

The South Asian phenotype: greater clarity would help to improve cardiometabolic health

Andrew Peter Hills

School of Health Sciences, College of Health and Medicine, University of Tasmania, Launceston, Tasmania, 7250, Australia

In a recent paper,¹ renowned endocrinologist and proponent of the thin-fat Indian phenotype, Dr Chittaranjan Yajnik, provided an erudite overview of the phenotypic characteristics of South Asian Indians in the context of the double burden of malnutrition.

Despite numerous publications detailing differences between Indians of South Asian origin and white Europeans, there are major gaps in our knowledge of ethnic differences in size, shape, and body composition across the lifespan with implications for health and disease.

Many years ago, Yajnik² referenced the drawback of simple anthropometric indices and only very recently has the 'quality' of growth of infants been quantified using objective body composition assessment.³ Other work in adults by Sattar and Gill⁴ reported significantly higher type 2 diabetes prevalence in South Asians at an earlier age and lower body mass index (BMI) than white Europeans. In a recent overfeeding intervention, Sattar and Gill's group compared the effect of induced weight gain in South Asian and white European men without overweight or obesity and reported a higher susceptibility of the former group to adverse metabolic consequences with weight gain.⁵ We know even less about responses to weight loss interventions in South Asians.

Much of the research to date has been cross-sectional and dominated by anthropometry. It's time to consider

longitudinal studies of South Asians to profile phenotypic changes, ideally across BMI and body fat levels. A better understanding of phenotypic changes using objective measures would help to inform novel approaches to prevent and manage cardiometabolic conditions in South Asia.

Contributors

Conceptualisation: APH.

Writing-original draft: APH.

Declaration of interests

None to declare.

References

- 1 Yajnik CS. Early life origins of the double burden of malnutrition: life can only be understood backwards. *Lancet Reg Health Southeast Asia*. 2024;28:100453.
- 2 Yajnik CS, Yudkin JS. The Y-Y paradox. *Lancet*. 2004;363:163.
- 3 Murphy-Alford AJ, Johnson W, Nyati LH, et al. Body composition reference charts for infants from birth to 24 months; multi-center infant body composition reference study (MIBCRS). *Am J Clin Nutr*. 2023;117(6):1262–1269.
- 4 Sattar N, Gill JMR. Type 2 diabetes in migrant south Asians: mechanisms, mitigation, and management. *Lancet Diabetes Endocrinol*. 2015;3:1004–1016.
- 5 McLaren J, Gao X, Ghouri N, et al. Weight gain leads to greater adverse metabolic responses in South Asian compared with white European men: the GlasVEGAS study. *Nat Metab*. 2024 Aug;16. <https://doi.org/10.1038/s42255-024-01101-z> [Online ahead of print].



The Lancet Regional Health - Southeast Asia 2024;29: 100482

Published Online xxx
<https://doi.org/10.1016/j.lansea.2024.100482>

E-mail address: andrew.hills@utas.edu.au.

© 2024 The Author. Published by Elsevier Ltd. This is an open access article under the CC BY-NC license (<http://creativecommons.org/licenses/by-nc/4.0/>).