SUMMARY AND CONCLUSION
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The present work was carried out in 31 male and 17 female healthy volunteers of 15-60 years of age. They were subjected to different types of dietary loads (single dose) in search of an effective, practically feasible and simple cholesterol tolerance test.

Ten subjects were given a test diet consisting of 100 g butter based diet. Postprandial significant rise in levels of STC, HDL and LDL were observed in 90% of the subjects at 2nd hour. STC level did not show significant change. Values returned to near basal level at 5th postprandial hour. Five subjects who were given a test diet based on 50 g butter, showed rise in all parameters but the changes were insignificant.

In an another protocol different amount of egg yolk used as dietary test load. In eight subjects who were given a single hen egg (boiled) STC, and LDL fell at first postprandial hour in 75% of subjects. This fall was statistically significant. Other parameters showed insignificant changes. In 25% of cases all parameters increased insignificantly when increasing amount of egg cholesterol (from 2-6 eggs) were given to another eight subjects, there was marked variability in the response, while half of them showed rise of STC and LDL at first postprandial hour, remaining half showed fall. The changes were statistically not significant.
Eight subjects were fed miscellaneous dietary articles viz. egg albumin, 75 g of glucose, 50 g ghee, 50 g saffola oil and 50 ml of alcohol. The changes in lipid lipoprotein profile were less marked except in case of pure ghee where STC and STG showed great quantum of increase. Other dietary articles also showed changes in the form of rise, though the quantum of rise was not great.

In a fourth group of subjects, crystalline cholesterol (1 g) dissolved in 200 ml of milk was given. In most of the subjects (78%) there was rise in STC, STG and HDL (statistically significant) while HDL was insignificant increased, 22% of cases showed fall at first hour postprandially.

Two subjects were subjected to prolonged feeding (2 weeks). The changes in lipid lipoprotein profile were not significant. Reproducibility of test was also assessed in these subjects. The feeding behaviour was found to be reproducible qualitatively.

The following conclusions were drawn from the present study.

1. 100 g butter based diet produced significant changes in lipid lipoprotein profile in most of the subjects. This change was in the form of rise.

2. The rise was more marked in subjects having comparatively low STC level.
3. The changes in lipid lipoprotein profile were less marked and insignificant when 50 g butter diet was given.

4. The egg cholesterol induced changes were found to be highly variable contrast to butter cholesterol. Single egg feeding produced fall in STC and LDL in majority of subjects while increasing egg cholesterol disturbed this consistency and produced variability of the responses.

5. Changes in lipid lipoprotein profile were little influenced by amount of egg yolk cholesterol in test diet i.e. on increasing egg yolk cholesterol (2 to 6), changes in lipid lipoprotein profile showed same quantum of changes as with one egg.

6. Subjects who had comparatively higher basal STC showed little change after feeding while those with normal STC level showed more marked changes (rise or fall) after feeding.

7. Subjects in whom STC was destined to fall at one hour, it started falling from very beginning, same was true for rise of STC after feeding test diet.

8. The egg yolk induced changes in lipid lipoprotein profile were not very marked excluding few individual cases.

9. Non cholesterol fatty articles – saffola oil and egg albumin elicited very little variable changes
in lipid profile. In the same way cholesterol fat-free articles alcohol, glucose etc. elicited similar little variable postprandial changes.

10. Changes induced by ghee were more marked with greater quantum of changes in TC, HDL and LDL.

11. Crystalline cholesterol induced significant changes in lipid lipoprotein profile. Most of the subjects showed rise. The rise in different parameters was variable while some individuals responding with greater quantum of changes, other showed minor changes.

12. Prolonged feeding with 3 eggs and 250 ml of milk induced no change in lipid lipoprotein profile.

13. Reproducibility of feeding behaviour was well elicited in 2 of the subjects after 15 days of initial test.

14. Individual dietary risk assessment on the basis of an arbitrary scale showed an indeterminate and unpredictable risk in about half of the cases. This unpredictability of risk assessment was increased when egg yolk and non-cholesterol fatty articles are given.