

THE NUTRITIONAL STATUS OF OVO-LACTO-VEGETARIAN
AND NON-VEGETARIAN PRESCHOOL CHILDREN

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There is growing awareness of the influence that early dietary habits have on health later in life. It is known that Seventh Day Adventists, a majority of whom are ovo-lacto-vegetarians, have a lower incidence of cardiovascular disease than the general population (Wynder *et al.* 1959) and that their serum cholesterol and intake of animal fat is also lower (Walden *et al.* 1964). Most of these studies have been in adults - knowledge about young children is scarce. Indeed, information on young children generally is lacking (Owles 1975). These reasons have motivated the study of such a group.

Twenty 2 to 4 year old ovo-lacto-vegetarians (hereafter vegetarians) were matched for age and sex with twenty non-vegetarians. A 7 day record of weighed food intake was kept by one or both parents of each child. A 10 ml. sample of blood was collected by venipuncture for determinations of haemoglobin and serum B12, folate, cholesterol and triglyceride. At the same time height and weight were measured.

There were no differences between vegetarians and non-vegetarians for height, weight, haemoglobin and serum triglyceride.

Statistically significant differences ($P \leq 0.05$) between the groups were found for the variables in table 1.

TABLE 1 - Differences between vegetarians and non-vegetarians

Variables	Vegetarians	Non-vegetarians
Fat intake (g/day)	42	52
Cholesterol intake (mg/day)	132	313
Carbohydrate intake (g/day)	164	144
P/S ratio	.77	.33
β -carot. equiv. intake ⁺ (μ g/day)	1933	1309
Retinol intake ⁺⁺ (μ g/day)	247	422
Serum cholesterol (mg%)	164	186
Serum B12 (pg/ml)	381	576
Serum folate (ng/ml)	17.9	11.5

⁺significant for males only ⁺⁺significant for females only

No significant correlation was found between serum cholesterol and any parameter of fat or cholesterol intake for the group as a whole.

Intakes of the study group were compared with the recommended dietary allowances (N.H. & M.R.C. 1970). Energy consumption failed to meet recommendations while intakes of iron, retinol activity, thiamine, riboflavin, niacin equivalent and ascorbic acid all exceeded them.

This study attempted to assess the nutritional status, by means of dietary, anthropometric and biochemical measurements, of two groups of children with dissimilar food habits but alike in many other characteristics. According to these parameters both groups were found to be adequately nourished, but vegetarians had a lower mean serum cholesterol and lower intakes of saturated fat and cholesterol.

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