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## Original Contribution

# Diethylstilbestrol Exposure in Utero and Depression in Women

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Diethylstilbestrol (DES) is an estrogenic endocrine disruptor with long-term health effects, possibly including depression, following exposure in utero. Understanding the relation between in utero DES exposure and depression will provide insight to the potential adverse effects of bisphenol A, a functionally similar and ubiquitous endocrine disruptor. The association between in utero DES exposure and depression was assessed among participants in the Nurses' Health Study II who first reported their history of antidepressant use in 1993 and lifetime history of depressive symptoms in 2001. DES exposure was reported by 1,612 (2.2%) women. A history of depression at baseline was higher among women

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exposed to DES in utero compared with those not exposed (age-adjusted odds ratio (OR) = 1.47, 95% confidence interval (CI): 1.26, 1.72) ( $P < 0.001$ ). Incident depression (first use of antidepressants among women who also reported depressive symptoms) during follow-up (1995–2005) was reported by 19.7% of women exposed to DES and 15.9% unexposed (age-adjusted OR = 1.41, 95% CI: 1.22, 1.63) ( $P < 0.001$ ). Adjustment for risk factors of depression and correlates of DES exposure moderately attenuated the association (multivariable-adjusted OR = 1.30, 95% CI: 1.13, 1.51) ( $P = 0.0004$ ). These results suggest that the neurophysiologic effects of in utero exposure to DES could lead to an increased risk of depression in adult life. Further research should assess whether in utero exposure to bisphenol A has similar adverse effects.

antidepressive agents; bisphenol A-glycidyl methacrylate; cohort studies; depression; diethylstilbestrol; endocrine disruptors

Abbreviations: BPA, bisphenol A; CI, confidence interval; DES, diethylstilbestrol; OR, odds ratio

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