

## **Forschungsgesuch Farpour**

### **School-based intervention to reduce television watching and promote physical activity: A pilot study**

#### **Summary**

Sedentary lifestyle is one of the ten leading causes of death and disability in the world, doubling the risk of obesity, cardiovascular diseases and type 2 diabetes. In children, insufficient physical activity results in a clustering of cardiovascular risk factors, such as increased body fatness, high blood pressure, lipids disorders, as well as low bone mass and chronic back pain. In Switzerland, 20% of children and adolescent are overweight and 5 to 8 % are obese[1]. As possibly 40% of overweight children might become obese in adult life, it is urgent to identify effective interventions to initiate healthy lifestyles during childhood.

The main purpose of this study is to determine the effectiveness of a school-based intervention on physical activity level and on the time spent watching television and computers or playing video games. This intervention includes two main components: 1) education focused on sedentary behaviours, and 2) limitation of the time spent watching television at home using an electronic monitor. We intend to conduct a 8-month cluster randomised controlled trial (RCT) at a school level in the elementary schools in the canton of Geneva (grades 3 to 6, ages 8 to 12 years).

Three schools volunteered to participate in the pilot phase which aimed to:

- Develop and test the class-based health education material (focusing on reducing television and computer viewing, or playing video games, and increasing physical activity)
- Develop and test the TV time manager (TV monitor)
- Preparation and assessment of acceptability and feasibility of the intervention and of the tools to measure outcomes
- Identify methodological problems and barriers to implementation before the large-scale RCT

Overall, participants appreciated the educational material and accepted all outcome measurement tools including the questionnaires. We had problems with the TV monitor: installation by the research team is too time-consuming, several families found it intrusive despite volunteering for the pilot study, and several technical problems remained unsolved to date.

We hypothesize that a large-scale intervention should result in reduced time spent watching television, using computers or playing video games and increasing general physical activity level and energy expenditure in the intervention group. We expect to show beneficial effects on multiple health risk factors such as SMI, body fatness, blood pressure or musculoskeletal pain. This information will contribute to primary prevention strategies to promote physical activity and reduce sedentary lifestyle in children.