



## A Generation in Jeopardy

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

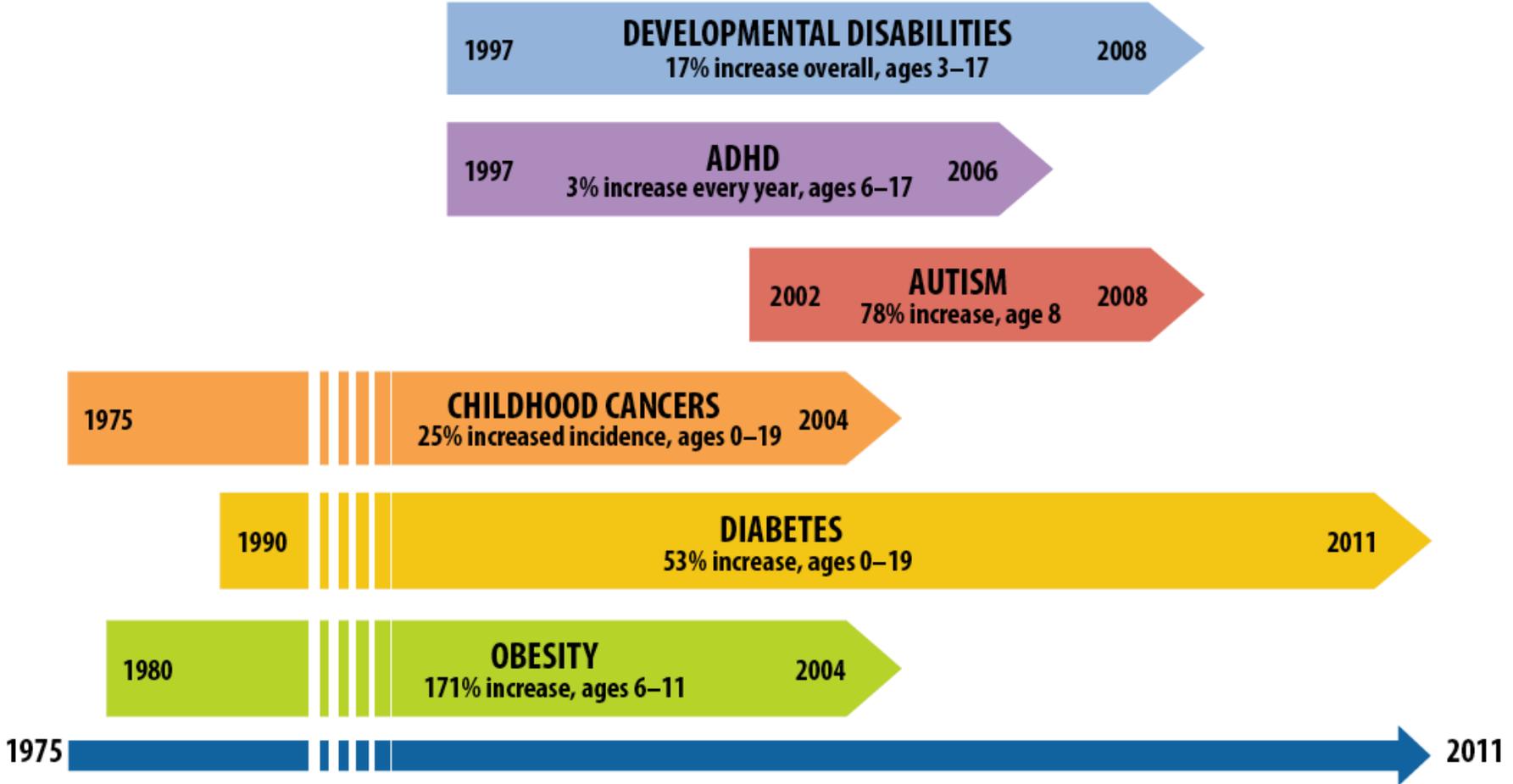


# Kids face health challenges



This generation is experiencing diseases & disorders their parents or grandparents were unlikely to face.





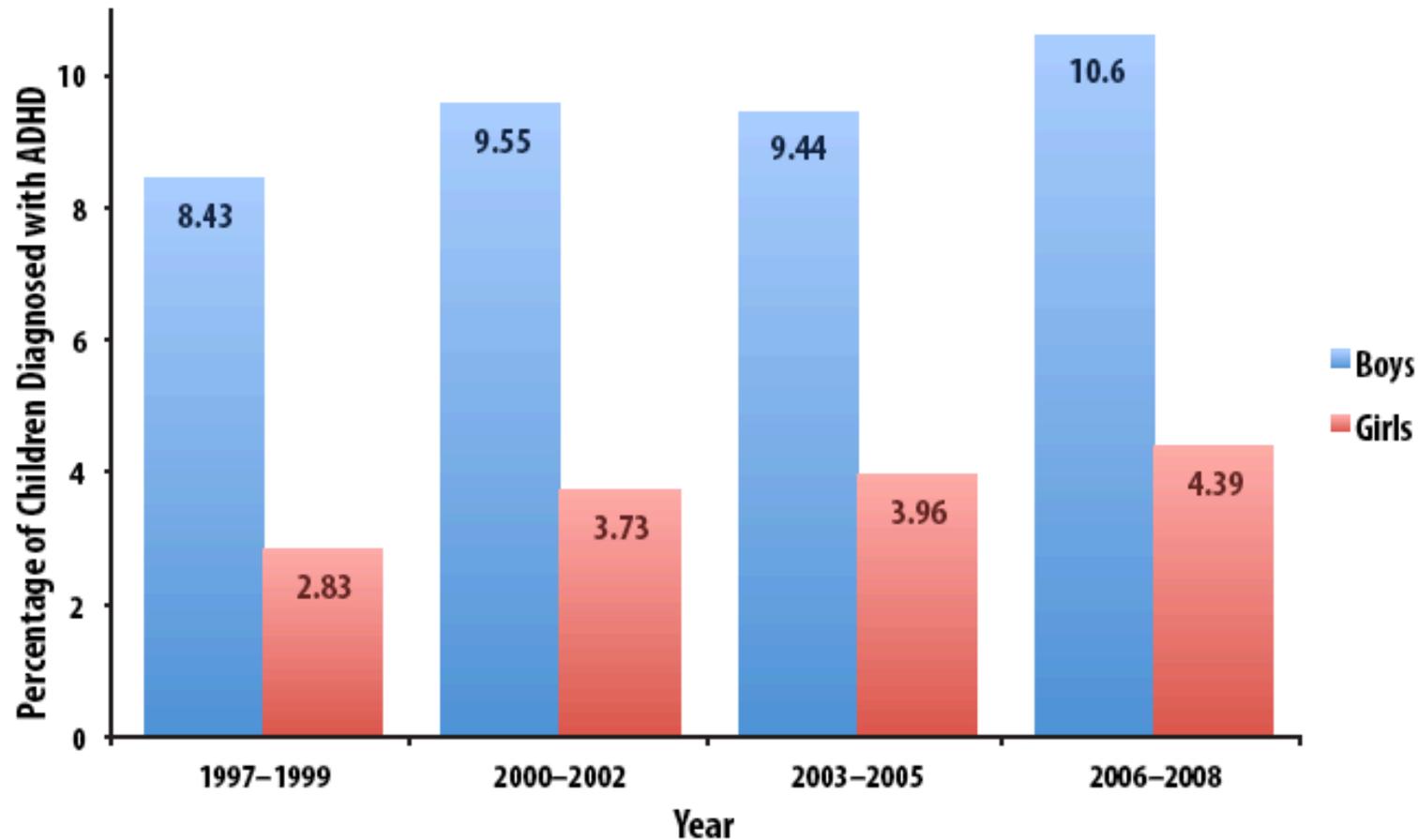
# Children's Health Harms on the Rise, 1975 - 2011



# Kids face health challenges

- ❖ **Developmental disabilities.** 400,000 to 600,000 of the 4 million children born each year are affected.
- ❖ **Childhood cancer:** Overall incidence up 25% since 1975; leukemia & childhood brain tumors up 40% and 50%, respectively.
- ❖ **Asthma:** More than 7 million now affected, up from 2 million in 1980.

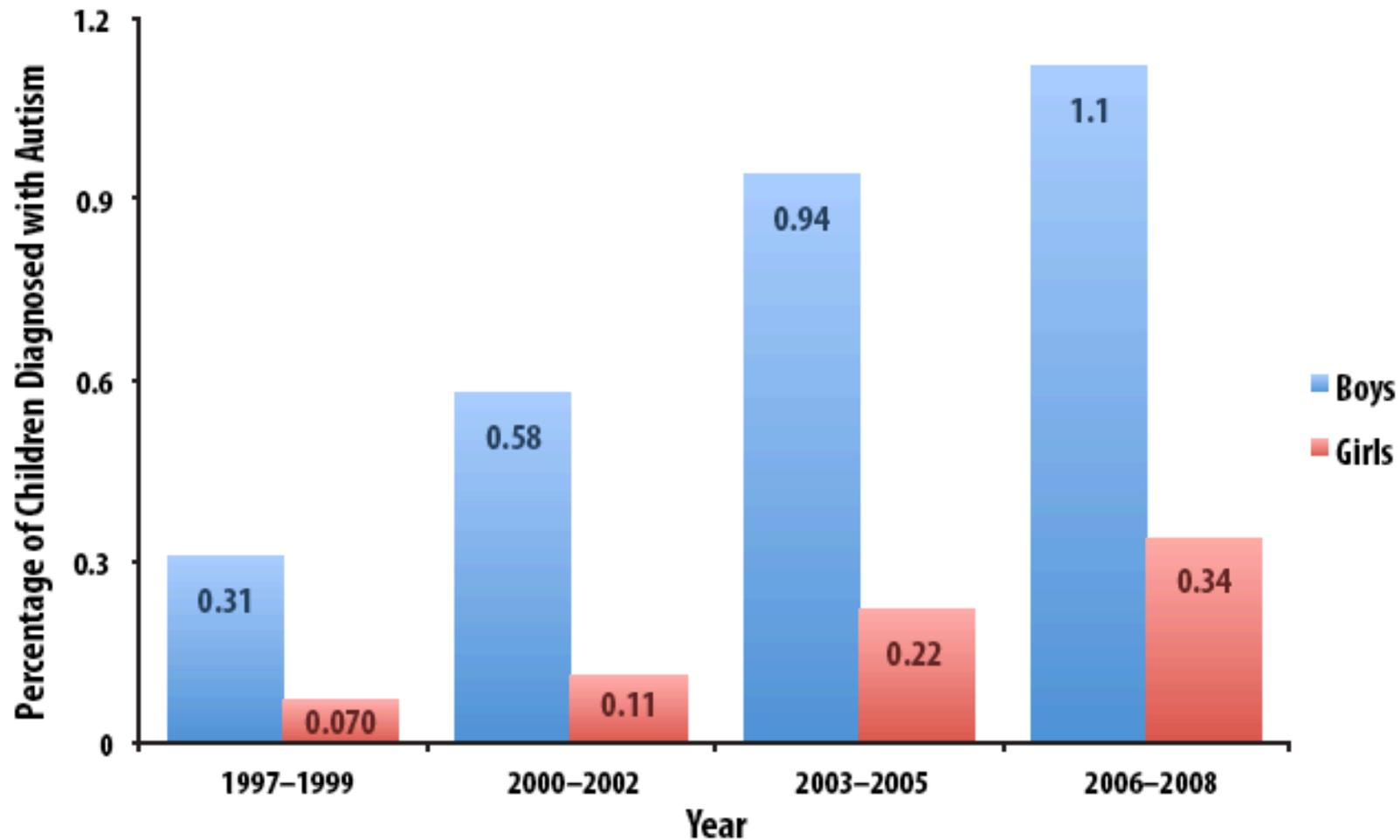
# ADHD increased average of 3% per year, 1997-2008



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."

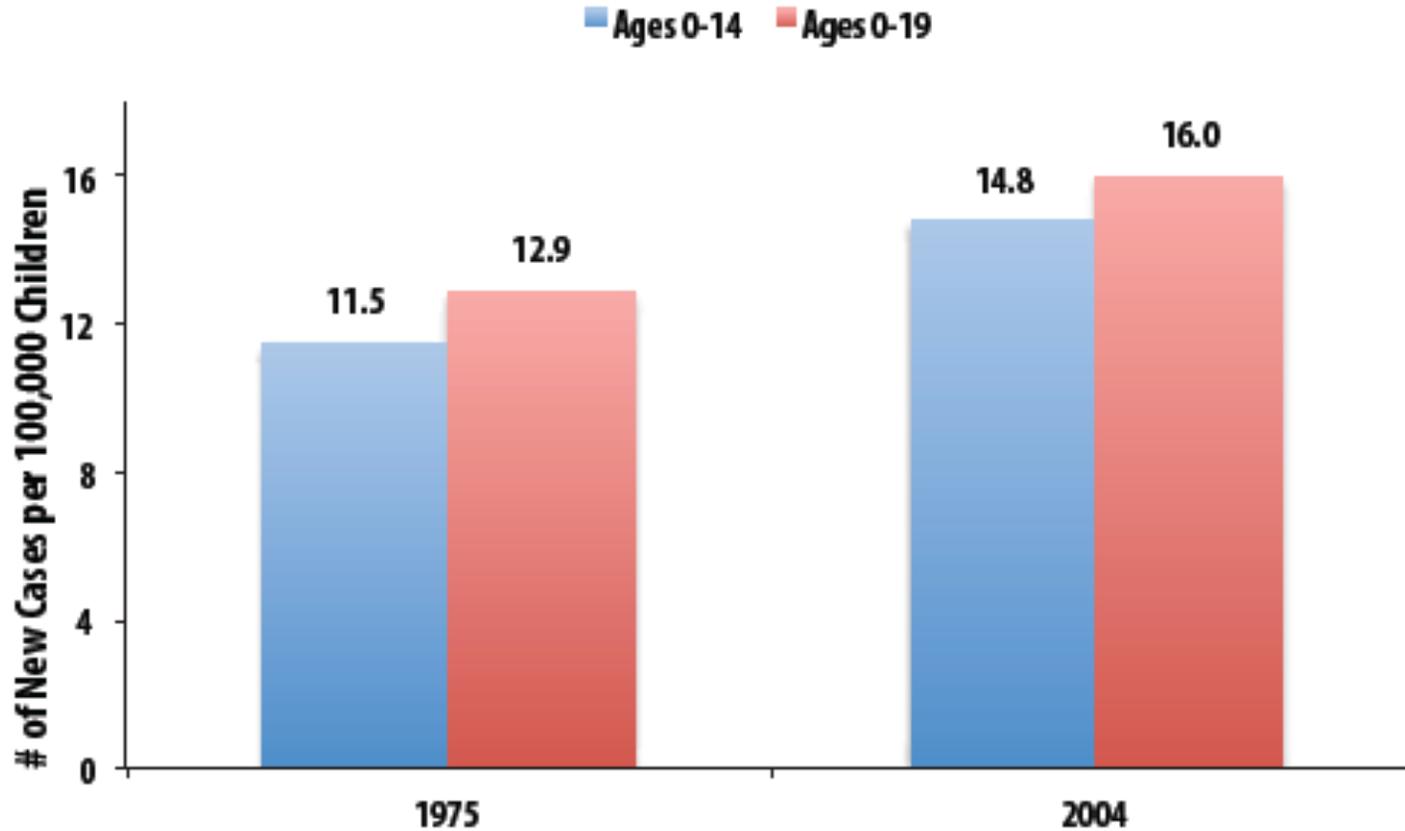


# Autism prevalence has jumped in past decade



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



# Pesticides contribute to childhood health harms



## Particularly compelling data:

- ❖ Brain & nervous system.
- ❖ Certain childhood cancers.



# Pesticides linked to ADHD, autism



Prenatal exposure to **OP pesticides:**

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

# Pesticides linked to changes in brain structure



- ❖ Children exposed to **chlorpyrifos** in the womb showed differences in MRI images of the brain.
- ❖ Areas 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 womb to classroom to kitchen table — often bring children into contact with harmful pesticides.

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



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

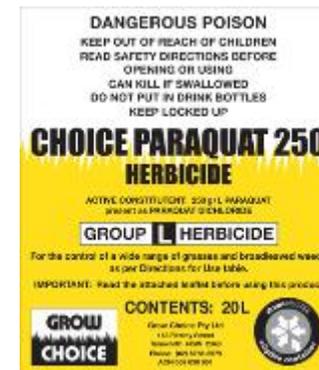
# Kids are exposed to pesticides where they live, learn & play



- ❖ Even at very low levels, interference from pesticides at critical moments can derail development.
- ❖ Some effects can last a lifetime.

# Pesticides and Parkinson's

- Maneb
- **Paraquat**
- Ziram
- Rotenone
- Synergistic effects



# Guarantee a solid start for kids



## How?

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

# What health professionals can do



- ✓ Personal choices:  
Organic food, when possible.  
Integrated Pest Management practice
- ✓ Community decisions:  
Pesticides in public places  
Farmers markets  
Retailers



## What health professionals can do

- Research and publications- carrying out research on relevant topics
- Communication and information



# Online Resources



- ❖ **Healthy Kids Campaign ::** [www.panna.org/current-campaigns/kids-health](http://www.panna.org/current-campaigns/kids-health)
- ❖ **What's On My Food? [www.whatsonmyfood.org](http://www.whatsonmyfood.org)**
- ❖ **Analysis :: GroundTruth Blog, [www.panna.org/blog](http://www.panna.org/blog)**
- ❖ **Pesticide information :: detailed toxicity & regulatory info, [www.pesticideinfo.org](http://www.pesticideinfo.org)**



