

***Secondhand Smoke Exposure: The  
Single Best Opportunity for  
Pediatricians to Save Lives***

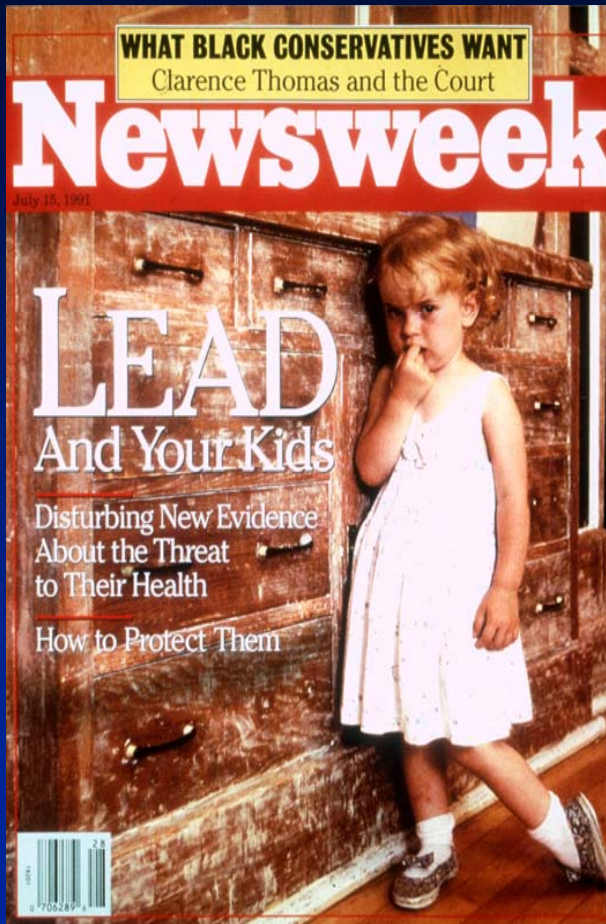
***by***

***Michael Weitzman, MD***

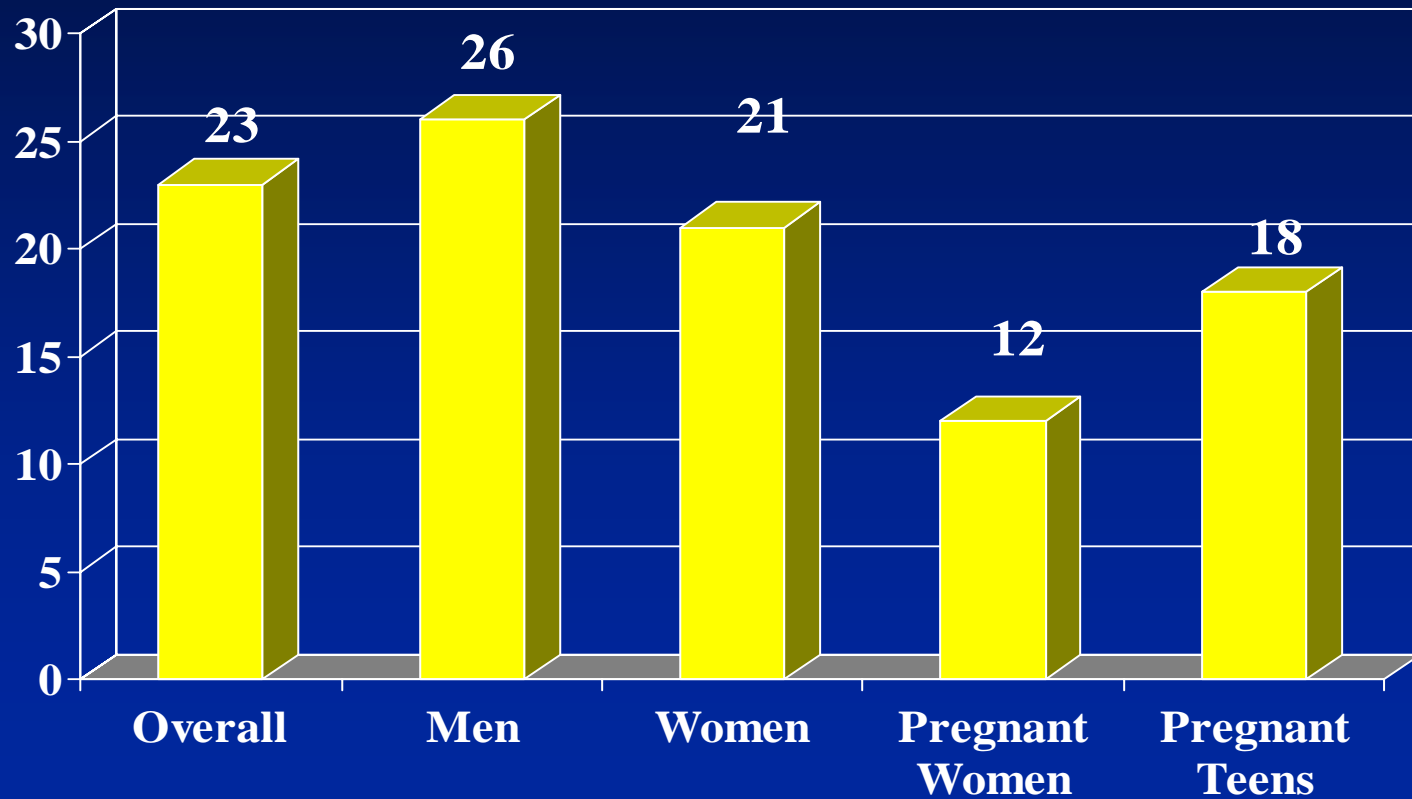
***Executive Director***

***American Academy of Pediatrics***

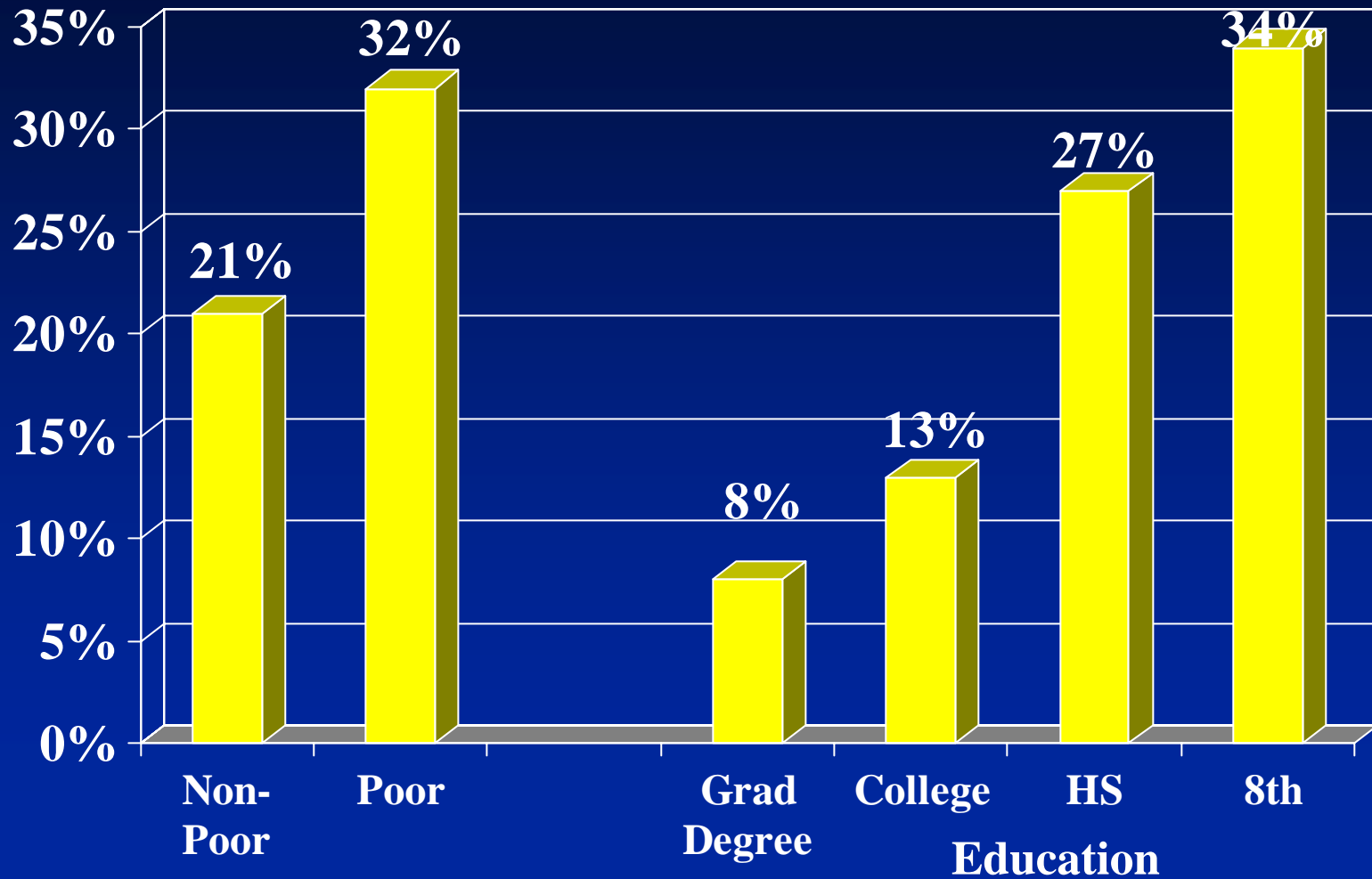
***Center for Child Health Research***



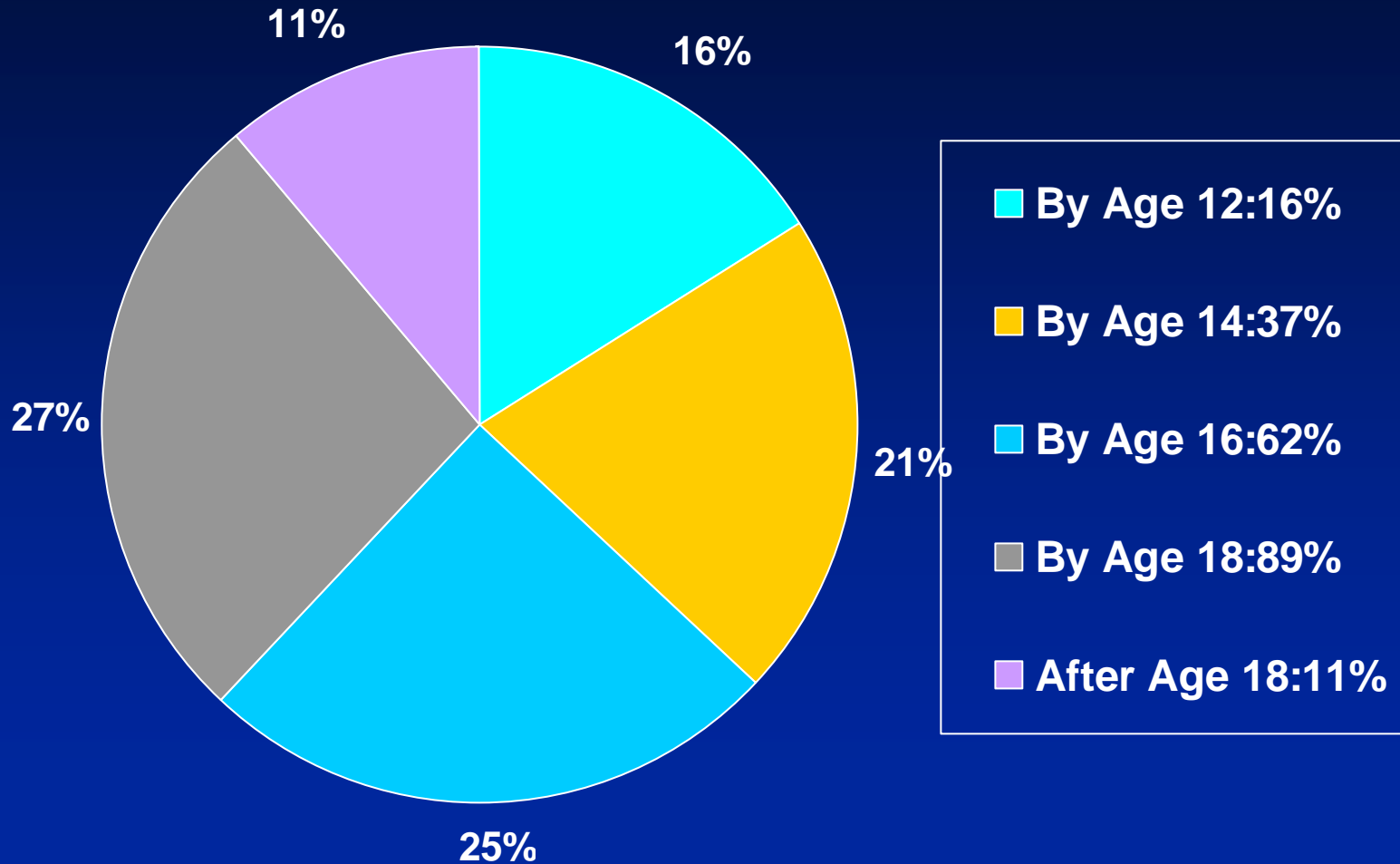
# *Prevalence of Smoking in the USA*



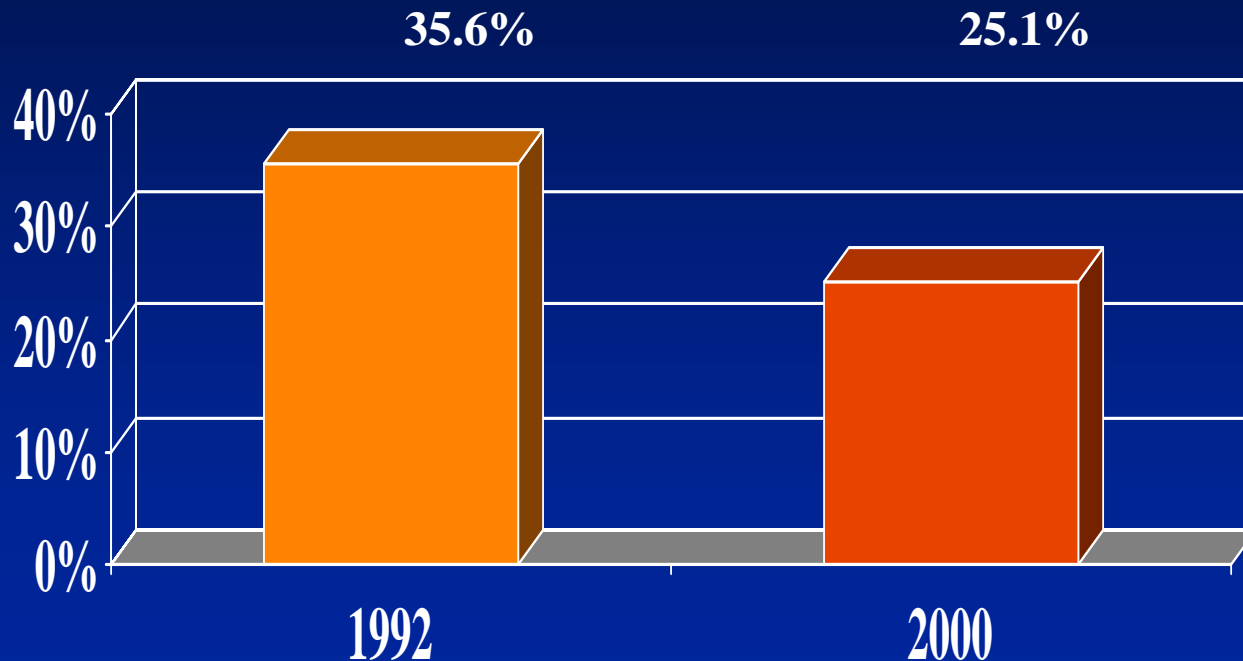
# *Disparities and Smoking 2000*



# *Tobacco Use Begins Early*



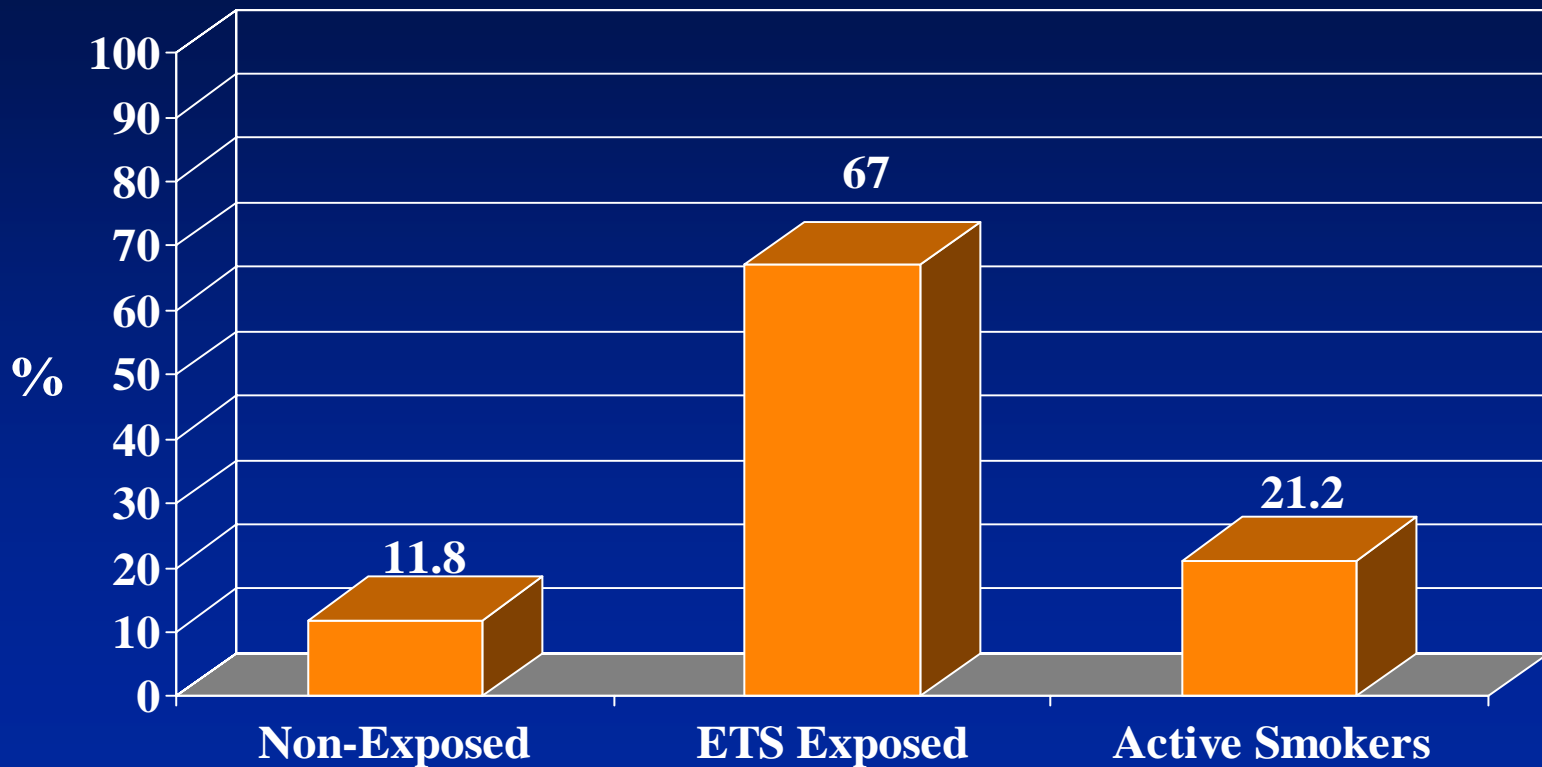
# *Decrease in Children's Secondhand Smoke Exposure in Their Homes*



Soliman S, et al, *AJPH*, 2004

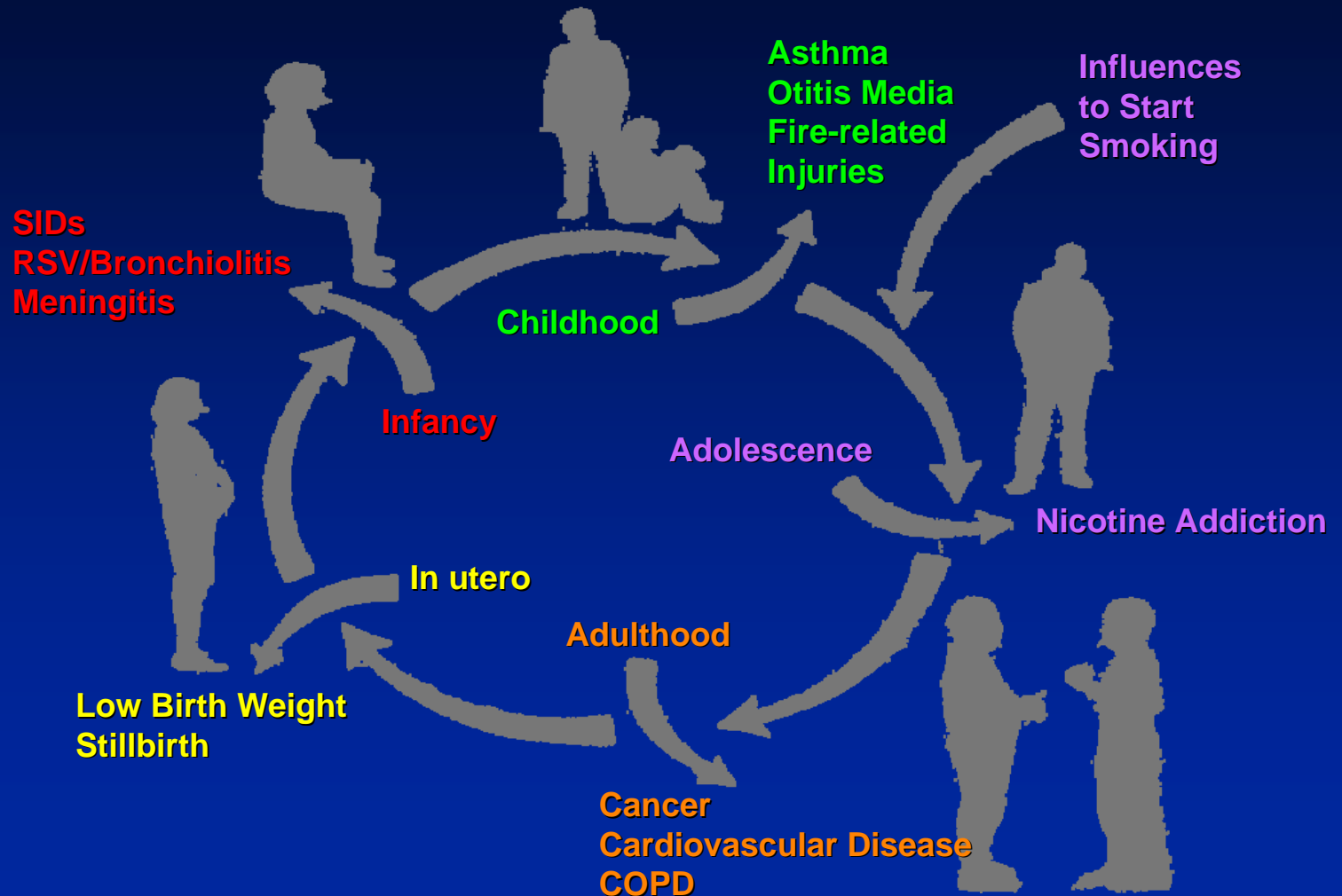
# *Tobacco Smoke Exposure in Adolescents*

## *NHANES III, 1988-1994*



*Circulation, in press*

# The Life Cycle Effects of Smoking



*Arch Pediatr Adolesc Med.* 1997



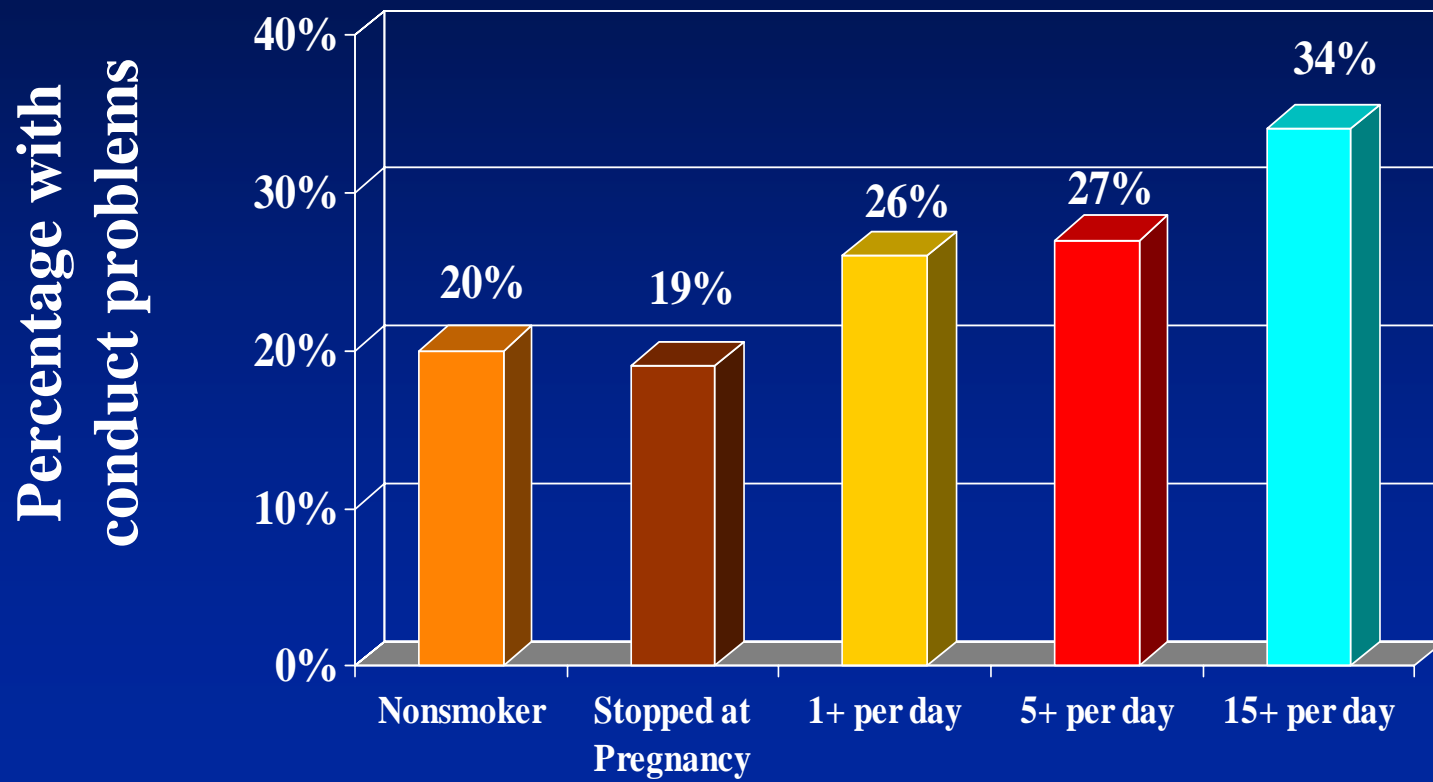
# *Secondhand Smoke, Behavior and Cognition*

- **Epidemiological studies:**
  - increased tone and irritability of newborns
  - increased rates of behavior problems, ADHD and conduct disorders
  - decreases in intelligence
    - 10 or more cigarettes per day independently associated with 4.4 IQ point loss
- **Animal studies:**
  - alterations in brain structure and function
  - attention problems
  - diminished memory

*Neurotoxicology and Teratology, 2005*

# *Conduct Problems In Boys Aged 5-10 Years and Maternal Smoking During Pregnancy*

Extent of Smoke Exposure During Pregnancy

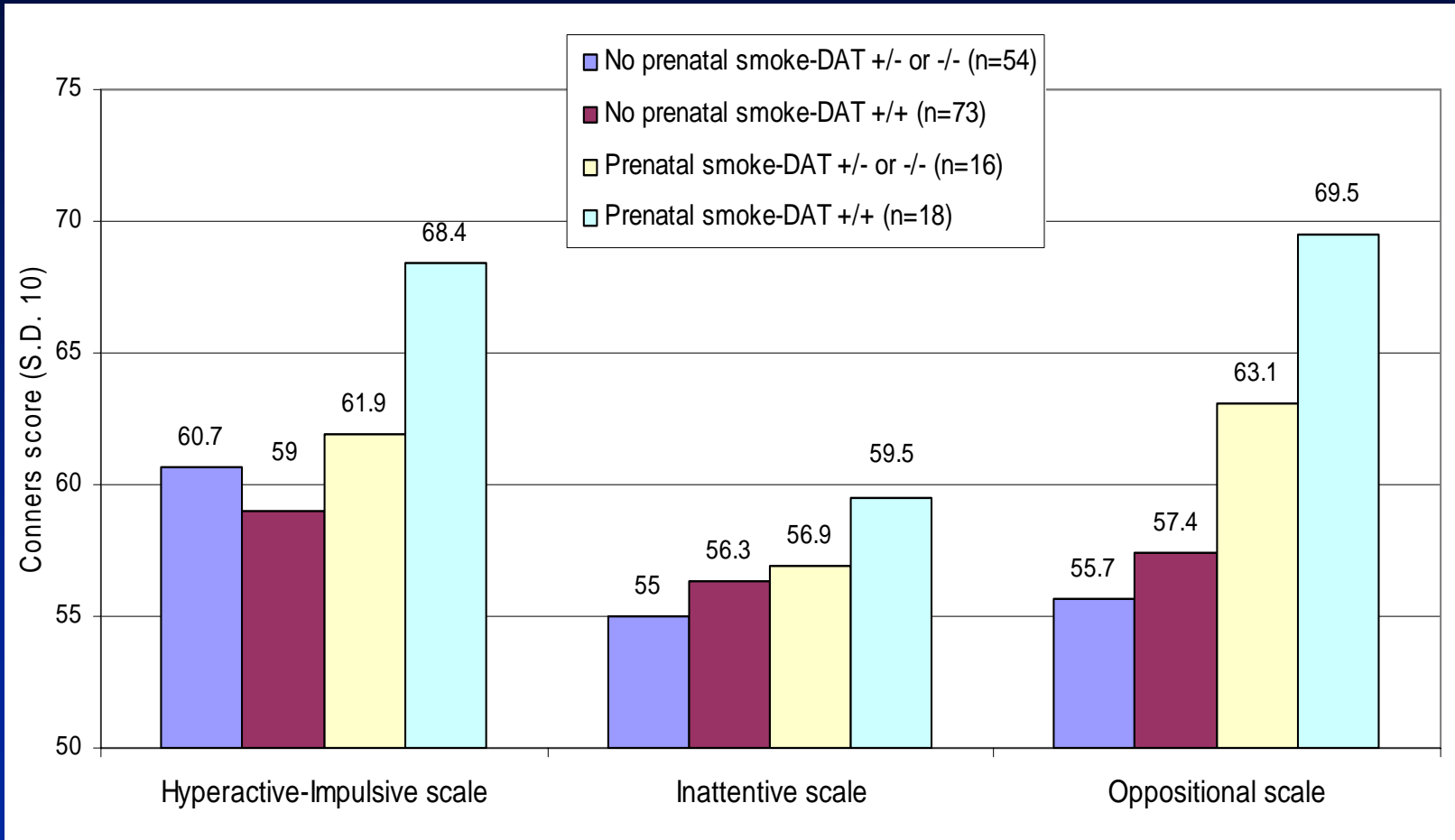


Maughan N, et al. *J Child Psychol Psychiat* 2001

## *What Could Be the Mechanism(s)*

- **Intrauterine Hypoxia**
- **Lower Birth Weight**
- **Prematurity**
- **2,000-4,000 Potential Neurotoxins**
- **Gene-Environmental Interaction**

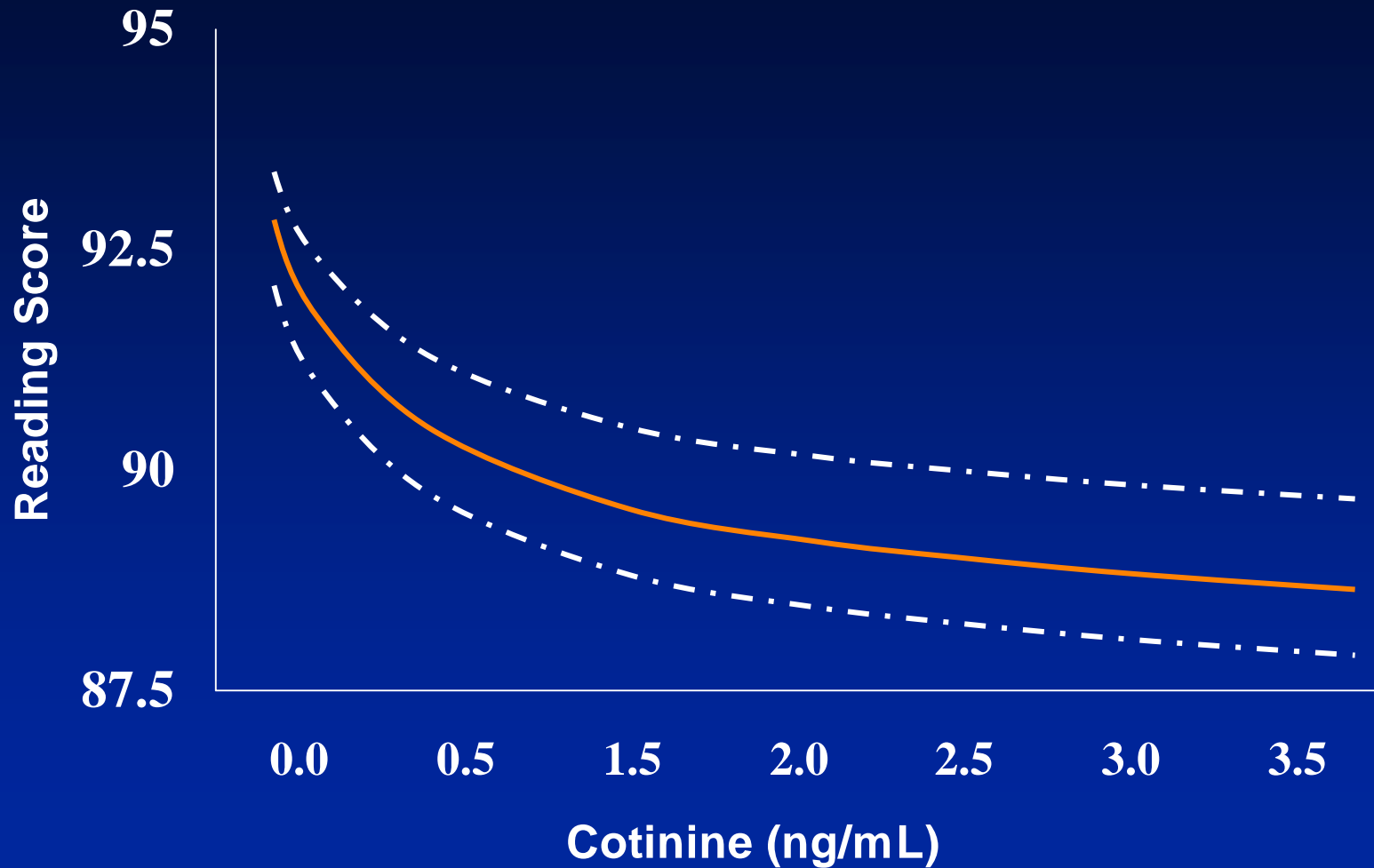
# Association of Prenatal Smoke Exposure and DAT Genotype with Conner's Scale Scores



# *Neurotoxic Effects of Tobacco Exposure*

- Diminished IQ Levels
- Increased rates ADHD and ODD
- Impairments in:
  - **Short-Term Memory**
  - **Reaction Time**
  - **Ability to Concentrate**
  - **Visual Motor Perceptual Integration**
  - **Classroom Behavior and performance**

# *Reading Scores by Serum Cotinine Levels*



Yolton, Dietrich, Auinger, Lanphear, Hornung. Environmental Health Perspectives, 2005

DISPLAY UNTIL FEBRUARY 10, 2003

# IS FAT THE NEXT TOBACCO?



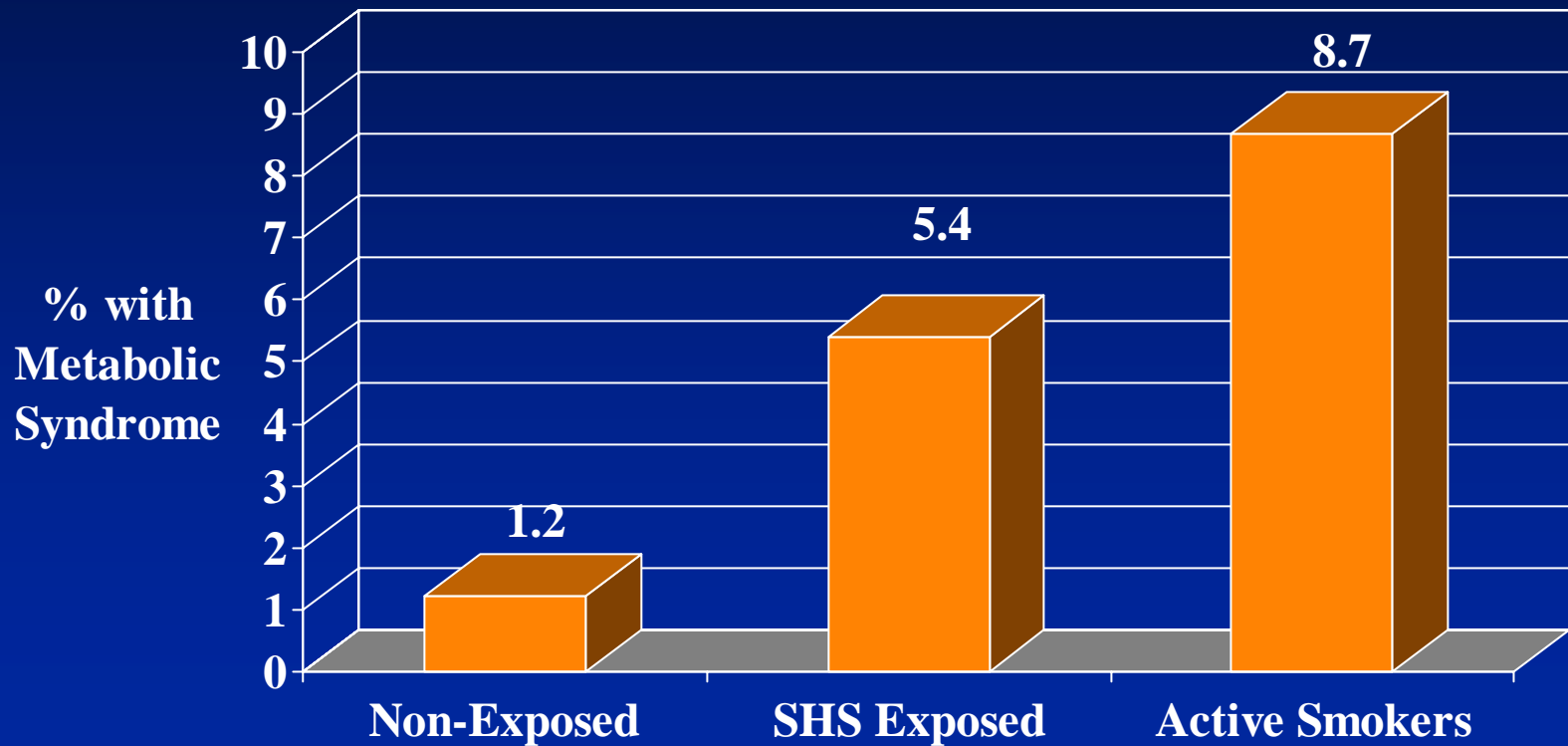
The war  
over obesity  
will be fought  
in the courts.  
That's bad news  
for Big Food.

\$4.99US \$5.99CAN



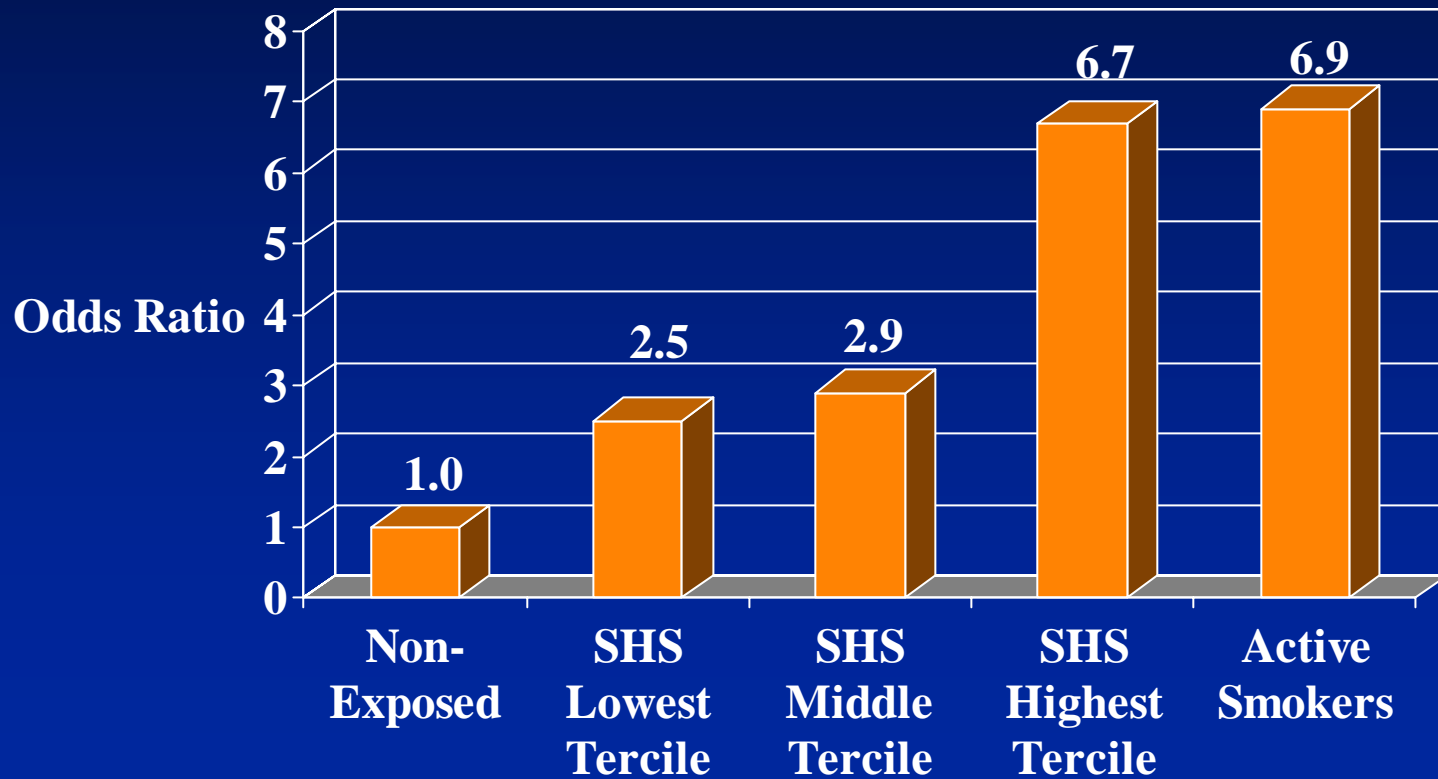
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# *Prevalence of the Metabolic Syndrome in Adolescents, NHANES III, 1988-1994*



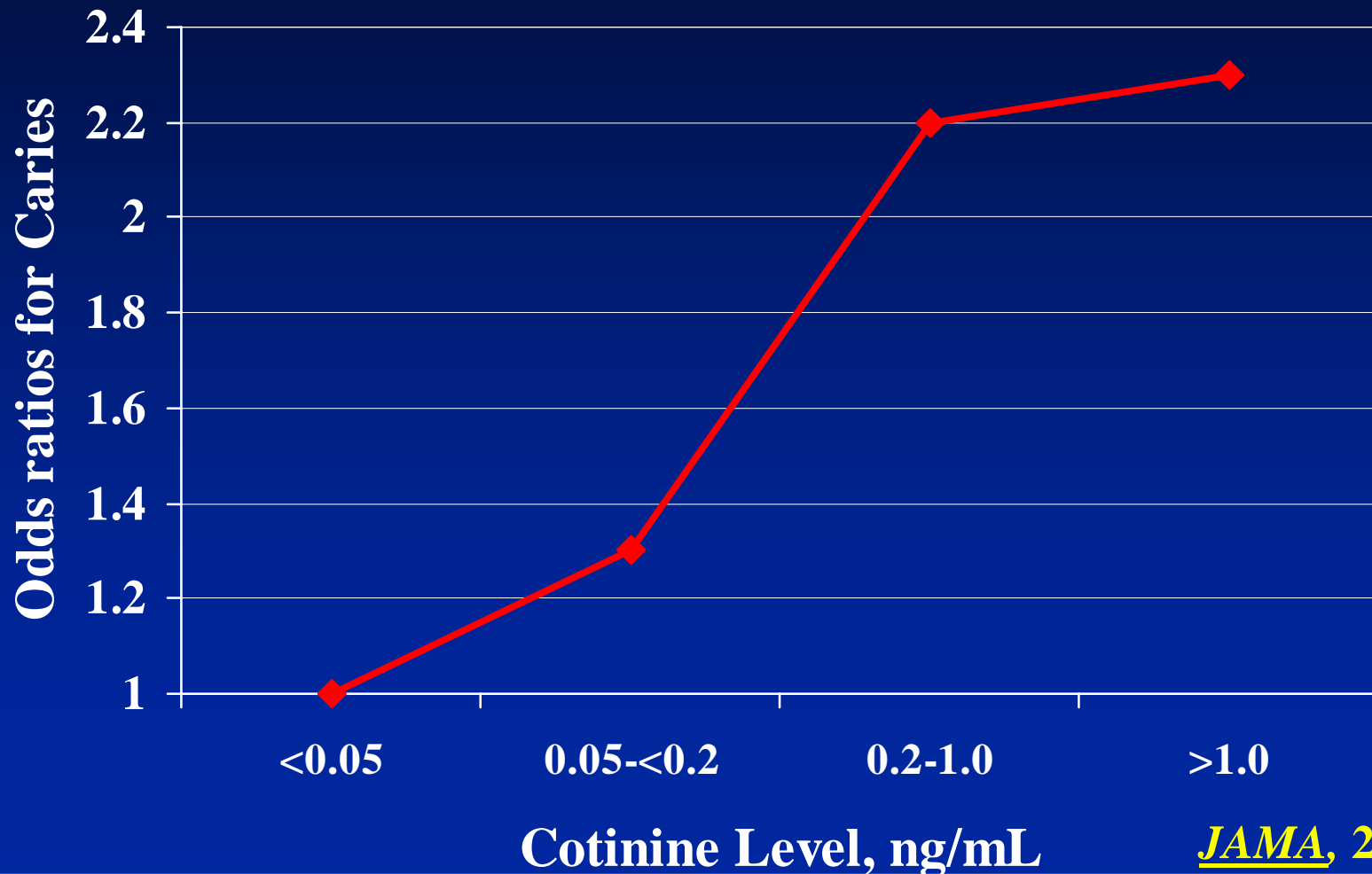
*Circulation, in press*

# *Secondhand Smoke Exposure and the Metabolic Syndrome in Adolescents NHANES III*



*Circulation, in press*

# *Children's Tooth Decay and Secondhand Smoke Exposure*



***JAMA, 2003***

# *Smoking During Pregnancy*

	<u>1999</u>	<u>% Change</u> <u>1990-99</u>
<b>Total</b>	<b>12.3</b>	<b>-33%</b>
<b>15-19 years</b>	<b>17.5</b>	<b>-16%</b>
<b>20-24 years</b>	<b>16.2</b>	<b>-27%</b>
<b>30-34 years</b>	<b>8.4</b>	<b>-45%</b>

# *What Can Pediatricians Do?*

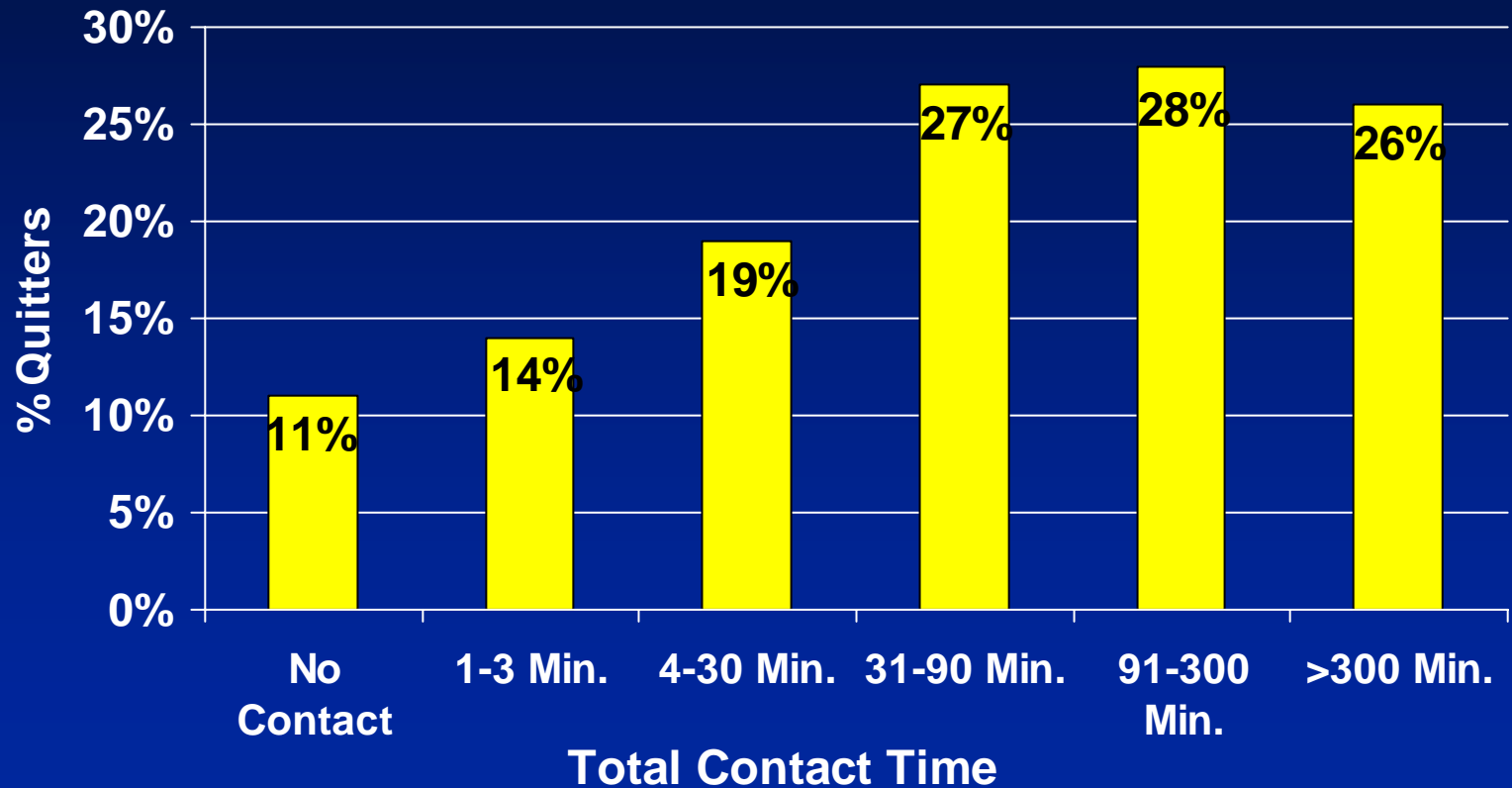
- Recognize parent smoking as a problem:
  - all children
  - infants and those with asthma or recurrent ear infections
- Triage and refer, or treat smoking parents and adolescents
- Provide support for those who have quit
- Offer advice on reducing exposure
- Recognize that smoking begins while our patients are our patients
- Multiple community advocacy roles

# *U.S. Adult Attitudes and Practices Regarding Smoking Restrictions and Child Exposure*

	<b>Smokers</b>	<b>Non-Smokers</b>
<b>Parent's smoke harms children</b>	<b>90</b>	<b>97</b>
<b>Parents' smoking increases child's smoking</b>	<b>71</b>	<b>87</b>
<b>Household smoking ban</b>	<b>30</b>	<b>86</b>
<b>Smoking never allowed in front of child</b>	<b>62</b>	<b>95</b>
<b>Unacceptable for parents to smoke in front of children</b>	<b>54</b>	<b>86</b>

McMillen, R. et al, *Pediatrics*, 2003

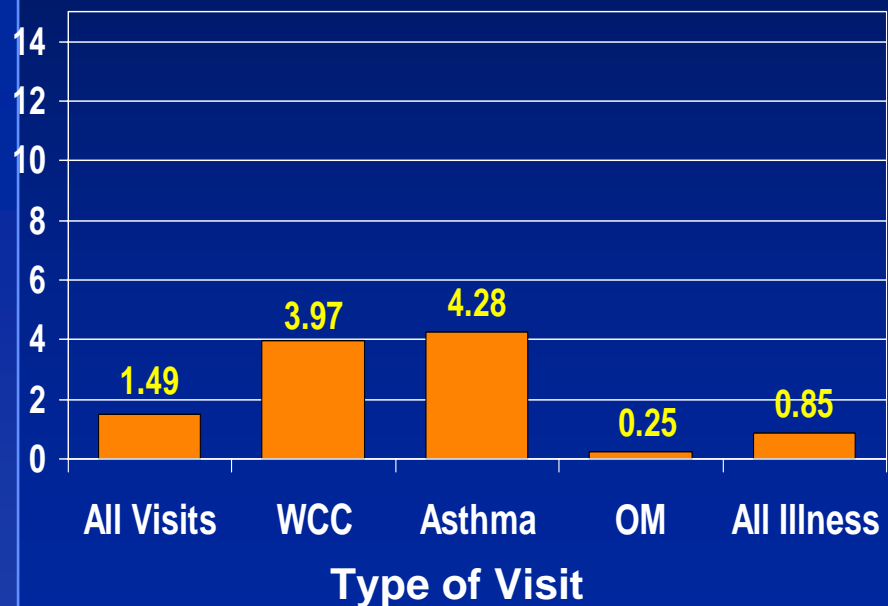
# *Percent Quitters Increase with Counseling*



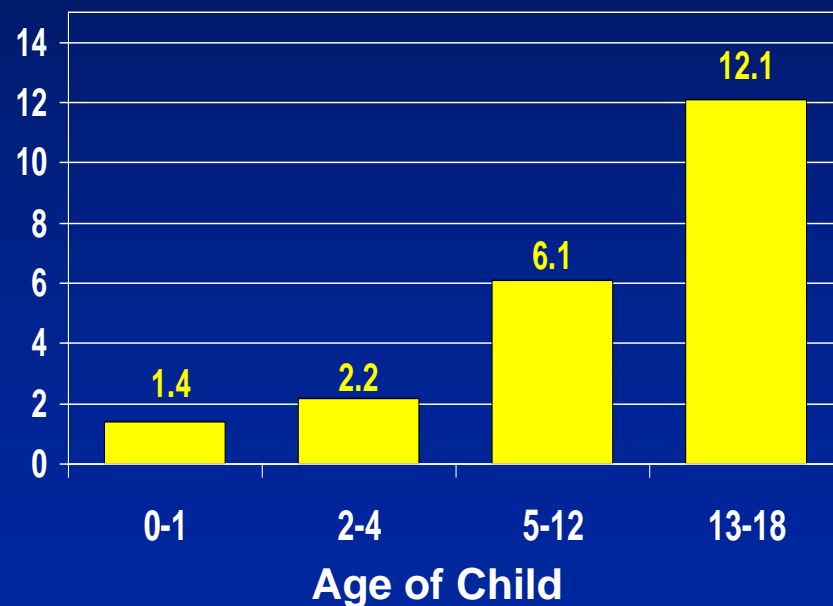
**Quitting defined as abstinence for at least 5 months.**

# *Prevalence of Tobacco Cessation Counseling at Pediatric Visits*

Prevalence at Pediatric Visits by Diagnosis

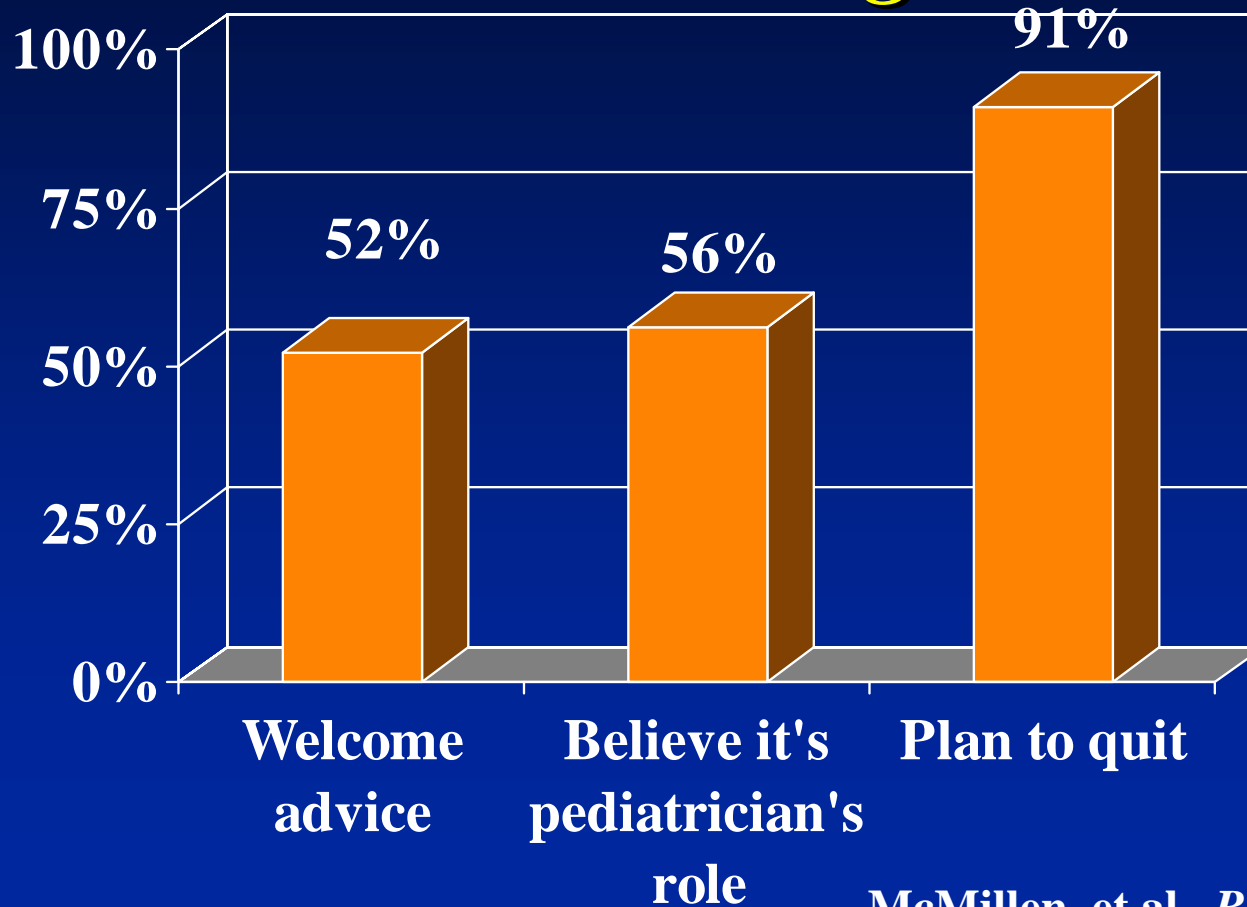


Prevalence by Age at Well Child Visits



Tanski, et al, *Pediatrics*, 2003

# *Smoking Parents' Views on Pediatric Counseling*



McMillen, et al. *Pediatrics*, 2004

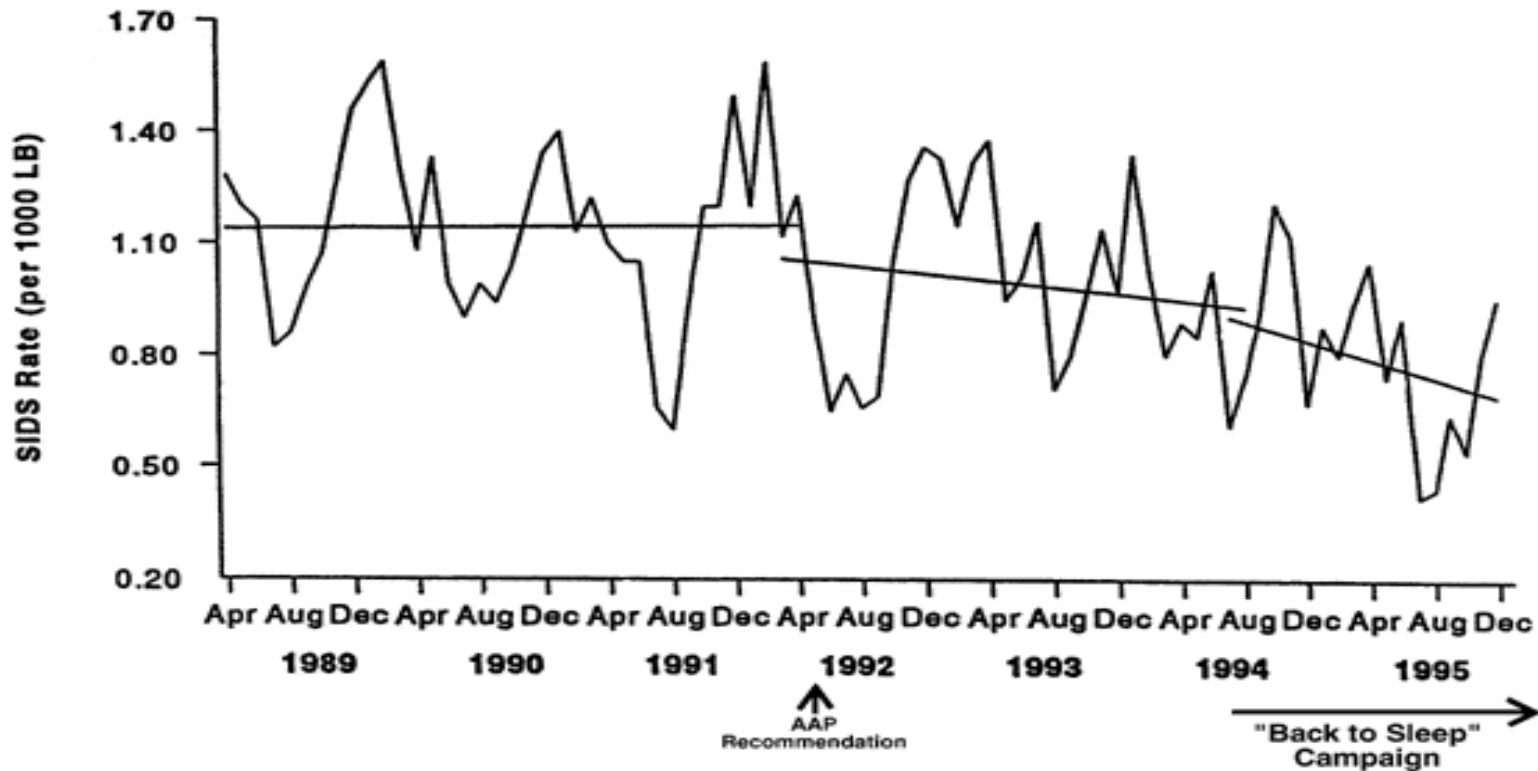
## ***SHS Reduction Counseling by Children's Doctors***

- **Asked if anyone in house smokes** 51%
- **Asked if smoking allowed in house** 43%
- **Asked if smoking allowed in car** 35%
- **Discussed dangers of SHS** 24%
- **Advised to quit** 38%
- **Recommended NRT** 15%
- **Prescribed NRT** 7%
  - **Parent actually filled Rx** 6.5%
- **Referred parent for services** 3%



# *Back to Sleep and SIDS*

**U.S. SIDS Rate**  
(NCHS Provisional Data)



# *Tobacco-Free Environment*

