Journal of Alternative Medicine 8-9, January 1986

A different look at serum cholesterol levels

So-called "normal" levels of cholesterol need revising. **Dr Emanuel Cheraskin, MD, DMD,** explains why.

WE have always held to the "commonsense" scientific philosophy that underweight is as undesirable as overweight, too tall is as unhealthy as too short and, it would follow, hypocholesterolemia must be just as pathogenic as hypercholesterolemia (i).

A propos, the 11 May 1979 issue of the *Journal of the American Medical Association* reported the deliberations of an international panel of heart specialists and nutrition experts (ii). "To arrive at their suggested *optimal* (emphasis added) level of total serum cholesterol, the group compared the serum cholesterol levels of the affluent societies of North America, Central and Northern Europe, New Zealand and Australia with those of populations in the Orient, Latin America and Mediterranean areas who are relatively free from fatty artery diseases.

"While the North American blood cholesterol averages of 220 to 275 mg per cent represent an upper extreme, a cholesterol of 150 to 160 mg per cent, found in some Mediterranean areas, is thought to be the 'ideal' level for all populations."

Such a level, the panel concluded, "may be considered compatible with substantially reduced risk of fatty arteries, good general health, and low rates of premature death from coronary heart disease."

On the other hand, a group of Japanese investigators (iii) question the practice of maintaining the total serum cholesterol as low as possible in order to prevent coronary heart disease (CHD) and cerebral stroke. From a ten-year study they reported a significant negative correlation between total serum cholesterol (from 150 to 200 mg per cent, and both cerebral hemorrhage (r = 0.83) and cerebral infarction (r = 0.84). According to these authors "the mortality rate for stroke increases in groups with a serum total cholesterol level lower than 160 mg per cent . . . Our results suggest that the desirable level of total serum cholesterol in men may be somewhere between 180 and 200 mg per cent, where incidence rates of both coronary heart disease and stroke are low."

Additionally, Kannel (iv) reports that ". . . data from Framingham shows an inverse relation of serum total cholesterol to overall mortality." He agres with the Japanese group (iii) that the optimal cholesterol level for adult Americans is approximately 180 to 200 mg per cent.

In the light of these observations, we respectfully submit another approach to the problem by developing the serum cholesterol values in a progressively symptomless and sign-free group. This is reasonable since the presumption can be made that, all other factors being equal, the patient without symptoms and signs is likely healthier than one with clinical findings.

We evaluated 1281 doctors and their spouses (v) in terms of the non-fasting total serum cholesterol (Auto-analyzer technique). Clinical state was graded by the Cornell Medical Index Health Questionnaire (CMI).

The CMI is a self-administered test consisting of 195 questions. Each question is answered by circling the word "yes" or "no". The questions are phrased so that the affirmative answers indicate pathology (clinical symptoms and signs). The clinical findings in this report are the total number of affirmative CMI responses (CMI score).

In the table, line 1 shows the nonfasting serum cholesterol for the entire group. In this sample of 1281, the CMI score ranged from 0 to 125 with a mean and one standard of 15.5 ± 12.2. The cholesterol values spread from 110 to 520 mg per cent with a mean and S.D. of 224 ± 44. Proceeding downward through the table, it is obvious that progressively fewer symptoms and signs are associated with a progressively lower mean serum cholesterol score and a narrower range. Thus, in the healthiest group (line 8), the very low and very high cholesterol scores have been eliminated so that the range has shrunk from 110-520

● DR CHERASKIN is lecturing and leading workshops at our April event.

	sample size	clinical findings affirmative CMI responses range	clinical findings affirmative CMI responses mean & SD	nonfasting serum cholesterol (mg/dl) range	nonfasting serum cholesterol (mg/dl) mean & SD
1) entire sample	1281	0-125	15.5 ± 12.2	110-520	224 ± 44
2) CMI <20	930	0-19	9.6 ± 5.0	110-520	223 ± 44
3) CMI <10	474	0-9	5.5 ± 2.3	122-520	221 ± 47
4) CMI <5	157	0-4	2.8 ± 1.2	122-456	216 ± 41
5) CMI <4	100	0-3	2.0 ± 0.9	122-456	213 ± 42
6) CMI <3	66	0-2	1.5 ± 0.7	158-456	211 ± 43
7) CMI <2	23	0-1	0.7 ± 0.5	166-290	214 ± 36
8) CMI <0	7	0	0.0 ± 0.0	176-239	207 ± 28

● Relationship of reported non-fasting serum cholesterol and reported total clinical findings (Cornell Medical Index Health Questionnaire) in a presumably healthy male and female sample.

(line 1) to 176-239 (line 8). Incidentally, these differences are statistically significant.

The evidence presented here from a study of presumably healthy doctors and their spouses suggests that the *ideal* non-fasting serum total cholesterol may approach 200 mg per cent. This is quite a departure from the American Health Foundation report (i) and the consensus in Western cultures and in agreement with the levels suggested by Ueshima et al (iii) and Kannel (iv).

(i) Cheraskin, E. Ringsdorf, W M Jr. "The biologic parabola: a look at serum cholesterol", *JAMA*, 247, 3, 302.

(ii) Elliott, J. "An 'ideal' serum cholesterol level?" *JAMA*, 241, 19, 197-198.

(iii) Ueshima, H. Iida, M. Komachi, Y. Letters to the editor: "Is it desirable to reduce total serum cholesterol level as low as possible?" *Preventive Med*, 8, 1, 104-105.

(iv) Kannel, W B. "In search of an optimal total cholesterol", *Preventive Med*, 8, 1, 106-107.

(v) Cheraskin, E. Ringsdorf, W M Jr. "Another look at the 'ideal' serum cholesterol level", *Arch In Med*, 140, 4, 580-581.