
Organic Fruits & Vegetables

The Environmental Working Group (www.ewg.org) is a nonprofit organization that advocates for policies that protect global & individual health. Their *Shoppers' Guide to Pesticides in Produce* is based on the results of 34,000 samples performed on the 48 most commonly purchased produce & collected by US federal agencies each year. The data takes into account how people typically wash and prepare produce - for example, apples were washed and bananas peeled before testing.

Why should you care about pesticides? Smart shopping choices matter. People who eat organic produce eat fewer pesticides. A study by Cynthia Curl of the University of Washington published February 5, found that people who report they "often or always" buy organic produce had significantly less organophosphate insecticides in their urine samples, even though they reported eating 70% more servings of fruits and vegetables per day than adults reporting they "rarely or never" purchase organic produce (Curl 2015). Several long-term observational studies have indicated that organophosphate insecticides may impair children's brain development. In 2012, the American Academy of Pediatrics issued an important report that said that children have "unique susceptibilities to [pesticide residues'] potential toxicity." The pediatricians' organization cited research that linked pesticide exposures in early life and "pediatric cancers, decreased cognitive function, and behavioral problems." It advised its members to urge parents to consult "reliable resources that provide information on the relative pesticide content of various fruits and vegetables."

Dirty Dozen – produce that should be organic if eaten:

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| • Apples | • Grapes | • Cucumber |
| • Peaches | • Celery | • Cherry tomatoes |
| • Nectarines | • Spinach | • Snap peas - imported |
| • Strawberries | • Sweet bell peppers | • Potatoes |

Key findings:

- 99% of apple samples, 98% of peaches, and 97% of nectarines tested positive for at least one pesticide residue.
- The average potato had more pesticides by weight than any other produce.
- A single grape sample and a sweet bell pepper sample contained 15 pesticides.
- Single samples of cherry tomatoes, nectarines, peaches, imported snap peas and strawberries showed 13 different pesticides apiece.

Clean Fifteen – produce that has the least amount of pesticides if not organic

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| • Avocado | • Onions | • Eggplant |
| • Sweet corn | • Asparagus | • Grapefruit |
| • Pineapples | • Mangoes | • Cantaloupe |
| • Cabbage | • Papaya | • Cauliflower |
| • Sweet peas – frozen | • Kiwi | • Sweet potatoes |

Key findings:

- Avocados were the cleanest: only 1 percent of avocado samples showed any detectable pesticides.
- Some 89 percent of pineapples, 82 percent of kiwi, 80 percent of papayas, 88 percent of mango and 61 percent of cantaloupe had no residues.
- No single fruit sample from the Clean Fifteen™ tested positive for more than 4 types of pesticides.
- Multiple pesticide residues are extremely rare on Clean Fifteen™ vegetables. Only 5.5 percent of Clean Fifteen samples had two or more pesticides.

References:

- EWG's 2015 Shopper's Guide to Pesticides in Produce. <http://www.ewg.org/foodnews/summary.php>
- AAP 2012. Organic Foods: Health and Environmental Advantages and Disadvantages. American Academy of Pediatrics Committee on Nutrition and Council on Environmental Health. e1406 -e1415. DOI: 10.1542/peds.2012-2579. <http://pediatrics.aappublications.org/content/130/5/e1406>
- Bouchard M, Chevrier J, Harley K, et al. 2011. Prenatal Exposure to Organophosphate Pesticides and IQ in 7-Year Old Children. Environ Health Perspect 119(8): 1189–1195.
- Curl CL, Beresford SAA, Fenske RA, et al. 2015. Estimating Pesticide Exposure from Dietary Intake and Organic Food Choices: The Multi-Ethnic Study of Atherosclerosis (MESA). Environmental Health Perspectives. Advanced publication February 5, 2015. DOI: 10.1289/ehp1408197 <http://ehp.niehs.nih.gov/wp-content/uploads/advpub/2015/2/ehp.1408197.acco.pdf>