

The role of postnatal BPA exposure on children's growth and development: A systematic review

Valerie Laurencia

Cibabat Regional General Hospital, Cimahi, Indonesia

Background:

Prenatal exposure to bisphenol A (BPA), a building block of polycarbonate plastics used in the production of products including food containers, has been linked with altered development: obesity and precocious puberty in children. However, the association of those with postnatal exposure has not been well researched.

Objective:

To investigate the association between postnatal exposure to BPA and children's growth and development.

Methods:

A systematic search through PubMed and Google Scholar using PRISMA guideline for studies of BPA exposure and growth and development in children conducted in 2010 - 2019.

Results:

There were 714 studies identified, and 26 of those studies were finally included in this systematic review. The number of participants range from 40 to 1.239 children, with a total of 8.780 participants aged between 4 months and 18 years old.

Conclusion:

There seems to be associations between postnatal BPA exposure and children's growth; particularly increased BMI, children's ADHD, ASD, maladaptive behavior, cognitive and social impairment, and early puberty or sexual development. Cohort studies with well-designed methods are needed to better understand the effects of prenatal BPA exposure in human growth and development principally in children to evaluate current policy of food packaging

Keywords:

bisphenol-A, children, growth, development, behavior