SECOND-HAND SMOKE NEGATIVELY AFFECTS MENTAL HEALTH

While nicotine from smoking is usually associated with physical health, a new study has shown that inhaling this drug, even from secondhand smoke (SHS), affects one’s mental health. Mark Hamer, PhD, of University College London, and colleagues, observed 5,560 nonsmoking adults (average age=49.8 years) and 2,595 active smokers (average age=44.8 years of age) in a cross-sectional, longitudinal study to assess the negative mood sought to be induced from tobacco. Each participant answered a 12-item General Health Questionnaire in which a score >3 classified him or her as distressed. Participants were then tracked by psychiatric hospitals for the following 6 years. The level of SHS in nonsmokers was assessed through saliva levels indicating the presence of the reliable biochemical, cotinine.

Although there was no follow up pertaining specifically to cotinine, the 6-year follow up indicated that 41 participants were admitted to psychiatric hospitals. Those admitted were most commonly hospitalized for depression, schizophrenia, and delirium, all of which were among some forms of psychological distress.

The results showed that 14.5% of all participants were psychologically distressed. A logistic regression analysis of the relationship between cotinine level and psychological distress showed that higher exposure to SHS (as classified 0.70–15.0 µg/l) resulted in a higher percentage of a psychological or somatic health outcome. Such results were found among younger adults with lower social status, higher body mass index, presence of chronic illness, lower physical activity, and higher alcohol intake. After a prospective analysis of the admitted psychiatric hospital patients, which replicated the previous analysis, Hamer and colleagues found that those patients were either highly exposed to SHS or active smokers. Men were more affected than women throughout the study.

Despite the fact that previous studies have shown negative mental consequences associated with tobacco, this was the first study to apply the general population to the consequences of SHS on one’s mental health. Interestingly, Hamer and colleagues discovered that it is the “never” smokers who are most at risk, not the ex-smokers. Primary care physicians can use these findings to enhance treatments. This newly attained knowledge also emphasizes why eliminating SHS is a health necessity, both physically and mentally.

Funding for this study was provided by the British Heart Foundation and the National Institute for Health Research. (Arch Gen Psychiatry. Jun 7, 2010. [Epub ahead of print]). –CM

ASThma AND AIR POLLUTION INCREASE SUICIDE Risk

Two large Asian population studies detected that difficulties breathing, caused by asthma or air pollution, increases suicide rates. The relationships to suicide were independent of psychiatric illness. Using air pollution measurements, Chang Soo Kim, MD, PhD, at Yonsei University College of Medicine in Seoul, Korea, and colleagues, examined the relationship between exposure to ambient particulate matter and the 4,341 suicides that occurred in seven metropolitan South Korean cities in 2004. Results showed a 9% increase (95% CI=2.4-16.1) in suicide risk related to an interquartile range increase in particulate matter ≤10-µm (average of 0–2 days prior to the day of suicide), and a 10.1% increase (95% CI=2.0-19.0) in suicide risk was related to an interquartile range increase in particulate matter ≤2.5-µm (1 day prior to the day of suicide), respectively. A significant association between particulate matter ≤10-µm (average of 0–2 days prior to the day of suicide) and suicide was observed (18.9%; 95% CI=3.2-37.0) in individuals with cardiovascular disease.

In a study of asthma and allergy, Chian-Jue Kuo, MD, MS, at the National Taiwan University in Taipei, and colleagues, followed 162,766 Taiwanese adolescent students (11–16 years of age) living in a catchment area in Taiwan from October 1995–June 1996. At baseline, participants were classified into three groups, including current asthma (symptoms present in the past year), previous asthma (history of asthma but no symptoms in the past year), and no asthma. Participants were followed-up through December 2007 by electronic record linkage to the national Death Certification System.
Researchers found that 905 of the total study participants died by the end of follow-up, with suicide listed as the cause of death for 106. Those with asthma at baseline were more than twice as likely to commit suicide as those without (11.0 vs 4.3 per 100,000 person-years; \( P < .001 \)). Those with more severe asthma symptoms at baseline had a higher suicide rate.

Though interesting, at present the results of both studies demonstrate only statistical associations. Further investigation is necessary to understand any causal relationship between asthma or air pollution and suicide.

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**STABILIZED BIPOLAR PATIENTS IN GROUP THERAPY RELAPSE LESS**

Psychosocial interventions for bipolar disorder are an established component of thorough treatment. A recent study suggests that group therapy, combined with cognitive-behavioral therapy (CBT), are an effective regimen for bipolar disorder patients stabilized on medication.

David Castle, MD, FRANZCP, MRCPsych, at the University of Melbourne, Australia, and colleagues, compared group therapy to usual care (medication only, with weekly phone follow-ups) for 12 weeks in 72 bipolar patients. All patients were stabilized on medication at baseline. The group therapy patients received a variety of psychosocial treatments, or components of them, including dialectical behavior therapy and motivational interviewing, in addition to CBT and psychosocial education.

Over the course of the 1-year trial patients in both treatment groups were interviewed in-person at baseline, then received weekly phone calls during the 3-month treatment phase ending in another in-person interview, followed by monthly follow-up by phone for 9 months using Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition-Text Revision, criteria, with a final in-person interview at 12 months.

Of the patients receiving usual care, 15 experienced any type of relapse (six experienced manic relapse), whereas four patients receiving group therapy experienced any type of relapse (none experienced manic relapse), a significant advantage for the group therapy intervention (hazard ratio 0.43; 95% CI=.20-.95; \( P =.04 \)).

Funding for this research was provided by the Medical Benefits Fund Foundation and Victorian Center of Excellence in Depression and Related Disorders. (Br J Psychiatry. 2010;196(5):383-388.) –LS

**SIGNS OF SCHIZOPHRENIA FOUND IN NEWBORN BABIES’ BRAINS**

Little is known about when abnormalities of brain structure and white matter develop in people with schizophrenia. John H. Gilmore, MD, at the University of North Carolina Schizophrenia Research Center, and colleagues, conducted a study to identify structural brain abnormalities in the prenatal and neonatal periods associated with genetic risk of schizophrenia.

Using prenatal ultrasound, as well as neonatal structural magnetic resonance imaging and diffusion tensor imaging, they examined brain development in 26 babies born to mothers with schizophrenia or schizoaffective disorder (N=26) and compared the results to mothers without psychiatric illness (N=26). Offspring of mothers with schizophrenia did not differ in prenatal lateral ventricle width or head circumference. High-risk neonates did not exhibit significantly larger intracranial, cerebrospinal fluid (CSF), and lateral ventricle volumes. Subgroup analysis showed that male high-risk infants had significantly larger intracranial, CSF, and total gray matter, and lateral ventricle volumes, while females did not. There were no group differences in white matter diffusion tensor properties. This is the first evidence that early neonatal brain development may be abnormal in males at genetic risk for schizophrenia.

The study shows that brain abnormalities associated with schizophrenia risk are detectable in newborns. This is significant, as improving early detection of schizophrenia will hopefully allow for clinicians to develop methods to prevent high-risk children from developing the illness.

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