

COMMENTARY

Modernization, less physical activity, more obesity and hypertension

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In this issue, Yang *et al.*¹ reported change in the prevalence of prehypertension and hypertension in Shangdong Province, a rural area in the east of China, from 1991 to 2007. The authors performed three surveys regarding blood pressure and lifestyles in large population samples aged 35–74 years. The prevalence of hypertension showed a steady increase from 20.4 to 30.6%. As the age range was fixed, the reasons for an increase in hypertension prevalence may be one or more of the following: increase in alcohol and/or salt consumption, increase in prevalence of overweight and obesity, less physical activity or less treatment. As a decline in alcohol intake and increase in hypertension awareness, treatment and control were shown, we may be able to rule out some of the above possibilities. The prevalence of overweight (body mass index between 25 and 30 kg m⁻²) increased from 19.7 to 49.7%, and that of obesity (body mass index ≥ 30 kg m⁻²) increased from 3.5 to 9.3%, paralleled with a decline in work-related high-strength physical

activity from 75.5 to 49.5%; the authors suggested that these factors contributed to an increase in prevalence of hypertension.

However, the important information lacking in this study is that relating to salt intake. Several studies have shown that blood pressure levels and hypertension prevalence in the northern part of China are higher than those in the southern part of China.^{2–4} This difference is explained in part by the difference in salt consumption.³ Although the prevalence of overweight in Japanese men is increasing,⁵ the mean systolic and diastolic blood pressures are declining.^{6,7} Thus, an increase in prevalence of obesity due to less physical activity alone may not provide the cause of this change. We need further studies to clarify this point.

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