

Letter to Editor

Decreasing the Cardiovascular Disease Burden in Māori Children: The Interface of Pathophysiology and Cultural Awareness

Letter to the Editor

The incidence of cardiovascular disease (CVD) is rapidly increasing worldwide¹. While CVD is typically associated with middle or old age, the atherosclerotic process can begin early in childhood and is occurring at an increasing rate²⁻⁴. The prevalence of childhood obesity is thought to be the main factor contributing to this epidemic¹. Within New Zealand, much higher rates of obesity have been reported among Māori (indigenous) children (11.8%) than in their counterparts of European ancestry (5.5%)⁵. The prevalence of obesity has taken its toll on the Māori culture, placing these cohorts at greater risk for obesity-related cardiometabolic conditions, including dyslipidemia, hypertension, type 2 diabetes mellitus and subsequent CVD⁶. Cardiometabolic health can be improved by decreasing adiposity (obesity) as well as by improving cardiorespiratory function (cardiorespiratory fitness); however, it is currently unclear whether “fatness” or “fitness” is the most important determinant of cardiometabolic health and CVD risk in children⁷⁻⁹.

Adiposity, inactivity and low physical fitness have emerged as independent risk factors for CVD in adults¹⁰. Strong evidence from studies of adults suggests that being fat and fit is better than being lean and unfit¹¹. In children, the evidence is less clear. A recent study concluded that leaner and less fit children have lower levels of cardiometabolic risks than their heavier, fitter peers⁷. This is at odds with the adult literature and the findings of a previous multicenter trial in children that reported an inverse association between physical activity and cardiometabolic risk, even after adjusting for the fitness levels and fatness⁹. The discrepancy in these findings may be attributed to methodological differences; the more recent study⁷ classified fatness using body mass index (BMI), whereas the older study utilized the superior skinfold thickness technique to more directly assess fatness. Nonetheless, given the increasing rates of obesity¹ and inactivity¹² among children and adolescents, and the important associations with CVD, this is an area that warrants further attention.

Understanding the pathophysiological underpinnings of CVD among Māori children is the first step; new physiological knowledge cannot be effectively translated without an appreciation for “human fac-

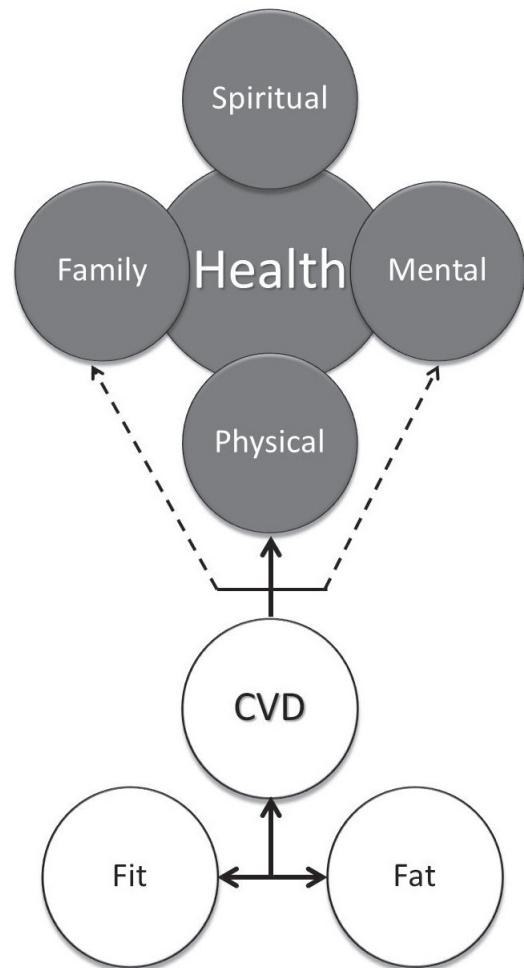


Fig. 1. The interface of pathophysiology and cultural awareness.

tors.” That is, health promotion strategies will likely be ineffective if the population does not fully accept said strategies (**Fig. 1**). Researchers and health care providers must be cognizant that the concept of ‘health’ may differ between indigenous and non-indigenous groups. Quite at odds with the Western model, which perceives health as ‘the absence of sickness,’ the Māori traditionally view health as an all-embracing concept. Maori health thus includes spiritual, family, mental and physical well-being¹³. For the Māori, issues of Te Whenua (land), Te Reo (language) and Whanaungatanga (extended family) are central to culture and health¹⁴. Therefore, lifestyle modification

strategies are likely to be limited unless they are underpinned by a holistic perspective of health. By the same token, Māori are more likely to pay greater attention to their physical health if they are fully aware of the interactions between poor physical health and emotional, mental and spiritual elements¹⁵. Researchers and health care providers must be conscious of the interface between pathophysiology and cultural awareness. This can be best achieved by working alongside Māori leaders to design and deliver health promotion strategies in a culturally competent manner.

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