

# Cardio-Edge™

## Sytrinol™, Plant Sterols and Pomegranate extract for cardiovascular and cholesterol health

### DESCRIPTION

Cardio-Edge™ continues Douglas Laboratories' tradition of providing unique, exclusive and scientifically substantiated products to health professionals. Cardio-Edge supplies Sytrinol™ (a patented combination of polymethoxylated flavones from citrus fruit and tocotrienols from palm), plant sterols, and standardized pomegranate extract to help support cardiovascular health and cholesterol metabolism.

### FUNCTIONS

#### Sytrinol™ - A unique and powerful ingredient for maintaining cholesterol health

The healthful effects of both bioflavonoids as well as tocotrienols have been recognized for years. Sytrinol provides a patented and well-researched combination of flavonoids derived from the peel of tangerines and tocotrienols derived palm. Within the peel of certain fruits, compounds belonging to a class of flavonoids called polymethoxylated flavones can be found. These compounds are similar in structure to flavones, but contain additional methyl groups on their ring structure, giving them the name polymethoxylated flavones – also known as PMFs. The primary PMFs present in Sytrinol are nobiletin and tangeretin. Science on PMFs dates back to the 1960s and covers both their antioxidant as well as their anti-inflammatory actions. Specifically, with respect to cholesterol metabolism, PMFs have been shown to decrease apolipoprotein B, the structural protein needed for the synthesis of LDL-cholesterol. Nobiletin and tangeretin have also been shown to decrease diacylglycerol acetyl transferase, an enzyme in the liver involved in the synthesis of triglycerides. In addition to PMFs, Sytrinol contains tocotrienols derived from palm. Tocotrienols, a group of compounds belonging to the vitamin E family, have also been studied over the years for their ability to act as antioxidants and to help support cardiovascular health. Tocotrienols have been shown to inhibit HMG-CoA reductase, the hepatic enzyme responsible for the rate limiting step in the synthesis of cholesterol. Consequently, the combined action of the PMFs and tocotrienols contained in Sytrinol results in a powerful synergistic action to support cardiovascular health. This effect has

been confirmed in both animal as well as human studies. In human clinical studies, Sytrinol given at a dose of 150 mg twice daily (daily dose of 300 mg) to hypercholesterolemic subjects for 4 weeks resulted in average reductions of total cholesterol by 20-24%, LDL-cholesterol by 19-22 %, and triglycerides by 24-28%. Additionally, the LDL/HDL ratio was significantly improved. Larger and longer follow up studies involving 120 hypercholesterolemic subjects supplemented for 12 weeks have yielded similar findings.

### Plant Sterols

Plant sterols are naturally occurring plant compounds that have structures similar to, yet slightly different from cholesterol. Typical plant sterols are compounds such as  $\beta$ -sitosterol, campesterol, and stigmasterol and can be found in vegetables, fruits, legumes, nuts, grains and certain oils. Research has shown that these compounds compete with the absorption of dietary cholesterol as well as inhibit the reabsorption of endogenous cholesterol in the gastrointestinal tract. Supplementation with plant sterols can significantly lower cholesterol levels and have been shown to work synergistically with other therapies for lowering cholesterol. Numerous foods including orange juice, rice drink, and margarine now incorporate plant sterols, or sterol esters. Increasingly, dietary supplements are now incorporating plant sterols and using the health claim that has been allowed for products containing at least 800 mg of plant sterols daily. The addition of plant sterols to Cardio-Edge provides yet another mechanism by which healthy cholesterol levels can be maintained.

### Pomegranate

Recent science has been focusing on the cardioprotective aspects of pomegranate. These brightly colored fruits contains numerous compounds known for their antioxidant capabilities, including anthocyanidins, catechins, tannis, and gallic and ellagic acids. Research has shown that supplementation with pomegranate juice can decrease macrophage lipid accumulation, and cellular cholesterol accumulation in mice. Recently, research in humans has confirmed a beneficial effect of consuming pomegranate juice on parameters such as LDL oxidation,

*(continued on reverse)*

blood pressure, and blood vessel health.

The combination of Sytrinol, plant sterols, and pomegranate extract present in Cardio-Edge results in a formula that embodies the most recent science to help maintain cardiovascular health and support healthy cholesterol levels.

## INDICATIONS

Cardio-Edge™ may be a useful dietary adjunct for individuals wishing to supplement their diets with a unique formula to help support cholesterol and cardiovascular health.

## FORMULA (#99134)

### 2 vegetarian capsules contain:

Plant Sterols (Phytosterols) .....	400	mg
Sytrinol™ .....	150	mg
(proprietary blend of polymethoxylated flavones and tocotrienols from citrus and palm fruits)		
Standardized Pomegranate Extract (Fruit) ...	50	mg
(Standardized to 40% ellagic acid)		

## SUGGESTED USE

Adults take 2 capsules, twice daily with meals or as directed by physician.

## SIDE EFFECTS

No adverse side effects reported.

## STORAGE

Store in a cool, dry place, away from direct light. Keep out of the reach of children.

## REFERENCES

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**Douglas Laboratories is the exclusive provider of Sytrinol™ to health professionals.**

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

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