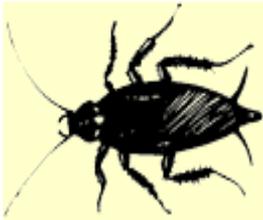


New and Improved

Cockroach Control Guide

Get Rid of Roaches - Breath Easier!



Cockroaches and Asthma

Many houses have problems with cockroaches. And many people with asthma are allergic to "roach dust" - roach body parts and roach droppings. Roach dust is a very strong asthma "trigger." Triggers cause asthma attacks.

For years, cockroaches have defeated our best efforts to get rid of them. We sprayed and sprayed, but they always came back. Now we understand there are better methods and products that really work.

The new products are also safer than the pesticide sprays that have been commonly used. The new roach control method is called "integrated pest management" (IPM). Pest control companies, landlords, homeowners and tenants can use IPM.

Even after you get rid of the roaches, the roach dust is still around and can trigger asthma. A thorough cleaning is important to get rid of all the roach droppings and body parts.

The Old Methods of Roach Control Don't Work and Are Not Healthy

Pesticide sprays; foggers and bombs have been used for years. But they don't work. They drive the roaches away for a while. And then the roaches come back.

The old method uses chemicals that are unhealthy. Some can even trigger asthma attacks. The old methods put too much pesticide into the air and leave too much on surfaces that people touch.



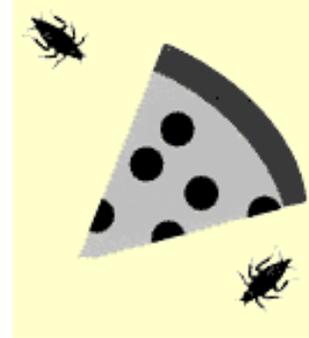
IPM Method Works Better and Are Safer

IPM works better than sprays at keeping roaches away. And IPM is safer because it

reduces human exposure to pesticides. The best pest control companies now use IPM.

The IPM method:

- Deny roaches food, water, shelter and entry.
- Do not use pesticide sprays, foggers or bombs.
- Use borate powders, as needed.
- Use roach baits, as needed.



Use Borate Powder

Borate powders (for example, Borid™ and Roach Prufe™) are effective chemical treatment for roaches. Borate powder takes several days to begin its killing action. But it can remain effective for years. It is available in many stores and is not very expensive. It is important not to apply the borates to areas where children and pets can get to it.

Borate powder should be lightly applied in areas where roaches are active. As roaches walk through the powder, it sticks on their bodies. When they lick the powder off, they ingest it and it poisons them.

Borate powder should be applied lightly with a bulb duster. If applied too heavily, it forms a barrier and roaches avoid it. Any plastic squeeze bottle with a narrow pointed spout can be used. Be sure to label the bottle and keep it out of the reach of children.

Apply the borate powder where roaches have been observed - along baseboards, under appliances, in electric switch boxes, in hollow doors, around door frames, and in the open spaces under and behind walls, shelves, sinks and cabinets.

After you place the borate powder in cracks, crevices and open spaces, seal it in with caulk or other material. The powder will remain effective for years.

Place borate powder in a safe place, out of the reach of children and pets. Do not apply borate powder onto plants - it can kill them.

Use Roach Baits

Use roach baits, if needed, in addition to the borate powders.

Roach baits contain food that attracts the roaches. Poison in the bait kills them. After a roach eats the bait, it goes back to its hiding place and dies. Other roaches eat the body of the poisoned roach and they die too.

Each roach that eats the bait can poison dozens of roaches. Thus, only a small amount of bait is needed to do the job. And, the baits can be placed where people do not come in contact with them.

Baits come in the form of gels, pastes, granules and dusts. Gels and pastes come in syringe applicators that allow exact placement of tiny amounts. Gels contain water and are most effective in the first three days. It may be necessary to make two applications- one week apart. Bait stations are bait containers that the roaches find and eat from.

You can buy roach baits at some hardware, grocery and drug stores. Common brands are MRF 2000™ and Pro-Joe-S™ borate powders and Combat™ and Max Roach Bait V™ gel bait products.



How to Use Roach Baits

- **Place the bait in a safe place, out of the reach of children and pets.**
- Proper location is the first rule of using baits. Roaches will eat the first food that they find. To work the bait has to be closer to the roach hiding place than other sources of food.
- Roaches need to find the bait during their normal activity. Place baits in areas of roach activity - within 10-12 inches of hiding places, food sources, water sources and where you see droppings.
- Place baits next to the wall, along baseboards, at edges and in corners. Good spots are under sinks, in cabinets, under appliances, and near plumbing fixtures.
- Apply small (BB-sized) dabs of paste or gel bait in many places, widely distributed. Big blobs of bait do not work.
- If the bait is completely eaten, reapply bait in the same spot. Roaches leave behind smells and droppings to mark good food sources and safe shelter.
- Baits will not work if pesticide sprays are used nearby. **DO NOT SPRAY ANY PESTICIDES.**
- Baits will not work if there are strong smells nearby. Cigarette smoke and strong smelling cleaning products can keep the roaches away from the bait.



Deny Roaches Shelter and Entry

Roaches like to hide in very small spaces. A young roach can fit in a space as thin as a dime and an adult male can fit in a space as thin as a quarter. Roaches hate open spaces and love clutter.

- Clean up clutter such as piles of newspaper and clothing.
- Discard grocery bags, cartons, boxes, and other containers that may bring roaches and roach eggs in from the outside and provide hiding places.
- Use a caulk gun to seal cracks and holes around baseboards, shelves, cupboards, pipes, sinks and bathtub fixtures.

- Spray foam can be used to fill holes, openings and electric outlet boxes where roaches like to hide.
- Plaster repairs may be needed where there are large holes or damaged walls.
- Screening can be used to block entry where openings such as vents should be maintained.
- Knitted copper mesh (for example, Stuf-fit) is more durable than steel wool and is a good barrier for holes that are hard to block with other materials.
- Weather stripping and door sweeps may be used around doors to create a tight seal.

Deny Cockroaches Food

Try to remove all roach food sources. Roaches forage at night, so the best time to make sure that things are cleaned up is at the end of the day before you go to bed.

- Keep clean all surfaces where food is prepared, stored, eaten or spilled. Clean up food debris from floors, tables, chairs, counters, around appliances and anywhere food spills. Don't forget the living room and bedroom areas where people eat.
- Don't leave food out on counters after use. Store all food in tightly sealed containers.
- Put pet food dishes away overnight or put the pet dish in a "moat" of soapy water. A moat is created by placing the pet food dish inside a larger diameter container filled with an inch or so of soapy water. Roaches will drown in soapy water.
- Wash dishes before going to bed or leave them in soapy water in the sink over night.
- Keep trash in a closed container and remove from house daily. Wipe down the outside of the garbage container frequently.

Cleanup Roach Dust - Strong Asthma Trigger

Dead roaches, body parts and droppings become part of the household dust. This roach dust is a powerful asthma trigger for people who are allergic to it. Roach dust can remain potent for many years.

A person with asthma should not be in the room being cleaned. The cleaning can stir up the roach dust into the air. If the person with asthma has to do the cleaning, a dust mask may help.

For surfaces that can be wet-cleaned (counters, cabinets, vinyl, wood or tile floors, woodwork, etc.): use a household detergent. For smaller areas, use a paper towel or rag dipped in the detergent/water solution to clean a small area. Then discard the towel/rag and use a clean one. Don't dip the dirty towel/rag into the cleaning solution. The idea is to pick the roach debris up and not just spread it around.

For larger floor areas, use a detergent bucket and a rinse bucket. Change the rinse water frequently. Rinse the mop each time before dipping back in the detergent bucket.

Cleaning with bleach destroys the chemicals in roach dust that triggers an allergy reaction. Use about $\frac{3}{4}$ of a cup of household bleach in a gallon of water. Wait ten minutes to give the bleach time to work before rinsing the surface.

Be careful using bleach. Make sure there is good ventilation - open a window and use a fan. Some people are sensitive to bleach vapors and they should not be in the area when cleaning with bleach is done. Bleach is a skin irritant, so wear protective rubber gloves. Never mix bleach with any other cleaning products - dangerous vapors can be produced.

For rugs and carpets: It is best to use area rugs that can be washed frequently.

For vacuuming, it is best to use special "HEPA" or "allergen" or "low emission" vacuums and bags that reduce the amount of roach dust that gets in the air during vacuuming.



If you don't have the special bags or vacuum, use bags already 1/2 full - a new empty bag lets too much dust out. When you put in a new bag, it also may help to clog the bag with flour or cornstarch. Pour 1 to 2 cups of flour or cornstarch on the floor and vacuum it up.

Vacuum very slowly - about three times longer than usual - in order to pick up the roach dust. Listen to some music and take your time. A vacuum with a beater bar or powered brush works best.

Vacuuming stirs up dust. A person with asthma should not do the vacuuming and should be out of the room when vacuuming is going on and until the dust settles. If it is unavoidable that the person with asthma does the vacuuming, they should wear a respirator mask.

Where possible, remove older carpets and rugs that are heavily soiled -- if there has been a roach infestation, they are probably contaminated with roach dust. Other asthma triggers and lead dust also build up in carpets too.

Carpet removal can release a great deal of dust that goes all over the house. Removal needs to be done very carefully.

- The person with asthma should not be in the room when the carpet is removed.
- Seal off the room with plastic sheeting.
- Mist the carpet with water and a small amount of dishwasher detergent.
- Cut the carpet into small sections and roll them up.
- Wrap the sections in plastic sheeting and seal with tape.
- Mop the floor as each section is rolled up and again when all the sections have been removed.

Keep dust out of your home. Dust and dirt tracked into your house from the outside can contain roach debris and other things that can trigger asthma attacks. It can also have lead dust that can poison children.

- Remove shoes at the door. Make it easy by providing a chair or stool at the door.
- If not everybody takes their shoes off, provide a large doormat just inside the doorway. Put one outside too, if it will be protected from the weather. Wash the mats weekly or vacuum with a HEPA vacuum.

Roaches Can Come Back -- Stick with the Plan

Roaches are "hitchhikers"-they hide inside grocery bags, soft drink cartons, cardboard boxes, used appliances, used furniture, TVs, radios, etc., that people bring in from infested sources.

- Occasionally a single roach may be seen in the kitchen, even in the cleanest homes.
- It is important to try and get rid of the roaches before they become a bigger problem.
- When you see the roach do not spray the roach, but kill it with "blunt trauma." Then check the surrounding area where you first saw the roach.
- Look through the clutter, anything bought recently and look for roach egg capsules.
- Even after you have been successful in getting rid of the roaches, stick with the suggestions in this guide.
- Continue the actions to deny roaches entry, shelter, food and water.
- Continue to monitor for roaches using sticky traps.
- If you live in a multifamily building, roaches might reinfest your apartment from others in the building. Share this Guide with your neighbors, so that everybody can use the safe and effective IPM roach control strategy.

Tenant/Landlord Cooperation

Effective roach control requires cooperation between landlord and tenant.

The building owner must:

- Use a pest control service that uses safe and effective IPM methods.
- Make repairs to deny water to roaches, such as fixing roof and plumbing leaks.
- Caulk and seal entry points to keep roaches out.
- Provide sealed garbage cans and frequently clean the area.
- Keep common areas clean and free of food and water sources for roaches.

The tenant must:

- Report roach sightings to the building manager. Also, report water leaks and food debris in common areas.
- Maintain household conditions that discourage roaches -- cleanup food debris, water and clutter.
- Cooperate with the IPM pest control company and building maintenance procedures - - don't disturb pest control measures, don't use pesticide sprays, don't use cleaners with strong odors near baits.

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