

**KidsTUMove: Background and outlook for healthy exercise in children and adolescents with congenital heart diseases**

*Stoecker N.(1), Oberhoffer R. (1,2), Ewert P. (2)  
Chair for Preventive Pediatrics, TU Munich (1)  
Clinic for pediatric cardiology and congenital heart disease  
German Heart Center Munich (2), Germany*

The main focus of children with congenital heart defects (CHD) nowadays is no longer on survival, but on their quality of life and daily life. This is why their sport activities are playing an important role. Data of the project kidsTUMove is presented.

108 children with CHD as well as a control group (CHD  $9,14 \pm 2,24$  years, 183 control  $8,78 \pm 1,67$  years) absolved a motoric test battery to check force, coordination, reaction, balance, flexibility and speed. Physical activity (KA) was measured by accelerometry (Actigraph, gt3x+) (88 CHD  $9,57 \pm 2,58$  years, 66 control  $9,86 \pm 1,90$  years). Health-related quality of life (hLQ) (263 CHD  $9,55 \pm 2,93$  years, 73 control  $9,67 \pm 3,26$  years) was collected using KINDL questionnaire. The data was divided into CHD, CHD ambulant and children with CHD who participated in a kidsTUMove project.

Results: Motoric: CHD achieved lower values than heart-healthy children in the motor characteristics of strength and coordination. On the other hand, heart-healthy children achieved significantly worse values in reaction. No differences: speed, flexibility and balance. CHD who had participated in a kidsTUMove summer camp achieved higher scores than CHD ambulant.

KA: There was no difference in the daily KA. According to Freedson algorithm, children who had participated in a kidsTUMove project reached higher KA than CHD ambulant ( $275,24 \pm 67,40$  min.).

hLQ: CHD achieved higher values in hLQ (total) than heart-healthy children (CHD:  $77,66 \pm 12,66$ , heart disease:  $75,1 \pm 10,62$ ).

Since the KA is an important health care provider and motor skills have an impact on many areas of life, they should be regularly examined. And patients should be motivated and advised to integrate KA as a central and permanent component in their daily life. Activities such as the kidsTUMove Sommercamp or kidsTUMove sports groups help children with CHD (also when having a reduced physical performance) to perform similar like healthy children. And since the development of overweight and further illnesses is already beginning in school age, it is urgently necessary to screen CHD already in childhood and provide interdisciplinary prevention offers (for example kidsTUMove).