

carried out to establish a frame for analysis of the strategies utilized in Chile to tackle the problem. Finally, conclusions were drawn.

Results: A progressive increase in obesity and nutrition-related chronic diseases is observed in Chile¹. Population changes in diet and physical activity are the main determinant factors; however, recent evidence suggests that specific patterns of prenatal and postnatal growth are also potential contributors². Since a rising trend in obesity is observed in children under 6 years of age and pregnant women, especially among the less affluent segments of the population¹, maternal and childhood nutrition policies are particularly relevant. Current policies pay special attention to weight control during pregnancy through education and counselling, and to tackle nutrition deficiencies with dairy supplementary drinkable feeding and specific nutrients, although adherence to the latter is low³. Exclusive breastfeeding for 6 months increased from 16 to 43.1% between 1993 and 2002, showing an inverse association with maternal work⁴. Policies to address childhood obesity include reformulation of the National Complementary Food Program⁵ and joint actions with the educational sector to promote healthy nutrition and physical activity among preschool children⁶.

Conclusions: Current policies might not reverse the rising trend of maternal and childhood overweight and obesity. The majority of the strategies implemented in Chile are centred on individual responsibility, even those targeting children. These approaches tend to blame the victim for poor health outcomes, without taking into account environmental determinants of the problem. Research findings regarding socio-cultural aspects involved in feeding practices during pregnancy and early childhood should be taken into account in order to improve educational interventions. A more ecological approach, as well as upstream population-based interventions, should be encouraged. Research on policies related to regulation of food processing (salt, sugar and fat content) of products manufactured and marketed for children is necessary.

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Adolescent build and diabetes: The Guangzhou Biobank Cohort Study

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Objective: An epidemic of diabetes is emerging in recently developed and developing Asia despite relatively low levels of obesity and ischemic heart disease (IHD). Muscle mass reduces vulnerability to type 2 diabetes, for which adolescence is a key developmental window. We examined the association of adolescent build with diabetes in a cohort who grew up in a developing country.

Methods: We used linear multivariable regression in 19,505 older (≥ 50 years) Chinese from the Guangzhou Biobank Cohort Study (phases 2 and 3) to examine the adjusted associations of recalled adolescent relative weight at 15 and 20 years (light ($n = 6,100$), average ($n = 10,954$), heavy ($n = 2,451$), i.e. build, with diabetes and waist-hip ratio. We also examined whether the associations varied by sex.

Results: Adolescent build had no sex-specific associations with later life diabetes but did with waist hip ratio. In later life relatively heavy adolescents had a lower risk of diabetes (odds ratio 0.85, 95% confidence interval (CI) 0.73 to 0.99) compared to light adolescents adjusted for age, sex, life course socio-economic position, lifestyle and linear growth (leg length and seated height). Similarly adjusted, heavy adolescents also had higher waist-hip ratio, particularly in men (mean difference 0.01, (95% CI 0.004 to 0.02) rather than women (0.006, 95% CI 0.002 to 0.009).

Conclusions: Relatively heavy build in adolescence may be associated with a lower risk of later life diabetes, perhaps via greater muscle mass, although the same exposure was also positively associated with central obesity particularly in men. Childhood physical activity to build muscles may be relevant to diabetes prevention. Although, the underlying physiology processes are unknown, we speculate that a dual process may exist whereby nutritionally and inter-generationally driven increases in pubertal sex steroids increase men's risk of IHD (via central obesity and lipids), but decrease men and women's risk of diabetes (via muscle mass). Support: The University of Hong Kong (HKSAR), Guangzhou Public Health Bureau (China), Guangzhou Science and Technology Bureau (China), The University of Birmingham (UK).

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Perinatal programming of appetite control – determination of gastric ghrelin expression and effects on intracellular energy sensing within the gut

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