

Guidelines for Safely Laundering Pesticide-Contaminated Clothing

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Pesticides may pose a risk to the applicator and his or her family. Clothing soiled with pesticides may cause health problems to

- the person wearing contaminated clothes,
- the person laundering contaminated clothes,
- other family members, if pesticide transfers to their clothing during laundering.

Applicators can lower the risk to their families by taking some precautions:

1. Before entering the house, discard clothing saturated with highly toxic, undiluted pesticides, and discard any contaminated leather apparel. The pesticide can't be completely removed from these items.
2. Prerinse other garments twice in a pail of hot water. Empty the prerinse water into the septic system, or empty it in a place where it won't endanger people, animals, water sources or the environment.
3. If the clothing can be laundered, inform the person doing the wash about the pesticide-contaminated clothes and tell whether the pesticide was in a liquid or powder form.

Here are eight ways to minimize the family's pesticide exposure when you are laundering pesticide-contaminated clothes.

1. Separate pesticide-soiled clothes from other family laundry (wearing latex gloves to protect yourself).
2. Launder as soon as possible after soiling; daily is best.
3. Launder only a few items at a time.
4. Launder with HOT water.
5. Launder using the longest wash cycle. NEVER use the sudsaver cycle with pesticide-soiled clothing.
6. Use the right detergent. Follow the pesticide label's directions or for liquid pesticide use heavy-duty liquid detergent. For granular or powder-type pesticide use a PHOSPHATE powder detergent. (If unavailable, use a heavy-duty liquid.)
7. Clean the washer after decontaminating clothes by running a complete cycle with hot water and detergent.
8. Line dry garments if possible. This prevents contaminating the dryer if the pesticide hasn't been completely removed in the wash.

Frequently asked questions about removing pesticides from clothing

Should I really discard my contaminated clothing or is laundering enough to get them clean?

If a garment is contaminated with low-toxicity pesticide then launder the garment. The pesticide should be removed by following the directions on page one of this pamphlet.

When a garment is soaked with highly toxic, full-strength pesticide, discard it. Laundering a saturated garment, even repeatedly, may not get all the pesticide out of it. To prevent reuse, slash the contaminated garment. Dispose of it in a tightly closed plastic bag.

It is best to err on the side of caution, so if ever in doubt, throw a pesticide-soiled garment away.

Is discarding a leather item really necessary?

Leather watch bands, boots and gloves cannot be decontaminated. When contaminated leather is worn and becomes damp, the person is exposed to the pesticide again. Leather items should be discarded because of this hazard.

Do I really need to wear gloves to handle pesticide-soiled clothing?

Gloves help prevent pesticide from being absorbed by the skin. Never handle pesticide-contaminated clothing with your bare hands.

Select unlined chemical-resistant gloves such as latex rubber gloves. Rinse gloves with hot water and detergent before taking them off to clean any pesticide from them.

Can I wait until the end of the week to wash pesticide-contaminated clothing?

It is best not to. Wash pesticide-contaminated clothing daily, and as soon as possible after wearing, to remove the most pesticide. Allowing pesticide-contaminated clothes to sit for a long time may make the pesticide more difficult to remove.

Can I safely prerinse pesticide-soiled clothing with my washing machine's presoak setting?

Prerinsing in a pail of water removes some of the pesticide before clothes are put in the washer. This is the first line of defense in protecting the family's wash from contamination. Never prerinse contaminated clothing in your washing machine. Always use a separate wash pail or tub.

Can laundering additives help?

- Starch, yes. Cotton or cotton-blend fabrics may be starched to help prevent pesticides from reaching the skin. Starch seems to trap pesticide so that both the starch and pesticide wash away in the next laundry. Starch must be reapplied after each wash. Heavy starching of the lower pantlegs helps form a pesticide-barrier and shouldn't be uncomfortable to the wearer.
- Ammonia and chlorine bleach, no. Ammonia and bleach have not been shown to assist in removing pesticide residues. Never use bleach and ammonia in the same wash load; toxic fumes result.
- Fabric softeners, no. Studies show that fabric softeners neither help nor hinder residue removal in cotton fabrics.
- Prewash sprays, maybe. Solvent-based aerosol sprays assist removal of oil-based pesticide formulations in cottons. To tell if prewash sprays contain a solvent, read the caution label. It should say something like, "Caution: Contains petroleum solvents."
- Salt, maybe. Salt helps remove paraquat, but not other pesticides. Add 1 cup of table salt to your wash load with regular detergent.

Other Safety Measures

Soil- and water-repellent finishes help cotton fabric resist penetration of pesticide sprays. Examples include Scotchgard R and Zepel R. However, they make fabrics more difficult to launder.

If you use these repellents, renew them after every second or third wash.

Keep Alert for New Safety Tips

Researchers continue to study protective clothing materials and laundering procedures. As new information becomes available, suggested laundering methods may change.

Always consult the pesticide label. Manufacturers offer many suggestions, but you must choose the protective clothing, equipment and laundry methods required in your situation.

Pesticide Clothing Safety

What can you do?

Reduce your exposure to pesticides by wearing protective gear and laundering work clothing properly. Always follow these guidelines when you work with pesticides:

- Wear clean clothes daily.
- Follow precautionary labels on the pesticide in choosing protective gear.
- Wear protective aprons during mixing and loading of pesticides to protect from spills. Remember, all pesticide spills are chance events.
- After each use, thoroughly clean all washable protective gear with hot water and detergent. Wash first the outside and then the inside of the item.
- Remove your pesticide-soiled clothing outdoors and away from the house. If granular pesticide has been used, shake clothing outdoors and empty pockets and cuffs.
- Handle pesticide-soiled clothing with chemical-resistant gloves.
- Keep pesticide-soiled clothes separate from your family's wash.
- Prerinse contaminated garments in a separate pail and repeat the wash for maximum pesticide removal.

- Discard all clothes that have been saturated with full-strength liquid pesticide concentrate.

This publication is based on:

"Learn about pesticides and clothes," (1994) Iowa State University, Ames, Iowa.

For more information:

When selecting protective clothes for pesticide safety, another extension publication may help:

HE-454, "Buying and Wearing Protective Clothing for Applying Pesticides."

For information about safe handling and disposing of pesticides, check HE382 and AE977, "SAFE Storage and Handling" and "Disposal of Pesticides and Containers."

All publications are available through your local extension office.

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