Harms of tobacco use, exposure

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For the first time, the Academy has released three linked, evidence-based statements to help protect children from tobacco addiction and exposure. The policies call for raising the minimum age to purchase tobacco to 21 years; urge pediatricians to screen patients for use of tobacco and nicotine delivery devices; and address tobacco dependence in parents as part of pediatric health care.

The policies and a technical report grading the evidence supporting the policies are available online and will appear in the November issue of Pediatrics (see resources).

A related policy statement Electronic Nicotine Delivery Systems also is available online and will appear in the November Pediatrics. All of the documents are from the AAP Section on Tobacco Control.

Harms of tobacco use, exposure

Tobacco addiction and tobacco smoke exposure are among the most important, preventable causes of sickness, disability and premature death in both the developed and developing worlds. There is no safe level of tobacco smoke exposure.

The landmark 2014 U.S. surgeon general report’s conclusions on the health consequences of smoking (www.ncbi.nlm.nih.gov/books/NBK179276/) include:

• Cigarette smoking has been causally linked to diseases of nearly all organs of the body, to diminished health status and to harm to a fetus.
• Exposure to tobacco smoke has been causally linked to adverse effects on the health of infants and children.
• The tobacco epidemic was initiated and has been sustained by the aggressive strategies of the tobacco industry. Advertising and promotional activities by tobacco companies cause the onset and continuation of smoking among adolescents and young adults.
• Effective, evidence-based tobacco control interventions continue to be underutilized and implemented at funding levels far below those recommended by the Centers for Disease Control and Prevention.

The impacts on cardiovascular disease, cancer, emphysema and premature death are well-known. Tobacco smoke exposure of children increases severity of bronchiolitis and asthma, increases middle ear disease, leads to findings of preclinical atherosclerosis, and increases risk for childhood cancers. Tobacco and nicotine exposure harms brain and lung development.

In addition to the well-documented impact on adverse fetal outcomes such as stillbirth and sudden infant death syndrome, recent research demonstrates that in utero tobacco and nicotine exposure increases risks for wheezing, asthma, obesity, learning disabilities and neurobehavioral problems.

Treatments underused

The adolescent’s developing brain is particularly susceptible to tobacco dependence. Nicotine — a neurotoxin — changes brain structure and chemistry.

The Food and Drug Administration has approved prescription and over-the-counter medications for tobacco dependence; however, these treatments are underutilized. Tobacco dependence treatment medications include shorter-acting relievers such as nicotine gum and nasal sprays and long-acting controllers such as nicotine patches, bupropion and varenicline.

Combination therapy is more effective than monotherapy. State-of-the-art approaches initiate treatment intensity based on severity of the tobacco dependence and on treatments the patient is ready to accept. Treatment intensity and duration are adjusted based on control of nicotine withdrawal symptoms (http://tobacco-dependence.chestnet.org).

Electronic nicotine delivery systems (such as e-cigarettes) should not be recommended because clinical trials have failed to demonstrate their effectiveness, and there is evidence of harm from these devices.

Recommendations for pediatricians

Tobacco use prevention is an important — and effective — part of anticipatory guidance.

• Pediatricians should inquire about tobacco use and tobacco smoke exposure as part of health supervision visits and visits for conditions that may be caused or exacerbated by such exposure. Be aware of the different tobacco products — not just cigarettes — available to youths. With fruit and candy flavors, hookah (water pipe) and electronic nicotine delivery system use is rising rapidly among middle and high school students. Adolescents often will use two or more different tobacco or nicotine products.
• Parental tobacco dependence should be addressed as part of the child’s health care. Approaching tobacco dependence as a severe, chronic disease, pediatricians can acknowledge the severity of the parent’s addiction and recommend treatment and/or treatment resources to protect the health of the child. Recommendations can involve over-the-counter nicotine replacement therapy, national or state help lines (such as 1-800-QUIT NOW) and/or the parents seeing their own...
doctor or clinic for treatment. The motivated pediatrician can, with appropriate documentation, prescribe for the parent to protect the health of the child. If the parent is not ready to stop smoking, a smoke-free home and car should be advised.

- **Tobacco dependence treatment or referral should be offered to adolescents who want to stop smoking.** There is very good evidence for effectiveness of behaviorally based approaches — especially for those with mild levels of addiction. For those with moderate to severe addiction, medications that are effective in adults are an option for use in adolescents, although evidence is limited. Close follow-up is needed as non-adherence to regular medication use and relapse of tobacco use after stopping therapy are common. Electronic nicotine delivery systems (e-cigarettes, others) should not be recommended as their use is associated with reduced rates of stopping smoking in adolescents.

### Public policy guidance

Tobacco control programs need to be funded adequately. Programs should change the image of tobacco by telling the truth about tobacco.

Increasing age of purchase decreases youth smoking rates. The age of purchase of tobacco products should be increased to 21 years, and such regulations need to be enforced. Tobacco taxes should be increased as this decreases tobacco use among youths.

In addition to comprehensive smoking bans in workplaces, recreation facilities, public areas, and campuses of educational and health care institutions, smoking in multi-unit housing should be prohibited. Smoking in or near one unit exposes and harms children living in nearby units.

Advertising and promotion is a cause of tobacco use initiation in adolescents. Therefore, tobacco advertising and promotion that is accessible to children should be prohibited, including point-of-sale advertising, product placements in movies and other entertainment media, and promotion in print or Internet-based media accessible to youths.

Flavoring agents, including fruit, candy and menthol flavors, should be prohibited in all tobacco and nicotine products as flavored products encourage tobacco use initiation among youths.

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*Dr. Farber, a lead author of the tobacco reports, is policy chair of the AAP Section on Tobacco Control Executive Committee.*

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### RESOURCES

**AAP policy statements:**
- Clinical Practice Policy to Protect Children from Tobacco, Nicotine and Tobacco Smoke, www.pediatrics.org/cgi/doi/10.1542/peds.2015-3108
- Public Policy to Protect Children from Tobacco, Nicotine and Tobacco Smoke, www.pediatrics.org/cgi/doi/10.1542/peds.2015-3110

**Technical report:**
Strong stance
AAP releases multiple policies to protect youths from tobacco, nicotine
Harold J. Farber
AAP News originally published online October 26, 2015;

Updated Information & Services
including high resolution figures, can be found at:
http://aapnews.aappublications.org/content/early/2015/10/26/aapnews.20151026-2

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Strong stance
AAP releases multiple policies to protect youths from tobacco, nicotine
Harold J. Farber
AAP News originally published online October 26, 2015;

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://aapnews.aappublications.org/content/early/2015/10/26/aapnews.20151026-2