In a large Chinese cohort study, Chen et al. explored the relevance of guidelines for healthy gestational weight gain (GWG) in pregnancy and compared the 2009 US National Academy of Medicine (NAM, formerly Institute of Medicine) guidelines against the 2021 Chinese Nutrition Society guidelines, which were derived from more than 100,000 Chinese women. They focused on offspring outcomes in children recruited at age 3 years in 2017 to 2018, with follow-up at ages 4 and 5 years.

A total of 3,170 singleton births at term (≥37 and <42 weeks’ gestation) were enrolled, and child height, weight, fat mass, fat-free mass, and percentage body fat were measured and relevant indices were calculated, including body mass index (BMI; calculated as weight in kilograms divided by height in meters squared). GWG was classified as insufficient, appropriate, or excessive according to both sets of guidelines, and outcomes were compared by criteria. The mean (SD) maternal prepregnancy BMI was 22.3 (3.4). By the Chinese criteria, prevalence rates were 14.1% for insufficient GWG, 48.1% for appropriate GWG, and 37.9% for excessive GWG; according to the NAM guidelines, the rates were 39.7% for insufficient GWG, 37.2% for appropriate GWG, and 23.1% for excessive GWG. A substantive difference in the proportions of Chinese women meeting recommended GWG was noted between criteria, with potential implications around antenatal healthy lifestyle recommendations during pregnancy. Child outcomes were generally similar across both GWG criteria, except that there was less macrosomia at birth and fat mass and obesity at 4 and 5 years of age by the Chinese guidelines compared with NAM guidelines, without alteration in nutritional status.

Healthy GWG is a highly topical area of international public health significance. Worldwide, adiposity is increasing, with both higher BMI at conception and escalating rates of excess GWG, both independently associated with adverse health implications for women and their offspring. In this context, the 2009 NAM-recommended healthy GWG according to BMI at conception was as follows: underweight (BMI <18.5), GWG of 12.5 to 18 kg; healthy weight (BMI 18.5-24.9), GWG of 11.5 to 16 kg; overweight (BMI 25-29.9), GWG of 7 to 11.5 kg; and obese (BMI ≥30), GWG of 5 to 9 kg.

Two recent reviews captured clinical practice guidelines internationally including across Asia, for management of GWG, including routine GWG monitoring and recommendations. Both reported considerable variation and noted overall poor guidelines. This emphasizes the vital need to develop high-quality recommendations and guidelines on healthy GWG monitoring and targets that are relevant to all populations. Furthermore, level I evidence across 117 randomized clinical trials now shows that antenatal lifestyle intervention is effective at reducing GWG, and the American Prevention Taskforce is recommending its implementation. To enable implementation of healthy lifestyle during pregnancy, clarity around recommended GWG across diverse populations is fundamental.

Hence, the issue of appropriate GWG recommendations in Chinese women addressed by Chen et al. is important and timely. It is also important because people of Asian race or ethnicity constitute approximately 60% of the world’s population, include diverse groups, and have different cardiometabolic risk. As Chen et al. note, generally, people of Asian descent have a shorter stature, a lower BMI, and a higher percentage of body fat than do White populations, and metabolic conditions often occur at a lower BMI. It has therefore been proposed that NAM guidelines, which were developed using historical data from largely White women, may not be appropriate to determine healthy GWG recommendations for women of Asian descent.
A systematic review and meta-analysis\(^5\) of 23 studies comprising 1.3 million pregnancies explored associations between NAM GWG guidelines and adverse pregnancy outcomes. A subgroup analysis on ethnicity, comparing Asia, the US, and Europe, showed that women outside Asia had higher prepregnancy BMI, higher prevalence of GWG above guidelines, and a lower rate of GWG below guidelines, than women in Asia.\(^5\) Those results suggested that use of Asian regional BMI categories to determine GWG recommendations resulted in similar proportions of women in each GWG category and similar pregnancy outcomes across continents. It remains unclear whether applying different recommended rates of GWG or applying different BMI cutoffs, or a combination of both these strategies is most appropriate to guide healthy GWG in Chinese populations. Furthermore, the relevance of Chinese recommendations to other Asian populations and to immigrant populations living under westernized conditions still needs to be established.

Ongoing controversy in this area has prompted the World Health Organization to invite expressions of interest for the development of global GWG standards.\(^10\) This seeks to create large multinational data sets and apply advanced analytics to establish optimal GWG ranges and recommendations associated with the lowest risks of adverse maternal and infant outcomes applicable internationally. We welcome this initiative and note that for implementation, recommendations and guidelines need to be high quality, accessible, equitable, and appropriately communicated to health care practitioners and to pregnant women, without bias or stigma. Work in this area is under way, and racial and ethnic considerations will be important to improving health outcomes for women and the next generation globally.

**ARTICLE INFORMATION**


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