Editorial

Managing Healthy Weight across the Lifespan in China: From Age-specific Standards to Behavioral Interventions

Ning Wang[#]

Obesity and unhealthy weight have emerged as one of the most pressing public health challenges worldwide and represent major contributors to the growing burden of non-communicable diseases (NCDs), disability, and premature mortality[1]. In China, rapid demographic aging, urbanization, and lifestyle transitions have further accelerated the obesity epidemic, creating substantial challenges for disease prevention and healthcare systems. Importantly, healthy weight cannot be defined using a single criterion across all age groups. Physiological characteristics, metabolic demands, and disease risks vary considerably throughout the life course, necessitating age-specific assessment standards and tailored intervention strategies. In this issue, two studies provide complementary evidence addressing this challenge[2,3]. One establishes evidence-based body mass index (BMI) recommendations for the oldest old, while the other examines the joint influence of sleep duration and physical activity on central obesity among general adults. Together, these studies contribute to a more comprehensive framework for healthy weight management across the lifespan.

Population aging has become one of the significant demographic transitions in China, making the health management of adults aged 80 years and older an increasingly important priority. Conventional BMI criteria developed for younger adults may not be appropriate for this age group, particularly in light of the widely recognized "obesity paradox", whereby moderately elevated BMI is associated with lower mortality and better functional outcomes among the oldest old[4]. Based on evidence synthesized from large prospective cohorts and studies involving East Asian populations, Ma et al. interpreted the newly released national standard, *Appropriate Body Mass Index Range and Weight Management Standards for the Oldest Old (WS/T 868-2025)*, which recommends an optimal BMI range of 22.0–26.9 kg/m^2 for Chinese adults aged 80 years and older[2]. Compared with existing adult criteria, the higher lower threshold reflects growing recognition that unintended weight loss may pose greater health risks than moderate overweight in advanced age. Beyond redefining BMI thresholds, the standard provides practical guidance for anthropometric assessment, nutritional management, and physical activity among both ambulatory and non-ambulatory elderly individuals. By shifting the focus from weight reduction to weight stability and functional preservation, this standard fills a critical gap in geriatric healthcare and offers a unified framework for healthy aging in China.

While age-specific standards are essential for older adults, lifestyle-related obesity prevention remains a priority for the broader adult population. Central obesity is a particularly important risk factor for cardiometabolic diseases and has become increasingly prevalent among Chinese adults[5]. Using data from more than 100,000 participants in the China-PAR project, Zhang et al. investigated the joint associations of sleep duration and physical activity with central obesity[3]. Their findings demonstrate that both short sleep duration (< 7 h/day) and long sleep duration (≥ 9 h/day) are independently associated with elevated risks of central obesity. Individuals reporting both inadequate physical activity and short sleep duration exhibited the highest risk of central obesity, highlighting the importance of considering multiple lifestyle behaviors simultaneously rather than in isolation.

A notable strength of the study lies in its application of isotemporal substitution analysis, which translates epidemiological findings into actionable behavioral recommendations[3]. Among adults sleeping longer than 8 hours per day, replacing 30

doi: 10.3967/bes2026.047

National Center for Chronic and Non-communicable Disease Control and Prevention, Chinese Center for Disease Control and Prevention, Beijing 100050, China

minutes of sleep with moderate-to-vigorous physical activity was associated with a lower likelihood of central obesity. In contrast, for individuals experiencing insufficient sleep, increasing sleep duration may provide greater benefits than additional exercise alone. The study also revealed sex-specific differences, with prolonged sleep showing a stronger association with central obesity among females and short sleep duration exerting a greater adverse effect among males. These findings underscore the complex interactions between sleep and physical activity and suggest that effective obesity prevention strategies should emphasize the coordinated optimization of multiple health behaviors.

The implications of healthy weight management extend beyond adulthood and old age. A life-course perspective is essential because obesity frequently tracks from childhood into adulthood, contributing substantially to long-term cardiometabolic risk[6]. China currently bears one of the largest burdens of childhood and adolescent obesity worldwide[7]. The development of obesity in young populations is related to a complex interplay of biological, behavioral, nutritional, psychological, and environmental determinants[8–10]. Therefore, sustainable obesity prevention requires upstream interventions that begin in early life. These interventions should address the multifactorial precursors of excess weight gain before obesity becomes entrenched and difficult to reverse.

Taken together, the studies in this issue highlight the importance of adopting a life-course approach to obesity prevention and weight management. From redefining evidence-based BMI standards for the oldest old to identifying modifiable behavioral risk factors for central obesity in adults, these investigations reinforce a fundamental principle: healthy weight management is not a one-size-fits-all endeavor. No single BMI threshold, lifestyle behavior, or age group can adequately capture the complexity of obesity and its health consequences. As China confronts the dual challenges of population aging and rising obesity prevalence, prevention efforts must move beyond uniform recommendations and embrace tailored approaches that promote healthy weight at every stage of life.

[#]Correspondence should be addressed to Ning Wang, E-mail: wangning@ncncd.chinacdc.cn

Received: June 10, 2026;
Accepted: June 15, 2026

REFERENCES

1. GBD 2021 Adult BMI Collaborators. Global, regional, and national prevalence of adult overweight and obesity, 1990-2021, with forecasts to 2050: a forecasting study for the Global Burden of Disease Study 2021. Lancet, 2025; 405, 813−38.
2. Ma XY, Chen PL, Chen C, et al. Interpretation of appropriate range of body mass index and body weight management standards for the oldest old: evidence-based recommendations from China. Biomed Environ Sci, 2026; 39, 703−10.
3. Zhang YJ, Hu ML, Yang ZY, et al. Joint association of sleep and physical activity with central obesity in Chinese adults. Biomed Environ Sci, 2026; 39, 619−29.
4. Lv YB, Mao C, Gao X, et al. The obesity paradox is mostly driven by decreased noncardiovascular disease mortality in the oldest old in China: a 20-year prospective cohort study. Nat Aging, 2022; 2, 389−96.
5. Pan XF, Fang ZF, Zhang LL, et al. Obesity in China: current progress and future prospects. Lancet Diabetes Endocrinol, 2026; 14, 178−86.
6. Kelly AS, Armstrong SC, Michalsky MP, et al. Obesity in Adolescents: A Review. JAMA, 2024; 332, 738−48.
7. Yuan CZ, Dong YH, Chen H, et al. Determinants of childhood obesity in China. Lancet Public Health, 2024; 9, e1105−e1114.
8. Zhu QR, Kok ED, Bekele HT, et al. Association of serum folate and vitamin B12 concentrations with obesity in Chinese children and adolescents. Biomed Environ Sci, 2024; 37, 242−53.
9. Tong YY, Li M, Su YJ, et al. Sex- and type-specific relationship of childhood maltreatment with general obesity and abdominal adiposity in Chinese college students. Biomed Environ Sci, 2024; 37, 1435−40.
10. Li M, Gao S. A new classification system for childhood and adolescent obesity: definition of the BCAMS classification. Biomed Environ Sci, 2025; 38, 376−8.