

← Back to Original Article

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Secondhand smoke isn't just bad for kids' bodies, it's bad for their brains

April 05, 2011 | By Karen Kaplan, Los Angeles Times

Children and teens exposed to secondhand smoke are more likely to develop symptoms for a variety of mental health problems, including major depression, attention-deficit/hyperactivity disorder and others, according to a study published in Tuesday's edition of the journal Archives of Pediatrics and Adolescent Medicine.

At this point, it should come as no surprise to anyone that exposure to tobacco smoke is unhealthy. Plenty of studies have linked secondhand smoke to respiratory problems, asthma, sudden infant death syndrome, middle ear infections and other physical health problems. But the link between secondhand smoke and mental health has not been examined as closely.

The new study is believed to be the first that looks at how secondhand smoke exposure – as measured by the presence of a nicotine metabolite in the blood – is associated with mental health in a nationally representative sample of American kids and teens.

Researchers from the National Institutes of Health, the University of Miami and Legacy, the nonprofit that fights tobacco use, used data on 2,000 kids who were between the ages of 8 and 15 when they were part of the National Health and Nutrition Examination Survey from 2001 to 2004. As part of the study, the kids were asked to provide blood samples; those who were exposed to secondhand smoke had higher levels of the cotinine, which is produced when the body metabolizes nicotine. The kids were also assessed for a variety of mental health disorders as defined by the National Institute of Mental Health's Diagnostic Interview Schedule for Children Version IV.

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Here's what the researchers found: On average, the kids had almost five symptoms of major depressive disorder, almost four symptoms of ADHD and three symptoms of generalized anxiety disorder and more than one symptom of conduct disorder.

After taking into consideration the kids' health history and other factors, the researchers determined that levels of cotinine in the blood were strongly linked with ADHD symptoms and weakly linked with symptoms of major depressive disorder, conduct disorder and generalized anxiety disorder. Overall, the link between cotinine and psychiatric symptoms were greater for boys than for girls, and for whites compared to blacks and Mexican Americans.

But none of those symptoms added up to a single diagnosis of a mental health disorder that could be linked with exposure to secondhand smoke. However, among the kids and teens in the study, at first, it looked like higher cotinine levels might be associated with a higher risk of ADHD. But upon further analysis, the increased ADHD risk was actually due to smoking by mothers during pregnancy.

Still, the authors make the undeniable point that there's no upside to secondhand smoke for kids, teens – or anyone else:

“Efforts to ban smoking in public places where children and adolescents are present, including all child care settings and schools, should complement increased efforts to develop interventions targeted directly at parents and designed to prevent [secondhand smoke] exposure in the home and among adolescents.”

The study is available online here.

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