

## Dealing with Pests

Most people can relate to the surprise, shock and revulsion of coming across pests in their homes. After their presence is detected, one can't help but wonder how many of the troublesome creatures exist and how difficult it may be to get rid of them. Once settled inside your apartment, pests can threaten your sanity, your health and your home. Do not ignore the presence of a cockroach or another pest and hope it will disappear. Deal with pests immediately before they multiply into a problem that you will be unable to handle.

Common household pests include insects, such as ants, cockroaches, termites, flies, moths and wasps. Urban wildlife, such as rodents, raccoons, bats and birds can sometimes become problems in buildings as well. Insects are the most common and troublesome pests found in apartment buildings and this fact sheet focuses on them.

Pests can creep inside a grocery bag from the store or a suitcase from travels abroad. They can move into your home, from the apartment next door or the one above or below. Apartment buildings have many "highways" for pests to follow. They crawl along heating ducts or water pipes and they squeeze into tiny cracks and gaps in floors, walls and doorways.

Once inside your apartment, a pest can probably find everything it needs to survive and multiply quickly. No matter how neat and clean your apartment is, the pest will likely locate the food, water, warmth and dark hiding places it needs to live and breed.

In rental apartment buildings, landlords are responsible for dealing with pests--usually in cooperation with the resident of the apartment. If the resident is unable to eliminate a pest, the landlord may have to hire a professional exterminator to deal with the problem. In individual condominium suites, dealing with pests is likely the responsibility of the owner. If the pests come from common areas, it could be the responsibility of the condominium corporation.

Regardless of whether you own or rent your apartment, there are steps you can take to make your apartment less inviting to pests. If the pests are already there, the Integrated Pest Management (IPM) approach is very effective at reducing or eliminating them. Pest proofing your apartment and the Integrated Pest Management process may involve various systems. Before taking any actions that might affect other areas of the building, obtain your building's management approval.

### **Understanding the Enemy: Why Pests Seem to Enjoy Our Homes**

Pests tend to enjoy our homes because the conditions there are more than suitable for them to survive and thrive. They can find food, there are lots of places to hide and they don't have to worry about the numerous natural predators they would otherwise face outside. Residents of apartments can better prevent and reduce infestations by understanding how pests get into our homes and what they need to survive.

Most pests are attracted by debris from human or animal activities and the shelter our homes offer. The first priority for effective pest prevention is to understand your adversary. The goal is to identify and seal pest entry points, eliminate sources of food, establish good housekeeping habits, and if necessary, actively eliminate pests with traps and pesticides.

### **PEST PROOFING YOUR APARTMENT**

#### **Find and Seal Pest Passageways**

Pests will take various routes to find their way into your apartment. Insects enter apartments through poorly sealed or open windows and doors, cracks and crevices in walls or foundations, and openings around

pipes and other penetrations. Insects can squeeze through extremely small openings. Vents and air ducts can provide an entry point for birds, rodents and insects. Insects can also attach themselves to pets, or to people and the items they are carrying.

Look under the kitchen sink and you may see a gap between the sink drain pipe and the wall or floor. Holes in window screens, gaps around window trim and crack between the floors and the walls may all offer travel routes for pests. Try to seal off these roadways by:

- Sealing holes in walls around plumbing and electrical lines between apartment units. Look for penetrations in utility closets, under kitchen sinks, behind toilets and sinks in bathrooms. Usually these holes can be sealed with caulking or spray foam.
- Caulking cracks and crevices in cupboards and walls.
- Ensuring window screens are properly fitted and are in good repair to keep flying and crawling insects out.
- Sealing the gap under the corridor to suite door with weatherstripping (Note: this may adversely affect the air quality in your apartment. If you note lingering odours, stale air and high humidity, you may have to remove the weatherstripping.)

The CMHC About Your Apartment publication, *Solving Odour Transfer Problems in Your Apartment* provides a comprehensive list of ways to find and seal passageways between your apartment and the rest of the building.

### Removing the Welcome Mat: What Pests Need to Survive and Thrive

Pests seek out our homes as they need the food and shelter. By understanding the conditions that give pests an opportunity to survive and thrive, you will be better prepared to develop an action plan to remove or limit these conditions, making your apartment a less welcoming place for pests.

**Climate:** The optimum temperature for many insects is between 20 and 30°C (68-86°F). Most insects will die if exposed to temperatures below -2°C (28°F) or above 45°C (113°F) for a period of time. They generally proliferate at humidity levels between 60% and 80%. Insects need moisture to survive, and some (such as silverfish) thrive on high humidity and standing water.

**Water Sources:** Many pests are attracted to damp areas. Sources of water and potential insect habitats include kitchens, bathrooms, water pipes in concealed spaces, water in the building envelope, custodial closets, water fountains and climate-control equipment. Standing water in refrigerator condensation pans and air conditioner drain pans can provide water for pests to live on. Water on a roof near a ventilation system intake louver or in other locations can raise humidity levels and provide an excellent environment for insects.

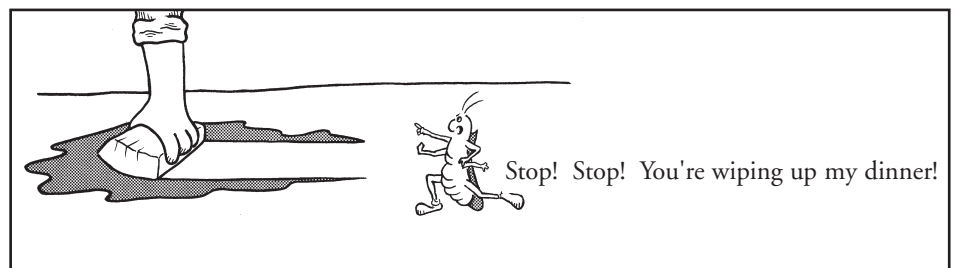
**Food sources:** Open foods and food waste, dander and dead skin represent food for all types of pests. Potted plants and cut flowers, water in vases and over-watered plants, dead and dying plants, and the nectar and pollen of flowering plants all encourage the presence of pests.

**Habitats:** Several common pests thrive in small, dark, undisturbed spaces. Insects like to live in dark, tight spaces (such as corrugated boxes and cracks in walls), and are attracted to piles of boxes or other materials left undisturbed for long periods. Insects also live in quiet spaces like concealed corners in cupboards, the undersides of bookcases and behind furniture. Dust and dirt are hospitable environments for many pests. Dead insects or insect debris can also attract other insects. Dirt and clutter make it difficult to see pests, so a problem may go unnoticed for some time.

### Good Housekeeping Habits: Making Your Apartment Hostile to Pests

The following list provides tips on what you can do to make your apartment a less desirable residence for pests:

- Wipe counters, tables and other eating surfaces after meals and snacks.



- Avoid leaving dirty dishes overnight; if you need to do so, rinse the dishes first. If you must soak a pot overnight, fill it with hot, soapy water.
- Avoid leaving dirty dishes in a dishwasher overnight.
- Wipe stove top and burners every night.
- Rinse cans and bottles before recycling.
- Clean food spills promptly, especially on carpets and furniture.
- Put garbage and compost in containers with lids and dispose frequently.
- Store food in sealed containers or in refrigerator.
- Keep cupboards tidy and clean.
- Store paper bags in cupboard or drawer away from kitchen; don't stuff in space beside refrigerator.
- Use bathroom fan or open window for half hour after every bath or shower to reduce humidity.
- Empty your dog's or cat's water bowl at night and fill it again in the morning. Empty and wash pet food dishes daily.
- Clean your apartment frequently and thoroughly to remove dust and insect byproducts.
- Improve ventilation to reduce humidity and eliminate damp areas.
- Clean hard-to-clean areas regularly; pull out refrigerators, stoves, microwaves and other appliances. Clean and vacuum behind, beside and under appliances.

- Don't let water stand in houseplant dishes or in pan under refrigerator.
- Check water faucets for leaks and ensure plumbing under kitchen or bathroom sinks is not leaking.
- Caulk gaps around sinks and tubs to prevent water from entering walls.

### Maintain Your Apartment

Poorly maintained buildings can be a very attractive shelter for pests. Buildings with cracks, holes and other openings to the outside practically invite pests to stay. Report any openings you may find to the building management. Also make sure your landlord or condominium corporation is made aware of water leakage through roofs, walls and windows. The previous list of housekeeping tips can be adapted for the common areas of the building as well. If you find the housekeeping in your building is not well done, report it to the property management, condominium board or tenant's association for action.

### Before You Rent or Buy

*To avoid moving into an infested home, inspect the apartment carefully for traces of pests. If you suspect pests, ask to view the apartment after dark when many household pests are active and ask other residents if there are any problems. Also, inquire with the building manager or landlord about their policy relating to pests and the use of pesticides.*

### Spread the Word

Pest proofing your apartment works best when the tenants and owners in your building do likewise. Pest problems in one apartment, if left unchecked, can spread to neighbouring apartments and common areas. If everyone joins in a common effort to eliminate food sources, establish good housekeeping habits and reduce entry points for pests, the potential for a pest problem is reduced, and, if pests do integrate, it will be much easier to deal with them. Discuss a pest-proofing strategy with your building manager. This *About Your Apartment* fact sheet is a useful information tool to start the discussion.

Pest proofing the common areas of your building is equally important. Encourage your building manager or building maintenance committee to establish a pest-proofing strategy for the building's common areas and mechanical rooms. Areas with standing water and high relative humidities are a particular concern as are leaky walls, foundations and roofs.

### INTEGRATED PEST MANAGEMENT

The Integrated Pest Management (IPM) strategy is widely recognized as the most effective approach to dealing with unwanted insects. Endorsed by the scientific community, government and the pest management industry, the five-step IPM approach relies primarily on non-chemical means (such as controlling climate, food sources and building entry points) to prevent and manage pest infestations. IPM combines changes in the pest's living space with the targeted use of pest control products to eliminate or reduce pests to acceptable levels.

## About Your Apartment

### Dealing with Pests

Conventional pest control tends to ignore the causes of pest infestations; it relies instead on routine, scheduled pesticide applications. Pesticides can provide temporary fixes, but tend to be ineffective over the long term especially if the source of the problem is not addressed. Pests' food, water and shelter must be removed. The most effective solution is to follow the IPM approach to control pests. Also, inform your building manager as soon as you notice a problem. The pests may not just be in your apartment and you will need a concerted effort to deal with them effectively.

Prevention begins with building managers and extends to other people in the building, including custodians, trades and, most importantly, the residents themselves. A successful IPM program is a collaborative effort involving building management, maintenance and residents.

The five steps of IPM are:

1. Inspect
2. Monitor
3. Decide
4. Control
5. Evaluate

#### 1. Inspect your apartment closely

- to confirm there is a pest problem
- to identify the kind of pest
- to locate the problem areas
- to look for the reasons pests are entering your home

Pest/Sites of Pest Activity and Concern	Habitat Modification /Sanitation
<b>Carpenter Ants:</b> Water-damaged wood; fence posts; decking; firewood; door and window voids; attics; utility piping; dead parts of trees and stumps; tree branches in contact with roof. Destroy structure and carry germs	Eliminate conditions that promote moisture accumulation; move and aerate firewood; remove stumps and overhanging branches in contact with structure as well as rotten railroad ties in landscape; remove dead trees.
<b>Termites:</b> Wood in direct contact with the soil; stored newspapers and cardboard boxes; timber and construction debris buried in backfill; fence posts; porches. Destroy structure	Break wood-to-soil contact; remove scrap wood and paper debris; improve drainage away from structure; inspect vapour barriers; improve ventilation in crawl spaces.
<b>Cockroaches:</b> Kitchens; grocery bags; unrefrigerated vegetables; toasters; radios and TVs; bathrooms; electrical and plumbing conduits; floor drains. Carry filth and transmit disease	Clean up spilled foods and water; eliminate harborage and pathway areas by sealing or screening; repair water leaks; increase ventilation; inspect incoming foods and packaging.
<b>Other Ants:</b> Wall voids; gaps at doors and windows, and around utility piping; house plants; cracks in paving; under landscape timbers, rocks and mulch. Carry germs	Remove food sources; seal all cracks and crevices; locate and eliminate nests; correct drainage in house plants; seal cracks in pavement and concrete slab.
<b>Fleas:</b> Pets; wildlife; neighbour's pets; carpets; furniture; pet bedding; yard. Transmit disease with their bite	Vacuum carpeting and furniture; keep pets in your own yard; proper pet treatment; prohibit wild animals in the building structure.
<b>Flying Insects:</b> Garbage; faulty plumbing; eaves; attics; light fixtures; wall voids; puddles of water and other moist areas. Transmit disease with their bite and contaminate food	Install or repair screens; change lighting; improve drainage; remove garbage daily; keep trash cans clean and tightly covered; repair cracks around siding, windows and doors.
<b>Pantry/Fabric Pests (moths):</b> Flour; potpourri; spices, cereals; rice; beans; dry pet food; stored clothing; woolen rugs. Eat and contaminate food, woolens	Inspect foods and packaging prior to storage; store foods in glass/plastic containers; clean up spilled foods; rotate dry goods; store only clean cloths.
<b>Mice and Rats:</b> Kitchen cabinets; stored food; storage areas; wall voids; inside appliances; closets; firewood; attics, garages; basements. Eat and contaminate food, transmit disease	Install physical barriers; eliminate food and water; remove nesting sites; inspect incoming boxes.
<b>Squirrels/Bats /Birds:</b> Attics; garages; porches; eaves; exhaust vents; nearby trees; utility lines; chimneys. Damage building envelope, transmit disease	Install chimney caps and screens on roof openings; remove tree branches in contact with apartment; repair holes in soffit and along roof.

Source: adapted from: National Pest Management Association inc, <http://npma.pestworld.org/homeowners/spotlight/ipm.asp>

**Identify the Pest:** To effectively deal with an insect problem, you need to establish the kind of pest. Each type and species of pest has a distinct biology and behavior pattern. The National Pest Management Association inc. website contains information and photographs of common North American pests (<http://npma.pestworld.org/homeowners/spotlight/>).

Local health departments and provincial agricultural departments may also be able to provide more information and advise whether to consult a pest control professional.

Routine and careful visual inspections are critical to long-term pest management. Look for indications of pests (damaged areas, droppings, eaten food) and conditions that favour pest infestations. Since some insects, such as, cockroaches, silverfish and carpenter ants, and rodents are active at night, inspect your apartment an hour or two after dark to identify where they are nesting, feeding and travelling. Conduct your inspection quietly and use a powerful flashlight. Look in all areas that might possibly provide the pest with food, water, warmth or shelter. If possible, during warm weather look outside for evidence of pests or their points of entry.

## 2. Monitor

Monitor your apartment to determine the scope of the problem and to establish a benchmark for future evaluation. Use sticky traps or glue boards to capture the pests (available at most hardware and grocery stores). Place the traps in locations where you suspect or know the pests visit; leave them in place for two to seven days. Keep a written record of the results and use the same trap locations for follow-up monitoring.

Several kinds of traps are used to catch and count pests. Be sure to purchase traps designed to capture the pest you have in your apartment. Place traps in the kitchen, bathroom(s) and dining room. Problem areas include under the sink, in the back of cupboards and other food storage areas, and behind the refrigerator, stove, toilet and bathtub. Place traps in areas not accessible to children and pets.

Monitoring allows you to identify the extent of the problem and the specific pest, and to fine-tune your management methods.

## 3. Decide

Decide on the number of pests you can tolerate in your apartment and your building. For most people, this means no pests in their apartments, but it may mean occasionally spotting a few cockroaches or a silverfish near the garbage collection chute or in common waste collection area.

The various comfort levels of the different occupants of the apartment building may create some tension when dealing with pest infestations. Some people may be willing to endure silver fish under the sink rather than carry out an extensive clean-up and use pest control products. Others may want conventional pesticide spraying on a routine basis whether there is a problem or not. Still others may be familiar with the benefits of the IPM strategy and advocate a proactive pest management program. Consult your building manager for information about your building's pest control policy.

#### 4. Control

Control pests by using several control methods simultaneously.

- Cut off food and water sources.
- Seal cracks and cavities to prevent pests from entering.
- Use pest control products, such as baits, bait stations and dusts.

Refer to the Good Housekeeping habits listed on page 2; each one will help you cut off the pest's food supply and compel the pest to leave (or die).

Seal cracks and cavities to reduce the locations where pests can hide, live and move between apartments. Use heat-tolerant caulk to seal gaps around heat registers, and other caulks to seal gaps near air ducts, electrical chases, false ceilings, interior/exterior water and heating pipes, and wherever pests can move from unit to unit.

Use pest control products, such as baits, bait stations and dusts, for a targeted approach to dealing with pests after cutting off the food and water sources, and sealing cracks and cavities.

Purchase a containerized insecticide bait (looks like a small hockey puck), or bait paste or gel specifically designed to deal with the pest in your apartment. Baits attract the pest by acting like a food source, so ensure no other food is available. Follow label directions for placing and using the bait containers, pastes or gels. Pastes and gels can be placed inside cracks, under sinks and in gaps between the wall and cabinets. However, they may leave deposits of bait that cannot be removed so ensure it is not placed in a visible location or on valuable furnishings. Ensure the baits are placed in areas not accessible to children and pets.

Use pesticide sprays only as a last resort to correcting severe pest problems, and use a low-toxic type. Several registered pesticides are available from garden and hardware supply stores.

- Silica aero gel (a desiccant which dehydrates the insect) may be combined with pyrethrum
- Commercial products containing boric acid (an effective insect stomach poison and desiccant that has low toxicity to humans)
- Pyrethrum product (a chrysanthemum derivative)

Read the label before using any pesticide. Consult your building manager before applying pesticides in any area where other residents may be affected.

Pesticide technicians can provide valuable assistance in dealing with troublesome pests. In Canada, only licensed exterminators can charge a fee for a pesticide application. Ask if they follow the IPM strategies. They should conduct a thorough inspection of your apartment, monitor the pests and identify the contributing conditions. Only then would an IPM-trained technician take reasonable and effective action--called precision targeting--to control and prevent the problem from recurring.

#### 5. Evaluate

After completing the steps to control the pest, monitor again to evaluate whether you have succeeded. If so, keep following the good housekeeping measures to prevent their return. If you were unsuccessful, inform your building manager and repeat the first four steps of the IPM program.

#### NOTE: PESTS, PESTICIDES AND HEALTH CONCERNS

Pests can transmit a host of diseases to humans and animals. The droppings (feces), saliva, eggs and outer covering of pests can contain substances that are allergenic to humans, especially people with asthma or other respiratory conditions. Pests, such as cockroaches, can bring diseases from garbage areas into your apartment and leave contaminated residue on your counter. Other pests, such as bed bugs, fleas and ants can transmit disease with their bite. Termites and carpenter ants can cause structural damage.

In most instances, pest problems in an apartment need to be addressed. However, it is important to avoid introducing a different health concern in the form of a toxic pesticide or poisonous bait-type trap. You and the apartment management need to balance the possible risks of using a pesticide against its benefits.

Pesticides are chemicals designed to kill, mitigate or repel pests. Many pesticides are toxic to pests and, when used improperly, they can be toxic to people as well. Always store pesticides in original containers away from children and pets and follow the directions when using them.

According to the Environmental Protection Agency in the United States, although pesticides can pose a risk to people, the amount of pesticide people are likely to be exposed to is too small to be a concern. To determine risk, consider both, the toxicity or hazard of the pesticide and the likelihood of exposure. For example, a low level of exposure to a very toxic pesticide may be no more dangerous than a high level of exposure to a relatively low toxicity pesticide. You can be “exposed” to pesticides by inhaling them, absorbing them through your skin or by swallowing them. Careful deployment, monitoring and clean up of pesticides can prevent most exposures.

As a precautionary measure, be aware that exposure to high levels of pesticides, usually because of misapplication, may lead to acute effects, such as headaches, eye or throat irritation, dizziness, muscle twitching, weakness and nausea. Long-term or excessive exposure to some pesticides has been linked to cancer, reproductive issues and effects on the central nervous system. Children and older adults may be more sensitive to the effects of chemicals contained in pesticides.

#### **Limiting Your Exposure to Pesticides:**

Some apartment buildings routinely schedule pesticide applications to proactively deal with pest problems. This routine application in kitchens, bathrooms and concealed locations is not necessary or effective for most pests and may unnecessarily expose residents to dangerous chemicals. Pesticides are most effective when applied as spot treatments in pest-populated areas identified during an inspection. Although more than one treatment may be required for long-term control, pesticide applications should only be carried out to resolve identified pest-related problems. Pesticide treatments around the perimeter of a building can be effective for some pest problems (such as termites). Pest

management professionals are properly trained and equipped to conduct this type of work. Use perimeter treatments only when needed, not as a cure-all for keeping insects out of an apartment building. It is more important to identify and correct food, water and shelter conditions, both inside and out, that attract pests.

The best way to deal with pests is to prevent them in the first place. To eliminate infestations or to reduce them to acceptable levels, follow good housekeeping measures in your apartment and in your building. Work with the building manager to develop a proactive Integrated Pest Management (IPM) strategy that primarily relies on non-chemical means to prevent and manage pest infestations, and involves targeted use of pest control products as a last resort.

#### **For further information, refer to these useful websites/sources:**

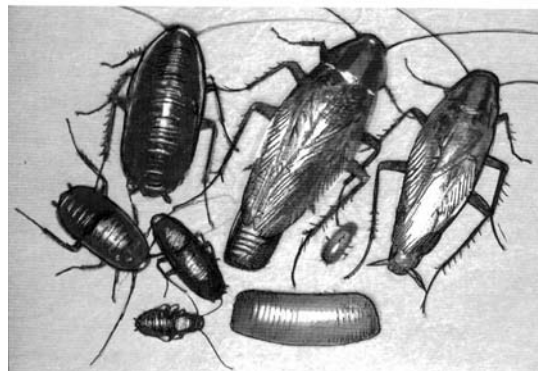
CMHC's *Farewell to Cockroaches* publication at: [http://www.cmhc-schl.gc.ca/en/burema/gesein/faroach/faroach\\_002.cfm](http://www.cmhc-schl.gc.ca/en/burema/gesein/faroach/faroach_002.cfm)

*A Strategy for Pest Control in the Home* from Purdue University: <http://www.btny.purdue.edu/Pubs/PPP/PP34.html#home>

<http://npic.orst.edu>

*Scram* by Kathy Seikel of the Environmental Protection Association: [www.ipminstitute.org/pdf/units\\_article.pdf](http://www.ipminstitute.org/pdf/units_article.pdf)

Environmental Protection Agency website: <http://www.epa.gov/opp00001/about/index.htm> and the National Pesticide Information Centre (NPIC) (a co-operative effort of Oregon State University and the U.S. EPA): <http://npic.orst.edu> or 1 800 858-7378.



[http://allergy.peds.arizona.edu/southwest/insects/mites\\_rockes.html](http://allergy.peds.arizona.edu/southwest/insects/mites_rockes.html)

#### **German Cockroaches**

The German cockroach is one pest found in Canadian apartments. Nocturnal and thigmotactic, they seek very small crevices, such as plumbing penetrations under sinks, and other warm, dark, and moist places. You may see them scurrying for cover in a kitchen or bathroom when you switch on the light at night. For more information on cockroaches refer to CMHC's *Farewell to Cockroaches* publication at [http://www.cmhc-schl.gc.ca/en/burema/gesein/faroach/faroach\\_002.cfm](http://www.cmhc-schl.gc.ca/en/burema/gesein/faroach/faroach_002.cfm).

To find more About Your House fact sheets plus a wide variety of information products, visit our website at [www.cmhc.ca](http://www.cmhc.ca). You can also reach us by telephone at 1-800-668-2642 or by fax at 1-800-245-9274.

### **Priced Publications**

*Curbing Cockroaches the Least Toxic Way*

Order No. 60949

### **Free Publications**

*Farewell to Cockroaches!—Controlling Cockroaches the Least-Toxic Way*

Order No. 60948

### **About Your Apartment** *fact sheets*

*Solving Odour Transfer Problems in your Apartment*

Order No. 63419

*Reducing Noise in Your Apartment*

Order No. 63904

*Dealing with Power Outages*

Order No. 65013

*Fire Safety*

Order No. 65050

*Improving your Security and Safety*

Order No. 65041

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