

Health & Housing: Cockroaches

Overview

Cockroaches enter the home by crawling or flying. They tend to hide in tight corners and are attracted to moisture, so they are commonly found near drains and pipes. Cockroaches are prone to appear in areas where crumbs, food scraps, and garbage are present. Once they habit one apartment or condominium, cockroaches can easily move and infest other units.¹

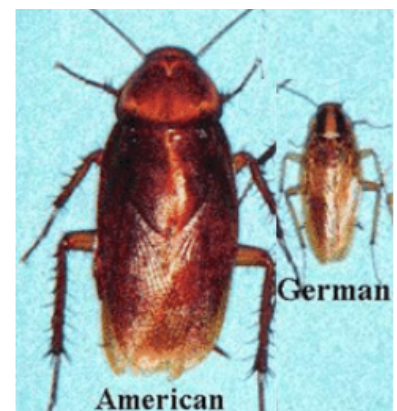
The most common types of cockroaches in Texas are the small German cockroach and the larger American cockroach. It is important to distinguish between the two species because they have different behaviors and different strategies are used to manage them.¹

German Cockroach – *Blattella germanica*

- Small build with wings that are shorter than their bodies
- Create habitats indoors
- Opportunistic feeders that prefer human and pet foods

American Cockroach – *Periplaneta americana*

- Large build with wings that are thinner and longer than their bodies, which gives them the ability to fly
- Prefer outdoor habitats, but will go indoors to find water and food
- Opportunistic feeders that prefer plant debris, mulch, and compost^{1,2}



Cockroaches are most active at night and tend to avoid bright lights. Seeing small cockroaches during the day is a likely sign of a heavy infestation. German cockroaches are the most common species that infest apartment buildings, homes, or restaurants. The larger American cockroaches are less likely to cause an infestation; they typically enter garages, basements, and parking structures in search of food and water.³

Health Impacts



Cockroach secretions, droppings, eggs, and shed skin can cause allergic reactions and are a known cause of asthma symptoms and exacerbations in people with asthma who are allergic to cockroaches.^{3,4} People can develop cockroach allergies after frequent exposure to cockroaches.

Cockroaches may carry infectious bacteria that can be transferred to surfaces in the home, including food that is not properly sealed.^{1,3}

¹ Texas A&M Agrilife Extension. (n.d.) *Cockroach biology and management*.

<https://agrilifeextension.tamu.edu/library/insects/cockroach-biology-and-management/#:~:text=The%20most%20common%20types%20of, and %20smokybrown%20cockroach%2C%20Periplaneta%20fuliginosa>

² United States Environmental Protection Agency. (2021). *Cockroaches and schools*. <https://www.epa.gov/ipm/cockroaches-and-schools>

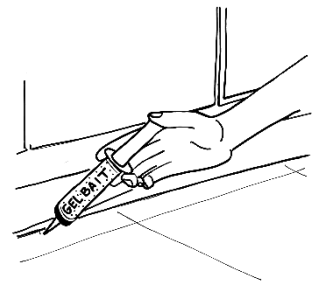
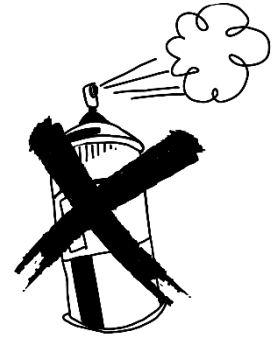
³ California Childcare Health Program, University of California, San Francisco School of Nursing. (n.d.) *Integrated Pest management: Cockroaches*. https://cchp.ucsf.edu/sites/g/files/tkssra181f/Cockroaches_FCH_IPM.pdf

⁴ Kanchongkittiphon, W., Mendell, M. J., Gaffin, J. M., Wang, G., & Phipatanakul, W. (2015). Indoor environmental exposures and exacerbation of asthma: an update to the 2000 review by the Institute of Medicine. *Environmental health perspectives*, 123(1), 6–20. <https://doi.org/10.1289/ehp.1307922>

Immediate Actions

Once cockroaches are present in the home, sanitation and cleanliness are important.

- Areas near cabinets, refrigerators, and stoves must be kept clean so that no small food particles are exposed.
- Tightly seal all food sources (including pet food).
- Restrict eating to kitchen and dining areas; clean crumbs from floor, counter, and other surfaces immediately after eating.
- Wash dishes right after using; do not leave them in sink.
- Clean off stove each time after cooking to remove grease.
- Trash bins, both indoor and outdoor, need secure covers and should be frequently emptied.
- Vacuum frequently to remove food crumbs and debris.
- Keep all areas in the home free of clutter.
- Use low-toxicity insecticides to exterminate pests such as:
 - Insect dusts (boric acid, diatomaceous earth)
 - Insect gels
 - Bait stations
 - Gel baits are an effective way to eliminate infestations and use smaller amounts of insecticide than conventional cockroach management.^{3,5}



Do not use “bug bombs” such as sprays and foggers – they do not reach areas where the cockroaches hide, and they do not eliminate cockroach eggs.³ These products also increase the risk of exposure to children, family members, and pets to pesticides.^{6,7}

Long-term Management¹

- American and other large cockroaches typically enter the home from the outdoor environment. Inspect and make necessary repairs to entry points (cracks and holes in walls, etc.) into the home. These include doors, windows, window screens, roof soffits, and fireplace screens.
- Insects are attracted to water sources. Routinely inspect pipes and drains to make sure they are functioning properly and do not allow access into the home.
- Keep compost, woodpiles, and other decaying materials away from home.
- Repair leaky pipes, seal crevices and cracks, and fill holes in walls and flooring to prevent cockroaches from entering the home or moving between multifamily units.
- **If living in a multifamily unit, it is essential to work with the property manager to make a collective effort to eradicate cockroaches in the entire building. These insects easily move from one unit to another.**

⁵ Rabito, F. A., Carlson, J. C., He, H., Werthmann, D., & Schal, C. (2017). A single intervention for cockroach control reduces cockroach exposure and asthma morbidity in children. *The Journal of allergy and clinical immunology*, 140(2), 565–570. <https://pubmed.ncbi.nlm.nih.gov/28108117/>

⁶ DeVries, Z. C., Santangelo, R. G., Crissman, J., Mick, R., & Schal, C. (2019). Exposure risks and ineffectiveness of total release foggers (TRFs) used for cockroach control in residential settings. *BMC public health*, 19(1), 96. <https://doi-org.ezproxy.lib.utexas.edu/10.1186/s12889-018-6371-z>

⁷ Environmental Protection Agency. (2021). *Pesticides' Impact on Indoor Air Quality*. <https://www.epa.gov/indoor-air-quality-iaq/pesticides-impact-indoor-air-quality>

The best practice is to hire an Integrated Pest Management (IPM) company. IPM is an effective long-term method for controlling cockroaches and other pests. IPM uses many techniques to eradicate pests, including:

- Inspecting the home to locate and eliminate the sources of pest entry to the home
- Locating where pests live and hide
- cutting off pests' access to food and water sources
- Using low-toxicity insecticides to exterminate pests such as:
 - o Insect dusts (boric acid, diatomaceous earth)
 - o Insect gels
 - o Bait stations



Tenants can support Integrated Pest Management methods by maintaining a home free of clutter and eliminating pests' access to food and water.

This report was compiled by Community-Driven Initiatives and the Center for Health and Environment: Education and Research (CHEER) at Dell Medical School at The University of Texas at Austin, in collaboration with Building and Strengthening Tenant Action (BASTA).



The University of Texas at Austin
Population Health
Dell Medical School

Center for Health and Environment,
Education and Research

Community-Driven Initiatives