

# Cholesterol screening in general practice

LAURIE JACOBS, BSc, MB  
General Practitioner, Peterborough

**SUMMARY.** Serum cholesterol levels were measured in 250 men and 250 women aged 25–60 years attending a general practice. Seventy three per cent of the sample had levels above 5.2 mM and of these 98 patients agreed to follow a low cholesterol/low saturated fat diet for six months. The overall reduction in serum cholesterol level among these patients was 13%, suggesting that lipid screening in general practice could be worthwhile.

## Introduction

CORONARY heart disease is the commonest single cause of death in the United Kingdom, resulting in a third of all deaths in men and a quarter of all deaths in women. The relationship between serum cholesterol concentration and coronary heart disease is unresolved but the evidence points to a linear relationship between the two, above a threshold level which has been variously estimated at 5.2 mM<sup>1</sup> and 5.7 mM.<sup>2</sup> As 80–90% of patients see their general practitioner every three years, the general practitioner is in the best position to offer cholesterol screening.

## Method

This study was carried out in an eight-man, mainly urban practice in Peterborough. Over a 12-month period 500 patients (250 men, 250 women), aged 25–60 years, were asked at routine surgery appointments if they would agree to a measurement of serum cholesterol. Patients who were seriously ill or receiving drugs which are known to affect cholesterol were excluded and those who attended with infections were asked to wait several weeks before measurement. Patients were told to have nothing to eat from midnight to standardize the results, although a fasting sample is not strictly necessary for serum cholesterol.

## Results and discussion

Seventy three per cent of patients had levels above the target serum cholesterol level of 5.2 mM (Table 1); this level was recently assessed as the optimal value for the general population.<sup>3</sup>

Table 2 shows the results analysed by age groups. The majority of men and women with high values were aged 35–50 years, but eight men and eight women with levels greater than 6.5 mM were aged under 35 years and of these, two men and three women had levels above 7.8 mM. Overall, there was a higher than expected mean value for cholesterol levels in all age groups, agreeing with other studies that have indicated higher levels of cholesterol in the UK than in the USA, for example.<sup>4</sup> The median serum cholesterol was 6.1 mM for this sample.

Out of the initial group of 500, 46 men and 52 women with high cholesterol values agreed to follow a low cholesterol/low saturated fat diet for six months. The mean serum cholesterol level at the start of the study was 7.8 mM for the men and 7.6 mM for the women. After the six-month period, the mean serum cholesterol level had fallen to 6.6 mM for the men (15% reduc-

**Table 1.** Results of serum cholesterol measurements in 250 men and 250 women.

Cholesterol level (mM) <sup>a</sup>	No. (%) of patients		
	Men	Women	Total
< 5.2	65 (26)	71 (28)	136 (27)
5.2–6.5	95 (38)	99 (40)	194 (39)
6.5–7.8	60 (24)	47 (19)	107 (21)
> 7.8	30 (12)	33 (13)	63 (13)

<sup>a</sup>1 mM = 38.6 mg per 100 ml.

**Table 2.** Mean serum cholesterol levels in 250 men and 250 women by age group.

Age group (years)	Mean serum cholesterol level (mM) (no. of patients)	
	Men	Women
< 35	5.6 (52)	5.5 (52)
35–44	6.1 (61)	5.7 (63)
45–54	6.4 (91)	6.3 (81)
55–60	6.5 (46)	6.9 (54)

tion) and 6.8 mM for the women (11% reduction). Some patients had a reduction in excess of 40% but 10 patients (three men, seven women) showed a rise in serum cholesterol level from a mean of 7.8 mM to 8.3 mM — a 6% increase. However, the overall reduction in serum cholesterol level of 13% was encouraging and gives some credibility to those who would advocate lipid screening.

In a recent review<sup>5</sup> Professor Oliver debates this last point. Unless there is a political move towards mass lipid screening, then it will be up to the general practitioner to instigate preventive programmes, of which screening lipids must be a part. Although it would be necessary to detail blood pressure, smoking habit and family history in any one patient, over several years, a reduction in coronary heart disease in the community could be achieved by encouraging those with a raised serum cholesterol level to follow a low fat diet.

## References

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## Address for correspondence

Dr L. Jacobs, 1 North Street, Peterborough, Cambs PE1 2RB.