

Physical activity levels of school-aged child with congenital heart disease in Taiwan

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摘要

Abstract

Congenital heart disease (CHD) is a common childhood health problem. The incidence of CHD is estimated between 8 and 10 per 1,000 children in Taiwan. Evidence indicates that exercise capacity for children with CHD can reach the level of children with no CHD after surgical repair. However, it is necessary to further investigate if their physical activity is comparable to their peers who have no CHD to prevent chronic disease caused by physical inactivity. This study aimed to investigate the differences of physical activity level (PAL) between Taiwanese children with no CHD and children after total correction for CHD. A case control design was used in this study. During the study period, 68 schoolchildren were recruited: 34 children with CHD and 34 age- and gender-matched children who have no CHD. The data collection tools included three-day physical activity record (3DPAR) and RT3 triaxial accelerometer. The average total energy expenditure (TEE) measured by both 3DPAR and RT3 triaxial accelerometer were lower for boys with CHD than boys with no CHD ($t = -3.39$, $p = .002$; $t = -3.43$, $p = .002$). PAL was also lower for boys with CHD than for boys with no CHD ($t = -2.29$, $p = .03$). Whereas, TEE did not differ between girls with CHD and girls with no CHD ($t = 0.58$, $p = .57$; $t = -0.27$, $p = .79$). Overall, the level of moderate-to-vigorous physical activity (MVPA) was similar between children with CHD and children with no CHD. These results suggest that boys with CHD engage in less physical activity than do boys with no CHD. Both children with CHD and children with no CHD should be encouraged to engage in more physical activity especially MVPA.