



# A Generation in Jeopardy

**How pesticides are undermining our children's health & intelligence**

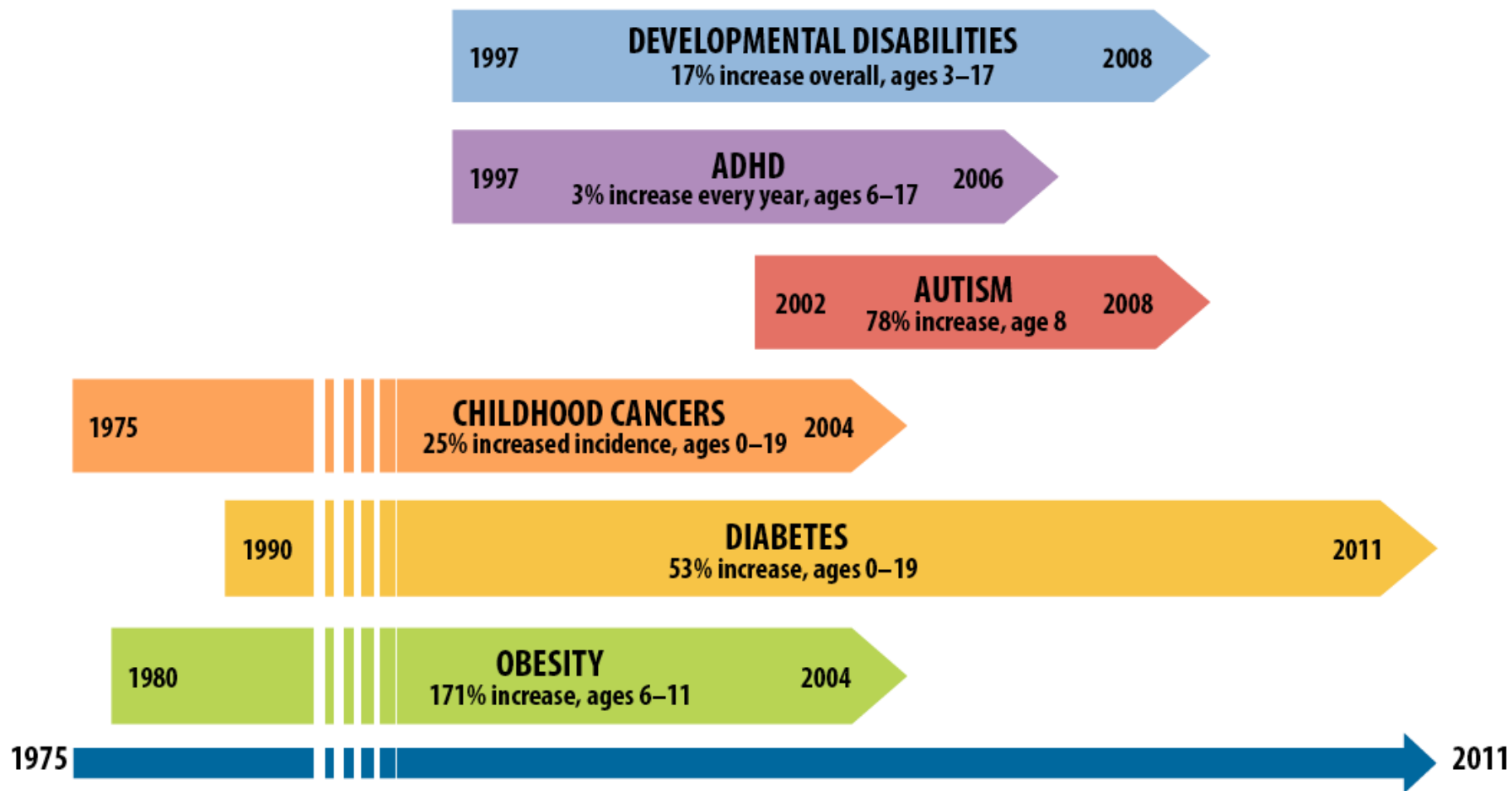
October 2012



# Kids face health challenges



- Children today face health challenges that cannot be fully explained by changes in lifestyle, etc.
- The question of an environmental component has been raised and investigated by several researchers.

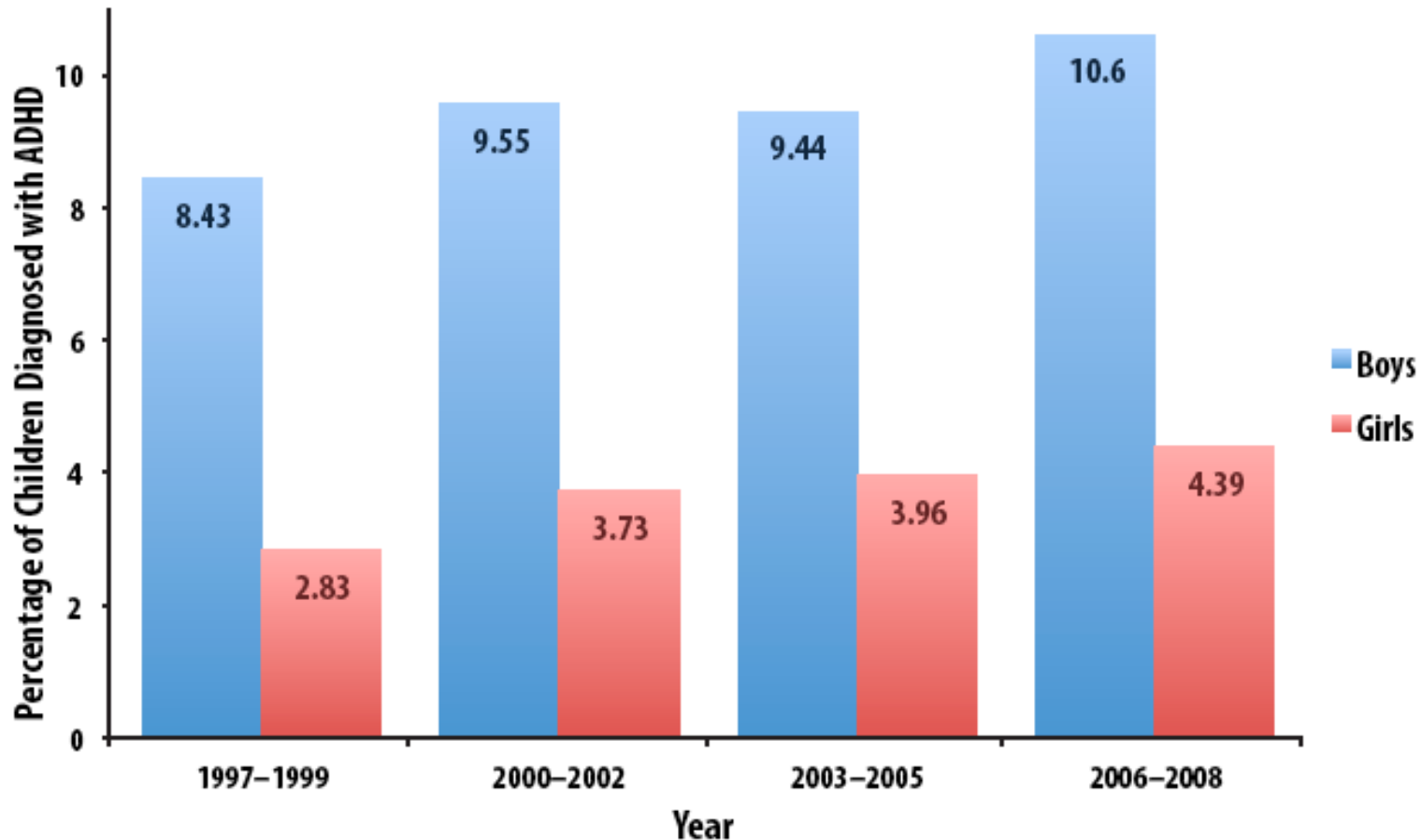


# Children's Health Harms on the Rise, 1975 - 2011

# Kids face health challenges

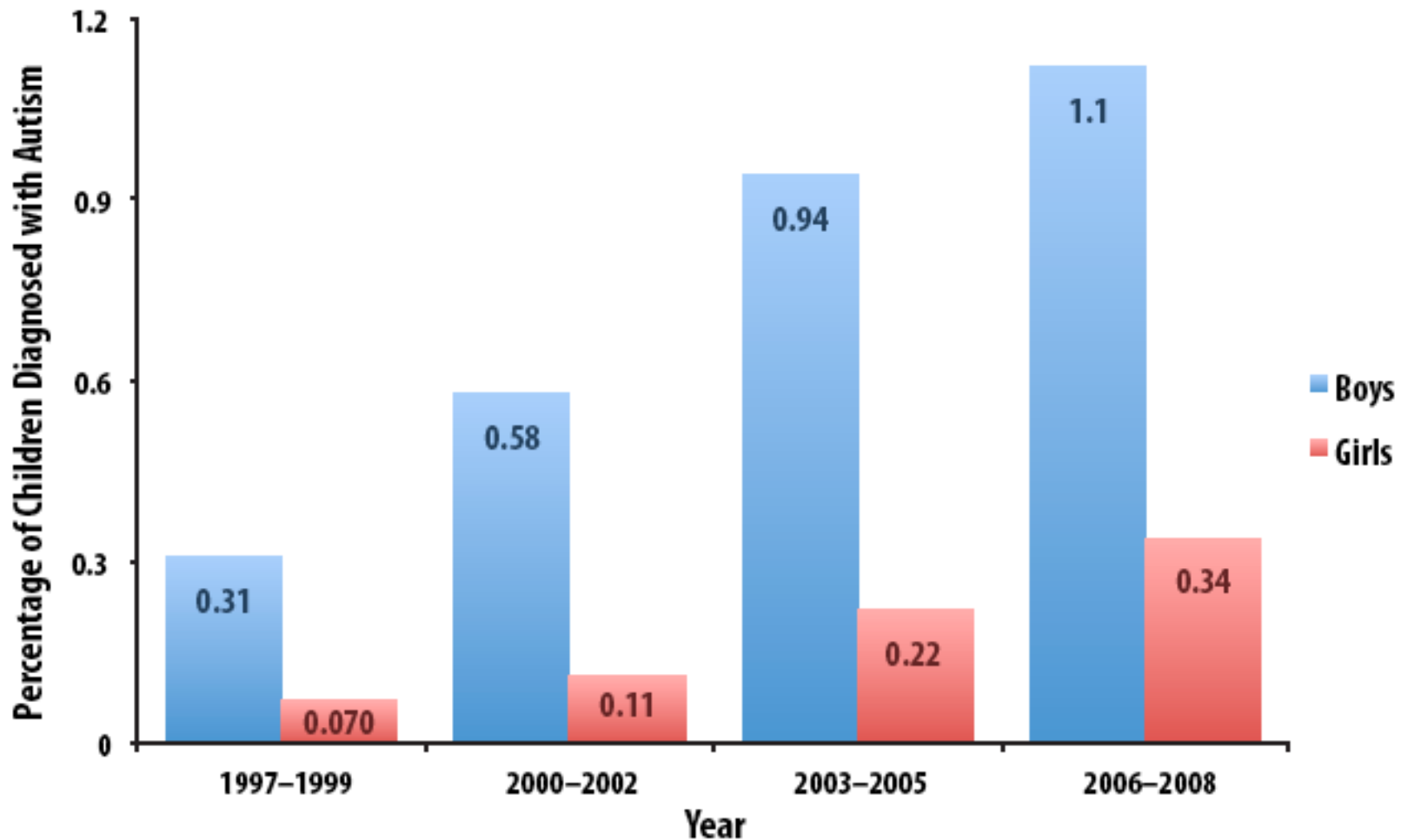
- 17% increase in the number of children with developmental disabilities in the past 15 years. 400,000 to 600,000 of the 4 million children born each year are affected.
- Autism rates have increased dramatically in the last 15 years, up more than 250% for boys and over 375% for girls since 1997.
- National Cancer Institute data show that overall, incidence of childhood cancer is up 25% since 1975. Leukemia and childhood brain tumors have risen even more over this period - 40% and 50%, respectively.
- More than 7 million U.S. children are now affected by asthma, up from an estimated 2 million in 1980.

# ADHD increased average of 3% per year, 1997-2008



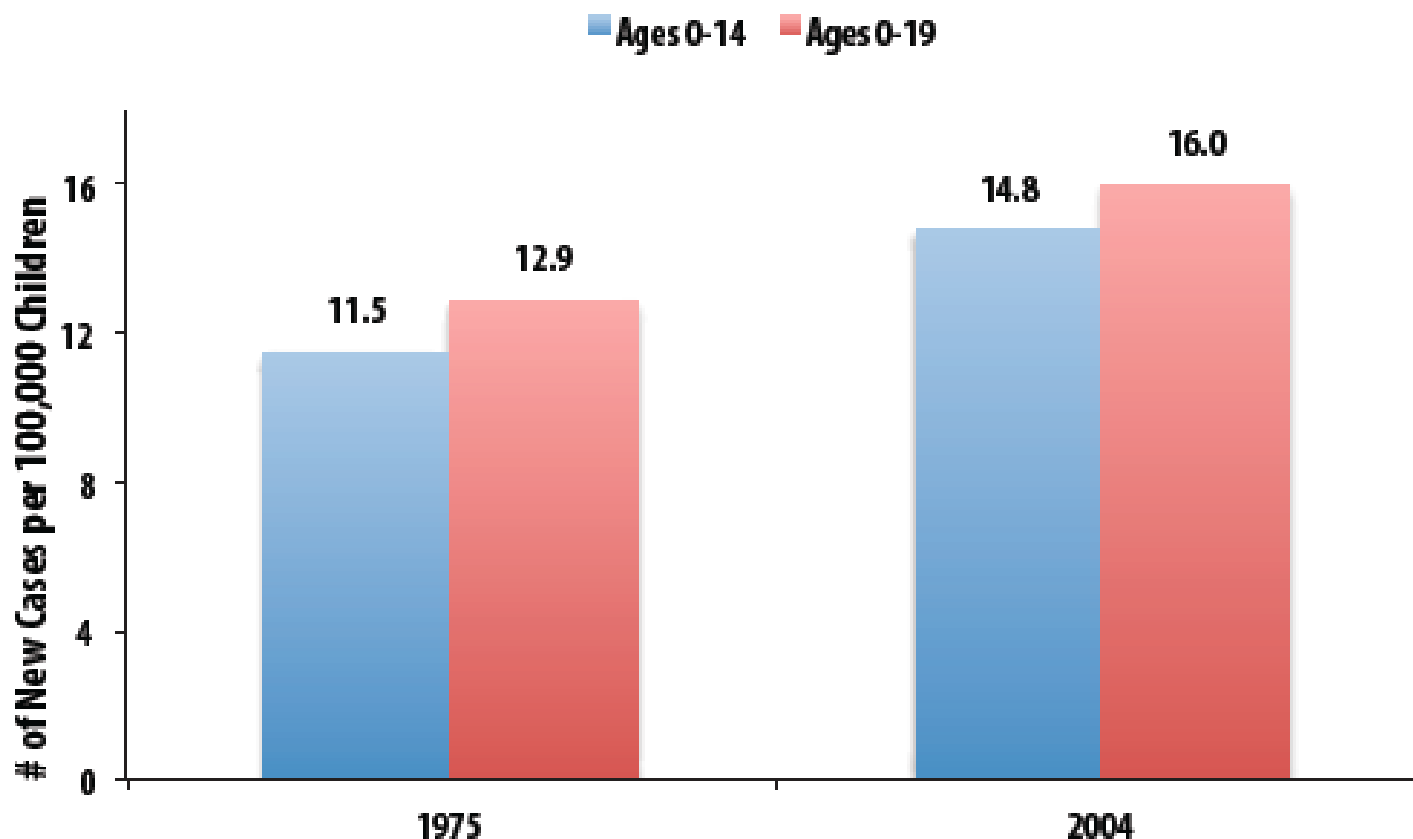
The number of children diagnosed with ADHD increased an average of 3 percent every year from 1997 to 2008. Boys are much more likely to be affected. Source: C. Boyle et al, "Trends in the Prevalence of Developmental Disabilities in U.S. Children, 1997- 2008."

# Autism prevalence has jumped in past decade



Rates of autism have risen dramatically in the past decade. While overall prevalence is higher among boys, the rate of increase is higher among girls. Source: C. Boyle et al, "Trends in the Prevalence of Developmental Disabilities in U.S. Children, 1997-2008."

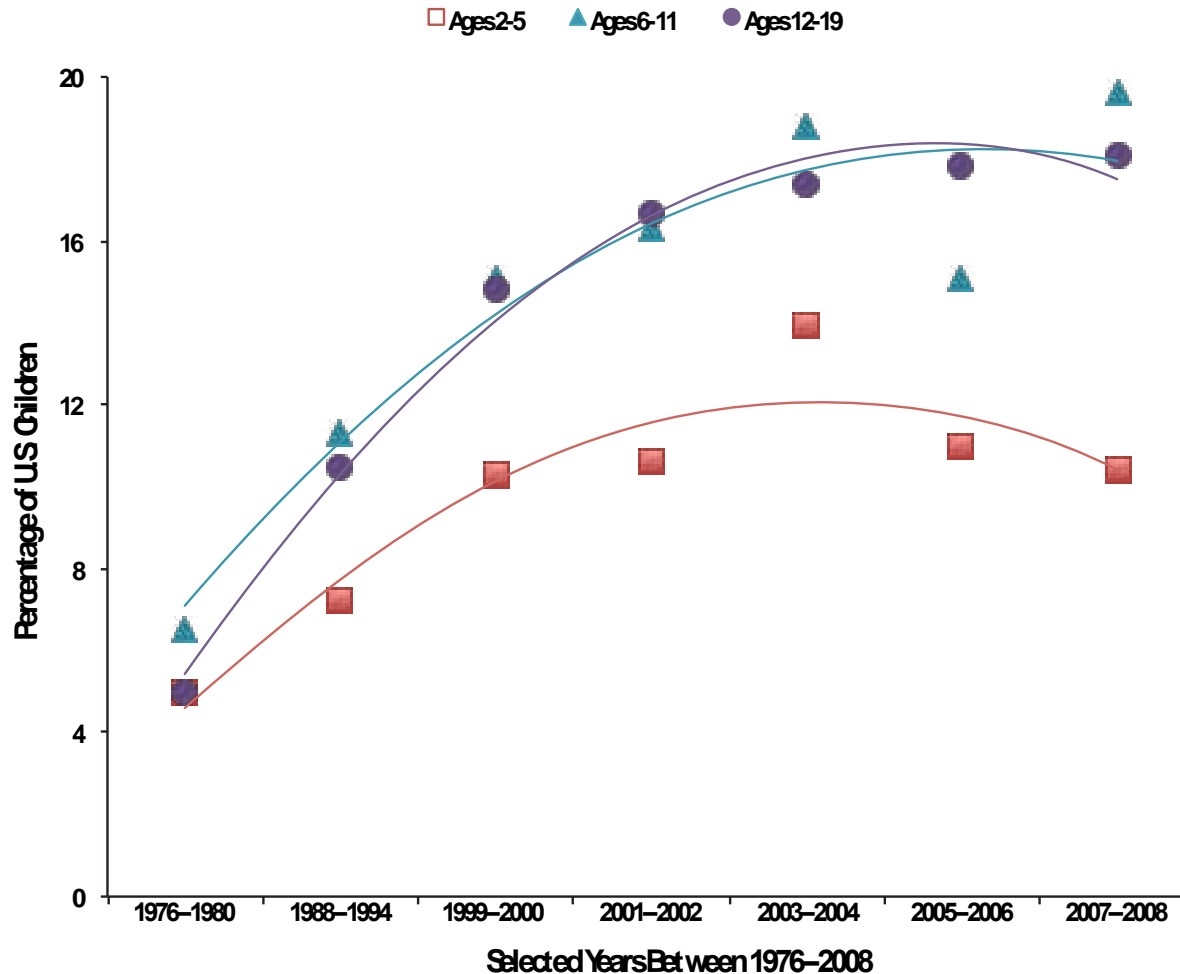
# Increased incidence of cancer



Over the past 30 years, the number of children diagnosed with all forms of cancer has increased from 11.5 to 14.8 cases per 100,000 children per year.

Source: SEER, 2004

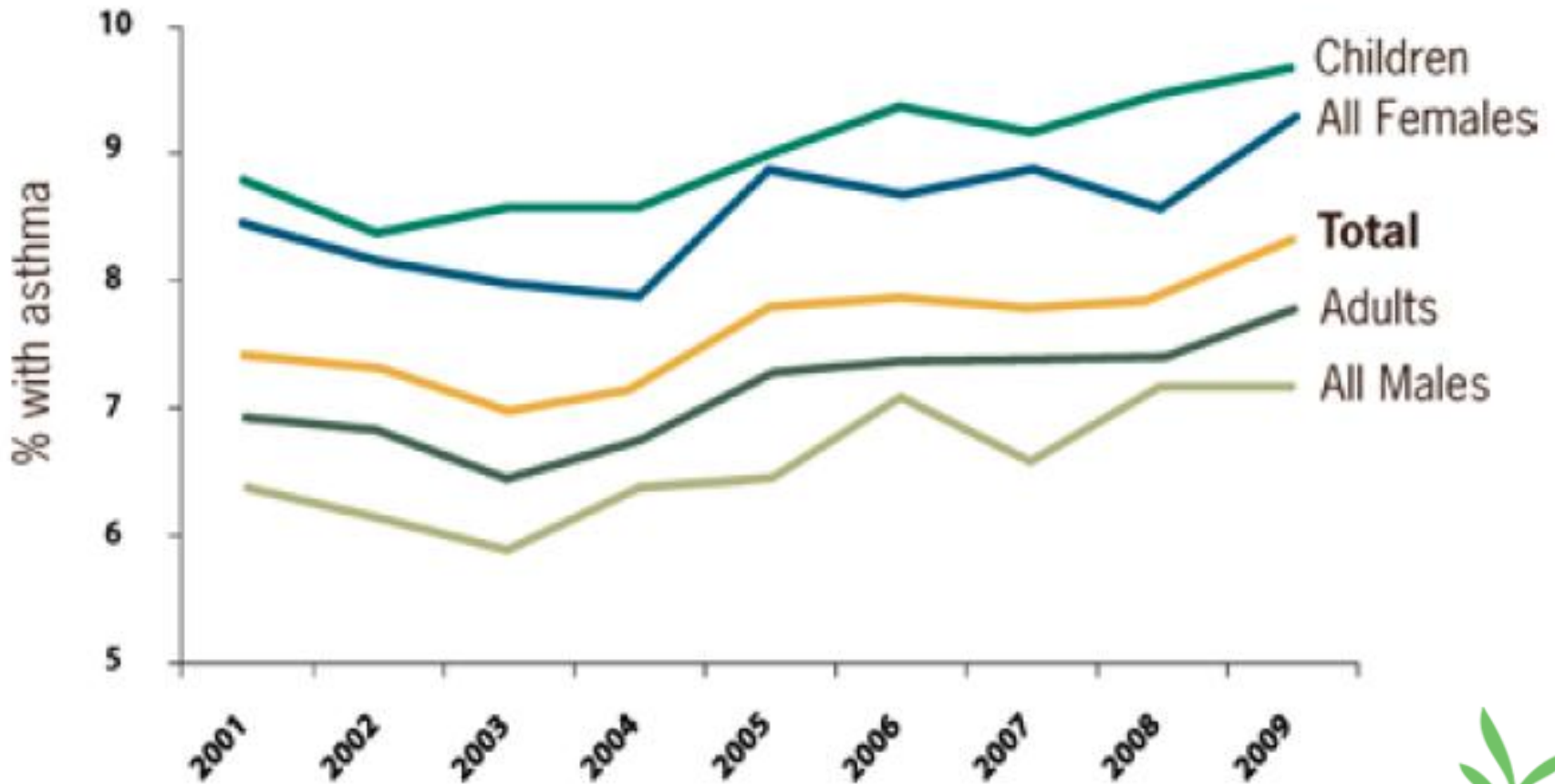
# Increased prevalence of obesity, ages 2-19



Prevalence of obese U.S. children ages 6-11 jumped from 7 percent in 1980 to 20 percent in 2008, while the percentage of obese adolescents increased from 5 to 18 percent. Source: Center for Disease Control, "Prevalence of Obesity Among Children and Adolescents: United States, Trends 1963-1965 Through 2007-2008."



# Asthma prevalence in the U.S., 2001-2009



Percentages are age-adjusted.

# Pesticides contribute to childhood health harms



## Particularly compelling data:

- Brain & nervous system.
- Certain childhood cancers.



# Pesticides linked to ADHD, autism



Prenatal exposure to organophosphate pesticides:

- Children more likely to have developmental disorders-- including autism-- by age 3.
- Children more likely to have increased attention problems and ADHD by age 5.

# Pesticides linked to changes in brain structure



Children exposed to the insecticide chlorpyrifos in the womb showed differences in MRI images of the brain.

Areas of the brain related to attention, language, emotions and control were all affected.

# Kids are exposed to pesticides where they live, learn & play



Environments we'd like to consider "safe" — from the womb to the classroom to the kitchen table — often bring children into contact with harmful pesticides.

# Kids are exposed to pesticides where they live, learn & play



Relative to their size, kids eat, breathe and drink much more than adults.



# Kids are exposed to pesticides where they live, learn & play



Interference from pesticides and other chemicals at critical moments of development — even at low levels — can derail the process, leading to effects that can last a lifetime.

# Guarantee a solid start for kids



## How?

- Individual choices help.
- We need local & national policy change.



# Key steps to reduce kids' exposure to pesticides



Stronger tools for policymakers for swift action to pull existing pesticides off the market and block new pesticides when independent science suggests harm to children.

Ending harmful pesticide use in homes, daycare centers and schools.



## Key steps to reduce kids' exposure to pesticides

Establish pesticide-free zones around schools, daycare centers, and neighborhoods in agricultural areas to protect children from harmful exposures.

# Key steps to reduce kids' exposure to pesticides



Jim and Jimmy on the farm, 2004

Increase investment and support for innovative farmers who are stepping off the pesticide treadmill.

# Join PAN's Healthy Kids campaign!



- **Healthy Kids Campaign:** [www.panna.org/current-campaigns/kids-health](http://www.panna.org/current-campaigns/kids-health)
- **Join the PAN community to take action:**
  - [www.panna.org/join](http://www.panna.org/join)

