

Decreased Daily Physical Activity in Adults with Congenital Heart Disease

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Objectives: Regular physical activity is known to sustain physical and mental health and reduce all-cause mortality. Despite recent guidelines in the fear of heart failure and sudden death, adults with congenital heart disease (ACHD) were not encouraged to be physically active in the past. By comparing ACHD with healthy controls, this study aimed to examine physical activity among these groups.

Methods: In 100 ACHD (42.7 ± 8.6 years, 50.0% female) and 57 controls (39.1 ± 14.7 years, 68.4% female) daily steps and active minutes (>3 MET) were recorded using an activity tracker (Garmin vivofit 3) for one week between September 2017 and November 2018. Comparison was performed using a general linear model corrected for age, sex and body-mass-index.

Results: ACHD were significantly less active per day than controls (ACHD: 8.1 ± 18.5 minutes, controls: 19.5 ± 18.9 minutes, $p=.001$). Daily steps tended to be reduced in ACHD (ACHD: 9324 ± 3628 steps, controls: 10415 ± 3706 steps, $p=.087$). ACHD were on average significantly more active on weekends compared to weekdays (weekend: 11.4 ± 19.1 minutes, week: 7.1 ± 9.6 minutes, $p<.001$). According to the activity tracker's data, 14.8% of the ACHD and 30.4% of the healthy reference cohort reached the WHO guideline of 150 minutes of moderate and vigorous activity a week.

Conclusions: ACHD are significantly less physically active compared to healthy controls, especially regarding intensity. In a medical context most patients have no restriction of physical activity and more advice concerning physical activity can be recommended.