SUGAR RESTRICTION AND HEALTH

Sugar helped build the human brain. A 2026 Science paper by Brand-Miller et al. (1) models glucose demand across four million years of hominin evolution and argues that fruit and honey sugars, not starch, fuelled the brain's early expansion, long before cooking made starch digestible. That history left a mark: an innate, almost atavistic pull toward sweetness, wired in by selection because sugar once meant fast, reliable energy for an expensive organ.

That same preference now collides with a radically different environment. Sugar that was once rare and seasonal is, for most of the world, constant and abundant from infancy onward: a textbook case of evolutionary mismatch.

A new PNAS study by Zhu and Zhang (2) puts a number on the cost. Exploiting the abrupt end of UK sugar rationing in September 1953 as a natural experiment, the authors followed 64,761 UK Biobank participants whose first 1,000 days of life fell before or after that date. Adults who spent their first 1,000 days under rationing show markedly lower cancer incidence five decades later (liver and biliary tract, rectal, lung, prostate, and breast cancers), longer telomeres (about 2.2 fewer years of biological ageing), and lower chronic immune activation. The effect does not stop at biology: rationed cohorts still eat less sugar and follow healthier, more varied diets in their fifties, evidence that early sugar exposure durably reshapes taste itself.

1. https://www.science.org/doi/10.1126/science.aed8437
2. PNAS in press