**BACKGROUND**

Childhood obesity affects 13% of Canadian youth and it is the leading cause of cardiovascular disease in children. CIRCUIT (Centre Pédiatric d’Intervention en Prévention et en Réadaptation Cardiovasculaires) is:

- A personalized 2 years intervention tailored to children’s family, school and community resources, with the aim of increasing physical activity.
- Its innovation lies in the use of GPS, accelerometry and other technologies to evaluate children’s behavior.
- Youth 4-18 y at risk of cardiovascular disease (CVD) are referred by their physician.
- At least 8 visits are performed with the team.

**OBJECTIVE**

Assess changes in cardiometabolic health outcomes among 106 participants who completed the 2-year CIRCUIT intervention between baseline and year 2.

**RESULTS**

- 106 participants (50% males) completed the CIRCUIT program.
- At baseline, the median age was 11 year-old [IQR: 9-13], 68.4% were Caucasian, and the mean zBMI was +3.3 (SD 1.4).
  - 97% overweight or obesity
  - 28% hypertension
  - 37% dyslipidemia
  - 12% type 2 diabetes

**CONCLUSIONS**

- After two years of intervention we saw:
  - Significant decreases in zBMI and diastolic zBP
  - Significant improvements in aerobic and anaerobic fitness and physical capacity.
- These preliminary results suggest that the CIRCUIT program may be a promising intervention for children at risk of CVD.
- Findings need to be confirmed in a large, randomized controlled trial.

The authors declare no potential conflict of interest.