

THE EFFECT OF SHIFTWORK ON DIETARY PATTERNS OF
WORKERS ON SHORT ROTATION SHIFTS

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The relationship between nutrition and health may be influenced by the pattern of employment. Since shiftwork alters the daily routine, it is likely that shiftwork will alter the pattern of food use.

In this study, we investigated the effect of short rotation shift work on the frequency of use of different foods. Frequency is the number of times a day the food is consumed, each time being a particular meal or snack. Foods were categorised into groups as used in the Tables of Composition of Australian Food (Thomas and Corden 1977) for analysis of frequency.

Twenty-five industry workers aged 26 to 59 years were interviewed on each of the night (N), afternoon (A) and day shifts (D) to compile a record of food use during the previous 24 h. The shift pattern is shown below:

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
Shift	N	N	N	-	A	A	A	-	D	D	D	D	D	-	-	-	-	-	N	N	N	-

Day	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Shift	A	A	A	A	-	-	D	D	D	-	-	-	-	N

Frequency of use of food groups per day

Food group	Night-	Afternoon-	Day-shift
1 Milk and products	5.8	4.5*	5.5
2 Non-alcoholic beverages	5.1	4.7*	5.2
3 Sugars and sweets	3.3	3.2	2.6*
4 Vegetables	2.9	1.8*	2.8
5 Bread	1.7	2.2*	1.8
6 Fat	1.7	2.2*	1.8
7 Fruit	2.3*	1.7	1.5
8 Meat	1.8	1.7	1.8
9 Cakes, puddings, etc.	1.1	0.9	1.2
10 Condiments and misc.	0.7	0.6	0.7
11 Cereals, rice and pasta	0.5	0.5	0.8
12 Alcohol	0.4	0.3	0.8*
13 Eggs	0.3	0.3	0.3
14 Fish	0.2	0.2	0.3
15 Soups and sauces	0.1	0.2	0.2
16 Nuts and pulses	0.1	0.1	0.1

Significantly different from other two shifts ($P < 0.05$).

The results show that food-use pattern is affected by the particular shift in which the worker is engaged and also gives information on which groups of food are affected with respect to intake and therefore an indication of which nutrients might be affected.

THOMAS, S. and CORDEN, M. (1977). 'Metric Tables of Composition of Australian Food'. (Australian Government Publishing Service: Canberra).