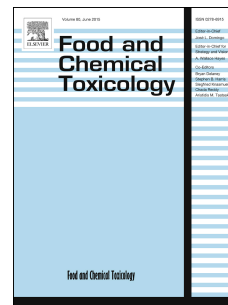


Accepted Manuscript

Implication of dietary phthalates in breast cancer. A systematic review

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PII: S0278-6915(18)30385-5

DOI: [10.1016/j.fct.2018.06.011](https://doi.org/10.1016/j.fct.2018.06.011)

Reference: FCT 9832

To appear in: *Food and Chemical Toxicology*

Received Date: 2 March 2018

Revised Date: 12 May 2018

Accepted Date: 6 June 2018

Please cite this article as: Zuccarello, P., Conti, G.O., Cavallaro, F., Copat, C., Cristaldi, A., Fiore, M., Ferrante, M., Implication of dietary phthalates in breast cancer. A systematic review, *Food and Chemical Toxicology* (2018), doi: 10.1016/j.fct.2018.06.011.

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Abstract

Phthalates are endocrine-disrupting for their ability to change the normal function of human endocrine system. Their action on the reproductive system, both on male and female, is the most one investigated by international scientific community. The aim of this systematic review was to gather the available information regarding the role of phthalates on breast carcinogenesis focusing our research in their intake through the diet. Research was performed according the PRISMA methodology and 25 scientific articles published between 2000-2018 were selected. The main source of exposure to phthalates is diet, mainly through the consumption of food and beverages wrapped in different plastic packaging. Several in vitro studies suggest that certain phthalates may be associated to breast cancer since they can bind and activate the estrogen receptors. However, results of epidemiological studies are debated, yet. It's necessary to plan the future studies more carefully to have more representative data on phthalate exposure by replacing urinary matrix with piliferous one, by including as confounding factors not only the other risk factors but also prevention one as diet and miRNA expression and, finally, by direct the study considering not only the estrogenic activity of phthalates and so including also the ER negative tumors.

Keywords: Phthalates, Breast Cancer, Diet, Endocrine Disruptor, Estrogenic Receptor.

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