



## WOMEN'S HEALTH AND SMOKING

---

In the United States, over 17 million adult women currently smoke cigarettes, putting them at risk for heart attacks, strokes, lung cancer, emphysema and other life-threatening illnesses.<sup>1</sup> As a result, more than 200,000 women die of smoking-caused disease each year, with additional deaths caused by the use of other tobacco products such as smokeless tobacco.<sup>2</sup> Today, 6.9 percent of high school girls and 13.6 percent of adult women still smoke.<sup>3</sup>

Smoking harms and kills both men and women, but women face unique and even greater health risks from smoking than men. And although death rates among female smokers were previously thought to be lower than among male smokers for lung cancer, chronic obstructive pulmonary disease and other tobacco-related diseases, the U.S. Surgeon General reported in 2014 that women's risk from smoking has risen sharply, and women who smoke are now as likely as men to die from many smoking-caused diseases.<sup>4</sup> Researchers attribute this increase in large part to a convergence in smoking patterns among men and women since the 1960's, with women starting to smoke earlier in adolescence and smoking more heavily. These findings confirm that "women who smoke like men die like men."<sup>5</sup>

### **Mortality:**

- Each year more than 200,000 U.S. women die from smoking-caused diseases.<sup>6</sup>
- More than six million women in the United States have died prematurely from smoking-related diseases since the release of the first Surgeon General's report on smoking and health in 1964.<sup>7</sup>
- About 2.1 million years of potential life of U.S women are lost prematurely each year due to smoking-related diseases.<sup>8</sup>
- Smoking reduces a woman's life expectancy by at least 10 years, on average.<sup>9</sup>
- Like men, women who smoke have a death rate three times higher than those who never smoked.<sup>10</sup>

### **Cardiovascular Disease:**

- Cardiovascular diseases are the number one killers of both men and women. Each year roughly 300,000 women die of these diseases.<sup>11</sup> Smoking is a leading cause of cardiovascular diseases, including coronary heart disease, atherosclerosis and stroke, among others.<sup>12</sup>
- Women who smoke are twice as likely to suffer a heart attack as non-smoking women. The risk of developing coronary heart disease increases with the number of cigarettes smoked per day, the total number of smoking years and earlier age of initiation.<sup>13</sup>
- Women smokers have a higher relative risk of developing cardiovascular disease than men. The reasons for the difference are not yet known, but could be due to tobacco smoke having an adverse effect on estrogen.<sup>14</sup>
- Women who smoke and use oral contraceptives are up to 40 times more likely to have a heart attack than women who neither smoke nor use birth control.<sup>15</sup>
- While women smoke less than men, many nonsmoking women still suffer increased risk of heart disease from exposure to secondhand smoke because their husbands or partners smoke.<sup>16</sup>

### **Lung Cancer:**

- An estimated 71,280 women will die from lung cancer in 2017.<sup>17</sup>
- Smoking causes 80 percent of all lung cancer deaths among women.<sup>18</sup> In 1987, lung cancer surpassed breast cancer to become the leading cause of cancer death among women.<sup>19</sup>

- The risk of lung cancer is 25 times higher for current women smokers compared to women who have never smoked—a nearly tenfold increase from 1959.<sup>20</sup>
- A survey from the American Legacy Foundation found that 80 percent of American women mistakenly believe that breast cancer is the primary cause of cancer death among women.<sup>21</sup>
- While women smoke less than men, many nonsmoking women still suffer increased risk of lung cancer because their husbands or partners smoke.<sup>22</sup>

#### **Other Cancers:**

- Smoking accounts for one-third of all cancer deaths.<sup>23</sup>
- Each year, more than 275,000 women are diagnosed with a tobacco-related cancer and more than 145,000 will die from a tobacco-related cancer.<sup>24</sup>
- Smoking is a known cause of cancer of the lung, larynx, oral cavity, bladder, liver, pancreas, cervix, kidney, colon and rectum, stomach, blood and esophagus.<sup>25</sup>

#### **Smoking and Pregnancy:**

- Smoking reduces a woman's fertility. Women smokers tend to take longer to conceive than women nonsmokers, and women smokers are at a higher risk of not being able to get pregnant at all. Furthermore, more cigarettes women smoked per day are associated with decreased fertility rates.<sup>26</sup>
- Smoking is known to cause ectopic pregnancy, a condition in which the embryo implants outside the uterus. Ectopic pregnancy is very rarely a survivable condition for the fetus and is a potentially fatal condition for the mother.<sup>27</sup>
- Research studies have found that smoking and exposure to secondhand smoke among pregnant women is a major cause of spontaneous abortions, stillbirths, and sudden infant death syndrome (SIDS) after birth.<sup>28</sup> Nevertheless, more than one in ten pregnant women smoke.<sup>29</sup>
- Mothers who smoke have double the rate of premature delivery compared to nonsmoking mothers.<sup>30</sup>
- There is a clear relationship between the number of cigarettes smoked during pregnancy and low birth weight babies.<sup>31</sup>
- Smoking and exposure to secondhand smoke during pregnancy directly increase the risk of health and behavioral problems including: abnormal blood pressure in infants and children, cleft palates and lips, childhood leukemia, infantile colic, childhood wheezing, respiratory disorders in childhood, eye problems during childhood, mental retardation, attention deficit disorder, behavioral problems and other learning and developmental problems.<sup>32</sup>

#### **Other Health Risks for Women who Smoke:**

- Cigarette smoking is the primary cause of chronic obstructive pulmonary disease (COPD) in women. Smoking is attributed for about 80 percent of deaths from COPD among U.S. women, and women smokers are up to 40 times more likely to develop COPD than women who have never smoked.<sup>33</sup> The risk of COPD is directly related to the amount and duration of cigarette use.<sup>34</sup>
- Many women who smoke choose brands which are believed to be and "low tar" and have lower levels of nicotine. However, there is no evidence that a smoker who chooses these brands reduces the risk of myocardial infarction, chronic obstructive pulmonary disease or lung cancer.<sup>35</sup>
- Women smokers have a greater risk for hip fracture than their non-smoking counterparts.<sup>36</sup>
- Women who smoke are more likely to have menstrual problems including painful periods, irregular bleeding, missed periods and early onset of menopause.<sup>37</sup>
- Cigarette smoking is a risk factor for osteoporosis and could become a more powerful factor among today's youth who have begun smoking at earlier ages. Women who are current smokers increase their risk for hip fractures and postmenopausal women who are current smokers have lower bone density versus women who never smoked.<sup>38</sup>

- Male and female smokers increase their risk of death from bronchitis and emphysema by nearly 10 times.<sup>39</sup>

### The Benefits of Quitting:

- Women who stop smoking reduce their risk of dying prematurely. While the benefits of quitting are greater at a younger age, quitting smoking has health benefits at any age.<sup>40</sup>
- Individuals who quit smoking before the age of 40 live about 10 years longer, on average. Those who quit between 35 to 44, 45 to 54 and 55 to 64 can regain 9, 6 and 4 years of life, respectively.<sup>41</sup>
- 10 to 15 years after quitting, a female ex-smoker's risk of stroke is almost equal to that of a woman who never smoked.<sup>42</sup>

### Campaign for Tobacco-Free Kids, June 23, 2017 / Laura Bach

<sup>1</sup> Centers for Disease Control and Prevention (CDC), "Current Cigarette Smoking Among Adults—United States, 2005-2015," *Morbidity & Mortality Weekly Report*, 65(44): 1205-1211, November 11, 2016, [http://www.cdc.gov/mmwr/volumes/65/wr/mm6544a2.htm?s\\_cid=mm6544a2\\_w](http://www.cdc.gov/mmwr/volumes/65/wr/mm6544a2.htm?s_cid=mm6544a2_w). U.S. Bureau of Census, 2015 population estimates used to compute number of smokers.

<sup>2</sup> US Department of Health and Human Services (HHS), *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*, 2014, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>.

<sup>3</sup> CDC, "Tobacco Use Among Middle and High School Students—United States, 2011-2016," *MMWR*, 66(23): 597-603, June 15, 2017, <https://www.cdc.gov/mmwr/volumes/66/wr/pdfs/mm6623a1.pdf>. CDC, "Current Cigarette Smoking Among Adults—United States, 2005-2015," *Morbidity & Mortality Weekly Report*, 65(44): 1205-1211, November 11, 2016, [http://www.cdc.gov/mmwr/volumes/65/wr/mm6544a2.htm?s\\_cid=mm6544a2\\_w](http://www.cdc.gov/mmwr/volumes/65/wr/mm6544a2.htm?s_cid=mm6544a2_w).

<sup>4</sup> HHS, *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*, 2014, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>.

<sup>5</sup> Thun, M, et al. "50-Year Trends in Smoking-Related Mortality in the United States," *New England Journal of Medicine*, 368:4, January 2013.

<sup>6</sup> HHS, *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*, 2014, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>.

<sup>7</sup> HHS, *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*, 2014, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>.

<sup>8</sup> CDC, "Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Productivity Losses – United States, 2000-2004," *MMWR* 57(45), November 14, 2008, <http://www.cdc.gov/mmwr/PDF/wk/mm5745.pdf>.

<sup>9</sup> Jha, P, et al., "21<sup>st</sup>-Century Hazards of Smoking and Benefits of Cessation in the United States," *New England Journal of Medicine*, 368:4, January 2013.

<sup>10</sup> Thun, M, et al. "50-Year Trends in Smoking-Related Mortality in the United States," *New England Journal of Medicine*, 368:4, January 2013.

Jha, P, et al., "21<sup>st</sup>-Century Hazards of Smoking and Benefits of Cessation in the United States," *New England Journal of Medicine*, 368:4, January 2013.

<sup>11</sup> HHS, *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*, 2014, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>.

<sup>12</sup> HHS, *The Health Consequences of Smoking: A Report of the Surgeon General*, Atlanta, GA: HHS, CDC, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004, [http://www.cdc.gov/tobacco/data\\_statistics/sgr/sgr\\_2004/index.htm](http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2004/index.htm). See also, HHS, *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*, 2014, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>.

<sup>13</sup> HHS, *The Health Consequences of Smoking: A Report of the Surgeon General*, Atlanta, GA: HHS, CDC, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004; See also, HHS, *Women and Smoking: A Report of the Surgeon General*, Washington, DC: HHS, Public Health Service, Office of the Surgeon General, 2001, [http://www.cdc.gov/tobacco/data\\_statistics/sgr/sgr\\_2001/index.htm](http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2001/index.htm).

<sup>14</sup> Prescott, E, et al., "Smoking and risk of myocardial infarction in women and men: Longitudinal population study," *British Medical Journal (BMJ)* 316:1043-7, 1998. See also, HHS, *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*, 2014, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>.

<sup>15</sup> HHS, *Women and Smoking: A Report of the Surgeon General*, Washington, DC: HHS, Public Health Service, Office of the Surgeon General, 2001, [http://www.cdc.gov/tobacco/data\\_statistics/sgr/sgr\\_2001/index.htm](http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2001/index.htm).

<sup>16</sup> HHS, *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*, Atlanta, GA: HHS, CDC, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006, <http://www.surgeongeneral.gov/library/secondhandsmoke/report/>.

<sup>17</sup> American Cancer Society, *Cancer Facts & Figures 2017*, <https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2017/cancer-facts-and-figures-2017.pdf>.

<sup>18</sup>HHS, *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*, 2014, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>. HHS, *Women and Smoking: A Report of the Surgeon General*,

Washington, DC: HHS, Public Health Service, Office of the Surgeon General, 2001, [http://www.cdc.gov/tobacco/data\\_statistics/sgr/sgr\\_2001/index.htm](http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2001/index.htm).

<sup>19</sup> US Mortality Public Use Data Tapes 1960-2003, US Mortality Volumes 1930-1959, National Center for Health Statistics, Centers for Disease Control and Prevention, 2006. See also, American Cancer Society, Cancer Facts and Figures, 2014, <http://www.cancer.org/acs/groups/content/@research/documents/webcontent/acspc-042151.pdf>.

<sup>20</sup> Thun, M, et al. "50-Year Trends in Smoking-Related Mortality in the United States," *New England Journal of Medicine*, 368:4, January 2013. See also, HHS, *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*, 2014, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>.

<sup>21</sup> American Legacy Foundation, "Women and Lung Cancer Survey," January 2001.

<sup>22</sup> HHS, *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*, Atlanta, GA: HHS, CDC, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006, <http://www.surgeongeneral.gov/library/secondhandsmoke/report/>.

<sup>23</sup> HHS, *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*, 2014, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>. See also, HHS, *Reducing the Health Consequences of Smoking: 25 Years of Progress. A Report of the Surgeon General*, HHS Publication No 89-8911, 1989, <http://profiles.nlm.nih.gov/NN/B/B/X/S/>.

<sup>24</sup> CDC, "Vital Signs: Disparities in Tobacco-Related Cancer Incidence and Mortality—United States, 2004-2013," *Morbidity & Mortality Weekly Report*, 65(44): 1212-1218, <http://www.cdc.gov/mmwr/volumes/65/wr/mm6544a3.htm>.

<sup>25</sup> HHS, *The Health Consequences of Smoking: A Report of the Surgeon General*, Atlanta, GA: HHS, CDC, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004. See also, HHS, *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*, 2014, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>.

<sup>26</sup> HHS, *The Health Consequences of Smoking: A Report of the Surgeon General*, Atlanta, GA: HHS, CDC, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004.

<sup>27</sup> HHS, *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*, 2014, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>.

<sup>28</sup> HHS, *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*, Atlanta, GA: HHS, CDC, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006, <http://www.surgeongeneral.gov/library/secondhandsmoke/report/>. **On spontaneous abortions**, see, e.g., Mendola, P, et al., "Risk of Recurrent Spontaneous Abortion, Cigarette Smoking, and Genetic Polymorphisms in NAT2 and GSTM1," *Epidemiology* 9(6):666-668, November 1999; Shiverick, KT & Salafia, C, "Cigarette Smoking and Pregnancy I: Ovarian, Uterine and Placental Effects," *Placenta* 20(4):265-272, May 1999; Ness, RB, et al., "Cocaine and Tobacco Use and the Risk of Spontaneous Abortion," *New England Journal of Medicine* 340(5):333-339, February 1999; Chatenoud, L, et al., "Paternal and Maternal Smoking Habits Before Conception and During the First Trimester: Relation to Spontaneous Abortions," *Annals of Epidemiology* 8(8):520-26, November 1998; Hrubá, D & Kachlik, P, "Relation Between Smoking in Reproductive-Age Women and Disorders in Reproduction," *Ceska Gynekol* 62(4):191-196, August 1997; Domínguez-Rojas, V, et al., "Spontaneous Abortion in a Hospital Population: Are Tobacco and Coffee Intake Risk Factors?," *European Journal of Epidemiology* 10(6):665-668, December 1994; Walsh, RA, "Effects of Maternal Smoking on Adverse Pregnancy Outcomes: Examination of the Criteria for Causation," *Human Biology* 66(6):1059-1092, December 1994; Windham, GC, et al., "Parental Cigarette Smoking and the Risk of Spontaneous Abortion," *American Journal of Epidemiology* 135(12):1394-403, June 1992; Armstrong, BG, et al., "Cigarette, Alcohol, and Coffee Consumption and Spontaneous Abortion," *American Journal of Public Health (AJPH)* 82(1):85-87, January 1992; Pattinson, HA, et al., "The Effect of Cigarette Smoking on Ovarian Function and Early Pregnancy Outcome Of In Vitro Fertilization Treatment," *Fertility and Sterility* 55(4):780-783, April 1991; Economides, D & Braithwaite, J, "Smoking, Pregnancy, and the Fetus," *Journal of the Royal Society of Health* 114(4):198-201, August 1994; Fredricsson, B & Gilljam, H, "Smoking and Reproduction: Short and Long Term Effects and Benefits of Smoking Cessation," *Acta Obstetrica Gynecologica Scandinavica* 71(8):580-592, December 1992. **On still births**, see, e.g., Raymond, EG, et al., "Effects of Maternal Age, Parity, and Smoking on the Risk of Stillbirth," *British Journal of Obstetric Gynecology* 101(4):301-306, April 1994; Ahlborg, G, Jr. & Bodin, L, "Tobacco Smoke Exposure and Pregnancy Outcome Among Working Women: A Prospective Study At Prenatal Care Centers In Orebro County, Sweden," *American Journal of Epidemiology* 133(4):338-347, February 1991. **On sudden infant death syndrome**, see, e.g., Cooke, RW, "Smoking, Intra-Uterine Growth Retardation and Sudden Infant Death Syndrome," *International Journal of Epidemiology* 27(2):238-41, April 1998.

<sup>29</sup> CDC, "Births: Final Data for 2005," *National Vital Statistics Reports*, 56(6), December 5, 2007, [http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56\\_06.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_06.pdf).

<sup>30</sup> HHS, *The Health Consequences of Smoking: A Report of the Surgeon General*, Atlanta, GA: HHS, CDC, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004.

<sup>31</sup> HHS, *The Health Consequences of Smoking: A Report of the Surgeon General*, Atlanta, GA: HHS, CDC, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004; HHS, *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*, 2014, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>. **On early delivery, low birth-weight babies, and growth problems after birth**, see, e.g., Wiborg, K, et al., "Smoking During Pregnancy and Pre-term Birth," *British Journal of Obstetrics and Gynaecology* 103(8):800-05, August 1996; Dejin-Karlsson, E, et al., "Does Passive Smoking in Early Pregnancy Increase the Risk of Small-for-Gestational-Age Infants?," *AJPH* 88(1):1523-27, October 1998; Martin, TR & Bracken, MB, "Association of Low Birth Weight with Passive Smoke Exposure in Pregnancy," *American Journal of Epidemiology* 124(4):633-42, October 1986; Jones, G, et al., "Maternal Smoking During Pregnancy, Growth and Bone Mass in Prepubertal Children," *Journal of Bone and Mineral Research* 14(1):146-51, January 1999; Eskenazi, B & Bergmann, JJ, "Passive and Active Maternal Smoking During Pregnancy, as Measured by Serum Cotinine, and Postnatal Smoke Exposure. I. Effects on Physical Growth at 5 Years," *American Journal of Epidemiology* 142(9 Supplement):S10-18, November 1995; Elwood, PC, et al., "Growth of Children from 0-5 Years: with Special Reference to Mother's Smoking in Pregnancy," *Annals of Human Biology* 14(6):543-57, 1987.

- <sup>32</sup> **On abnormal blood pressure in infants and children**, see, e.g., Morley, R, et al., "Maternal Smoking and Blood Pressure in 7.5 to 8 Year Old Offspring," *Archives of Disease in Childhood* 72(2):120-24, February 1995; Blake, KV, et al., "Maternal Cigarette Smoking During Pregnancy, Low Birth Weight and Subsequent Blood Pressure in Early Childhood," *Early Human Development* 57:137-147, 2000. **On cleft palates and lips**, see Nagourney, E, "Consequences: Linking Cleft Palates and Smoking Moms," *New York Times*, April 12, 2000 [citing recent study in *Plastic and Reconstructive Surgery*, the Journal of the American Society of Plastic Surgeons]. **On childhood leukemia**, see, e.g., Sijnefeldt, M, et al., "Maternal Smoking and Irradiation During Pregnancy as Risk Factors for Child Leukemia," *Cancer Detection and Prevention* 16(2):129-35, 1992. **On birth defects**, see, e.g., Kallen, K, "Maternal Smoking During Pregnancy and Limb Reduction Malformations in Sweden," *AJPH* 87(1):29-32, January 1997; Czeizel, AE, et al., "Smoking During Pregnancy and Congenital Limb Deficiency," *BMJ* 308(6942):1473-76, 1994; Drews, CD, et al., "The Relationship Between Idiopathic Mental Retardation and Maternal Smoking During Pregnancy," *Pediatrics* 97(4):547-53, April 1997. **On colic**, see Reijneveld, SA, et al., "Infantile Colic: Maternal Smoking As Potential Risk Factor," *Archives of Disease in Childhood* 83:302-303, October 2000. **On wheezing and respiratory problems**, see, e.g., Hu, FB, et al., "Prevalence of Asthma and Wheezing in Public Schoolchildren: Association with Maternal Smoking During Pregnancy," *Annals of Allergy, Asthma, and Immunology* 79(1):80-84, July 1997; Tager, IB, et al., "Maternal Smoking During Pregnancy: Effects on Lung Function During the First 18 Months of Life," *American Journal of Respiratory and Critical Care Medicine* 52(3):977-83, September 1995; Lux, AL, et al., "Wheeze Associated with Prenatal Tobacco Smoke Exposure: A Prospective, Longitudinal Study," *Archives of Disease in Childhood* 83:307-12, October 2000. **On eye problems**, see, e.g., Hakim, RB & Tielsch, JM, "Maternal Cigarette Smoking During Pregnancy: A Risk Factor for Childhood Strabismus," *Archives of Ophthalmology* 110(10):1459-62, October 1992. **On impaired intellectual development**, see, e.g., Frydman, M, "The Smoking Addiction of Pregnant Women and the Consequences on the Offspring's Intellectual Development," *Journal of Environmental Pathology, Toxicology and Oncology* 15(2-4):169-72, 1996; Olds, DL, et al., "Intellectual Impairment in Children of Women Who Smoke During Pregnancy," *Pediatrics* 93(2):221-27, 1994 [correction published in 93(6, Pt 1):973, June 1994]. **On developmental and behavioral problems, including criminality**, see, e.g., Milberger, S, et al., "Further Evidence of an Association Between Maternal Smoking During Pregnancy and Attention Deficit Hyperactivity Disorder: Findings from a High-Risk Sample of Siblings," *Journal of Clinical Child Psychology* 27(3):352-58, October 1998; Orlebeke, JF, et al., "Child Behavior Problems Increased By Maternal Smoking During Pregnancy," *Archives of Environmental Health* 54(1):15-19, 1999; Fergusson, DM & Horwood, LJ, "Prospective Childhood Predictors of Deviant Peer Affiliations in Adolescence," *Journal of Child Psychology and Psychiatry* 40(4):581-92, May 1999; Orlebeke, JF, et al., "Increase in Child Behavior Problems Resulting From Maternal Smoking During Pregnancy," *Archives of Environmental Health* 52(4):317-21, 1997.
- <sup>33</sup> HHS, *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*, 2014, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>. See also, HHS, *Let's Make the Next Generation Tobacco-Free: Your Guide to the 50<sup>th</sup> Anniversary Surgeon General's Report on Smoking and Health*, 2014, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/consumer-guide.pdf>.
- <sup>34</sup> HHS, *Women and Smoking: A Report of the Surgeon General*. Washington, DC: HHS, Public Health Service, Office of the Surgeon General, 2001, [http://www.cdc.gov/tobacco/data\\_statistics/sgr/sgr\\_2001/index.htm](http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2001/index.htm).
- <sup>35</sup> Djordjevic, MV, et al., "Nicotine Regulates Smoking Patterns," *Preventive Medicine* 26(4):435-40, 1997. Farrow, DC & Samet, J, "Identification of the high risk smoker," *Clinics in Chest Medicine* 12(4):659-68, 1991.
- <sup>36</sup> HHS, *Women and Smoking: A Report of the Surgeon General*. Washington, DC: HHS, Public Health Service, Office of the Surgeon General, 2001, [http://www.cdc.gov/tobacco/data\\_statistics/sgr/sgr\\_2001/index.htm](http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2001/index.htm).
- <sup>37</sup> HHS, *Women and Smoking: A Report of the Surgeon General*. Washington, DC: HHS, Public Health Service, Office of the Surgeon General, 2001, [http://www.cdc.gov/tobacco/data\\_statistics/sgr/sgr\\_2001/index.htm](http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2001/index.htm).
- <sup>38</sup> HHS, *Women and Smoking: A Report of the Surgeon General*. Washington, DC: HHS, Public Health Service, Office of the Surgeon General, 2001, [http://www.cdc.gov/tobacco/data\\_statistics/sgr/sgr\\_2001/index.htm](http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2001/index.htm).
- <sup>39</sup> HHS, *Women and Smoking: A Report of the Surgeon General*. Washington, DC: HHS, Public Health Service, Office of the Surgeon General, 2001, [http://www.cdc.gov/tobacco/data\\_statistics/sgr/sgr\\_2001/index.htm](http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2001/index.htm).
- <sup>40</sup> HHS, *Women and Smoking: A Report of the Surgeon General*. Washington, DC: HHS, Public Health Service, Office of the Surgeon General, 2001, [http://www.cdc.gov/tobacco/data\\_statistics/sgr/sgr\\_2001/index.htm](http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2001/index.htm).
- <sup>41</sup> Jha, P, et al., "21<sup>st</sup>-Century Hazards of Smoking and Benefits of Cessation in the United States," *New England Journal of Medicine*, 368:4, January 2013.
- <sup>42</sup> HHS, *Women and Smoking: A Report of the Surgeon General*. Washington, DC: HHS, Public Health Service, Office of the Surgeon General, 2001, [http://www.cdc.gov/tobacco/data\\_statistics/sgr/sgr\\_2001/index.htm](http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2001/index.htm).