Editorial



Optimizing Nutrition to Reduce Cardiometabolic Disease Burden: Strategies for a Healthier China

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China faces a significant challenge with increasing cardiovascular disease (CVD) incidence and mortality rates, imposing a heavy disease burden. As of 2020, approximately 330 million individuals in China suffer from CVD, including 245 million with hypertension and 13 million with stroke, not accounting for those with cardiometabolic risk factors^[1]. Given this context, shifting from a disease-centered approach to a population health-centered strategy, as outlined in the "Healthy China Action (2019–2030)", is critical.

Cardiometabolic risk factors, despite varying indicators worldwide, typically should be included abdominal obesity, elevated blood pressure, elevated blood glucose, and marginal abnormal blood lipid related indicators. Taking blood glucose for example, there was still about 10% adults with elevated blood glucose but not yet diagnosed as diabetes. Studies indicate that 54.0% of Chinese adults aged 18 to 59 and 67.8% of those aged 60 and older have two or more of these risk factors^[2,3]. Alarmingly, 15.6% of children and adolescents aged 6 to 17 years also exhibit these risks^[4]. The potential large base high-risk population underscores the urgency of comprehensive intervention on health influencing factors, whether for patients, high-risk or healthy population.

Zhong V et al. estimated the proportions of adults with diabetes achieving major clinical risk factor control, body mass index (BMI), lifestyle, and dietary targets specified in the Chinese diabetes guidelines. They found that only 4.4% achieved all 3 ABC targets (HbA1C, BMI and HDL-C), only 5.1% met all 4 primary lifestyle targets and few people met all dietary targets^[5]. Poor achievement of care targets may pose the risk of disease complications. In this issue, Li R et al. investigate the impact of glycemic control and diabetes duration on subsequent myocardial infarction (MI) in patients with both coronary heart disease (CHD) and type 2 diabetes

(T2D)^[6]. The study indicated that glycemic control and diabetes duration significant influence the subsequent occurrence of MI and emphasize the key role of strict glycemic control on patients with longer diabetes duration and atrial fibrillation.

An unhealthy lifestyle, particularly unsuitable dietary patterns, significantly contributes to the rising trends in cardiometabolic factor and CVD in China. National nutrition surveillance data have shown that suboptimal dietary factors are linked to a considerable proportion of cardiometabolic mortality. Specifically, high sodium intake (17.3%), low fruit consumption (11.5%), and low marine omega-3 fatty acids (9.7%) were major contributors to cardiometabolic deaths between 2010 and 2012^[7]. Recently the Food and Agriculture Organization (FAO) and the World Organization (WHO) recommend healthy diets that are adequate, balanced, moderate, and diverse [8].

Despite the known benefits of marine omega-3 fatty acids, the consumption of fish and seafood in China remains in lower level, with nearly half of Chinese adults consuming no seafood. Conversely, there is excessive intake of livestock meat, particularly pork. In this issue, Hu H et al. examined the relationship between fish consumption and risk of incident stroke among Chinese population. The results indicates that higher fish consumption correlates with a reduced risk of stroke, particularly among individuals with moderate-to-high stroke risk^[7]. These findings highlight the need for dietary interventions that promote increased fish consumption to mitigate stroke risk.

Addressing the cardiometabolic disease burden in China requires a multi-faceted approach, emphasizing dietary improvements, lifestyle changes, and effective disease management. Public health initiatives should focus on educating the population about healthy eating habits and the importance of lifestyle and clinic risk factor control. Future research should aim to

develop and implement targeted population interventions that encourage sustainable lifestyle changes, ultimately reducing the prevalence of cardiometabolic diseases and enhancing the overall health of the Chinese population.

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REFERENCES

- 1. Report on Cardiovascular Health and Diseases in China 2023: An Updated Summary. Biomed Environ Sci, 2024; 37, 949-92.
- Wang Z, Zhang B, Wang H. The current status of cardiovascular metabolic risk factors among adults aged 18-59 in 15 provinces of China and the impact of demographic and economic factors. Chin J Epidemiol, 2018; 904-8.

- 3. Wang L, Zhang B, Wang H, et al. Cardiovascular metabolic risk factors and population influencing factors among elderly people in 15 provinces (autonomous regions, municipalities directly under the central government) of China in 2015. Journal of Hygiene Research, 2019; 173-8.
- 4. Hu X, Jiang H, Zhang B. Epidemiological characteristics of cardiovascular metabolic risk factors in children and adolescents aged 7–17 in 15 provinces of China. Environmental and Occupational Medicine, 2021; 3, 833–8.
- Zhong VW, Yu D, Zhao L, et al. Achievement of Guideline-Recommended Targets in Diabetes Care in China. Ann Intern Med, 2023; 176, 1037–46.
- 6. Li F, Dou Y, Mo C. Glycemic Control and Diabetes Duration in Relation to Subsequent Myocardial Infarction among Patients with Coronary Heart Disease and Type 2 Diabetes Biomed Environ Sci. 2025; 38, 31-40.
- 7. He Y, Li Y, Yang X, et al. The dietary transition and its association with cardiometabolic mortality among Chinese adults, 1982–2012: a cross-sectional population-based study. The Lancet Diabetes & Endocrinology, 2019; 7, 540–8.
- 8. WHO, FAO. What are healthy diets. 2024.