gut bacteria in your colon, adding that "a diet high in [certain] red meats can increase colon cancer risk while a diet high in fruits ... [and] vegetables ... can reduce colon cancer risk."<sup>13</sup>

A FASEB Journal study backed up the gut bacteria benefit, noting that their data supported their initial hypothesis:

"Diet is known to alter metabolism and composition of colon microbiota, which has major implications for disease prevention and treatment ... The hypothesis tested by this experiment was that consumption of dried plums would promote retention of beneficial microbiota and patterns of microbial metabolism throughout the colon, and that by doing so would reduce colon cancer incidence."<sup>14</sup>

#### **Fructose in Plums and Prunes**

It takes around 4 pounds of fresh plums to produce 1 pound of dried plums, and both are very versatile. You can chop them up to add to raw grass fed yogurt, blend them in smoothies and shakes and add them to salads and vegetable dishes. In fact, just about anything you use raisins for, prunes are a tasty, healthy alternative.

Eating plums and prunes may also help alleviate problems related to obesity, heart disease and diabetes. However, whether it's fresh plums or dried prunes you crave, make sure you consume these in moderation, as they both contain high amounts of sugar. Nutritionist Anshul Jaibharat cautions:

"Prunes are high in natural sugar, so too many may not be good for people watching their weight. After all, excess of anything is stored as fat in your body. Prunes have such high nutritional values ensuring that you can eat just one piece and still gain measurable nutrients."<sup>15</sup>

However, the sorbitol, which is a sugar alcohol, is not a source of ethanol, the substance found in alcoholic beverages. It's a natural substance found in many fruits and

vegetables, and is about 50% as sweet as sugar.<sup>16</sup>

Plums are often used to make the French form of Armagnac, a quickly distilled version of cognac with a raw, earthy body. They also end up soaked in brandy for several desserts, including brûlée. The sugar (and, for the former, alcohol) content in these, however, is considerable and outweighs the nutritional benefits that the fruit provides.

Additionally, prune juice is often loaded with high-fructose corn syrup and, even if it's not, will still be a significant source of fructose without the fiber benefits, so be aware that consuming the whole fruit is preferable.

#### **Sources and References**

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