

## **Cholesterol/Lipid Mgmt; Complementary/Alternative Medicine**

Total blood cholesterol level above 200 mg/dl LDL cholesterol level above 130 mg/dl HDL cholesterol level below 35 mg/dl Lipoprotein (a) level greater than 30 mg/dl

### QUICK REVIEW

- Elevated cholesterol levels in the blood are linked to heart attacks and strokes.
- Although, in most cases, elevations of blood cholesterol levels are due to dietary and lifestyle factors, elevations can also result from genetic factors.
- Elevations in cholesterol levels may be the result of low thyroid function (hypothyroidism).
- The most important approach to lowering a high cholesterol level is a healthful diet and lifestyle.
- Several of the cholesterol lowering drugs are actually associated with an increase in noncardiovascular mortality. Cholesterol-lowering drugs are toxic to the liver and extremely carcinogenic (cancer-causing).

Niacin has demonstrated better overall results than cholesterol lowering agents in reducing the risk of coronary heart disease.

Niacin was the only cholesterol-lowering agent found to reduce the death rate in The Coronary Drug Project. Because of its low cost and proven efficacy, niacin should be considered the first cholesterol-lowering agent to try. The problems with niacin (e.g., skin flushing, other side effects, and patient compliance) can be avoided by using inositol hexaniacinate.

- Sustained-release niacin should not be used due to greater toxicity in the liver.
- The majority of studies that showed a positive effect of garlic and garlic preparations used

### TREATMENT SUMMARY

In addition to diet and lifestyle measures, there are a number of natural compounds that can effectively improve cholesterol and triglyceride levels. Of the four described above (niacin, garlic, guggulipid, and pantethine), niacin in the form of inositol hexaniacinate produces the best overall effect.

In addition to the recommendations given in the chapter HEART DISEASE AND CARDIOVASCULAR HEALTH, we recommend beginning therapy with the following:

- Flaxseed oil: 1 tablespoon daily

- Niacin (as inositol hexaniacinate): 500 mg three times per day with meals for two weeks, then increase dosage to 1,000 mg three times per day with meals

- Garlic: minimum of 4,000 mcg of allicin per day

Within the first two months, this program will typically produce reductions in total cholesterol level of 50 to 75 mg/dl in patients with initial total cholesterol levels above 250 mg/dl. In cases in which the initial cholesterol level is above 300 mg/dl, it may take four to six months before cholesterol levels begin to reach recommended levels. Once the cholesterol level is reduced below 200 mg/dl, reduce the dosage of niacin to 500 mg three times per day for two months. If the cholesterol levels creep up above 200 mg/dl, then raise the dosage of niacin back to 1,000 mg three times per day. If the cholesterol level remains below 200 mg/dl, then withdraw the niacin completely and check the cholesterol levels in two months. Re-institute niacin therapy if levels creep up over 200 mg/dl. Garlic and flaxseed oil supplementation can be continued indefinitely, if desired.

Gugulipid can be added to the above protocol if, after four months, the total cholesterol level remains above 250 mg/dl. Gugulipid is also suitable for the rare patient who cannot tolerate inositol hexaniacinate.

Pantethine is recommended primarily to diabetics and patients who have elevated triglyceride levels. Although there are no data showing that inositol hexaniacinate affects blood sugar levels, niacin is known to adversely affect blood sugar control in some diabetics. As stated above, pantethine has demonstrated excellent effects in diabetics. It not only improves cholesterol and triglyceride levels; it also normalizes platelet lipid composition and function and blood viscosity.<sup>15</sup>

In regard to elevations in Lp(a), both niacin and vitamin C have shown an ability to drop Lp(a) levels dramatically (thirty-five- and twenty-seven-percent reductions, respectively). In addition, it is important to rule out low thyroid function (hypothyroidism) in all cases of elevated blood lipids, especially Lp(a).

**TABLE 3** Comparative Effects of Natural Compounds on Cholesterol and Triglyceride Lipids

	<b>NIACIN</b>	<b>GARLIC</b>	<b>GUGULIPID</b>	<b>PANTETHINE</b>
Total cholesterol (% decrease)	18	10	24	19
LDL cholesterol (% decrease)	23	15	30	21
HDL cholesterol (% increase)	32	31	16	23
Triglycerides (% decrease)	26	13	23	32