An Opportunity to Protect and Prevent: Understanding the Impact of Pesticides on Children's Health

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Key Points

1. Children are uniquely susceptible to pesticide toxicities

2. The health effects of chronic, low-level pesticide exposure are detrimental

3. These damages can be mitigated

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Key Point #1

Children are uniquely susceptible to pesticide toxicities

- Immaturity of organs
  - Less effective toxin clearance
  - Buildup of harmful metabolites
  - Increased vulnerability to pesticide insult
- Physical and behavioral activities
  - Increased exposure to pesticides through normal play
- Physiologic differences
  - Increased dietary and inhalational pesticide exposure



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Key Point #2

Chronic, low-level pesticide exposure has detrimental health effects

- Adverse birth outcomes
  - Preterm birth
  - Low birthweight
  - Congenital anomalies
- Pediatric cancers
  - Increased exposure to pesticides through normal play
- Neurobehavioral disorders
  - Developmental delays
  - Attention Deficit Hyperactivity Disorder
- Lung disease
  - Asthma
  - Respiratory infections

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Key Point #2

Chronic, low-level pesticide exposure has detrimental health effects

- Endocrine Disruptors
  - Affect endocrine glands and hormones
  - Act as imposters of naturally occurring hormones
  - Disrupt production of hormones
  - Block action of or alter hormone chemical message
- Pesticides as EDs
  - Organophosphates and organochlorines
  - Suggested: endocrine cancers, pubertal and reproductive effects

Key Point #3

The damages of pesticide exposure can be mitigated

- Integrated pest management (IPM) programs
- Warning signs of pesticide use
- Restricting spray zone buffers at schools
- Restricting specific types of pesticide products in schools

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Key Points Reviewed

1. Children are uniquely susceptible to pesticide toxicities

2. The health effects of chronic, low-level pesticide exposure are detrimental

3. These damages can (and must) be mitigated

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References

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