



Commentary on "Ambient air pollution and endocrinologic disorders in childhood"

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Air pollution (AP) has become an important social issue worldwide. It is known that it increases global morbidity and influences endocrine systems in adults, however, studies were insufficient and inconclusive in children. In this work, the authors reviewed results of previous pediatric studies reporting the effect of prenatal and postnatal AP exposure on various thesis including childhood type 1 diabetes mellitus, obesity, insulin resistance, thyroid dysfunction, and timing of pubertal onset, along with underlying related mechanisms.¹⁾

Air contaminants may act as endocrine-disrupting chemicals and indoor exposure may influence respiratory symptoms and metabolic obesity.²⁾ These data support the hypothesis that systemic inflammation is a possible molecular pathway that could link obesity and insulin resistance in youth.³⁾ In addition to traditional risk factors such as poor diet, low physical activity, and socioeconomic status, recent studies have suggested that ambient AP exposure may contribute to obesity and type 2 diabetes development. Furthermore, endocrine-disrupting chemicals may affect not only the control of energy balance and adiposity, but also puberty and reproduction.⁴⁾ The mechanism by which air pollutants contribute to endocrine disorders is not fully known, although altered immune responses and inflammatory reactions have been suggested as potential mechanisms, effect on neuroendocrine system.¹⁾

This study shows clinical importance and academic value about association between AP and endocrine disorders in childhood. Further investigation is needed to determine the causal relationship between AP and endocrine disorders in childhood to reveal the underlying mechanisms.

Conflict of interest

No potential conflict of interest relevant to this article was reported.

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