

Pests can be a nuisance or a serious problem. Either way, you want to remove pests from your house - from crawlspace to attic, living room to garage - and then keep them from returning using methods that don't negatively impact people and pets.



# IMPLEMENTATION MANUAL





Pests of many kinds can, and will, infiltrate a house looking for spaces that are warm and offer a source of food and water. The occasional ant or mouse is not an infestation and not necessarily cause for alarm. But that observation does justify a careful inspection to see if they are alone or if there are more. When pests begin reproducing uncontrollably, that is when they pose an immediate threat to the health of the occupants or the structure of the house. The key is to stay vigilant and stop nuisances before they become problems.

The common, and most popular, response is to immediately KILL whatever is seen. There are two problems with this approach if you are seeing more than the occasional ant. First, the problem of the colony home, nest, and/or breeding location is not addressed. Second, the chemicals used in the majority of household pesticides can also be harmful to people.

While many home repairs and maintenance tasks can be done without professional intervention, pest identification and control requires special training, experience, and methods. The steps listed below will help you know what to ask for, how to hire a qualified individual or company, and how to determine if pest removal is complete without an increased risk of exposure to pesticides.

This manual is designed to help you address pests in your house. Although most of these actions won't be new to a pest control expert, some of the reasons we recommend doing things the way we do may be. They have been trained to comply with local building codes and general industry standards, not these higher standards which include the impact of the house on occupant health.

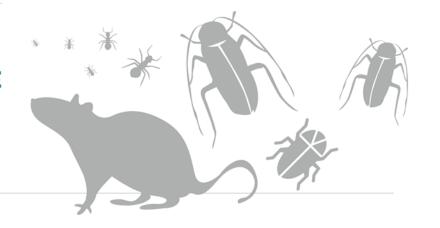
Our methodology encompasses building science, medical science and academic research in combination with practical experience and usually exceeds industry standards. Getting rid of pests can be pretty straightforward, but it is important to do it so it minimizes your exposure to any pesticides that may be needed. More importantly, effective pest management will prevent a re-infestation.

STEP 1: DETERMINE IF YOU HAVE A PEST PROBLEM

STEP 2: IDENTIFY HOW PESTS ARE ENTERING YOUR HOME

**STEP 3: SEAL AND REPAIR** 

STEP 4: REMOVE PESTS FROM YOUR HOME



### **STEP 1:**

#### **DETERMINE IF YOU HAVE A PEST PROBLEM**

- Ideally, it is best to look all over the house to ensure that you don't miss anything. Key areas to check:
  - THE KITCHEN. A LOT OF PIPES ARE LOCATED INTO THE KITCHEN, WHICH OFTEN PROVIDE PESTS WITH ENTRY POINTS. CHECK ALL CABINETS, ESPECIALLY WHERE FOOD IS STORED, AND UNDER THE SINK.
  - PLACES WHERE APPLIANCES, PIPES, CABLES, AND/OR VENTS CONNECT THE INSIDE OF YOUR HOUSE TO THE OUTSIDE OF YOUR HOUSE. CHECK LAUNDRY ROOMS, BASEMENTS, ATTICS, AND UTILITY ROOMS.
  - ROOMS AND SPACES THAT AREN'T OCCUPIED OR USED ROUTINELY.
  - THE GARAGE.
  - OUTDOORS AROUND GROUND LEVEL WINDOWS AND THE FOUNDATION.
    CHECK BEHIND WOOD PILES THAT MAY BE STACKED AGAINST THE HOUSE.
  - FOUNDATION VENTS AND OTHER ACCESS TO A CRAWLSPACE OR STORM SHELTER.

TIP!

While looking for pests, especially if you are in your crawlspace or other dirty spaces, be sure to wear protective clothing!

- Pests usually leave clues that they are around. Here are a few things to look for:
  - RODENT OR OTHER PEST DROPPINGS (WHICH CAN RESEMBLE SMALL PELLETS OR DRY COFFEE GRANULES).

- ODOR, ESPECIALLY A SMELL THAT SEEMS TO MIX MUSTY AND AMMONIA
- NESTS
- DAMAGED, GNAWED OR NIBBLED WOOD, INSULATION, WIRES,
  CARDBOARD BOXES, PIPES, AND EVEN PLASTIC.
- TERMITE DAMAGE OR DROPPINGS (AIRBORNE TERMITES). SMALL MOUNDS OF MUD AND PATHWAYS (SUBTERRANEAN TERMITES).

#### NOTE:

If you notice signs or suspect an active and large infestation, skip directly to Step 4.



## IDENTIFY HOW PESTS ARE ENTERING YOUR HOME

Pests can enter your home through virtually any size of opening. A mouse needs only a hole the size of a ballpoint pen.

 Look for gaps around water or gas pipes or where cables enter the house from the outside.
 Any old or recent installation of cables, wires, or other equipment that required drilling a hole in the outside wall should also be tightly sealed (but often aren't.)

- Look for cracks in the foundation or chimney brickwork and holes in the roof.
- Check windows and doors to make sure they seal tightly. Don't forget to check to make sure that the garage door closes tightly against the garage floor and doesn't leave space for pests to enter. Also check that doors between the house and the garage close tightly. We strongly advise following current best practices (and building codes!) by installing self-closing hinges to insure that doors don't inadvertently get left open for unwanted visitors!

### > STEP 3: SEAL AND REPAIR

Keeping pests out goes a long way to solving pest-related issues. There is little point of getting rid of pests that are in your house if more can get back in.

- Fix holes in the roof, replace missing shingles and window panes.
- Seal cracks, crevices and gaps, especially around pipes with non-toxic sealant or expanding foam.
- If you have a chimney, place a top ventilation cap or steel mesh over it that is small enough to keep birds out but large enough for regular airflow. Check local building codes.

• Make sure soil or vegetation does not touch the siding of the house. Contact with the foundation is okay. If possible, leave a gap between vegetation and house so that you have easy access for inspection and pests have restricted access, as they don't like to cross gaps!

### STEP 4: REMOVE PESTS FROM YOUR HOME

It is tempting to pull out the pesticides and spray pests away. While conventional practice says that this may be ok to do this very occasionally in a very well ventilated space, it is not a good solution as the vast majority of pesticides contain chemicals that are known to be harmful to human health.

When it comes to pests, we do not recommend DIY. Find and hire a professional pest control company who operates according to the principles of Integrated Pest Management (IPM). IPM has proven to be effective at removing current pests, preventing future re-infestations, and – most importantly – with methods which don't expose people and pets to potential, or known, hazards. Excellent information is available at:

- https://www.epa.gov/managing-pests-schools/introduction-integrated-pest-management
- http://www.beyondpesticides.org/resources/safety-sourceon-pesticide- providers/what-is- integrated-pest- management

## A NOTE FROM HAYWARD SCORE ABOUT PESTICIDES

ANY product which claims to kill, inhibit, or otherwise affect the life of pests of any kind, are required by FIFRA – the Federal Insecticide, Fungicide, and Rodenticide Act – to submit documentation to the US EPA for evaluation. Those which meet the EPA requirements will receive an Registration Number which is available on the web. The Registration will include an official label specifying where and how the product is approved to be used. The label for some will look like labels you are used to seeing on food and building products. Labels for more complex products or those with detailed limitations of use can be several pages long.

Always insist on obtaining the Registration Number of any chemical product offered for use in your home. Read the label and verify that the use complies with the label.

Finally, semantics can be important. EPA does not "approve" any products - they evaluate documentation and issue a Registration Number. EPA does not

determine that a product is safe for people. However, there are some which have been determined as "unsafe" and have been removed from the market.

Despite the stringent FIFRA requirements, no manufacturers are compelled to identify the "inert ingredients" in their products. This is critical for two reasons: 1. The active ingredients are often less than 1% of the total. That means the inert ingredients make up 99% or more. 2. Some chemicals can be an active ingredient in one product but an inert ingredient in another. This usually occurs when the most effective chemical can be enhanced or accelerated by another chemical – even if that chemical can be "active" in another product. In 2011 the EPA proposed a regulation that would force disclosure of inert ingredients. It was blocked by industry.

## MAINTENANCE MANUAL





Killing the current population won't prevent new ones from entering your home and re-infesting. Once your home is pest-free, make (and stick to) a plan to keep it that way!

The most important part of pest control maintenance is to identify and block air pathways from outside the house to the inside. If you notice air or water coming into your house that is a sure sign that pests can enter as well. Routinely check areas where pipes, cables, and vents connect to the house and make sure they remain sealed. In addition, there may be new entry points for pests from installation of new equipment, deterioration of the building, or shifting of the foundation creating new cracks.

Entry points for pests are frequently where air also enters. Air leakage can often be detected by placing your hand near suspected openings. Air will be moving strong enough to feel when there is a temperature difference between inside and

outside, or when the wind is blowing,

You also want to remove food sources - so make sure opened containers or boxes of food in your cabinets are kept closed or better yet, put unused portions of cereals, pastas, sugar, crackers, and flour into airtight containers. Don't make your home available and attractive for hungry pests.

For most people, an annual inspection of the house specifically to check for re-infestation is sufficient. However, depending on your climate and type of pests, you may want to do this seasonally. Follow the instructions in Step 1. Clues to watch for are listed above and can also be provided by an Integrated Pest Management (IPM) company.

## CHECKLIST





Ready to start? Great. Keep this checklist handy as you move through each step. If you need more detailed information, refer back to the Implementation manual.

#### STEP 1:

### DETERMINE IF YOU HAVE PESTS

The risk from pests of various types can range from nuisance to disease. Conventional methods of pest control start with the application of chemicals to kill. These same pesticides can often make people sick. Integrated Pest Management (IPM) is the key to success.

#### STEP 2:

## IDENTIFY HOW THEY GOT INTO THE HOUSE

Find the cracks, crevices, holes, and gaps that allow pests to enter your house. Don't forget the "big" gaps like your chimney.

#### STEP 3:

#### **SEAL AND REPAIR**

Once the cracks, crevices, holes, and gaps have been identified, block or seal them block or seal with non-toxic materials to prevent re-entry.

#### STEP 4:

#### **REMOVE THE INFESTATION**

Depending on the pest type and the extent of the infestation, you may need to call a professional to ensure this step is done completely and safely.

#### **ONGOING MAINTENANCE:**

Inspect frequently and implement a routine that doesn't negatively impact people and pets.

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