

# Healthy kids!

Tips & tools for action on pesticides



## Pesticide Action Network North America

Pesticide Action Network North America (PAN North America) works to replace the use of hazardous pesticides with ecologically sound and socially just alternatives.

As one of five PAN Regional Centers worldwide, we link local and international consumer, labor, health, environment and agriculture groups into an international citizens' action network. This network challenges the global proliferation of pesticides, defends basic rights to health and environmental quality, and works to ensure the transition to a just and viable society.

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## Introduction

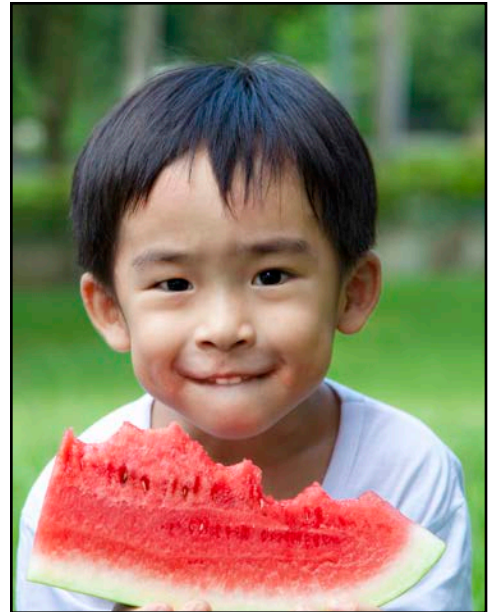
The science is clear: Kids today are sicker than they were a generation ago, and pesticides are part of the reason why.

Throughout childhood, kids are exposed to pesticides where they live, learn and play. Scientists have known for many years that children's developing bodies are especially vulnerable to health harms from such chemicals.

Evidence is particularly strong that pesticides can harm the brain and nervous system, increasing risk of developmental delays, ADHD and autism — and lowering IQ. Links to certain childhood cancers are also increasingly clear.

The good news is, this is a problem we can all do something about. Right now.

Whether at our own kitchen tables, at neighborhood schools, in city councils, statehouses or the halls of Congress, we can all make a difference. This toolkit will help you get started.



## QuickFacts: Pesticides & kids' health

PAN's scientists recently reviewed studies exploring the links between pesticide exposures and harms to children's health. Below are some of our key findings.

The full report, *A Generation in Jeopardy*, is available in hard copy or online, and you'll find the citations for all of the facts and figures in the report. Many of these facts are also outlined in our "Conversation Kickstarter," a stand-alone fact sheet on pesticides and children's health.

### *Kids are less healthy*

For perhaps the first time in history, children are less healthy than their parents or grandparents. Kids today face startling increases in diseases and disorders rarely seen by previous generations.

### Key facts & figures

- ✓ **Developmental disabilities:** Public health experts tell us we have a "silent pandemic" of learning disabilities and disorders. Between 400,000 and 600,000 of the four million children born each year are affected.
- ✓ **Autism:** One in 88 children is likely to be on the autism spectrum, with the odds even higher among boys. Autism rates are up more than 250% for boys and over 375% for girls since 1997.
- ✓ **Childhood cancers:** More than 10,000 children are diagnosed with cancer each year. Overall, childhood cancers are up 25% since 1975, and leukemia and childhood brain tumors have risen even more: 40% and 50%, respectively.
- ✓ **Asthma:** More than seven million U.S. children are now affected by asthma, up from an estimated two million in 1980.



## *Kids are more vulnerable*

Quickly growing bodies take in more of everything, and the body's systems are undergoing rapid changes throughout childhood. Interference from pesticides — even at very low levels — can derail the development process and lead to health harms that can last a lifetime.

### Key facts & figures

- ✓ ***Taking in more:*** An infant takes in about 15 times more water than an adult per pound of body weight. And up to age 12, a child inhales roughly twice as much air.
- ✓ ***Absorbing more:*** Children are much more likely to absorb pesticides than adults. The skin of infants and young children is particularly permeable, and absorption levels in the lungs and gut are also high.
- ✓ ***Nervous system at risk:*** The brain and nervous system are especially vulnerable during fetal development and for the first six months of life, before the blood-brain barrier is fully developed
- ✓ ***Missing safeguards:*** Children's biological systems are less able to process harmful contaminants than adults, particularly in the first seven years of life.

## *Kids are exposed*

Environments we'd like to consider "safe" too often bring children into contact with harmful pesticides. In any given day, a child may absorb a wide range of these chemicals into their bodies.

### Key facts & figures

- ✓ ***In the womb:*** Many chemicals pass through the placenta into the womb, where they become part of the first environment of a developing fetus. Many studies document the pesticide load newborns bring with them into the world.
- ✓ ***As infants:*** Infants often explore their new world by touching and bringing objects to their mouths. When harmful chemicals are present, they often take them in.
- ✓ ***At school & at play:*** Toddlers and school-age children are often exposed to pesticides in daycare centers, classrooms, playing fields and parks.
- ✓ ***At the table:*** Residues in food — from breastmilk to the highchair to the school lunch tray — are a major source of pesticide exposure throughout childhood.

## Science of pesticide harms

The body of evidence linking pesticide exposure and childhood health harms is growing quickly, and it's getting stronger. Pesticides are certainly not the only contributor to the rise in childhood diseases and disorders, but it's clear they are playing an important role.

The “key facts and figures” below reflect findings from recent scientific studies; you'll find full descriptions and citations in [A Generation in Jeopardy](#). Most of the hundreds of studies we reviewed for the report were published within the past five years.



### Key facts & figures

- ✓ **ADHD:** Children who have higher levels of pesticide breakdown products in their urine — at levels commonly found in children from residues on fruits and vegetables — are more likely to be diagnosed with ADHD.
- ✓ **Brain architecture:** MRI technology has documented changes in the brain structure of infants exposed to the insecticide chlorpyrifos in the womb. Areas of the brain related to attention, language, emotions and control were all affected.
- ✓ **Childhood cancers:** Exposure to herbicides and household insecticides during pregnancy can increase risk of childhood leukemia and brain cancer. And kids who grow up in agricultural areas are more likely to have childhood cancers too.
- ✓ **Asthma:** Exposure to pesticides in the first year of life can increase the chances of being diagnosed with asthma by age five.

## Top 10 ways to protect kids from pesticides

When it comes to pesticides, the very best way to protect children from harm is to use less. Every year, we use over a billion pounds of these chemicals across the country — and as the science shows, they are compromising our children's health.

Using less sounds simple. But this is not a small change, and not a recommendation we here at PAN make lightly. Yet the science tells us the problem is serious and urgent, and that safer ways to control pests do exist.



The very good news? This is a problem we can all do something about. We can make a difference **right now** with our food choices, in our homes and schools, and in our communities. And the more of us who press for an overall safer, healthier system of food and farming, the sooner we'll get those big pesticide use numbers down.

Below are our **Top 10 ways to protect kids from pesticides** — and tips and tools to get you started. If you have any questions or want to know more, please visit our campaign webpage ([panna.org/kids](http://panna.org/kids)) or contact us directly at [healthykids@panna.org](mailto:healthykids@panna.org).

### At home

Informed food choices not only protect your family, they also grow the market for food produced without harmful pesticides — encouraging farmers to make the shift to organic production. And reducing (or eliminating!) use of pesticides in your home, lawn and garden can provide immediate and long-lasting benefits to children's health.

**#1 - Choose kid-safe foods.** Whenever possible, shop for fruits and veggies free of pesticides that harm children's health. More and more families across the country are choosing organic produce, joining local CSAs, shopping at farmers' markets or planting their own backyard gardens.

#### Online tools:

- ▶ [whatsonmyfood.org](http://whatsonmyfood.org) - PAN's online database shows what pesticides USDA found on which foods — and what health harms they can cause. There's an iPhone app too! It's a handy tool **and** a conversation starter.
- ▶ [localharvest.org](http://localharvest.org) - Many farmers' markets, family farms and community supported agriculture (CSA) setups offer organic produce. The searchable national map at this site might surprise you!

**#2 - Keep homes kid-safe.** Use safer, alternative methods to control pests at home, on your pets, and in your lawn and garden. Pesticide use at home can be especially harmful for young children, and exposure during pregnancy can increase risk of childhood diseases.



**Online tools:**

- ▶ [panna.org/athome](http://panna.org/athome) - These practical tips and resources — and even some short videos! — will help you control pests without harmful pesticides in your home, on your pets and in your garden.
- ▶ [pesticide.org/alternatives](http://pesticide.org/alternatives) - Check out the Home & Garden Toolbox from our partners at the Northwest Center for Alternatives to Pesticides.
- ▶ [safelawns.org](http://safelawns.org) - This advocacy group is a great information source for natural lawn care and grounds maintenance. You'll also find a very fun "lawn games for life" page!

### ***At school & daycare***

When pesticides are used in school buildings or daycare centers they can settle on desks, books, counters and walls. These residues sometimes linger for days, and when kids then touch the surfaces they can absorb the chemicals into their bodies.

And outside the school building, herbicides used on playing fields can be picked up on hands, bodies, clothes and tennis shoes. These chemicals sometimes drift into classrooms after application. In rural areas, pesticides often drift into schoolyards during and after spraying on nearby fields.

**#3 - Create safer child care.** Child care centers should be free of pesticides known to harm children. Ask your facility about the pesticides they use, and urge them to create the safest environment possible.

**Online tools:**

- ▶ [cehn.org/ehcc](http://cehn.org/ehcc) - The Eco Healthy Child Care program, run by our partners at the Children's Environmental Health Network, endorses child care centers that follow best practices for environmental health, including using nontoxic methods to control pests. Download the checklist and bring it to your facility manager!

- ▶ [cerch.org](http://cerch.org) - Search the Center for Environmental Research and Children's Health website for "child care toolkit" to find detailed, practical tools for safe pest management at child care facilities.

**#4 - Make schools pesticide-free, inside & out.** Pesticides that harm children — and especially those known to harm developing minds — have no place in our schools. Communities across the country are working with school districts and policymakers to create pesticide-free school environments.

#### Online tools:

- ▶ [panna.org/schools](http://panna.org/schools) - PAN's webpage on schools and playgrounds highlights both the problem of pesticides in schools and the stories of communities and states that have put smart policies in place.
- ▶ [panna.org/green-schools](http://panna.org/green-schools) - Californians for Pesticide Reform recently pulled together this short report highlighting progress in implementing the Healthy Schools Act, with profiles of effective programs across the state.
- ▶ [beyondpesticides.org/schools](http://beyondpesticides.org/schools) - Our partners at Beyond Pesticides released a report on state school pesticide laws, successful practices in 27 school districts in 19 states, and the need for new national rules.
- ▶ [ehhi.org/reports/pestschools](http://ehhi.org/reports/pestschools) - Environment and Human Health, Inc., a driving force behind Connecticut's groundbreaking state law banning use of pesticides on school grounds, provides links to their report on pesticides in schools — and the full text of the state law!

**#5 - Link local farms to school plates.** Urge your school district to link up with a farm-to-school program. Partnering with a local, organic farmer to bring fresh produce to the school cafeteria will protect children from pesticide residues and build the family farm economy.

#### Online tools:

- ▶ [farmtoschool.org](http://farmtoschool.org) - The national Farm-to-School Network links hundreds of school cafeterias with local family farmers. Some of these programs source from organic farmers, and most involve the children in harvesting, cooking — and eating! — fresh and local fruits and veggies.
- ▶ [foodcorps.org](http://foodcorps.org) - Active in 15 states, FoodCorps places young leaders in schools to teach students about healthy food and where it comes from. The programs also establish school gardens, and source (often organic) produce from local family farms.

## In your community

Across the country, people are stepping up for pesticide-free parks, playgrounds and public spaces. These local changes are sparked by motivated community members — like you! — who spread the word, build momentum, then dig in and work with local leaders to create healthier communities for children.

**#6 - Spread the word about pesticides & health.** When it comes to making change, we are most influenced by friends, family members, and people with whom we work and worship. Follow and share the science on pesticides and kids health with your community.

### Online tools:

- ▶ [panna.org/kids](http://panna.org/kids) - Download our 2-page *Conversation Kickstarter* to help get the discussion going. You'll find a few key facts that will help bring friends, family and neighbors into the conversation, and motivate them to work with you for change.
- ▶ [panna.org/spread-the-word](http://panna.org/spread-the-word) - Tools here will help you connect with PAN's online community through Facebook and Twitter, and spread the word with links, badges and banners for your own website or blog. You can sign up for (and share!) action alerts here too.
- ▶ [panna.org/change-the-conversation](http://panna.org/change-the-conversation) - Writing to your local paper is **still** one of the most effective things you can do to build momentum for change. Here you'll find tips and tools for writing letters to the editor, opinion pieces and more. (See also the "Nuts & bolts" section in this toolkit.)

**#7 – Make public places safe for kids.** Toddlers and young children spend hours and hours at parks and playgrounds. Making these places pesticide-free goes a long way toward protecting their health. In rural areas, buffer zones around agricultural fields can protect parks, schools and neighborhoods from drifting pesticides too.



### Online tools:

- ▶ [sustainableplaces.org/](http://sustainableplaces.org/) - You'll find great resources on the "Parks" page of this Sustainable Places Information Network site, including links to pesticide-free park programs from Lawrence, Kansas to Ashland, Oregon.

- ▶ [panna.org/blog/mom-mission](http://panna.org/blog/mom-mission) - Be inspired by this story of a Minnesota mom who's working with the local leaders to make parks and playgrounds throughout the city of Rochester pesticide-free.
- ▶ [panna.org/protection-zones](http://panna.org/protection-zones) - Our partners at Californians for Pesticide Reform make the case for "Pesticide Protection Zones" around schools and other sensitive sites in agricultural areas. Such zones are already in place and protecting kids in parts of California. And thanks to a recently hard fought and won campaign, buffer zones will now be stronger on the island of Kaua'i.

## Healthier food & farming

We can all contribute to healthier food and farming with our household choices. But this challenge is just too big — 1 billion pounds! — to shop our way out of it. We need state and national policies that protect kids from harmful pesticides, set overall pesticide use reduction goals and support and encourage farmers who say "no" to harmful pesticides.

The movement for safe and healthy food is gaining ground every day, and there are many opportunities to get involved. Here are some ways you might plug in.



**#8 - Support green & healthy farming.** Our policies have to do a better job supporting organic farming. More and more farmers want to grow healthy, pest-free crops without relying on pesticides that can harm children. It's time to make financial help and on-farm technical support for these growers a national priority!

### Online tools:

- ▶ [panna.org/food-agriculture](http://panna.org/food-agriculture) - Check out PAN's food and agriculture page for an overview of the challenge and links to the latest actions, blogs and publications.
- ▶ [sustainableagriculture.net](http://sustainableagriculture.net) - Our partners at the National Sustainable Agriculture Coalition track all the "ins and outs" of the national Farm Bill debates. They offer action alerts for weighing in with Congress when the time is right, along with blogs and other resources.

**#9 - Press policymakers to put children's health first.** The sad truth? Overall, current rules and regulations protect the interests of the pesticide corporations much more than they protect our children. Together, we need to press hard for policies that put children's health first.

### Online tools:

- ▶ [panna.org/hold-leaders-accountable](http://panna.org/hold-leaders-accountable) - Check out these great tips and tools for influencing policymakers, from your city council to the White House. You'll find fact sheets with sample call scripts and letters, and a "How to lobby" tip sheet that demystifies the process.
- ▶ [panna.org/kids](http://panna.org/kids) - Scroll down to the bottom of our *Healthy Kids!* campaign page to find current action alerts targeting decisionmakers. Click through, sign on, then spread the word!
- ▶ [protectfarmworkers.org](http://protectfarmworkers.org) - Farmworker children are too often on the frontlines of pesticide exposure. Sign onto this petition to strengthen national rules protecting farmworkers and their families, and watch the "from the field" stories you'll find on this site.

**#10 - Vote for kids' health.** We need leaders who will protect kids' health, not pesticide industry profits. From local to state to national elections, let's bring children's health into the conversation and hold politicians accountable!

### Online tools:

- ▶ [panna.org/change-the-conversation](http://panna.org/change-the-conversation) - Political leaders are influenced by public conversations. What issues do people care most about? You can help put healthy food, farming — and children! — at the top of this list by placing letters in local papers and starting online conversations.
- ▶ [eac.gov](http://eac.gov) - If you're not already registered to vote, you can register here. Follow the instructions in the "Resources for Voters" section of this site from the federal Election Assistance Commission. Then speak up for kids' health at the ballot box!



## Nuts & bolts of making change

**Do one thing.** Nobody can do everything, but everybody can choose one thing and do it. Whether it's writing a letter or giving a donation, making a phone call to policymakers, or being a conscientious consumer — we each have real power. That power builds when we act together, and it starts when one person does one thing.

An easy place to start is by signing up to receive email action alerts from PAN at [panna.org/signup](http://panna.org/signup). You'll stay updated on opportunities to speak up for protecting kids' health, and you'll be linked to PAN's international network of over 600 organizations in 90 countries.

Here are more tips and online tools to help make change:

- ▶ **Change the conversation:** Did you know that policymakers read papers as proxies for public opinion? It's true. One well-placed OpEd or Letter to the Editor can cause a decisionmaker to think again. Learn more about how to change the public conversation about kids and pesticides at [panna.org/change-the-conversation](http://panna.org/change-the-conversation).

### Quick Tips: Letter to the Editor

Short, timely and to- the-point.

150 - 200 words.

Use alternate forums to respond.

- ▶ **Hold leaders accountable:** Engage your state official or representative directly. Hold leaders accountable with phone calls, letters and visits. We've laid out "Advocacy 101"— how a bill becomes law, which committees matter most for our issues, sample letters and call scripts: [panna.org/hold-leaders-accountable](http://panna.org/hold-leaders-accountable).
- ▶ **Build community:** Small talk matters more than TV ads and billboards. Really. Research tells us that when it comes to making change in the way people think, we are most influenced by friends, family members, and people with whom we work and worship. And there are those people, "connectors," who make links and build community wherever they go. These links are circuits of power. Find ideas and resources here: [panna.org/build-community](http://panna.org/build-community).
- ▶ **Be the change:** In your everyday choices — at the market or in your home — you can be the change we're working to realize in the world. Each time you do the right thing, you affirm your commitment to a healthier, more just world. Find more here: [panna.org/be-the-change](http://panna.org/be-the-change).

And please share your experiences with us — successes and frustrations alike! Email [healthykids@panna.org](mailto:healthykids@panna.org) or share with the PAN online community via Facebook and Twitter. Together, we can do more.

## Join PAN today

For three decades PAN has worked to replace hazardous pesticides with safe and sustainable alternatives. Your tax-deductible gift will fund grassroots science, collaboration with communities and policy change as we work together to build a safe, healthy food system for our future.



Become a member of Pesticide Action Network North America by donating \$35 or more and receive an organic cotton tote bag to carry your groceries or personal items!

You can donate online at [panna.org/donate](http://panna.org/donate), or print out this form and mail it to us at the address below.

### Yes! I want to make a donation and join PAN.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State/Province \_\_\_\_\_ Zip \_\_\_\_\_

Thank you for being part of the growing PAN family! We invite you to also sign up for alerts and join our online communities on Facebook and Twitter.

You'll find all the links you need here: [panna.org/spread-the-word](http://panna.org/spread-the-word)

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