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**Sports in children and adolescents with congenital heart defects**

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Background: Age-appropriate physical activity is an important basis for healthy physical and mental development for children and adolescents with congenital heart defects (CHD)

Purpose: The main goal of this study was to learn more about the physical activity of young and adolescent CHD-patients to understand patient’s needs physical activity and to improve the medical advice regarding physical activity and sports by taking the CHD-severity into account.

Methods: An online-questionnaire was developed. CHD patients registered in the German National Register for Congenital Heart Defects were invited by email/post to join the study. In total, 1,718 patients took part. 1,262 patients have finished the questionnaire and are included in the statistical analysis (average age: 11.6±3.1 years; 588 women). CHD severity: 411 patients with simple CHD, 423 with moderate CHD, 364 with complex CHD and 64 with unclassified CHD. The study participants were asked to answer questions regarding physical activity and (school) sports to evaluate their activity level and their individual needs regarding sports.

Results: We identified 831 (65.9%) patients who reported they were exercising sports for at least three days or more for 60 minutes or longer per week (simple CHD: 68.9%; moderate CHD: 64.5%; complex CHD: 63.5%; other CHD: 68.8%). Over all 47 patients (3.7%) stated that they had no regular school sports and 12 patients (1%) reported to have less than one regular sports lesson per week. Out of the 1,215 patients who reported to have regular school sports (simple CHD: 97.3%; moderate CHD: 98.1%; complex CHD: 94.5%; other CHD: 87.5%), the patients stated about how hard they usually work in a regular sports lesson as follows: "without sweating and without shortness of breath" (188 patients, 15.5%; simple CHD: 15.4%; moderate CHD: 17.1%; complex CHD: 14.8%; other CHD: 7.1%), "a little bit sweaty and a bit short of breath" (825 patients, 67.9%; simple CHD: 68.8%; moderate CHD: 65.3%; complex CHD: 69.9%; other CHD: 75%), "a lot of sweat and a lot of shortness of breath" (202 patients, 16.5%; simple CHD: 15.8%; moderate CHD: 17.6%; complex CHD: 16.3%; other CHD: 17.9%).

Conclusions: Overall, young and adolescent patients with CHD appear to be exercising sports regularly and are well integrated into school sports. Although there are slight differences between the individual degrees of CHD severity. These differences can be interpreted as minor fluctuations.