

## THE EFFECT OF THE HABITUAL USE OF NICOTINE UPON THE BASAL METABOLIC RATE OF COLLEGE WOMEN

Ann Buntin and Helen B. Burton, Norman

As there is an impression that smoking, at least in women, is stimulating and as this stimulation can cause loss of weight through increased metabolism, it was decided to try to determine whether or not there was any difference in the basal metabolic rate of young women who were habitual smokers and those who never smoked.

Thirty normal college women were selected for the study. Half of the group had been smoking habitually for at least a year. The rest had never smoked.

The Benedict-Roth Recording Metabolism apparatus was used with the usual method and precautions. No smoking, eating or strenuous exercise was allowed in the morning before the tests were made. Tests were run on each subject on two different days and the lower figure used each time.

The average heat production for the non-smokers was 49.3 calories per hour or 9.26 per cent below the corrected Aub-Du Bois standard and for the smokers 51.2 calories per hour or 8.55 per cent below the corrected Aub-Du Bois standard or only 0.7 of 1 per cent higher than that of the non-smokers. This difference has no significance. Comparison of the basal metabolic rate of the two groups on the basis of age, weight and surface area likewise showed close relationship. There was about the same range in both groups.

From these results would conclude that smoking has no permanent effect upon the basal metabolic rate. One cannot predict that other groups of normal women will react similarly and whether nicotine may be a temporary rather than a permanent stimulant.

