

Peer Review Report

Review Report on Phthalate exposure and neurotoxicity in children: A systematic review and meta-analysis

Review, Int J Public Health

Reviewer: María Ángeles Martínez

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EVALUATION

Q 1 Please summarize the main theme of the review.

The health issues associated with EDCs is a continuous issue and always more research is necessary. Their accumulation in trophic chain or their chronic exposure and their widespread distribution reaching humans must be further investigated. Especially in those most vulnerable to exposure, such as pregnant women and children. This systematic review aims to assess the relationship between prenatal and childhood exposure to phthalates and neurodevelopmental outcomes, identifying periods of heightened susceptibility.

Q 2 Please highlight the limitations and strengths.

The strengths of this study are the identification of possible periods of susceptibility through studies with information on both phthalate exposure during pregnancy and at various points in childhood and neurodevelopmental outcomes. The authors separated low molecular weight and high molecular weight phthalates for this article. However, no clear patterns were found to suggest a different burden of low molecular weight phthalates compared to high molecular weight phthalates on specific outcomes and perhaps this may be due to the limited number of studies on this in the literature. However, when studying possible associations, I would consider all chemicals (high and low molecular weight) together to see possible synergies between them and be closer to a real scenario.

Q 3 Please provide your detailed review report to the authors, structured in major and minor comments.

Minor notes, which do not affect the quality of the manuscript, but can further qualify the text:

- 1) In 2021; 2022, no scientific evidence was found that could compose the data set?
- 2) Introduction: I suggest inserting information concerning the classification of "neuroendocrine disruptors" regarding the adverse effect in all hypothalamic-pituitary-glandule axis.
- 3) Methods: I suggest including the date range of the papers included in the review. For example, "the papers included in this review were published between 2014 to 2023"
- 4) The following paper has recently been published: Sex differences in children's cognitive functions and phthalates exposure: a meta-analysis I recommend the authors to review it.

The study of the effects of endocrine disruptors on human, animal and environmental health remains a challenge for science. The text is very well written and the supplementary materials are relevant. I believe that the addition of a graphical summary successfully condenses all components of the study.

PLEASE COMMENT

Q 4 Does the reference list cover the relevant literature adequately and in an unbiased manner?

Yes

Q 5 Does this manuscript refer only to published data? (unpublished data is not allowed for Reviews)

Yes.

Q 6 Does the manuscript cover the issue in an objective and analytical manner

Yes.

Q 7 Was a review on the issue published in the past 12 months?

No.

Q 8 Does the review have international or global implications?

Yes

Q 9 Is the title appropriate, concise, attractive?

Yes

Q 10 Are the keywords appropriate?

Yes

Q 11 Is the English language of sufficient quality?

Yes

Q 12 Is the quality of the figures and tables satisfactory?

Yes.

QUALITY ASSESSMENT

Q 13 Quality of generalization and summary



Q 14 Significance to the field



Q 15 Interest to a general audience



Q 16 Quality of the writing



REVISION LEVEL

Q 17 Please take a decision based on your comments:

Minor revisions.