Policosanol

En Español (Spanish Version)

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Supplement Forms/Alternate Names:
• 1-Octacosanol; N-Octacosanol; Octacosanol Alcohol; Octacosanol; Wheat Germ Oil

Principal Proposed Uses
• High Cholesterol

Other Proposed Uses
• Intermittent Claudication; Parkinson’s Disease; Sports Performance Enhancement

Policosanol is a mixture of waxy substances generally manufactured from sugarcane. It contains about 60% octacosanol, along with many related chemicals. In some cases, the terms octacosanol and policosanol are used interchangeably.

Numerous studies have reported that sugarcane policosanol can substantially improve cholesterol profile, with an efficacy approximately equal to that of the most effective drugs used for this purpose. On this basis, policosanol has been approved as a treatment for high cholesterol in about two dozen countries, most of them in Latin America. However, essentially all positive studies of policosanol were performed and reported by a single Cuban research group—a group with a financial relationship to the product. Independent verification of the product’s effectiveness was delayed for several years by various legal obstacles. During the years 2006 and 2007, however, several independent studies of sugarcane policosanol were at last reported. In none of these trials has policosanol proved more effective than placebo.

Requirements/Sources

The tested Cuban policosanol product is manufactured from sugarcane. Octacosanol and related substances are also found in wheat germ oil, vegetable oils, alfalfa, and various animal products.

Due to political and patent issues, sugarcane policosanol has not been widely available in the US. Products sold in the US market as "policosanol" are generally derived from beeswax or wheat germ. These products have a significantly different mixture of constituents and could have substantially different effects.

Therapeutic Dosages

Typical dosages of policosanol in Cuban studies have ranged from 5 mg to 10 mg twice daily.

Therapeutic Uses
The Cuban research group that holds the patent on sugarcane-derived policosanol has published approximately 80 double-blind studies on their product. If these reports are to be believed, a total of several thousand people with elevated cholesterol levels have been enrolled in clinical trials ranging in length from 6 weeks to 12 months, and in virtually every one of these trials policosanol proved both more effective than placebo and equally effective as statin drugs.29-42,45-53,74,78

However, in science, it is always necessary to have independent confirmation of results before a treatment can be considered proven to work. The first truly independent trials of policosanol as a treatment for high cholesterol began to appear in 2006. Of the many studies published since then, enrolling over 500 people, not one found policosanol more effective than placebo.79,82,85-87,89-91,92 These results have raised serious doubts about the effectiveness of sugarcane policosanol. In addition, questions are now being raised about other scientific claims made by the patent-holding Cuban research group.

Wheat-germ policosanol, sold in the US as substitute for sugarcane policosanol, failed to prove more effective than placebo in the one published clinical trial of this product.80 There is no published evidence to indicate that beeswax-derived policosanol affects cholesterol profile. A study published in Croatia reportedly found benefit with rice-source policosanol, but it suffered from significant problems in design and reporting.79

The bottom line: At present, considerable doubt exists regarding whether any form of policosanol offers cholesterol-related benefits.

One study, again conducted by the patent-holding Cuban research group, reported that policosanol is helpful for intermittent claudication.23

Other potential uses of policosanol have been proposed by non-Cuban researchers. A small double-blind trial found marginal evidence that policosanol might enhance sports performance.24 Marginal benefits were also seen in a very small, double-blind trial of individuals with Parkinson’s disease; however, this study also reported that policosanol can increase the side effects of the levodopa, the standard drug used for Parkinson’s disease.25 Finally, in a small double-blind trial, policosanol failed to produce any benefits in amyotrophic lateral sclerosis.26

Safety Issues

Note: Virtually all statements regarding the safety of policosanol derive from studies reported by the patent-holding Cuban research group. Since the reliability of these researchers is now in question, all of the statements below are similarly open to question.

Given the above caveat, policosanol is said to be safe at the maximum recommended dose. In double-blind trials, only mild short-term side effects have been reported, such as nervousness, headache, diarrhea, and insomnia. A safety study of 27,879 people followed for 2 to 4 years showed that use of policosanol produced adverse effects in only 0.31% of participants, primarily weight loss, excessive urination, and insomnia.59 In animal studies, no toxic signs were seen even at 620 times the maximum recommended dose.60-63,72 In addition, policosanol does not adversely affect the liver.64 Finally, policosanol does not interact with three types of medications used for high blood pressure: calcium-channel antagonists, diuretics, and beta-blockers.65

On the other hand, policosanol may be a “blood thinner,”66-68,75,81 and it appears to enhance the blood-thinning effects of aspirin,69 though at least one study failed to confirmed this adverse effect.88 Still, to be on the safe side, policosanol should not be combined with aspirin or other blood-thinning drugs, such as warfarin (Coumadin), heparin, clopidogrel (Plavix), ticlopidine (Ticlid), or pentoxifylline (Trental). There is also at least a remote chance that it might cause excessive bleeding if combined with natural supplements that thin the blood, such as garlic, ginkgo, and high-dose vitamin E.66 Similarly, individuals with clotting problems should avoid policosanol, and the supplement should not be used during the period immediately prior to or following surgery or labor and delivery.
One non-Cuban report suggests that policosanol might increase the action of levodopa, a medication used for Parkinson's disease, leading to increased side effects called dyskinesias. The maximum safe dosages for young children, pregnant or nursing women, or individuals with severe liver or kidney disease have not been established.

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**Interactions You Should Know About**

Do not use policosanol except on medical advice if you are taking:

- Blood-thinning medications, for example:
  - Aspirin, warfarin (Coumadin), heparin, clopidogrel (Plavix), ticlopidine (Ticlid), or pentoxifylline (Trental)
- Natural supplements that thin the blood, for example:
  - Garlic, ginkgo, or high-dose vitamin E

Keep in mind that policosanol may increase both the effects and side effects of:

- Levodopa

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**References [+]**


85. Francini-Pesenti F, Beltramolli D, Dall'acqua S, et al. Effect of sugar cane policosanol on lipid profile in


As of 5/3/2011, additional research published on policosanol does not warrant any changes to this article.

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