FUNCTIONAL OUTCOME IN CHILDREN AND ADOLESCENTS WITH ISOLATED LEFT-TO-RIGHT SHUNT

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INTRODUCTION
Atrial (ASD) and ventricular septal defects (VSD) represent the two most common congenital heart diseases (CHD) and belong to the simple CHDs. Nevertheless, they represent a chronic diseased population and these patients have increased long-term functional impairments and higher cardiac morbidity.

OBJECTIVES
The objective of this study was to investigate several functional outcome measures in children with ASD and VSD in comparison with a healthy control group (CG).

PATIENTS AND METHODS
From May 2014 to October 2018, we examined 148 patients (72 girls, 11.7 ± 3.6 years) with isolated shunts for their Health-Related Physical Fitness (HRPF), arterial stiffness, Intima-Media Thickness (IMT) and Health-Related Quality of Life (HRQoL).

RESULTS
HRPF was tested by five tasks of the FITNESSGRAM®. The functional arterial stiffness measures, central systolic blood pressure and pulse wave velocity (PWV) were analyzed with an oscillometric device. Structural changes were characterized by IMT of the Arteria carotis communis. HRQoL was assessment of a subjective perspective with the KINDL questionnaire. For comparison, a CG of 2002 children (48.9% girls, 12.8 ± 2.8 years) was recruited within two recent school projects.

CONCLUSION
Children with ASD or VSD have impaired HRPF but fortunately, they have no other functional and structure limitations in terms of arterial stiffness measures and no reduced HRQoL. Early childhood sports promotion would be a good intervention to counteract these restrictions in HRPF at an early stage.