

PEDIATRICIAN-RECOMMENDED MEASURES FOR SCHOOLS/PARENTS TO PROTECT OUR CHILDREN AGAINST THE AERIAL LIGHT BROWN APPLE MOTH (LBAM) SPRAY

We are local physicians who treat many of your children. As many of you know, the California Department of Food and Agriculture (CDFA) is starting a monthly aerial pesticide spraying program throughout much of Northern California (including the counties of San Francisco, Marin, San Mateo, Alameda, Contra Costa, Monterey, and Santa Cruz) for the light brown apple moth (LBAM) starting this summer. The spraying is planned to continue every 30-90 days for between 3-10 years – and potentially indefinitely until the LBAM is “eradicated.”

We are extremely concerned about the spray. Although the spray is reported by officials to be “safe,” the spray has never been tested for its health effects and toxicities in children or adults. Moreover, we do not yet know what chemical will be sprayed this year. Some of the ingredients in the spray that was used last fall are known to be toxic and carcinogenic in animals. Several illnesses can be linked directly to exposure to environmental toxins, including asthma, autoimmune illness, cancer, genital defects, and autism. And the rates of chronic illnesses in children are disturbingly on the rise. Children are particularly vulnerable to toxic effects from the spray – pound for pound compared with adults, children eat more food, drink more water, and breathe more air. Their immature liver detoxification pathways are less able to eliminate these toxins. Their closer proximity to the ground, with more outdoor exposure and hand-to-mouth behavior, ensures that children will ingest more spray and that more of these ingested chemicals will enter into their bloodstreams and subsequently their developing brains.

The pesticide sprayed last fall in Monterey (twice) and Santa Cruz (once) counties was micro-encapsulated in small plastic spheres. The size of the plastic polyurea capsules that were sprayed last year, and may be used again, are of particular concern for children, the elderly, and anyone with chronic respiratory illnesses or otherwise challenged immune systems. Dennis L. Knepp, Ph.D. identified, through analysis of CDFA data and communications with the CDFA, that the median size of the Checkmate LBAM F particles aerially sprayed last fall in Santa Cruz and Monterey was 9.8 microns, which is small enough to enter the deepest areas of our lungs and potentially cause severe respiratory symptoms. The pesticide is intended to break down slowly in a time-released manner between sprays so that there will be constant chemical exposure. When these capsules are inhaled or ingested by our children, they will break down over months and the chemical contents will be released to travel freely through their blood into vital organs and tissues.

The spray will coat any exposed surface. With repeated monthly sprays, these particles will accumulate on various surfaces and saturate the ground, sandboxes, wooden and plastic play structures, and all other areas where children play outdoors. Particles will easily become airborne again as children play or run on sprayed surfaces, only to be further inhaled or ingested, so the potential harm from the spray will continue for long after the spraying has actually stopped.

Below are our recommendations for all public/private schools and parents to implement during the spray period:

1. All outdoor play areas must be covered with tarp that can be discarded after each spray, especially play structures, grass, sports fields, sandboxes (wiping off is not an option; it will likely just re-aerosolize the particles). Wooden play structures are a particular problem because the particles will soak into the wood and saturate it, making cleanup virtually impossible. All yards and gardens must be covered, especially if used for kids' play or for growing food. Spray particles will be tracked into schools and homes on shoes, clothing, and backpacks that have come into contact with ground that has been saturated with the spray, so shoes should be removed before coming indoors. Bring in as much as you can. Remember, all outdoor surfaces will be sprayed – including car and house door handles, mailboxes, etc.
2. If outdoor areas are not covered, children should not play on these areas for at least 30 days after the spray.
3. Make sure that all windows, doors, and drafty areas are sealed with exterior plastic.
4. Stay indoors during the hours of the spray.
5. Run a high-quality air purifier that will remove airborne particles <10 microns in size constantly, in each classroom and room in the house, during all months of the spray.

6. Children should remain indoors for at least one full day after each spray (i.e., not go to school), with doors and windows at home and school kept closed for as long as feasibly possible.
7. Children and adults should wear **medical-grade protective face masks that can filter out particles <10 microns in size** and chemical-resistant gloves when going outdoors for at least the day after the spray, and likely for much longer, as the spray will persist on the ground and re-aerosolize as kids run and play. Hiking should not be done in sprayed areas without a face mask, as trees, plants and trails will be saturated with particles that can re-aerosolize and be inhaled/ingested. It is unlikely that we could find a mask that would fit tightly enough around the nose and mouth to protect children. Even if we could, it is doubtful that most children (and their parents) would wear these uncomfortable, tightly fitting masks.
8. Do as much as feasibly possible to keep children's hands away from their faces, eyes, mouths, and noses. (If you have kids, you know how easy this will be!). Any bare hands or body parts that come into contact with sprayed surfaces should be washed immediately in cold water for at least 15 minutes.
9. Do everything you can to ensure that you and your children are detoxifying optimally – drink plenty of water, eat lots of organic fresh fruits and vegetables (especially cruciferous vegetables like broccoli, cauliflower, kale, and brussels sprouts). Talk to your doctor about taking extra vitamin C, milk thistle seed, and glutathione – all critical for healthy detoxification.

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