



Chrisana Ogilvie-McDaniel, MD, Thomas A. Scott, MD and
Heather Vas, PA-C
Allergy and Asthma
3311 E. Murdock
Wichita, KS 67208

Cockroaches and Asthma

Controlling Cockroaches in Your Home

QUESTIONS AND ANSWERS ABOUT COCKROACHES AND ASTHMA

- **Why are cockroaches important for asthmatics?**
Many children and adults with asthma are allergic to cockroaches. This allergy can make the asthma worse, and the allergic person may not even realize the roaches are part of the problem. Getting rid of the cockroaches will decrease the chances for asthma attacks!
- **How do cockroaches cause all this trouble?**
The roaches leave their droppings everywhere they go. They also feed by licking surfaces, so their spit is spread on places they eat. Cockroach droppings, spit, and dead roach bodies are sources of cockroach allergen. The allergen gets spread into the dust in the house. People in the house breathe in tiny amounts of the roach allergen in the dust. This inhaled allergen can make asthma worse if the person is allergic to cockroaches.
- **Why is it so hard to get rid of cockroaches?**
Roaches can be hard to kill if the way you try to kill them doesn't fit with the habits of the roaches. Roaches avoid the light, and spend most of their time hiding in walls, under cabinets and appliances, or in cracks in the floor or walls. When the roaches come out of hiding, they spend most of the time close to walls and other hiding places, and don't usually travel very far from where they live and hide. To kill them you have to get the roach poison to where they live or travel.
- **Will the bug sprays or poisons hurt my family or me?**
Bug sprays that you buy or that exterminators use often smell strong and can make asthmatics feel bad. You can avoid that problem by avoiding sprays. We will use bait that the roaches eat. Most of the baits are in a plastic shell that pets and kids can't get into, so they aren't hurt.

KILLING COCKROACHES

Secret fact: Roaches like to travel with at least two of their body parts touching a surface. You can use this fact to make sure you put bait stations where the most roaches will be killed!

- **How can I kill the cockroaches in my house?**
There are four main steps to killing the roaches:

1. Find out where the roaches are living and hiding. Check out the rooms in the house following the instructions later in this handout.
2. Put out roach baits in the places where there are roaches. Most roaches are in the kitchen, so the most bait will need to be used there. The bathroom usually needs the next batch of baits. Other rooms usually need fewer baits.
3. Make your house less friendly to roaches. We will describe things you can do around the house to reduce the amount of food and water roaches can get, and to get rid of hiding places for them.
4. Troubleshoot. After 2 or 3 weeks you should not be seeing many roaches. If some are still there, repeating some of the steps above will usually get the rest of them. So now, let's move on to details of these 4 steps to roach relief.

Step 1. Where are the roaches?

Start in the kitchen. The main hiding places for roaches are almost always in the kitchen. Open the cabinet under the sink. Look at the back and around the pipes as they come in from the bottom or the wall. You will probably see dead roaches and roach parts. You may also see live roaches. This is an area that must be treated.

Now look on the cabinet top around the sink. Look at the back of the counter and behind and under anything on the counter. This area is likely to show signs of roaches because the sink is near for moisture and there is usually food available on the counter.

Look on the floor near the sink, and also around any appliances, the garbage can, and any pet feeding dishes. You will probably be able to find some roach parts in some of these places. If you shine a light behind appliances or in the crack between appliances and cabinets, you may see some roaches.

Also check the cabinets above the counters and the drawers in the counter. Look at the back of the cabinets and in the back of the drawers. If the drawers will come all the way out, you may find many roaches inside the frame of the cabinets. These places are usually pretty dark, so you may see live roaches. If there is a fuse box in the kitchen, open the door and look for roaches or roach parts. Don't touch the wires or fuses. Now move to the bathroom. Look inside cabinets and drawers just like you did in the kitchen. If there are clothes hampers or other objects on the floor, look under them. If there is a storage closet in the bathroom, look inside, especially at the back on the floor.

Now look at the living room and bedrooms. There may be roaches in these rooms, especially if people often eat there. If either room shares a wall with the kitchen or bathroom, look along that wall first. Look under shelves or any object on the floor. If you sometimes see roaches on the furniture, look under it and under any removable cushions for live roaches. If you see roaches in the bed, look under it and under anything stored under the bed. In a house with more than one level, there may be a living room or bedroom over or under the kitchen or bathroom. If the kitchen or bathroom has lots of roaches, the rooms above or below will probably also have roaches that come through the ceiling or floor.

Think whether there might be another room that has the food, dark hiding places, and water that roaches need. A laundry room might be such a place. An enclosed porch that stays warm most of the year could be a hiding place. A room where there is a water leak may have enough dampness to keep roaches alive.

Step 2. Using baits to kill the roaches

Once you know where the roaches are hiding, you are ready to put baits there. Remember that you will need to put the baits in the places the roaches are most likely to walk. Roaches don't like to wander out in the open, so they will find the bait most often if it is actually touching the wall or other upright surface. The roaches also tend to spend more time on flat (horizontal) surfaces than on walls, so put the baits on the flat, not the vertical surface. Also, a bait station does no good if it gets knocked away or picked up. So if your baits come with double-sided tape, use it to stick the bait station in place.

Start in the kitchen. It is usually the biggest problem area. Start with the cabinet under the sink. Place baits flat on the bottom of the cabinet all the way at the back (against the wall). Put one bait every foot for about 4 feet inside the cabinet (if the cabinet is that big). Put bait at the front of the cabinet on each side at the door. Now look at the countertop around the sink. Place bait about every two feet along this counter all the way from the sink to the end of the counter. Try to put the bait behind things that you leave on the counter. If you saw roach parts in drawers, put bait at the back of each drawer where you saw roaches. If there were roaches in the cabinets up on the walls, place one bait in each cabinet, at the back, on the shelf that you saw the most roaches. If you were able to remove drawers and saw roaches in the framework, put several baits inside it.

Now look at the floor in front of the sink cabinet. Roaches probably hide under the cabinet and will travel along the floor next to the cabinet. Put a bait on the floor about every 2 feet. If they will not stick well there, or if they are very likely to be kicked away, this is a good place to use a few spots of gel bait from the syringe. You can squirt a dot of gel about $\frac{1}{4}$ to $\frac{1}{2}$ inch long in place of a bait station. It will stay in place well if you can get the bait partially under a crack. A gel spot just out on the floor won't stay in place very long. The last section of this handout has more information about using gel baits.

Now place baits beside each appliance in the room, as far back as you can get it. You may need to push it back to the wall with a broomstick. If you can get a bait or two under the cooking range, place them there. If the cooking range is built into the cabinets, put several baits under the cooking area in the cabinets.

Now look at the last few places that are a problem in the kitchen. If there is a garbage can, you will need 1 or 2 baits behind it. If there is a bowl for pet food on the floor, place a bait (stick to the floor) against the wall near it, or use a spot of gel pushed into the crack at the base of the wall near the bowl. Some homes have a fuse box in the kitchen. If you have a fuse box in the kitchen, see if a bait will fit inside, at the bottom. If a bait won't fit, put a spot of gel inside on the bottom. Don't touch any wire or put gel on or near wire or fuses.

Now move to the bathroom. Place 2 baits in the cabinet under the sink just as you did in the kitchen. If there is a laundry hamper or another object on the floor, place a bait under it. If there is a linen closet and you saw roaches or dead roaches in it, add 2 baits at the back on the floor. If there is room on the sink counter, place a bait there.

The living room and bedroom are next. If there is a wall shared with the kitchen or bathroom, place a bait about every 3 feet along the base of the wall. If you see roaches elsewhere in the room, place a bait where they were.

Step 3. Making your house less friendly to roaches.

How do I make my house less friendly to roaches?

Roaches need food and water, so think about where the roaches get food and water in your house. Remove the sources of food and water that you can. This means that no food should be on the counter or in the cabinets unless it is in a sealed container. Plastic boxes or zipper plastic bags are good for this. Keep the countertops clean of crumbs and food scraps by wiping up after preparing meals, and especially at the end of the day. Wipe up any splashes of water after using the sink. Range tops collect grease that roaches can eat. Use soapy water and ammonia if necessary to clean off grease. If you can get under the burners, clean up grease and food particles there also. Doing these jobs will make it more likely that roaches will eat the bait laid out if other food is hard to find. Roaches also need places to hide. If you have stacks of newspapers, paper bags, clothing or other items that are not moved for weeks at a time, roaches will begin to live under them. This is especially true in the kitchen and bathroom. Get rid of any items like this. Either throw them away or get them off the floor and into a closed chest or plastic box for storage. People who are pack rats are likely to have roaches for pets very soon.

Step 4. Troubleshooting. What to do if your first try doesn't wipe out all the roaches.

What do I do if I still see roaches after doing the treatment?

It may take 2 or 3 weeks for the bait stations to do their job. After 2 or 3 weeks you should not be seeing many roaches. If a room still has lots of roaches, look at where your baits are. Are roaches on a wall that only has one or two baits at the floor below? If so, try adding baits or gel dots to get one every foot along the base of the wall.

Are there live roaches in cabinets on the wall? Try adding a bait at the back of each shelf. If there are roaches in the drawers, add a bait at the back of each drawer with roaches, and take out the bottom drawer so you can put 1 or 2 baits in the cabinet frame that holds the drawers.

GETTING RID OF ROACH ALLERGEN

Killing the roaches and making the house less pleasant for them is the first part of the job. The second job is to reduce the amount of roach allergen in the house. Just getting rid of the roaches isn't enough, because the allergen might still be in the house for months or years.

- **Where do I clean up? How do I clean up allergen?**

After the number of roaches you see has dropped, it is time to start the clean up process. Usually this will be one to two weeks after you put out the roach baits.

Let's start again with the kitchen. When you looked for roaches, you probably saw roach bodies and wings in some of the hiding places in the kitchen. Smaller bits of roach bodies are also there, but just look like dust or dirt. If there are grocery bags, garbage cans, or other movable objects on the floor, move them and sweep around and under them.

After the floor is swept, let's tackle the counters and stovetop. Roaches wandering on the countertops to find food will leave allergen behind. If the water in the bucket gets very dirty, pour it out and make a fresh bucket so that you won't be spreading allergen around with your cleaning rag and solution. Move everything on the counter to wipe up the whole surface. Dish drains, toaster, microwaves—all can have allergen under them. Most folks have lots of stuff in the cabinet under the sink, but it's a good idea to take it all out, and wipe out the cabinet. If there is carpet, vacuum it after you've cleaned the rest of the room.

- **What about the protective coverings?**

Mattresses, pillows, and bed linens are likely to have some cockroach allergen in them because the tiny particles will stick in the fabric. Even if you don't see roaches in the bedroom, there is probably allergen there because we bring it in from other rooms on our feet. When you sit or lay on the bed, the tiny particles of allergen are forced up into the air and you may breathe them in.

To keep the allergen from being forced into the air, special coverings are needed for the mattress, pillow, and box spring (if there is one). These coverings are called encasings.

KEEPING THE HOUSE ROACH-FREE

- **What can I do to help keep the roaches out, once I get them under control?**

If you go a month without seeing any roaches, you have probably really gotten rid of them and the unhatched eggs that can cause them to come back in a few weeks. If you have an apartment with a common wall to another unit, you could get them from the other apartment. If you are in a separate house, they have to be brought in.

To prevent your house from getting roaches again, be careful what you bring in the house or leave on porches or storage areas of the house. Clothes, bags of groceries, or other items anyone gives you may bring new roaches in if you aren't careful to ask about roaches at the other house. If you put out new baits in the kitchen and bathroom every 4 months for a year, you can kill off the few that do get brought in. After that, you could probably use a small number of baits every 6 months to maintain your house.

ABOUT BAIT STATIONS AND GEL BAITS

Baits are insecticides that the insects eat. Baits come in 2 forms, either in a plastic container called a bait station, or as a thick gel in a syringe. Bait stations are usually about 2 inches square, with a covered area in the middle where there is about a quarter

teaspoon of soft bait containing insecticide. There are small holes where the roaches can go in to get the bait. The bait has some sugar to make it attractive to roaches, but children or pets can't reach it.

The same insecticides are also available as a gel in a large syringe. The gel bait in the syringe is softer than in the bait stations. To apply gel bait with the syringe, take the cover off the tip of the syringe, and then hold the tip onto the area to be treated. Usually you will be treating the area where the floor meets the wall, so the gel can be mostly pushed into the crack where they meet. Move the tip slightly to the side as you squeeze out the bait. A spot about $\frac{1}{4}$ inch long is enough.