

Red Yeast Rice

*Organic red yeast rice to support healthy blood lipid levels**



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Designs for Health's Red Yeast Rice capsules contain 1.2 grams of organic red yeast rice per serving, which is derived from U.S. grown *Monascus purpureus*, a yeast that contains a multitude of compounds including monacolins. Research shows that monacolin may support overall cardiovascular health.¹ Of the thirteen isolated monacolins identified, monacolin K, in particular, has been shown to help maintain healthy blood lipid levels through its inhibition of HMG-CoA reductase, the rate-limiting step in cholesterol synthesis.²

The red yeast rice (RYR) in this product is USDA certified organic, non-GMO, and is grown in the U.S. It is assayed to assure that there are undetectable levels of a common fungal mycotoxin known as citrinin, which can be found in poorly produced RYR products, as well as substantial levels of naturally-occurring monacolin compounds, especially monacolin K.

Traditionally, RYR was produced by fermenting white rice with the *Monascus purpureus* yeast and other related molds. It has been used clinically as an herbal supplement and functional food in traditional Chinese medicine (TCM) for many years, and as a staple in East Asian (Chinese, Korean, and Japanese) cuisine as a flavoring, preservative, and coloring agent for various foods.²

Blood Lipid Balance

Red yeast rice is a safe, viable option for those looking for natural alternatives for helping favorably modulate blood lipid levels,³ especially in statin-intolerant patients.^{2,4} Statin-intolerant dyslipidemic patients who had to discontinue use due to myalgias were randomly assigned 1.8 g of RYR or placebo for 24 weeks along with a 12-week therapeutic lifestyle change program; LDL-C decreased by 43 mg/dL at week 12 and by 35 mg/dL at week 24 resulting in significantly lower LDL-C levels than in the placebo group.⁵ Total cholesterol levels were also significantly reduced, indicating that RYR, in combination with lifestyle changes, is a viable option for dyslipidemic patients who cannot tolerate statins due to adverse effects.⁵

RYR works in the same way as a statin works by blocking the HMG-CoA reductase enzyme from creating cholesterol, thus it helps maintain a healthy balance of low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein (HDL-C), triglycerides (TG), and total cholesterol (TC). In a recent meta-analysis of over 6,000 patients, RYR administration significantly reduced LDL-C compared to placebo groups, was comparable to statin therapy, and resulted in fewer than 5% total adverse events.⁶ Furthermore, a systematic review found significant reductions in LDL-C and TC levels in adults who supplemented with red yeast rice.⁷ In patients with metabolic syndrome (MetS) and hypercholesterolemia, RYR, in combination with other nutraceuticals such as berberine, showed improvements in the lipid and atherogenic profile by significantly reducing small, dense LDL-C, TC, and non-HDL-C, while increasing HDL-C levels, compared with controls.^{8,9}

Arterial Health

Red yeast rice has demonstrated positive metabolic and cardiovascular influences beyond cholesterol modulation due to its anti-inflammatory, antidiabetic, antihypertensive, and osteogenic properties.^{10,11} RYR supports healthy inflammatory responses and protects against the damage caused by oxidative stress, in which inflammatory dysfunction is a characteristic of cardiovascular-related diseases. The anti-inflammatory actions of RYR have shown to protect the arterial lining via improving endothelial function, thereby supporting arterial health and preventing atherosclerotic plaque formation.¹²

Red yeast rice may help to:*

- Modulate blood lipids such as LDL, HDL, total cholesterol, and triglycerides
- Protect endothelial lining, thereby supporting arterial health
- Support normal insulin and blood glucose metabolism
- Support a healthy inflammatory response and protects against the damage caused by oxidative stress

A sizeable RCT showed that RYR supplementation may reduce nonfatal heart attack occurrence, coronary disease mortality, coronary revascularization, and total mortality in subjects with moderate hypercholesterolemia and a history of myocardial infarction.² The results of an atherosclerotic animal model showed that, compared to the controls, RYR treatment significantly reduced arterial plaque formation and LDL-C levels, and significantly changed the balance of the intestinal microbiota.¹³ This study suggests that RYR possesses the ability to protect against atherosclerosis by inhibiting hydroxy methylglutaryl-CoA reductase and the subsequent inflammatory pathways to improve the endothelial lining of the intestines, and by altering the gut microbial composition.¹³ A small RCT demonstrated that moderately hypercholesterolemic patients experienced favorable changes in blood lipid profiles and high-sensitive C-reactive protein levels, a marker of inflammation, and markers of vascular remodeling with 10 mg of monacolin treatment.¹⁴

Blood glucose metabolism

As mentioned earlier, RYR possesses anti-diabetic properties and has been shown to promote healthy blood sugar levels. A recent systematic review and meta-analysis of RCTs show that, in combination with other nutraceuticals, in addition to lowering TC, LDL-C and increasing HDL-C, RYR significantly improved serum glucose levels, and that the beneficial glucose-lowering effects were found with longer duration supplementation.¹⁵ In MetS subjects who were given a combination of RYR and coenzyme Q10 orally for two months in combination with following a Mediterranean-style diet regimen, researchers observed significant reductions of serum glucose, systolic and diastolic blood pressure, TC, LDL-C, and TG compared to the control group who followed the same diet plan.¹⁶ According to a mini-review of the antidiabetic effects of fermented foods, diabetic rats who were fed *Monascus purpureus*-fermented feed for eight weeks had “meritoriously reduced” plasma glucose, TG, amylase, cholesterol levels, and production of reactive oxygen species.¹⁷ In the same study, the rats who were supplemented with the red mold fermented products demonstrated noticeable increases of glutathione disulfide reductase, glutathione reductase, and catalase enzymes that are responsible for catalyzing reductions to form glutathione, the body’s master antioxidant.¹⁷

Supplement Facts

Serving Size 2 capsules
Servings Per Container 90

Amount Per Serving	% Daily Value
Organic Red Yeast Rice (<i>Monascus purpureus</i>)	1.2 g *

*Daily Value not established.

Other Ingredients: Cellulose (capsule), L-leucine.

Recommended Use

- As a dietary supplement, take two capsules per day in the evening, preferably before bed, or as directed by your health care practitioner.

Further Considerations

- Similar to a statin medication, RYR may reduce levels of CoQ10, which may increase the risk of adverse effects seen with medication use such as statin-associated muscle symptoms.^{18,19} For optimal cardiovascular health, consider combining Red Yeast Rice with any of the Designs for Health coenzyme Q10 products such as CoQnol™ 100 mg, Q-Evail® 100, or Q-Evail® 200. (Note that Designs for Health also offers RYR Synergy™, which combines 1.2 g organic red yeast rice together with 40 mg CoQ10.)
- Patients should consult with their health care practitioner if they are currently taking statin medications and/or cytochrome P450 enzyme inhibitors, as it may increase the risk of adverse effects.
- Those with soy allergies or sensitivities may be advised to not take this product as it may contain soy.

For a list of references cited in this document, please visit:

https://www.designsforhealth.com/techsheet-references/Red_Yeast_Rice_References.pdf

*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure or prevent any disease.

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