

# *Pesticides and Precaution?*

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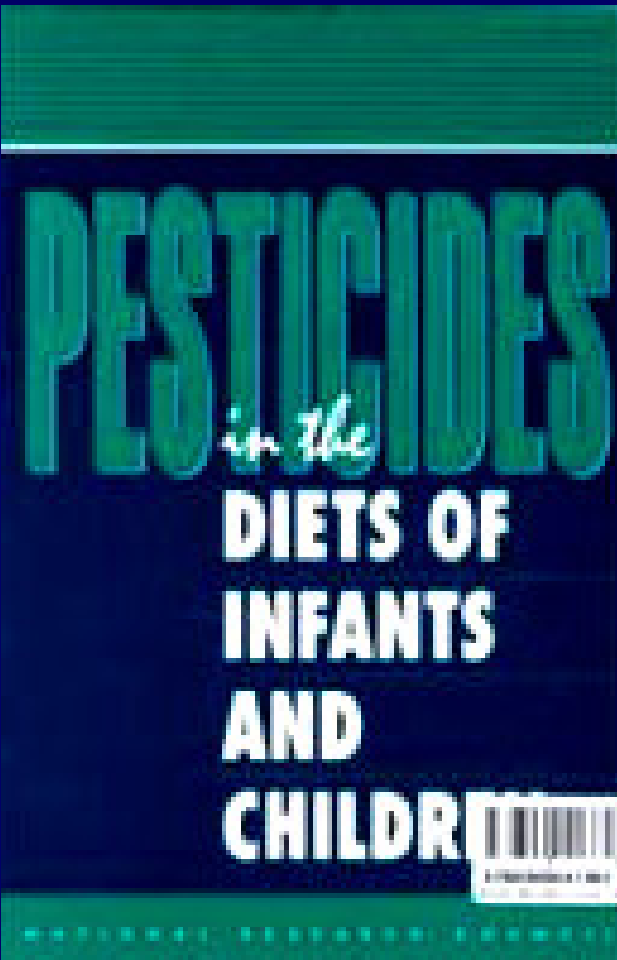
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American Enterprise Institute

**REGULATING  
PESTICIDES  
IN FOOD**



**THE DELANEY PARADOX**

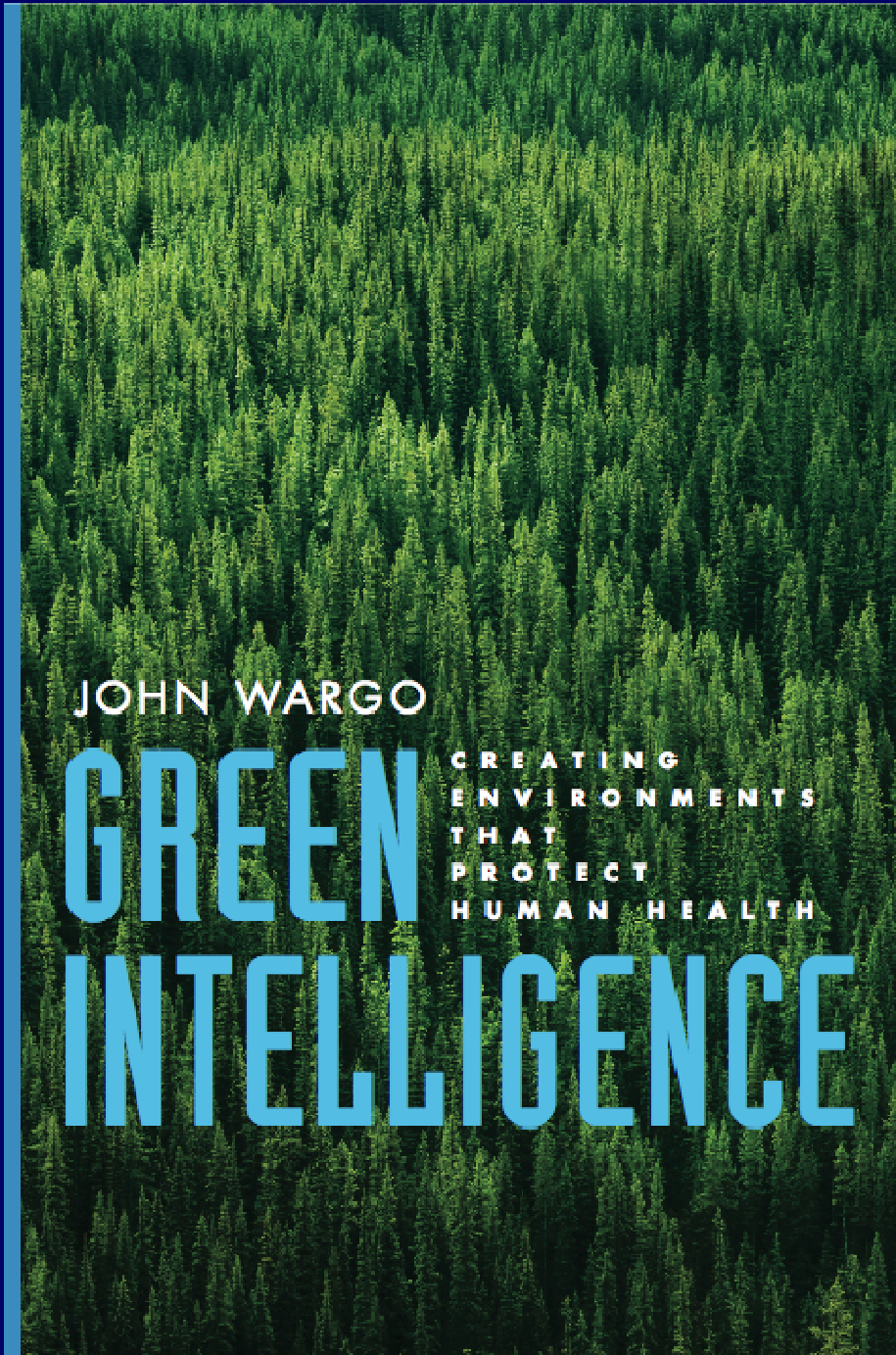


# Our Children's Toxic Legacy

How Science  
and Law Fail  
to Protect Us  
from Pesticides

John Wargo





JOHN WARGO

**GREEN** CREATING ENVIRONMENTS THAT PROTECT HUMAN HEALTH  
**INTELLIGENCE**

# *The Costs of Precautionary Policy*

- 1. Discourages Innovation: Always Risky*
- 2. Increases Pre-Market Testing Costs*
- 3. Slows Introduction of Less Risky Substitutes*
- 4. Decreases Return on Investments*
- 5. Reduces Competitive Advantage Globally*

## *Industry Arguments*

1. Prove Pesticides Are Dangerous: Where Are the Dead Bodies?
2. Pesticides Are Among the Most Tested Synthetic Compounds
3. Natural and Voluntary Hazards Are More Significant: Regulate Them
4. Comparative Risk: Spend \$ on Seat Belts, Drug Control and Suicide Prevention
5. Human Experimentation Should Be Expanded to Relieve 10X Safety Factor
6. Labels Offer Sufficient Warning
7. Applicator Training and Licensing Effectively Manages Risks
8. Registration Is a Property Right: Prohibition Demands Compensation (5<sup>th</sup> Amend.)
9. If Product is Banned Domestically: Let Other Cultures Decide Risk Tolerance

## *Counter-Arguments*

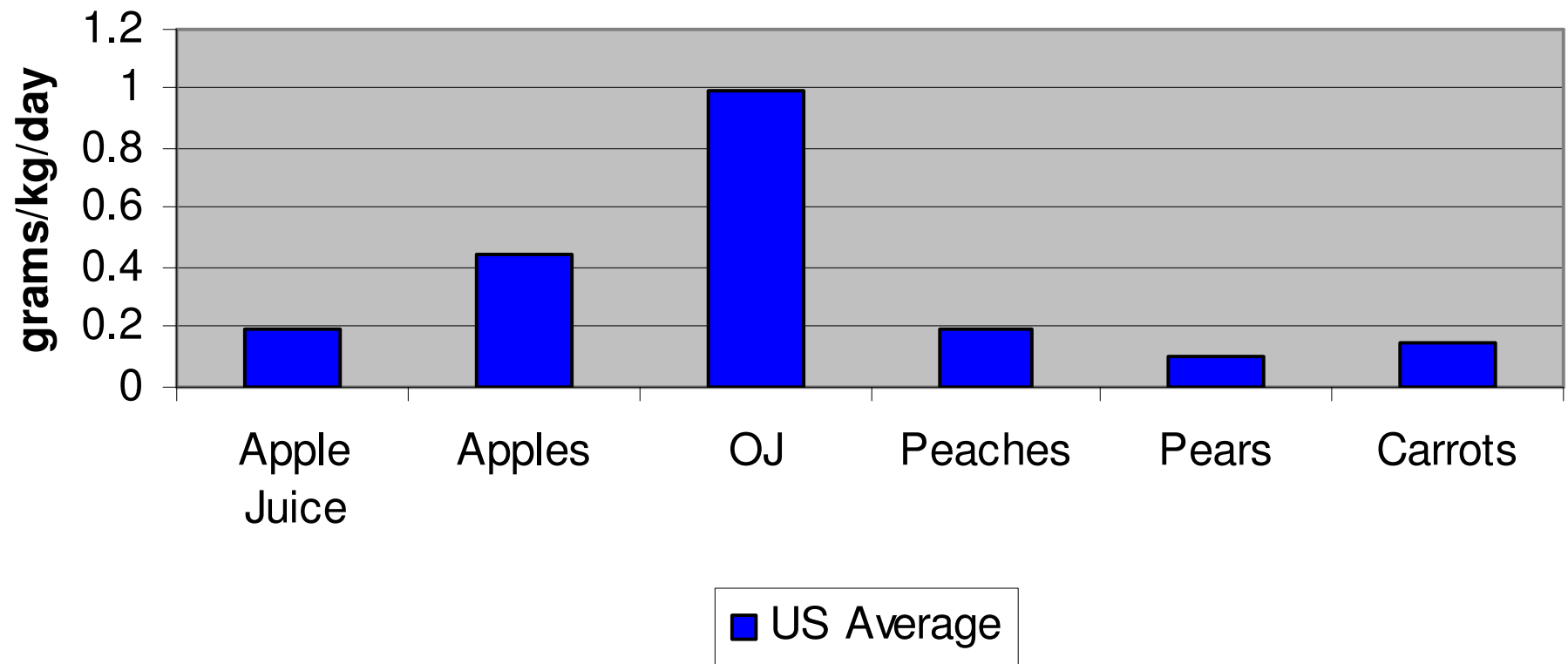
- Chemical at a Time Regulation: Avoids Mixtures
- Toxicity Testing of Single Chemicals & Selected Effects
- Data Developed by Vested Interests
- Assume Exposure & Risk Uniformly Distributed
- Preoccupation With Food
- Air, Water, Indoor Environments, Neglected
- Bans are Rare Events in History of Regulation



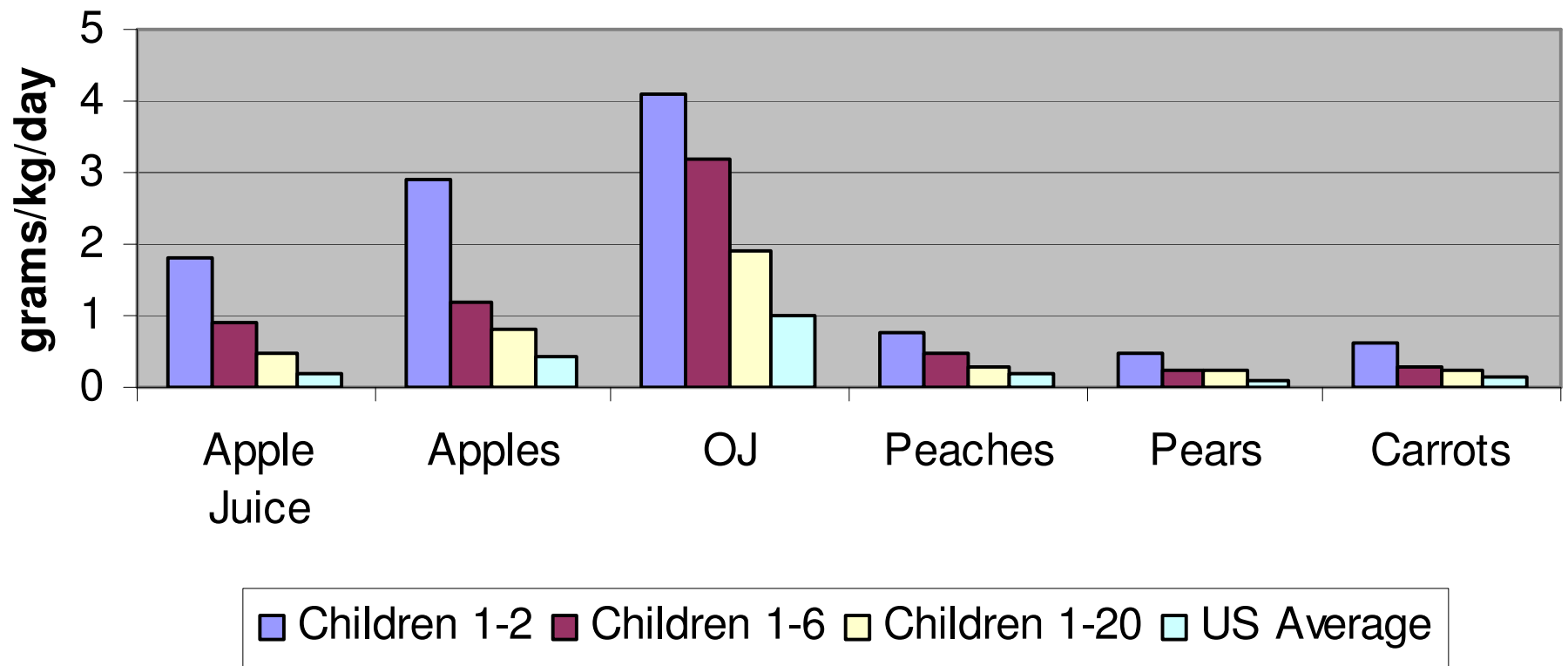
Pesticide Risks Are Not Detectable By Human Senses

# *Statistical Averaging: Insight or Myopia?*

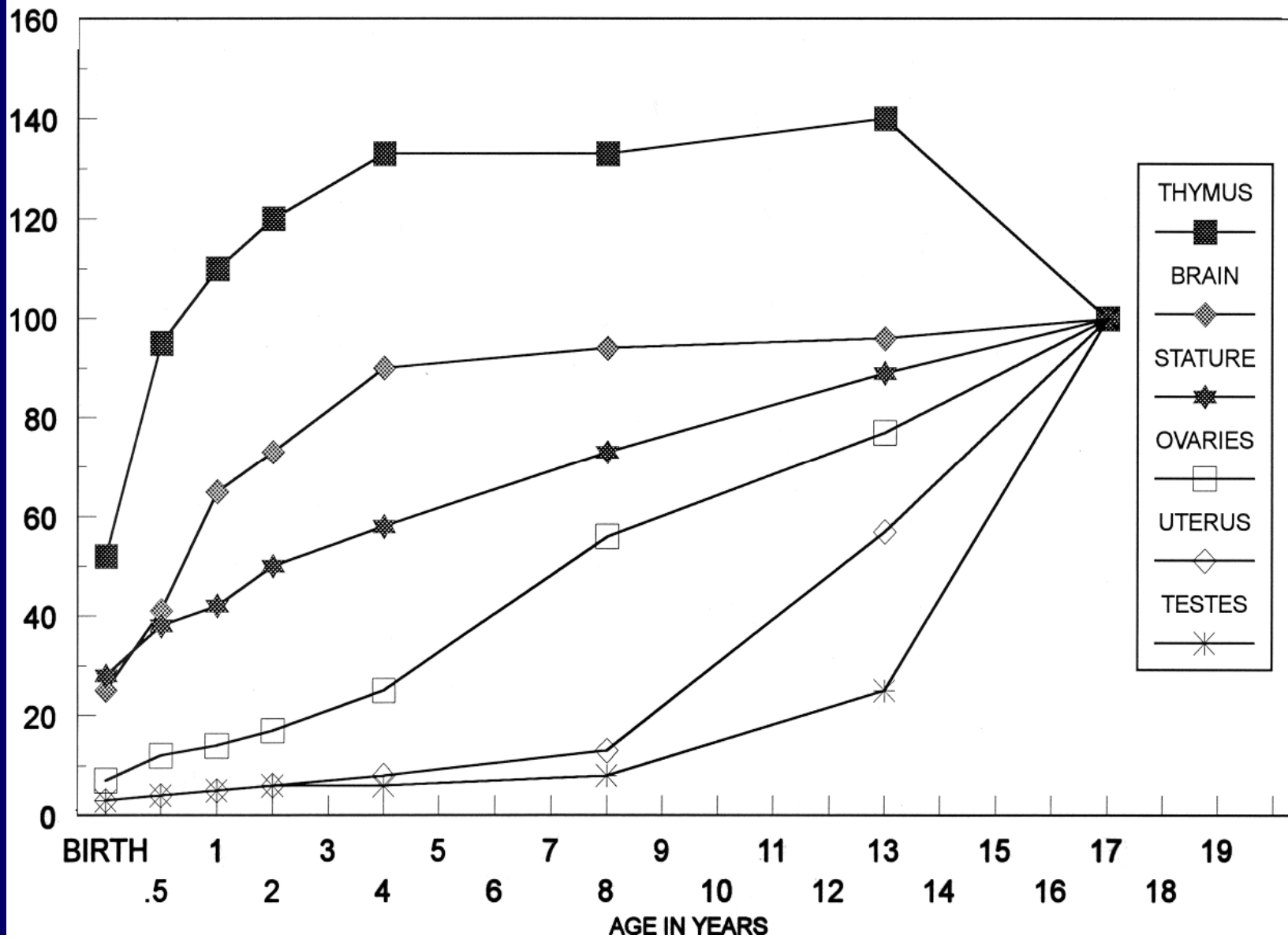
## Mean Intake



## Mean Intake: Comparison Among Age Groupings



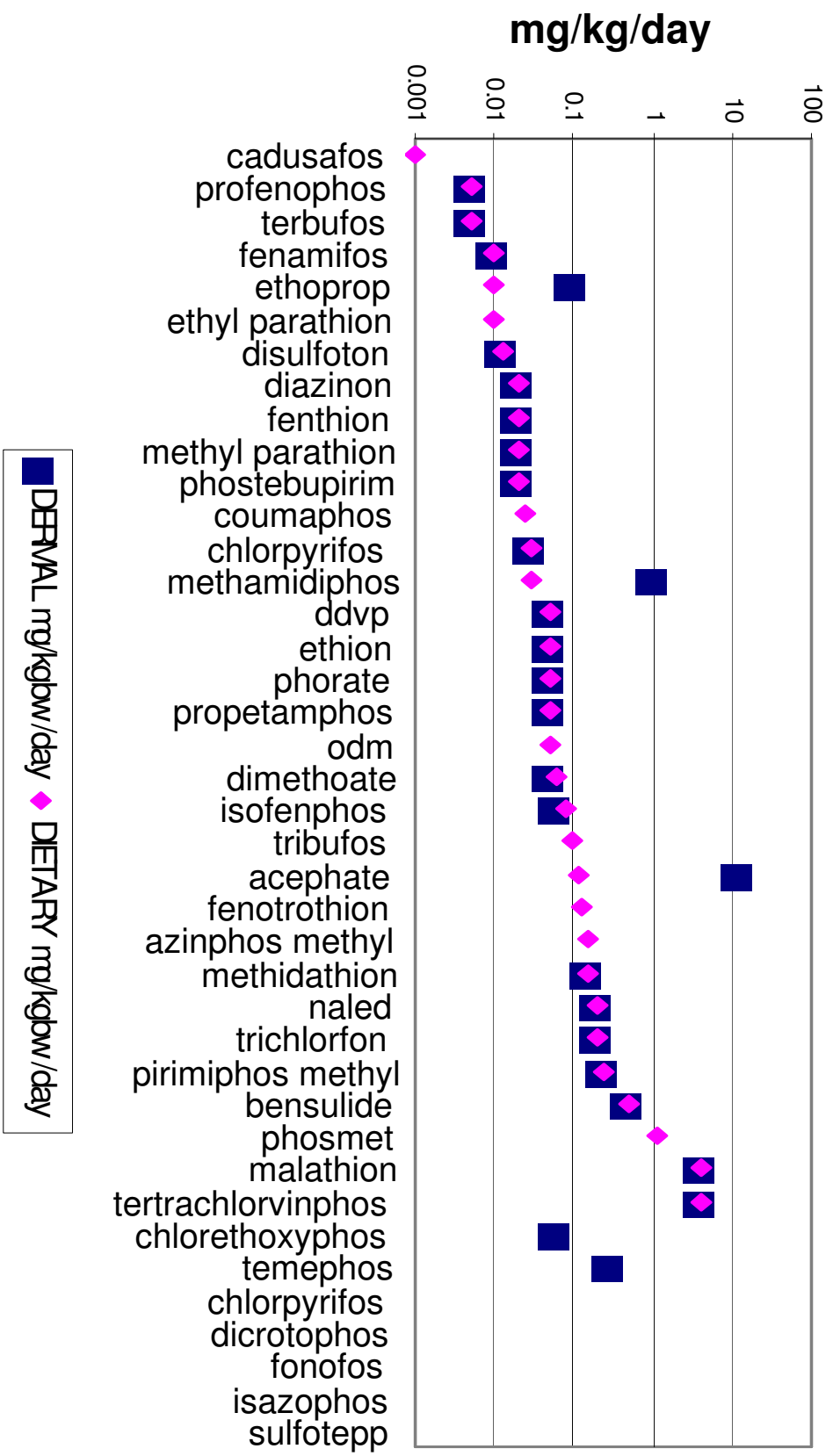
# Childhood Organ Growth Rates



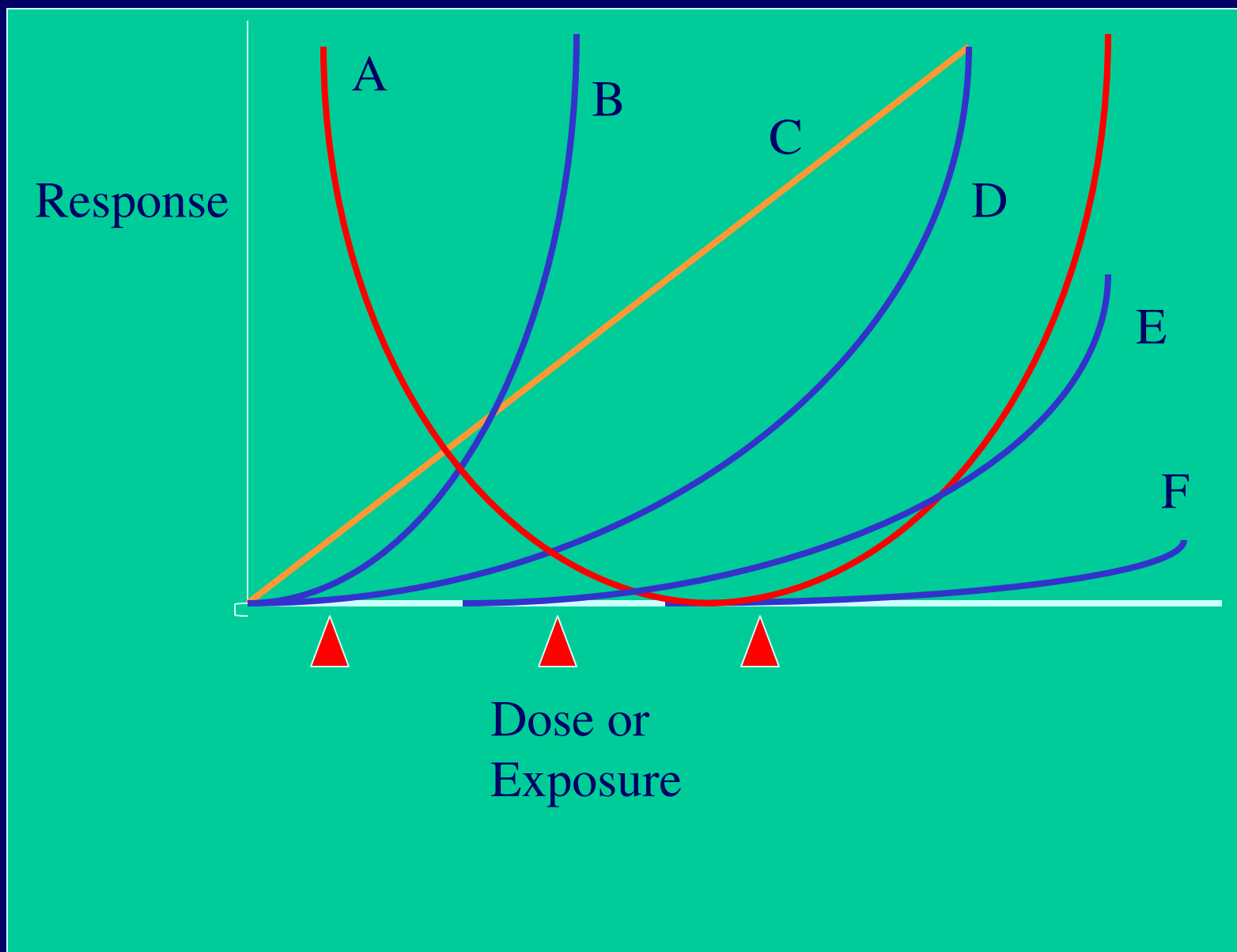


# Relative Toxicity of Organophosphate Insecticides

## ORGANOPHOSPHATE TOXICITY: COMPARISON OF DIETARY AND DERMAL NOE'S EPA 2000 HAZARD ID COMMITTEE REPORT



# Using Law and Regulation to Effect Chemical Substitution & Risk Reduction



# *Food Quality Protection Act of 1996*

❖ *Burden of Proof of Safety*

❖ *General Safety Standard: “Reasonable certainty of no harm”*

❖ *Required Finding of Safety:*

❖ *Tenfold Additional Safety Factor:*

❖ *Aggregate Risk:* Consider various routes of exposure.

❖ *Cumulative Risk:* Consider mixtures

# *Why Support Precautionary Policy?*

1. Human Inability to Sense Chemical Risk
2. Presumption of Susceptibility Among Children and Others
3. Misunderstanding Pesticide Use: Poor Environmental Monitoring
4. Misunderstanding Pesticide Persistence and Environmental Fate
5. Misunderstanding Variability in Human Exposure
6. Exposure to Mixtures is Common
7. Incomplete Toxicity Testing
8. Failure of Labeling As Management Strategy
9. Trends in Human Illness: Neurological, Endocrine, Immune Systems
10. Variance in Human Capacity to Manage Risk