

# Sugar consumption and attention-deficit/hyperactivity disorder (ADHD): A birth cohort study

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Abstract

## BACKGROUND:

Attention-deficit/hyperactivity disorder (ADHD) is characterized by persistent symptoms of lack of attention, impulsivity and hyperactivity. The association between nutritional exposures and ADHD has been investigated and some studies have identified adverse effects from higher intake of sugar. The objective of the present study was to evaluate the association between change in sugar consumption between 6 and 11 years of age and incidence of attention-deficit/hyperactivity disorder (ADHD).

## METHODS:

Pelotas 2004 Birth Cohort Study in Brazil. A food frequency questionnaire (FFQ) was used to estimate sugar consumption and the Development and Well-Being Assessment (DAWBA) was applied to mothers to assess the presence of ADHD.

## RESULTS:

Only children without ADHD at 6 years and with complete information from FFQ and DAWBA at 6 and 11 years were included in the analyses ( $n = 2924$ ). Odds ratios with 95% confidence intervals were calculated. Incidence of ADHD between 6 and 11 years was 4.6% (3.6-5.6%) among boys and 1.8% (1.2-2.5%) among girls. Adjusted analyses showed no association between always high sucrose consumption between 6 and 11 years and incidence of ADHD, compared with individuals who always presented low consumption, both among boys (OR = 0.66; 0.21-2.04) and girls (OR = 2.71; 0.24-30.35).

## LIMITATIONS:

Reflect those that are inherent to use of FFQs, such as memory bias and lack of precision in quantifying the diet.

## CONCLUSIONS:

The results suggest that there is no association between sucrose consumption between 6 and 11 years of age and incidence of ADHD.