

Health evaluation of the dentist and his wife

III. Fasting serum cholesterol

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As part of the 1965 Health Evaluation Program sponsored by the American Dental Association, 1.8% of the examined dentists had hypercholesterolemia. Utilizing the same criteria for normocholesterolemia, 2.1% of the 153 examined dentists and wives had hypercholesterolemia. On the basis of recently proposed new serum cholesterol standards, 4.7% of the dentists and wives show definitely elevated levels and 37.2% show marginal hypercholesterolemia.

Of the 1,354 dentists examined during the 1965 Health Evaluation Program of the American Den-

tal Association,¹ 24 subjects (1.8% of the group) were found to have an elevated serum cholesterol level. A physiologic range of 135 to 275 mg/100 ml was used. Because of the present interest in lipid metabolism and heart disease, this report presents the fasting serum cholesterol findings in another group of dental practitioners and their wives.

Method of investigation

One hundred fifty-three dentists and their wives (members of the Southern Academy of Clinical Nutrition) have been participating in a multiphasic screening program. Earlier reports described the results of a self-administered general health questionnaire² and a three-hour oral glucose tolerance test.³ The age and sex distribution is summarized in Table 1.

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Table 1 ■ Age and sex distribution.

Age groups	Men	%	Women	%	Total	%
20-29	3	3.6	9	13.0	12	7.8
30-39	38	45.2	34	49.3	72	47.0
40-49	37	44.0	23	33.3	60	39.2
50-59	5	6.0	3	4.3	8	5.2
60-69	1	1.2	0	0.0	1	0.7
Total	84	100.0*	69	100.0*	153	100.0

*Approximate.

Results

Table 2 summarizes the serum cholesterol levels that were determined by the autoanalyzer method. The minimal and maximal scores range from 127 to 520 mg/100 ml. Utilizing the criteria employed in the 1965 American Dental Association Health Evaluation Program, 2.1% of the group display hypercholesterolemia.

Discussion

There is increasing question as to the validity of present standards (so-called normal range) for serum cholesterol. The following quotation represents current thinking:

It is possible to bring to bear to this matter the findings of international epidemiological research, specifically the observations that in populations where clinical coronary heart disease is rare in middle age,

Table 2 ■ Serum cholesterol distribution.

Serum cholesterol groups (mg/100 ml)	Men	%	Women	%	Total	%
<150	3	3.6	5	7.2	8	5.2
150-159	3	3.6	6	8.7	9	5.9
160-169	6	7.1	8	11.6	14	9.2
170-179	8	9.5	9	13.0	17	11.1
180-189	11	13.1	10	14.5	21	13.7
190-199	10	11.9	10	14.5	20	13.1
200-209	13	15.5	6	8.7	19	12.4
210-219	7	8.3	6	8.7	13	8.5
220-229	7	8.3	3	4.3	10	6.5
230-239	9	10.7	3	4.3	12	7.8
240-249	1	1.2	2	2.9	3	2.0
260-269	2	2.4	0	0.0	2	1.3
270-279	3	3.6	0	0.0	3	2.0
290-299	1	1.2	0	0.0	1	0.7
300+	0	0.0	1	1.4	1	0.7
Total	84	100.0*	69	100.0*	153	100.0*
Minimum	127		133		127	
Maximum	292		520		520	

*Approximate.

mean serum cholesterol levels are in the range 130 to 170 mg. per 100 ml., with a standard deviation of 30 to 40. Again, the conclusion seems reasonable that an appropriate standard for normal, based on the vast amount of new information available, is in the range less than 200 mg. per 100 ml. Values of 250 mg. per 100 ml. or greater are appropriately designated definitely and grossly abnormal, those in the range 200 to 249 are borderline. The old standards need to be discarded, and new ones substituted.⁴

If the criteria set forth in this citation are more valid than the older standards, 58.2% of this group show physiologic cholesterol levels, 37.2% demonstrate borderline values, and 4.7% display definite hypercholesterolemia. This interpretation is more consistent with the observations noted in a multi-phasic screening program of physicians conducted at the annual meeting of the American Medical Association. Specifically, in a sample of 1,711 physicians tested, elevated blood cholesterol levels were observed in 533 (30%) of the group.⁵

Summary

As part of the 1965 Health Evaluation Program sponsored by the American Dental Association, 1.8% of the examined dentists had hypercholesterolemia. Utilizing the same criteria for normocholesterolemia, 2.1% of the 153 examined dentists and wives had hypercholesterolemia. On the basis of recently proposed new serum cholesterol standards, 4.7% of the dentists and wives show definitely elevated levels and 37.2% show marginal hypercholesterolemia.

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