HYPERLIPIDAEMIA AND WEIGHT GAIN AFTER MATURITY

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In affluent western societies average weight gain in males over the two decades after maturity is of the order of 9-12 kg. Increase in total plasma lipids over this period tends to parallel increase in body weight but whether there is a causal relationship is not clear. One approach to the problem is to use the tool of weight reduction; this is the subject of this paper.

We studied two distinct groups of patients. The first comprised 12 men with type 2a hyperlipidaemia and 10 with type 2b. Their mean age was 49 years. Nearly all of them had survived myocardial infarction and were moderately obese. Controls for this group were 28 survivors of infarction of similar age and relative body weight (RBW) who were a mixture of type 2a and type 2b. The second group of patients were healthy blood donors mean age 40 years chosen at random because they had type 4 hyperlipidaemia on screening. They should reflect the common variety of type 4 in this community. Both groups were evaluated nutritionally and then took a standard high protein, minimum carbohydrate diet of approximately 1600 calories. When weight had ceased to fall they continued an isocaloric diet calculated as approximately 2300 calories. The details are reported elsewhere.¹,² Both groups and the type 2 controls who failed to lose weight were followed for a minimum of 12 months.

Changes in body weight and serum lipids appear in table 1. In both type 2a and type 2b relative body weight (RBW) declined from 117 to 100 and there was a very significant fall in both serum cholesterol (SC) and serum triglyceride (STG). There was a 24.8% drop in serum cholesterol. 13 of the 22 men now had "normal"
## TABLE 1. BODY WEIGHT, INDICES OF OBESITY AND SERUM LIPIDS. MEANS AND STANDARD DEVIATIONS

Starred probability values refer to within type comparisons between entry and steady state. *p ≤ 0.05, **p ≤ 0.01, ***p ≤ 0.001