

# CAMPAIGN For TOBACCO-FREE Kids®

## HARM CAUSED BY PREGNANT WOMEN SMOKING OR BEING EXPOSED TO SECONDHAND SMOKE

Numerous research studies in the United States and overseas 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>1</sup> According to a meta-analysis of published studies, tobacco use is responsible each year for 19,000 to 141,000 spontaneous abortions; 1,900 to 4,800 infant deaths caused by perinatal or pre-birth disorders; and 1200 to 2200 deaths from SIDS.<sup>2</sup> A more recent comprehensive study found that parental smoking causes 2,800 deaths at birth and 2,000 deaths from SIDS.<sup>3</sup> Almost one quarter of all SIDS deaths have been attributed to prenatal maternal smoking; and fetal mortality rates are 35 percent higher among pregnant women who smoke than among nonsmokers.<sup>4</sup>

Smoking during pregnancy creates a more serious risk of spontaneous abortion and a greater threat to the survival and health of newborns and children than using cocaine during pregnancy.<sup>5</sup> It is also a much more pervasive problem. Roughly one out of every ten pregnant women smoke, accounting for half a million births per year -- and many more non-smoking pregnant women are regularly exposed to secondhand smoke.<sup>6</sup> And the problem is likely larger because some pregnant women do not report their tobacco use or exposure.<sup>7</sup>

Besides spontaneous abortions, stillbirths and SIDS deaths, smoking and exposure to secondhand smoke during pregnancy directly increases the risk of each of the following:

- ectopic pregnancies
- other birth and delivery problems
- brain damage during gestation
- growth retardation/low birth weight
- abnormal blood pressure in infants + kids
- problems requiring neonatal intensive care
- infant death from perinatal disorders
- cleft palates and lips
- cancer-causing agents in infants' blood
- potentially carcinogenic genetic mutations
- childhood leukemia
- infantile colic
- childhood wheezing
- respiratory disorders in childhood
- eye problems during childhood
- mental retardation
- attention deficit disorder
- other learning & developmental problems
- behavioral problems
- youth and adult violence and criminality
- smoking during adolescence
- various health problems in adulthood<sup>8</sup>

Smoking by fathers prior to conception may also increase the risk of childhood cancers and mental retardation among offspring, even when the mother does not smoke.<sup>9</sup>

Research studies estimate that the direct additional health care costs in the United States associated just with the birth complications caused by pregnant women smoking or being exposed to secondhand smoke could be as high as \$2 billion per year.<sup>10</sup> The medical condition with the highest average hospital charges nationwide is infant respiratory distress syndrome (\$68,000 per episode), which can be caused by pregnant women smoking or being exposed to secondhand smoke; and the third highest is for premature and low-birthweight birth (\$50,000), which can also be smoking caused.<sup>11</sup> More broadly, parental smoking has been estimated to cause direct medical expenditures of more than \$4.5 billion per year to care for smoking-caused problems of exposed newborns, infants, and children, as well as to treat pregnancy and birth complications.<sup>12</sup> These estimates do not include the enormous smoking-and-pregnancy costs associated with the physical, developmental, and behavioral problems of affected offspring that can extend throughout their entire lives.

Exposure to parental smoking after birth can exacerbate all of these problems and increase related costs. For example, parental or other household smoking after birth further increases the chances that children will suffer from smoke-caused coughs and wheezing, bronchitis, asthma, pneumonia, potentially fatal lower respiratory tract infections, meningitis, SIDS, eye and ear problems, or injury or death from

cigarette-caused fires.<sup>13</sup> Each year, more than 20,000 children are hospitalized for respiratory illnesses caused by their parents' tobacco use and over 1,000 die from them.<sup>14</sup> Smoking-caused fires kill another 200 children each year, and as many as 10,000 more suffer from fire-caused injuries.<sup>15</sup> According to a 1997 study, kids' exposure to secondhand smoke leads to over 500,000 physician visits for asthma and 1.3 million visits for coughs, and to more than 115,000 episodes of pneumonia, 14,000 tonsillectomies or adenoidectomies, 260,000 episodes of bronchitis, two million cases of otitis media among children (an acute or chronic inflammation of the middle ear), and 5,200 tympanotomies (middle ear operations).<sup>16</sup> In addition, poison control centers annually receive thousands of reports of young children ingesting cigarettes, cigarette butts, and other tobacco products that they find around the house, in ashtrays, or in the garbage.<sup>17</sup>

**National Center for Tobacco-Free Kids, April 20, 2004/Meg Gallogly**

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On sudden infant death syndrome, see, e.g., Cooke, R.W., "Smoking, Intra-Uterine Growth Retardation and Sudden Infant Death Syndrome," *International Journal of Epidemiology* 27(2): 238-41 (April 1998).

<sup>2</sup> DiFranza, J.R. & R.A. Lew, "Effect of Maternal Cigarette Smoking on Pregnancy Complications and Sudden Infant Death Syndrome," *Journal of Family Practice* 40(4): 385-94 (April 1995).

<sup>3</sup> Aigne, C.A. & J.J. Stoddard, "Tobacco and Children: An Economic Evaluation of the Medical Effects of Parental Smoking," *Archives of Pediatric and Adolescent Medicine* 151(7): 648-53 (July 1997).

<sup>4</sup> Pollack, H., "Sudden Infant Death Syndrome, Maternal Smoking During Pregnancy, and the Cost-Effectiveness of Smoking Cessation Intervention," *American Journal of Public Health* 91(3): 432-36 (March 2001); National Center for Health Statistics, "Medical and Life-Style Risk Factors Affecting Fetal Mortality, 1989-90," *Vital and Health Statistics* 20(31), August 1996.

<sup>5</sup> Slotkin, T.A., "Fetal Nicotine or Cocaine Exposure: Which is Worse?," *Journal of Pharmacology and Experimental Therapeutics* 285(3): 931-45 (June 1998); Ness, R. B., et al., "Cocaine and Tobacco Use and the Risk of Spontaneous Abortion," *New England Journal of Medicine* 340(5): 333-339 (February 4, 1999).

<sup>6</sup> See, e.g., Matthews, T.J., "Smoking During Pregnancy in the 1990s," *National Vital Statistics Report* 49(7) (August 28, 2001); Births: Final Data for 2002, *National Vital Statistics Report* 52 (10) (December 17, 2003); Rebagliato, M., et al., "Assessments of Exposure to Environmental Tobacco Smoke in Nonsmoking Pregnant Women in Different Environments of Daily Living," *American Journal of Epidemiology* 142(5): 525-30 (September 1995).

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<sup>12</sup> Aligne, C.A. & J.J. Stoddard, "Tobacco and Children: An Economic Evaluation of the Medical Effects of Parental Smoking," *Archives of Pediatric and Adolescent Medicine*, 151: 648-653 (July 1997).

<sup>13</sup> See, e.g., Li, J.S. et al, "Meta-Analysis on the Association Between Environmental Tobacco Smoke (ETS) Exposure and the Prevalence of Lower Respiratory Tract Infection in Early Childhood," *Pediatric Pulmonology* 27(1): 5-13 (January 1999); DiFranza, J.R. & R.A. Lew, "Morbidity & Mortality in Children Associated with the Use of Tobacco Products By Other People," *Pediatrics* 97(4): 560-68 (April 1997); Adair-Bischoff, C.E. & R.S. Sauve, "Environmental Tobacco Smoke and Middle Ear Disease in Preschool-Age Children," *Archives of Pediatric and Adolescent Medicine* 52(2): 127-33 (February 1999); American Academy of Pediatrics Committee on Environmental Health, "Environmental Tobacco Smoke: A Hazard to Children," *Pediatrics* 99(4): 639-42 (April 1997); Mannino, D.M., et al., "Environmental Tobacco Smoke Exposure and Health Effects in Children," *Tobacco Control* 5(1): 13-18 (Spring 1996); BBC News, Health, "Smokers' Babies 'Risk Meningitis,'" (June 11, 2000), <http://news.bbc.co.uk/>; Anderson H.R. & D.G. Cook, "Passive Smoking and Sudden Infant Death Syndrome: Review of the Epidemiological Evidence," *Thorax* 52(11): 1003-09 (November 1997); Hall, J.R., Jr., *The U.S. Smoking-Material Fire Problem Through 1995*, National Fire Protection Association (September 1997).

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<sup>15</sup> Aligne, & Stoddard (July 1997). See, also, Hall, J.R., Jr. (September 1997); DiFranza & Lew, (April 1997).

<sup>16</sup> DiFranza, & Lew (April 1997). For even larger totals, see Aligne & Stoddard (July 1997).

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