



# School Pesticide Monitor

A Bi-Monthly Bulletin on Pesticides and Alternatives  
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## CT Bill to Ban Pesticides on Public Playgrounds, But Not High School Fields

Activists and concerned parents have been working for years in Connecticut to extend the current prohibition of pesticide use on daycare centers and K-8 school grounds to include high schools, athletic fields, municipal parks and town land. Now, the state Senate approved legislation to ban pesticides from public playgrounds, but there will still be no extension of the ban on high school lawns or fields under the bill language. Activists claim a partial victory and vow to continue working on a full ban, despite heavy opposition from industry forces.

Connecticut was the first state to prohibit the use of toxic pesticides at K-8 schools and daycare centers, but high schools, athletic fields, parks and playgrounds were exempted from the ban.

On May 27, 2015, a bipartisan bill (SB366) extending the ban to public playgrounds passed the Senate 34-2 and now goes to the House. The new legislation would extend the ban to municipal playgrounds, except for situations that the authors say could threaten human health, such as hornet nests or tick infestations. The bill also calls for parents of high school students

to be promptly notified by email of any pesticide applications at schools. Additionally, it would also allow the use of nontoxic microbial or biochemical pesticides to combat grubs on school properties and playgrounds.

Strong opposition from many municipalities and the pesticide industry has prevented the inclusion of language that would extend the ban to high school grounds and fields, despite calls from parents and local activists.

“There is growing evidence that pesti-  
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## Pyrethroid Pesticide Use Increases ADHD in Adolescent Boys, Says New Study

Another study has found links between a commonly used household pesticide and attention deficit hyperactivity disorder (ADHD) in children and young teens. Researchers at Cincinnati Children’s Hospital Medical Center (CCHMC) found an association between pyrethroid pesticide exposure and ADHD, particularly in terms of hyperactivity and impulsivity. These results reinforce the findings of a study led by a research team at Rutgers University earlier this year that found links between the pesticide deltamethrin and ADHD.

The study, “Association of pyrethroid pesticide exposure with attention-deficit/hyperactivity disorder in a nationally representative sample of

U.S. children,” was published in the journal *Environmental Health*.

Pyrethroids, like deltamethrin, are commonly used in the home, office buildings, and on vegetable crops, gardens, lawns and golf courses. Despite often being promoted as a safer choice than other chemicals, including the now banned organophosphates, many recent studies show significant concern with this class of chemicals, and their use has been linked to learning problems, and adverse behavioral and emotional development in children.

In light of the misconception of the safety of pyrethroids, Tanya Froehlich, MD, a developmental pediatrician at CCHMC, and a corresponding author

of the study, observes that, “Given the growing use of pyrethroid pesticides and the perception that they may represent a safe alternative, our findings may be of considerable public health importance.”

In the study, researchers looked at data on 687 children between the ages of 8 and 15. The data came from the 2000-2001 National Health and Nutrition Examination Survey (NHANES), which is a nationally representative sample of the U.S. population designed to collect information about health. Pesticide exposure measurements were collected in a random sample of the urine of half the 8-11 year olds and a third of the 12-15 year olds.

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## Connecticut

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cides do far more harm than good to our communities,” said Sen. Ted Kennedy Jr., D-Branford and co-chairman of the environment committee. Sen. Kennedy has repeatedly warned that research shows pesticide ingredients have been linked to health problems ranging from cancer to neurological disorders. “By keeping pesticides off playgrounds and [K-8 grade] school property, we are protecting those who are most susceptible to the health impacts of pesticide exposure,” he said.

Previous attempts to extend the ban have also fallen short over the years. In 2013, the then-proposed bill 6385 to extend a pesticide ban from pre-K through eighth grade to include high schools stalled and a task force to study pesticides was set up, despite a favorable vote in the education committee to move the bill along. Another bill to extend the ban, which also included a ban on the use of genetically engineered (GE) lawn and turf seed, passed the Senate last year, but was eventually rejected in the House.

There have even been attempts to repeal the existing ban for daycare centers and K-8 schools, with legislation allowing pesticide use as part of a weak “integrated pest management” (IPM) system. Current state law, adopted in 2005 and amended in 2007 and 2009 to cover facilities from day care centers up through grade 8, prohibits pesticides on playgrounds and playing fields at schools (except under emergency situations), allowing instead for non-toxic pest and fertility management.

Industry groups and local land managers argue the myth that banning pesticides from fields would cost schools and municipalities more money because of pest damage and could make playing fields hazardous. However these myths have been debunked by studies and real world successes of organically managed fields. First, fields that are intensively managed with chemicals are at greater risk for disease and weed infestation (leading to a dependence on chemical inputs) compared with those whose practices build healthy, balanced soil. Similarly, chemically-managed fields are generally harder and more compacted due

to a loss of natural soil biology, while organic management focuses on cultural practices, such as aeration, that alleviates compaction and provides a softer, better playing surface. Any field with irregular surfaces, whether organically managed or not, can lead to falls or twisted ankles.

Banning pesticides from playing fields also will not cost more in the long-term. While initial costs to transition a chemical-dependent field to organic care can be higher, in the long-run costs will be lower as inputs, like fertilizer and water, decrease, along with the absence of the cost of annual chemical treatments.

But there is still hope for Connecticut. New York, the only state that has banned pesticides on the grounds of all schools, pre-K through 12th grade, saw previous versions of its bill defeated nine times. New York’s *Child Safe Playing Field Act* passed in 2010 with over 8,000 letters sent to legislators in favor of the bill and over 18,000 people signed to a petition. Similar efforts are underway in New Jersey.

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## ADHD

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Interviews then determined whether a subject had ADHD by having an interviewer assess whether they met the criteria for the diagnosis under the Diagnostic Interview Schedule for Children, a diagnostic instrument that assesses 34 common psychiatric diagnoses of children and adolescents. Alternatively, caregivers could report the presence of ADHD by providing a report of a prior diagnosis.

The study found that the association between pyrethroid pesticide exposure and ADHD is stronger in boys than girls. Boys with detectable urinary 3-PBA, a biomarker of exposure to pyrethroids, are three times as likely to have ADHD compared with those

without detectable 3-PBA. Hyperactivity and impulsivity increased by 50 percent for every 10-fold increase in 3-PBA levels in boys. Biomarkers are not associated with increased odds of ADHD diagnosis or symptoms in girls.

These findings shed light on the relationship between pesticide exposure and its impact on developing children, showing that pesticides may have the ability to alter brain function, increasing levels of hyperactivity and impulsivity, especially in young boys.

However, the researchers do point out that because pyrethroids are non-persistent and rapidly metabolized, measurements taken over time would provide a more accurate assessment of typical exposure, and

more studies are recommended before definitive impacts on public health can be determined.

It is important to note that ADHD is not the only pesticide-induced disease observed in developing children. Autism and developmental delays in children have also been linked to pesticide exposure. This exposure occurs in nearly all aspects of a child’s life: home, school, day care, grocery stores—and the list goes on. For more information on the hazards of pesticides and human health, visit Beyond Pesticides’ Pesticide-Induced Diseases Database, at [www.beyondpesticides.org/health](http://www.beyondpesticides.org/health), where we track the science on how pesticides are contributing to the rise of learning and developmental disorders in children.