

Neuropsychopharmacology press release



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This press release contains the following item(s):

- ▶ [Developmental nicotine exposure diminishes attention capacity](#)
[DOI: 10.1038/sj.npp.1301398](#)
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Developmental nicotine exposure diminishes attention capacity
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Teen smokers who were also exposed to nicotine before birth show a dramatic reduction in attention capacities related to vision and hearing, reports the journal *Neuropsychopharmacology* this week. The study, led by Leslie Jacobsen and colleagues, also demonstrates that male and female attention capacities are affected by the exposure in different ways.

Jacobsen's team found that girls who smoke and were subject to nicotine exposure in the womb performed most poorly in both visual and auditory attention tasks. Individuals who do not smoke and did not have prenatal exposure performed most accurately. As expected of a dose-dependent effect, those performing in between were individuals who smoke but whose mothers did not, or individuals who do not smoke themselves but whose mothers did during pregnancy. In boys, nicotine exposure had a greater effect on auditory attention, suggesting that brain regions involved in auditory attention may be more vulnerable to nicotine in boys. These gender-specific effects may result from differences in hormonal control of nicotine's actions.

Previous studies on smoking have found that rates of tobacco smoking and nicotine dependence are higher among individuals prenatally exposed to maternal smoking. The Center for Disease Control reports that smoking during pregnancy is the single most preventable cause of illness and death among mothers and infants. Prior to this study, very little research was available on the less dramatic effects of exposure to smoking such as the impact on attention capacity.

Author contact:

Leslie Jacobsen, (Yale University School of Medicine, New Haven, CT, USA)
Tel: +1 203 764 8480; E-mail: leslie.jacobsen@yale.edu

Editorial contact:

Joyce-Rachel John (NPG Academic Journals, New York, NY, USA)
Tel: +1 212 726 9214; E-mail: j.john@natureny.com