

OBESITY IN INDIGENOUS PEOPLES IN COLONIZED COUNTRIES

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Present an overview of obesity amongst colonized populations during the nutritional transition, with a focus on Indigenous Australians, and the interplay between genetics and environment. Indigenous Australians have higher rates of obesity (29%-86%) than other Australians (17%), plus higher levels of body fat for a given BMI, with its attendant cardiovascular risks. Eliciting aetiology of obesity is highly controversial. Studies that elicit no difference in calorie intake or macronutrient ratios between thin and fat people within a population appear to suggest a genetic aetiology. However, case-control studies cannot reliably establish causality of a ubiquitous exposure. The comparison between two different time points or geographical locations has shown the role of drastic changes in calories and macronutrient profiles in creating upheavals in metabolic health. Genes load the gun, but the environment pulls the trigger. Those with hunter-gatherer lifestyles that have rapidly and recently been subject to colonization are particularly prone to obesity and diabetes. The 'thrifty genotype' hypothesis suggests that insulin resistance conferred a selective advantage during times of food paucity. These genetic adaptations became counter productive once the food environment changed. A meta-analysis demonstrated that lower carbohydrate, higher fat diets work best in those who are insulin-resistant, as in many indigenous populations in developed countries. Fascinating experiments in which Indigenous Australians reverted to pre-colonial diets demonstrated weight loss and reversal of type 2 diabetes. This suggests that supplanting their traditional diets with modern processed diets has been catastrophic for the metabolic health of indigenous Australians.

BIOGRAPHY

Rashmi Dixit is a paediatric and adult infectious diseases Specialist with an interest in metabolic medicine and the interaction between communicable and non-communicable diseases. She has completed a second fellowship in Travel and Tropical Medicine, in which her dissertation was on obesity in colonised populations and developing countries, which was published in a peer-reviewed journal, and has published several first author papers. She has completed a PhD at the University of Sydney on influenza in vulnerable populations, which examined the role of metabolic risk factors for severe influenza in indigenous Australians.

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