Project PANK: Rationale, design and baseline results of a multidisciplinary school based intervention in children with cardiovascular and metabolic risk factors. A Randomized Controlled Trial.

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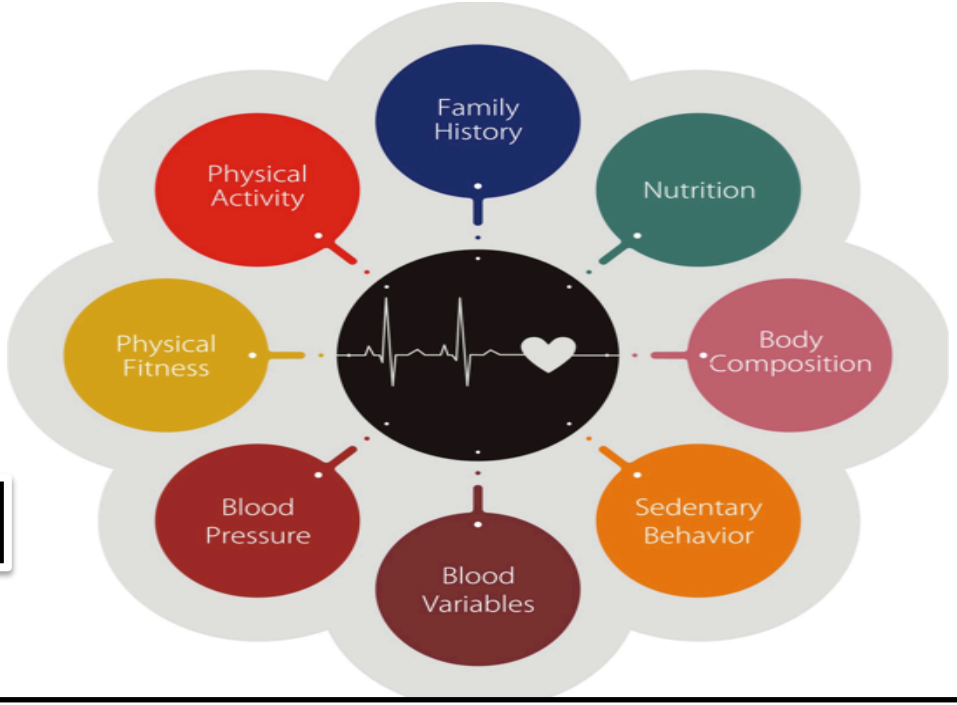
Introduction

Cardiovascular

Metabolic

Risk Factors



Steele, R., Brage, S., Corder, K., Wareham, N., & Ekelund, U. (2008). Physical activity, cardiorespiratory fitness, and the metabolic syndrome in youth. J Appl Physiol. 105:342-351.

Expert Panel on Integrated Guidelines for Cardiovascular Health and Risk Reduction in Children and Adolescents (2012). U.S. Department of Health and Human Services. National Institutes of Health.

Methods

Project PANK (Physical Activity and Nutrition for Kids)

Participants (N=77, aged 7-10 years) were recruited after a cross-sectional study. Overweight and obesity condition were the main inclusion criteria.

Results (baseline data)

1. It was found a statistically significant inverse relationship between **physical fitness** and levels of **triglycerides** (rho=-.53, p<.001) and **total cholesterol** (rho=-.25, p=.036).

2. The length of time spent in **sedentary behaviors** was inversely correlated with moderate (rho=-.38, p=.001) and vigorous physical activity (rho=-.32,p=.005).

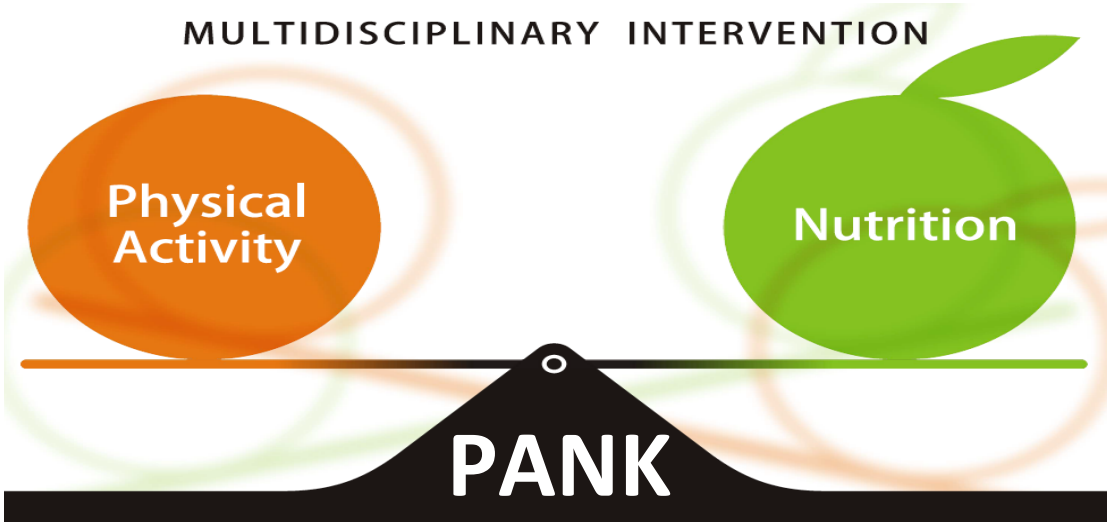
3. The length of time spent in **moderate** (rho=.27,p=.018) and **vigorous PA** (rho=.33, p=.004) were positively correlated with **physical fitness**.

4. **Obese children** had higher values of **fasting glucose** (t=-2.05,p=.044), **waist circumference** (t=-7.17,p<.001), and **waist to height ratio** (t=-.6457,p<.001), when compared to overweight children.

Discussion

- The association found between **obesity** and **higher values of fasting glucose** justifies the importance of multidisciplinary interventions to promote the reversion of overweight/obesity conditions and to decrease abdominal fat.

- It seems to be equally important the **increase of MVPA** to improve the **physical fitness** in order to control other **blood variables**.



Interventions on Diet and Physical Activity What Works. (2009). Summary Report. World Health Organization.