Different Trends in Dietary Intakes of Foods and Nutrients across Psychological Stress Level among Middle-Aged Japanese Women with or without Habitual Exercise.

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INTRODUCTION: Mental illness is increasing globally. Well-balanced diet is not only base of physical health but also mental health. However, relationship between psychological stress and dietary intakes of foods and nutrients has not been fully clarified. To determine the relationships, we conducted a large-scale cross-sectional study.

METHODS: A total of 2,718 middle-aged (30–60 years old) Japanese women who underwent annual health checkup between 2005 and 2007. The subjects were divided into habitual exercisers and non-exercisers. Self-reported psychological stress (SRPS) was estimated by a brief questionnaire and classified into three levels (low, moderate or high). For each SRPS level in two habitual exercise groups, multivariate-adjusted means of dietary intakes of foods and nutrients, respectively, were calculated by a general linear model.

RESULTS: Proportions of habitual exercisers and non-exercisers were 45.4% and 54.6%, respectively. Among exercisers, SRPS was positively associated with western confectionaries, ‘sembei’ (Japanese-style confectionaries) and coke and negatively with green leafy vegetables, tomatoes, ‘raw lettuce and cabbage’, whisky, mayonnaise, insoluble dietary fiber, total dietary fiber and folate (P for trend < 0.05 for all). Among non-exercisers, SRPS was positively associated with wine, western confectionaries and saturated fatty acids, and negatively with tomatoes, seaweeds, beer (P for trend < 0.05 for all). Interactions between SRPS and habitual exercise were found for ‘raw lettuce and cabbage’ and juice (P for interaction < 0.05 for both).

CONCLUSIONS: Among middle aged Japanese women with or without habitual exercise, different associations were found between SRPS and dietary intakes of foods and nutrients. The authors thank a member of SBS Shizuoka Health Promotion Center.