



## Red Yeast Rice

Stock #558-3 (120 capsules)

Although most people typically think of high cholesterol as a problem that affects primarily middle-aged men, the surprising fact is that high serum cholesterol is most prevalent among white, non-Hispanic women, according to the Centers for Disease Control and Prevention in Atlanta. Conventional treatment for high cholesterol usually involves costly statin drugs such as Lipitor or Zocor, which reduce LDL (low-density lipoprotein) cholesterol. However, statin drugs can cause a variety of side effects, including gastrointestinal problems such as abdominal pain, constipation, diarrhea, dyspepsia (indigestion), flatulence and nausea, as well as dizziness, headache, rash and sleep disturbance. There have also been reported cases of patients experiencing peripheral neuropathy (injury to the nerves of the arm/legs), cataract progression, and a progressively decreased therapeutic response to statins after long-term treatment. The most serious, although infrequent, adverse event experienced with statin drugs is hepatotoxicity (liver damage). Furthermore, statin drugs inhibit Co-Q<sub>10</sub> production, which can lead to congestive heart failure, high blood pressure and low energy.<sup>1-3</sup>

Fortunately, natural supplements such as red yeast rice have been shown to not only lower total cholesterol, but also raise HDL (high-density lipoprotein) cholesterol levels and lower lipoprotein(a)—a damaging blood fat similar to LDL cholesterol. Individuals with high plasma levels of lipoprotein(a) have a 10 times greater risk for heart disease than individuals with elevated LDL levels.<sup>1,3,4</sup>

**Red yeast rice** has been used for centuries—some sources report its use as far back as the Tang Dynasty, A.D. 800—in Chinese cuisine and as a medicinal food to promote blood circulation. Red yeast rice is naturally produced by fermenting rice with red yeast (*Monascus purpureus*). The finished product, red yeast rice, contains important substances known as monacolins, which have the ability to inhibit HMG-CoA reductase—an enzyme responsible for cholesterol synthesis in the liver. HMG-CoA reductase inhibitors help regulate the body's cholesterol production and increase the liver's removal of LDL cholesterol from the blood. Numerous studies have confirmed that red yeast rice demonstrates a direct inhibitory effect on HMG-CoA reductase activity and cholesterol synthesis. Red yeast rice also contains sterols (beta-sitosterol, campesterol, stigmasterol, sapogenin), isoflavones, monounsaturated fatty acids and trace elements that likely assist in lowering serum cholesterol and triglyceride levels.<sup>2-9</sup>

In fact, red yeast rice has been shown to significantly decrease total cholesterol levels in hyperlipidemic (elevated blood fats) subjects, and has proved to be a cost-saving cholesterol-lowering medication. A systematic review was conducted involving 4 randomized clinical trials on the lipid-lowering effects of red yeast rice in patients with hyperlipidemia. In all studies, statistically significant reductions (16% to 31%) in total serum cholesterol compared with placebo or control or baseline were confirmed, as well as increases in HDL and decreases in LDL cholesterol levels. HDL is regarded as the "good" cholesterol, because it helps clean up excess blood fats. LDL cholesterol is called the "bad" cholesterol, because it accumulates inside arteries, narrowing them and slowing or blocking blood flow—obstructing blood flow causes tissue death and can trigger heart attacks and strokes. Thus, high LDL levels are associated with a higher risk of heart disease.<sup>1,2,4,7,10</sup>

It is important to note that low HDL cholesterol levels are actually the most important predictor of heart disease in individuals over 70. When HDL levels drop below 35 mg/dL, the risk for heart disease becomes 2½ times greater. Since as many heart attacks strike people with total cholesterol levels below 200 mg/dL as those with levels higher than 300 mg/dL, the National Institutes of Health, along with leading researchers, recommend maintaining HDL levels above 35 mg/dL. In fact, HDL levels of 60 mg/dL or more actually help to lower your risk for heart disease—for every 1% increase in HDL cholesterol, an individual's risk for heart attack drops 3-4%.<sup>1,11-15</sup>

In one of the reviewed clinical trials, 324 hypercholesterolemic adults (those having abnormally high cholesterol levels) taking red yeast rice (1.2 grams daily) for 8 weeks exhibited an average reduction of 22.7% in total cholesterol levels and 30.9% in LDL cholesterol. Furthermore, triglycerides dropped 34.1%, while serum HDL levels increased 19.9%. Thus, researchers concluded that red yeast rice was a highly effective dietary supplement for correcting elevated serum cholesterol and triglycerides.<sup>3,16</sup>

Another study, a double-blind, placebo-controlled, randomized 12-week trial conducted at UCLA School of Medicine, evaluated the lipid-lowering effects of red yeast rice separate from the effects of diet alone. A total of 65 hypercholesterolemic adults, who were not being treated with lipid-lowering drugs, were given red yeast rice (2.4 grams daily) or placebo and instructed to maintain a diet of 30% fat, 10% saturated fat, and a maximum of 300mg cholesterol daily. After 8 weeks, total cholesterol concentrations had decreased significantly (18% lower) in the red yeast rice group compared to the placebo group. In addition, LDL cholesterol levels were 23% lower in the treatment

group compared to the placebo group. Total triacylglycerol (triglycerides) were also reduced by 16% in the red yeast rice group.<sup>3,5</sup>

In a randomized, double-blind, placebo-controlled pilot study involving 12 adults with dyslipidemia—abnormal lipid levels (cholesterol and triglycerides) in the blood—related to human immunodeficiency virus (HIV), characterized by hypercholesterolemia, hypertriglycerolemia or both, treatment with red yeast rice (2.4 grams daily) for 8 weeks resulted in statistically significant reductions in total cholesterol (31%) and LDL cholesterol (32%) compared with placebo (8% and 26% respectively). Furthermore, no adverse effects were seen with red yeast rice.<sup>4,17</sup>

Toxicity evaluations of red yeast rice in animals for as long as 4 months have demonstrated no toxicity. Likewise, human trials have shown no elevations of liver enzymes or renal (kidney) impairment. Side effects in clinical trials with red yeast rice have been limited to headaches and gastrointestinal discomfort such as heartburn, flatulence or stomachache.<sup>3,4</sup>

Red yeast rice is not recommended during pregnancy or nursing, or for women planning to become pregnant in the near future. Individuals with or at risk for liver or kidney disease or those currently taking any cholesterol-lowering medications should consult your healthcare provider before using. Cholesterol levels should be checked regularly.<sup>3</sup>

Since red yeast rice provides HMG-CoA reductase-inhibiting activity, supplementation with CoQ<sub>10</sub> is recommended. Furthermore, because cholesterol, particularly LDL cholesterol, acts as a carrier for various antioxidants, increasing antioxidant intake when reducing cholesterol is also considered beneficial.<sup>3,12</sup>

Each capsule of Red Yeast Rice contains 600mg of red yeast rice (*Monascus purpureus*).

#### References:

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