Bed Bugs

Controlling Bed Bugs Using Integrated Pest Management (IPM)

Controlling bed bugs takes time and patience. The biology of bed bugs dictates this, since they reproduce quickly and their eggs are resistant to many methods of pest control, both chemical and non-chemical. This page describes some of the techniques that have been found to be effective against bed bugs.

- Understanding IPM (Integrated Pest Management)
- Non-chemical methods
- Using Pesticides

Understanding IPM (integrated pest management)

Integrated pest management is an effective and environmentally sensitive approach to pest management. IPM (integrated pest management) programs use information on the life cycles of pests and their interaction with people and the environment. This information, combined with available pest control methods, is used to manage pest damage by the most economical means, and with the least possible hazard to people, property, and the environment.

IPM takes advantage of all appropriate pest management options, including the judicious use of pesticides. Although bed bugs may sometimes be controlled by non-chemical means alone, this approach is often very difficult, potentially less effective, and usually more resource intensive.

Bed bug control is most effective when an IPM approach is implemented with diligent participation by the residents. In multi-family housing, diligent participation is also required of the building management.

A comprehensive IPM (integrated pest management) program to control bed bugs may include a number of non-chemical and chemical methods. Some of these are described in the following sections.

Non-Chemical Methods
• Put bedding and clothing in the dryer at high temperatures for 30 minutes to kill bed bugs (just washing will generally not kill bed bugs).
• Heat infested articles (e.g., furniture, luggage, other items that can't go in a clothes dryer) and/or areas (i.e., a room in a house or apartment, or a whole house) to at least 120 °F (approx. 49 °C) for 90 minutes to ensure that eggs are killed.
  • The higher the temperature, the shorter the time needed to kill bed bugs at all life stages.
  • This is often done using a heat-generating device or in a specially constructed heating unit, some of which are portable.
• Cold treatments (below 0 °F (-19 °C) for at least 4 days) can eliminate some infestations.
  • The cooler the temperature, the less time needed to kill bed bugs.
  • Home freezers may not cold enough to reliably kill bed bugs. Always use a thermometer to measure the temperature.
  • Read more at Using Freezing Conditions to Kill Bed Bugs
• Use mattress, box spring, and pillow encasements to trap bed bugs and help detect infestations.
• Use monitoring devices to ensure that the bed bugs have been truly eradicated.
• See the “do-it-yourself” steps for more details on methods to reduce and control bed bug populations.

Using Pesticides

• Use a comprehensive strategy for controlling bed bugs - pesticides should be only one part of a multi-part IPM plan. (Integrated Pest Management)
• Use the Bed Bug Product Search tool to help you find a pesticide product that meets your needs. Currently, there are over 300 products registered by EPA for use against bed bugs -- the vast majority of which can be used by consumers.
• Before reapplying or trying a different product read, When Treatments Don’t Work.
• You may want to consult a pest management professional to inspect your residence and, if needed, apply approved pesticides to treat any infestation.
• For assistance with choosing a pesticide registered for consumer use, you may also check with the Cooperative Extension Service office in your area.

Read more about IPM

Stay Legal and Safe in Treating for Bed Bugs

Learn about treatment options. (4 pp, 480 K, About PDF)
Guidelines For Home Visits where infestations are suspected/confirmed

These guidelines were produced by the Alameda County Health Care Services Agency and are to be followed by all Healthy Homes Department employees. While these guidelines specifically mention bed bugs or a specific type of infestation, they also apply to other types of insects or pests.

1. Recommended for all employees who conduct home visits.
   All employees should attend bed bug training. Training should include: identification of bed bugs; awareness of where bed bugs can hide; how to conduct a self-inspection; containment and isolation procedures; and, procedures for controlling bed bugs should a problem exist.

2. Recommended guidelines for Bed Bug Containment Kit.
   Employees visiting residences that may have a bed bug infestation should maintain a bed bug containment and isolation kit that will be kept in each Healthy Homes Department vehicle as well as one will be kept in the office for anyone needing to take their own vehicle to do a home visit. The kit should always be stocked with:
   - Tape
   - Booties
   - Gloves
   - Plastic Bags
   - Wet Wipes
   - A Portable Stool

3. Recommended guidelines for in-home visits. Employees should:
   - On intake or prior to your first home visit with a client, ask if he or she has had any known infestation or treatment for any pests including bed bugs.
   - Wear protective booties when a client states there is a known infestation; when conducting a home visit in a client’s unit that is located in a building with a known infestation; or when you are uncertain about the presence of an infestation.
   - Coveralls should be worn if the employee is going to be moving items or touching things in the residence known to be infested. The coveralls should be worn if the infestation is severe (e.g. bed bugs readily visible in areas other than around resting areas). Employee training will provide you with talking points to help you discuss this protective measure with clients.
   - Do not sit on cloth-covered furniture or bedding. Pay attention to cracks and crevices of wooden or hard surface chairs.
   - Bring only items necessary for the visit into the home. A plastic (or metal) clipboard can be used to hold paperwork, while a “fanny” pack can be used to hold a wallet and other personal items, in addition to a spare pair of gloves and booties.
   - Store personal items securely in your vehicle prior to arriving at the location.
   - Avoid placing any items on upholstered furniture or bedding or on carpeted floors.
   - Upon completion of the visit, take the following steps if bed bugs are found during the home visit:
     1. Return to your vehicle.
     2. Perform a self-inspection.
     3. Remove protective booties immediately following the visit. Place them in a sealed plastic bag and dispose of the bag.
4. If a protective suit was worn, suit should be removed so that it is turned inside out as it is taken off so as to trap any bugs inside the suit. Immediately place all protective gear in a plastic bag and seal it; then dispose of the bag in an outdoor receptacle.

- Laying a plastic drum liner on the floor enables you to remove these garments on a clean surface that would make most bed bugs visible. Rolling the liner up will enable you to contain coveralls, booties and any possible insects. Seal the plastic in another bag and dispose as mentioned.

- Drum liners are also useful for containing articles suspected to have an infestation and can be used as temporary seat covers when transporting people (if clean clothes are unavailable or if an inspection of the person cannot be conducted).

- *Remember:* on-person infestations are usually uncommon, although they do happen with severe infestations or in cases where the person is in bed or a wheel chair.

- *Note:* such a plastic seat cover is not recommended for the driver as it may affect vehicular operation.

- Perform a self-inspection for pests immediately after leaving and before entering another facility or a vehicle. Pay attention to inside and outside of shoes, lace holes, socks, leg area and around hands and arms.

- If you find a bed bug or other insect (e.g. cockroach), use the wet wipes to contain or crush the insect. Wipe the surrounding areas with another wet wipe as a precaution. Pay attention to corners, crevices and seams. Alternately, a spatula can be used to crush or remove the insect.

The employee who may have contracted bed bugs should notify a Supervisor and return to their home. The employee should remove all clothing before entering their home (or near the entry door) and immediately place these items in a plastic bag that can be tightly closed via a knot or twist tie. Wash contaminated clothing in hot, soapy water and dry in a dryer using the highest heat setting that the fabric can safely withstand. The employee should take a shower or bath. Any clothing or items taken into the home that cannot be washed or dry cleaned should be placed in a hot dryer for at least 15 minutes. If items are taken to a dry cleaner, inform the cleaner of the possibility of bed bugs.

4. Suggestions

The guidelines and the following suggestions were gathered from employees, other agencies that have successfully served clients with infestations over the years, as well as input from an entomologist. These practices may help avoid transporting bugs from one consumer to another or into your own home.

- Keep your car clean of clutter, vacuum weekly, and monitor for infestation.

- In a separate bag, keep a second pair of shoes and another jacket (if desired) for use in client homes.

- Discourage the sharing of vacuum cleaners by consumers as this can be a means of transmission of hidden bed bugs. If using a vacuum or vacuum attachment in an infested residence, it is a good idea to finish up by sealing the vacuum bag with tape or place the vacuum bag inside a plastic bag, and then discard the bag in an outdoor container.

- Do not redistribute items from one consumer to another as this is a common means of bed bug transmission. Bed bugs are excellent hitchhikers that can hide in furniture, clothing, or other items brought from infested areas.
Pest Infestation and Code Enforcement Legislative Update

Code enforcement activities can help to ensure safe and effective pest elimination and pest control management. Two new pieces of legislation impact code enforcement with regard to pest infestations, enforcement authority, and encouraging effective strategies for eliminating and managing pests in residential properties.

**SB 1167**
- Signed into law in July of 2014
- Goes into effect as of January 1, 2015.
- Requires that when a pest infestation is found, code inspectors must not only enforce existing codes with regard to eliminating the infestation, but also substandard conditions per HSC 17920.3 that caused the infestation.
- Examples of issues that might require action in addition to pest infestation include:
  - Plumbing or sewage leaks that attract pests;
  - Holes and cracks that allow pests to enter;
  - Garbage containers that are inadequately sealed or are too small
  - Garbage or trash located too close to the structure;
  - Dampness of habitable rooms (poor ventilation or weather-proofing);
  - Inadequate roofing or flashing.
- To read the full text of SB 1167, go to:

**SB 488**
- Signed into law in August of 2013
- Went into effect as of January 1, 2014
- Closes a loophole in the California Health and Safety Code that required a health officer to determine whether a pest infestation was present, even though there are local jurisdictions that do not have an agreement with a health officer to do so. This inhibited those jurisdictions’ ability to enforce laws regarding pest abatement.
- Agencies and inspectors involved in code enforcement should determine whether this law will affect their jurisdiction, and establish new enforcement procedures if appropriate and needed.
- To read the full text of SB 488, go to:
Pests and Pest Management

Pest infestations can usually be resolved with non-toxic or low toxic strategies, but property owners and tenants need to be aware of these options. Clear educational messages for property owners, managers and tenants can make a positive difference in the health and well-being of occupants.

Property Owners and Building Managers

Pests can damage property, reduce property value and create health risks for occupants.

Property owners are responsible for eliminating pests and repairing building conditions that cause or perpetuate infestations (pest entryways, leaks, etc.).

• Use the safest possible methods to eliminate pests.
• Avoid sprayed pesticides.
• For more information on safe, effective pest management, go to www.epa.gov/pesticides/controlling/index.htm
• Caulk or repair cracks and holes where pests are entering.
• Repair leaks in plumbing or sewage.
• Eliminate excess moisture from poor ventilation, broken appliances, and heating or cooling systems.
• Clean up unsanitary conditions on the property.
• Keep your home or property clean, dry, and clutter-free.
• Learn more about safer pest elimination at www.epa.gov/pesticides/factsheets/ipm.htm

Tenants

Pests can contaminate food, carry infectious disease, and make allergies and asthma worse.

Tenants are responsible for keeping their units clean, not destroying or damaging property, and informing owners when there is a problem. Tenants should:

• Contact the landlord immediately if any rodents, cockroaches, bedbugs or pest droppings are seen or suspected.
• Contact code enforcement if landlord or manager does not fix the problem.
• Ask the landlord to use a licensed pest control operator who utilizes integrated pest management techniques. These methods are safer, more effective and less toxic than the regular spraying of pesticides.
• Remove food sources for pests by keeping garbage in tightly closed containers and storing food in sealed containers.
• Use low-toxic or non-toxic traps, gels, and pesticides.
• Learn more about safer pest elimination at www.epa.gov/pesticides/factsheets/ipm.htm

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Household Pests and Asthma

Roaches, mice, and rats can cause asthma or trigger asthma attacks. Whether you rent or own your home, there are things you can do to keep most household pests out, and to get rid of them if they get in.

Pests are usually looking for food, water, or shelter

Keeping your home clean, dry, and clutter-free will make it more comfortable for the people who live there — and less comfortable for pests.

To help prevent pests:
- Keep food and trash in sealed containers.
- Dry up areas that are wet from spills, leaks, or condensation.
- Keep counters, sinks, tables, and floors clean and free of clutter.
- Wash dishes, wipe up crumbs, and clean food spills as soon as possible.
- Clean up greasy areas with soap and water.
- Close up places where pests can enter — seal cracks with caulk and block larger openings with steel wool or copper mesh.

If you have a pest problem

For tenants:
- Use the tips above to keep your home clean, dry, and clutter-free.
- Tell your landlord or property manager about the problem. Ask them to use the safe and effective pest control methods listed below.

For homeowners, landlords, or property managers:
- Use the safest possible methods to eliminate pests. Avoid sprayed pesticides. For more information on safe, effective pest management, go to www.epa.gov/pesticides/controlling/index.htm
- Caulk or repair cracks and holes where pests are entering.
- Repair leaks in plumbing or sewage.
- Eliminate excess moisture from poor ventilation, broken appliances, and heating or cooling systems.
- Clean up unsanitary conditions on the property.
- Keep your home or property clean, dry, and clutter-free.

For more information

U.S. Department of Housing and Urban Development
Asma Y Las Plagas En El Hogar

Las cucarachas, los ratones y las ratas pueden causar asma y pueden desencadenar los ataques de asma. Si es dueño de su casa o aun si está rentando, hay cosas que usted puede hacer para mantener alejadas a la mayoría de las plagas y para deshacerse de ellas si ya están dentro de su hogar.

Las plagas buscan al agua, comida o refugio

Al mantener su hogar limpio, seco, y ordenado, lo hace más cómodo para las personas que viven allí, y menos cómodo para las plagas.

Para Prevenir las Plagas:
- Mantenga la comida y la basura en recipientes que sellen bien.
- Seque las áreas que se mojen a causa de derrames, goteras, o condensación.
- Mantenga superficies, lavabos, mesas y pisos limpios y ordenados.
- Lave los trastes, limpie las migajas, y limpie los derrames de comida más pronto que sea posible.
- Limpie las áreas grasosas usando agua y jabón.
- Selle las grietas y las aberturas alrededor o dentro de los gabinetes, zócalo o rodapié, y otros lugares por donde puedan entrar las plagas.

Si tiene problemas con plagas

Si usted es un inquilino:
- Siga las sugerencias anteriores para mantener su hogar limpio, seco y ordenado.
- Avísele al dueño si hay un problema. Pídale que use los métodos de control de plagas más seguros y eficaces posibles para usted y otras personas que vivan en su casa o edificio de apartamentos. Sugiera que siga los siguientes pasos.

Si usted es dueño de su hogar, renta o es arrendatario, o es un administrador de propiedades:
- Use los métodos más seguros que sean posibles para eliminar las plagas y evite usar pesticidas en espray. Para más información sobre el manejo de plagas efectivo, y el uso más seguro de pesticidas, vaya a: www.epa.gov/pesticides/controlling/index.htm
- Póngale sellador o repare los agujeros en la estructura por donde estén entrando las plagas.
- Repare las fugas en la tubería o drenaje.
- Elimine la humedad excesiva causada por la mala ventilación, aparatos que no funcionan y los sistemas de calefacción y aires acondicionados o sistemas de ventilación deficientes.
- Limpie si hay condiciones anti-higiénicas en la propiedad.
- Mantenga su vivienda o edificio limpio, seco y ordenado.

Otros Recursos
La Universidad de California/Davis (Visitada en Julio del 2014)
www.ipm.ucdavis.edu/QT/qtindexsp.html

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Dampness, Mold, and Code Enforcement
California Health and Safety Codes

While California law does not require enforcement for mold, health risks and property damage can be minimized if excessive moisture and damp conditions are effectively resolved, and if mold is safely and effectively removed. Excessive moisture and dampness of habitable spaces are code issues. Orders to remedy these conditions can be issued by code enforcement, housing and environmental health inspectors.

<table>
<thead>
<tr>
<th>Problem/Source</th>
<th>Solution</th>
<th>CA-HSC Section</th>
<th>Code Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dampness of habitable rooms</td>
<td>Identify and fix the source of the dampness</td>
<td>17920.3(a)(11)</td>
<td>Dampness of habitable rooms</td>
</tr>
<tr>
<td>Mold growth on wall, ceiling, carpet that cannot be</td>
<td>Repair and dry moisture source. Remove and replace damaged materials,</td>
<td>17920.3(a)(13)</td>
<td>Inadequate sanitation due to general dilapidation or improper maintenance.</td>
</tr>
<tr>
<td>clean/removed</td>
<td>using safe work practices.</td>
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<tr>
<td>Building Shell Leaks</td>
<td>Weather-Tight Shell</td>
<td>17920.3(g)</td>
<td>Faulty weather protection</td>
</tr>
<tr>
<td>Plumbing Leaks</td>
<td>Repair Plumbing</td>
<td>17920.3(a)(1&amp;2)</td>
<td>Plumbing fixture leaks</td>
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<td></td>
<td></td>
<td>17920.3(e)</td>
<td>Plumbing problems</td>
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<tr>
<td>Site Drainage Problems</td>
<td>Proper Grading</td>
<td>17920.3(a)(11)</td>
<td>Dampness of habitable rooms</td>
</tr>
<tr>
<td>Appliance Malfunction (including AC, heating,</td>
<td>Repair Appliance</td>
<td>17920.3(f)</td>
<td>Faulty mechanical equipment</td>
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<td>ventilation)</td>
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<td>Crawlspace</td>
<td>Ground Moisture Barrier</td>
<td>17920.3(a)(11)</td>
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<td>Cooking</td>
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<td>Lack of, or improper ventilation</td>
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<tr>
<td>Bathing</td>
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<tr>
<td>People &amp; Plants</td>
<td>Whole House Ventilation</td>
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<td>Lack of, or improper ventilation</td>
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</tbody>
</table>
Dampness and Mold

Dampness, mold and moldy odor are all signs of excessive moisture, water intrusion, and/or poor ventilation, and signal potential health risks for occupants (http://tinyurl.com/CDPH-DampnessMoldStatement). Excess moisture also provides a more attractive environment for pests, such as cockroaches and rodents.

Property Owners and Building Managers

- Make needed repairs to the roof and outside of the building wherever water can enter.
- Repair or replace leaky or broken plumbing or sewage lines.
- Repair broken appliances, air conditioners, heaters, or ventilation systems that are causing condensation inside living spaces.
- Remove and replace carpeting, flooring, or building materials that have been damaged by mold or that have gotten wet and cannot be thoroughly dried within a day.
- Before painting, remove mold, eliminate any sources of moisture, and clean and dry surfaces.
- Dry up any wet spots or sources of standing water inside or around your property.
- Use safe and effective methods for cleaning up mold. Learn more at: www.epa.gov/mold/mold_remediation.html#Key_Steps

Tenants

- Inform the landlord immediately of the following:
  - Leaking roof, windows, pipes, or other sources of water intrusion or excess moisture;
  - Malfunctioning gas appliance (furnace, hot water heater, stove, dryer);
  - Cracked or broken flues or ducts connected to gas appliance;
  - Non-operable fans in bathroom or kitchen;
  - Non-operable windows.
- Open windows and use fans to improve ventilation.
- Dry up any wet spots or sources of moisture inside your home.
- Clean up small amounts of mold regularly using soap and water. Add baking soda if scrubbing is needed. Avoid bleach, ammonia and vinegar as they can cause or trigger asthma.
- Tell your landlord or property manager about damp areas, moldy smells, and any mold you see.
- Ask them to repair the problem using these guidelines: www.epa.gov/mold/mold_remediation.html#Key_Steps

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Statement on Building Dampness, Mold, and Health
September 2011

CDPH has concluded that the presence of water damage, dampness, visible mold, or mold odor in schools, workplaces, residences, and other indoor environments is unhealthy. We recommend against measuring indoor microorganisms or using the presence of specific microorganisms to determine the level of health hazard or the need for urgent remediation. Rather, we strongly recommend addressing water damage, dampness, visible mold, and mold odor by (a) identification and correction of the source of water that may allow microbial growth or contribute to other problems, (b) the rapid drying or removal of damp materials, and (c) the cleaning or removal of mold and moldy materials, as rapidly and safely as possible, to protect the health and well-being of building occupants, especially children.

Indoor dampness and mold (fungal growth) are common problems in California and worldwide. To date, no clear state or federal policy has been issued on how to assess the health risks that dampness and mold pose to building occupants. In 2001, the Toxic Mold Protection Act (Senate Bill 732, Ortiz*) mandated that the California Department of Health Services (currently the California Department of Public Health, CDPH) determine the feasibility of setting Permissible Exposure Limits (PELs) for mold in indoor environments. In its 2005 report to the Legislature, CDPH concluded that “sound, science-based PELs for indoor molds cannot be established at this time” and outlined the reasoning by which the department reached that conclusion.

While PELs remain elusive, mounting scientific evidence on dampness and mold, much of it published since 2005, supports an alternate, evidence-based approach to the assessment of health risks from indoor dampness and mold. Human health studies have led to a consensus among scientists and medical experts that the presence in buildings of (a) visible water damage, (b) damp materials, (c) visible mold, or (d) mold odor indicates an increased risk of respiratory disease for occupants. Known health risks include: the development of asthma, allergies, and respiratory infections; the triggering of asthma attacks; and increased wheeze, cough, difficulty breathing, and other symptoms. Available information suggests that children are more sensitive to dampness and mold than adults. In addition, evidence is accumulating, although not yet conclusive, that the more extensive, widespread, or severe the water damage, dampness, visible mold, or mold odor, the greater the health risks.
There also is consensus that the traditional methods used to identify increased mold exposure do not reliably predict increased health risks. Therefore, the current practices for the collection, analysis, and interpretation of environmental samples for mold cannot be used to quantify health risks posed by dampness and mold in buildings or to guide health-based actions.

Finally, current consensus does not justify the differentiation of some molds (such as *Stachybotrys* species) as "toxic molds" that are especially hazardous to healthy individuals. The presence of molds such as *Stachybotrys* that grow only on very wet materials might be interpreted as demonstrating damp conditions that could place occupants at increased risk. However, the only types of evidence that have been related consistently to adverse health effects are the presence of current or past water damage, damp materials, visible mold, and mold odor, not the number or type of mold spores nor the presence of other markers of mold in indoor air or dust.

Our goal in issuing this notice is to increase awareness of the hazards from indoor dampness and mold and to reduce exposures to these hazards. The following are recent publications that support our positions on the assessment of health risks and the remediation of dampness and mold:


**Background note:** Building dampness degrades indoor environmental quality in many ways. Mold growth is perhaps the most common and noticeable result of excessive or chronic indoor dampness. Molds are fungi (as are mushrooms and yeasts). To grow and reproduce, molds need only moisture and nutrients. As nutrients are almost always available from organic material (e.g., leaves, wood, paper, and dirt), the presence or lack of moisture generally is what allows or limits mold growth. In addition to mold, indoor dampness can support bacterial growth and contribute to infestations of house dust mites, cockroaches, and rodents, which also pose health risks for building occupants. Moisture also may alter the chemistry of damp materials. Hence, while excessive or chronic dampness is not by itself a cause of ill health, it may indicate or increase other exposures that do have adverse health effects.

*Information on SB 732, the 2005 CDPH report to the legislature, and the 2008 update to the report are available at www.cdph.ca.gov/programs/IAQ/Pages/IndoorMold.aspx.*
Dampness, Mold, and Asthma

Mold can cause asthma or trigger asthma symptoms. Damp areas in the home can cause mold to grow, and can attract roaches, mice, and rats which can also trigger asthma symptoms. Whether you are a tenant or a homeowner, there are things you can do to keep the home dry and prevent problems from dampness and mold.

To reduce dampness and prevent mold:
- Use the kitchen fan or open a window when cooking.
- Use the bathroom fan or open a window while bathing or showering.
- Use a squeegee to dry wet bathroom windows and shower stalls.
- Clean up spills as soon as they happen.
- Repair plumbing leaks quickly.

If you have a problem with dampness or mold

For tenants:
- Dry up any wet spots or sources of moisture inside your home.
- Clean up small amounts of mold regularly using soap and water. Add baking soda if scrubbing is needed. Avoid bleach, ammonia and vinegar as they can cause or trigger asthma.
- Tell your landlord or property manager about damp areas, moldy smells, and any mold you see. Ask them to repair the problem using the steps below.

For homeowners, landlords, or property managers:
- Dry up any wet spots or sources of moisture inside your property.
- Make needed repairs to the roof and outside of the building wherever water can enter.
- Repair or replace any leaky or broken plumbing, sewage lines, kitchen appliances, air conditioners, heaters, or ventilation systems.
- Remove and replace carpeting, flooring, or building materials that have been damaged by mold or that have gotten wet and cannot be thoroughly dried within a day.
- Before painting, remove mold, eliminate any sources of moisture, and clean and dry surfaces.
- Use the safe methods for cleaning up mold at www.epa.gov/mold/mold_remediation.html#Key_Steps.

For more information
California Department of Public Health
www.cdph.ca.gov/Programs/IAQ/Pages/IndoorMold.aspx
www.dca.ca.gov/publications/landlordbook/catenant.pdf
U.S. Environmental Protection Agency
www.epa.gov/mold/moldguide.html

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La Humedad, El Moho Y El Asma

El moho puede causar asma y desencadenar los síntomas del asma. Demasiada humedad en el hogar puede causar el crecimiento de moho. Además, la humedad puede atraer a cucarachas, ratas y ratones los cuales pueden provocar síntomas del asma. Si es dueño de su casa o aun si está rentando, hay cosas que usted puede hacer para mantener su hogar seco y prevenir problemas de humedad y moho.

Para reducir la humedad y prevenir el moho:

- Use los ventiladores o abra una ventana cuando cocine, bañe o duche.
- Use un secador (“squeegee” en inglés) para secar ventanas y superficies después de bañarse o ducharse.
- Evite productos con blanqueador o amoniaco. Pueden causar asma o desencadenar síntomas.
- Limpie los derrames en cuanto ocurran.
- Repare las goteras en las tuberías lo más pronto posible.
- Remueva alfombras o tapicería que se hallan mojado y no secan dentro de un día.

Qué hacer si tiene un problema de moho o hay demasiada humedad en su hogar

Si usted es un inquilino:

- Seque las áreas húmedas y fuentes de humedad dentro de su hogar.
- Limpie las pequeñas cantidades de moho en el baño con jabón y agua. Para refregar, añada bicarbonato de soda.
- Avisele al dueño o administrador de la propiedad si hay exceso de humedad, olores mochosos, o moho visible. Pidale que repare el problema usando los pasos siguientes.

Si usted es dueño de su hogar, arrendador, o administrador de propiedades:

- Seque lugares húmedos o fuentes de humedad dentro de la propiedad.
- Haga las reparaciones necesarias al techo o al exterior del edificio para detener la entrada de agua.
- Repare o reemplace aparatos de la cocina, plomería y sistemas mecánicos que tengan fugas o no funcionen, incluyendo calentones, acondicionadores de aire y sistemas de ventilación.
- Remueva y reemplace alfombras y materiales de construcción que hayan sido dañados por el moho o que se hallan mojados y no secan dentro de un día.
- Antes de pintar, quite el moho, elimine las fuentes de la humedad, y limpie y seque las superficies.
- Use los métodos que sean más seguros para los inquilinos y los trabajadores. Para más información sobre la limpieza segura y eficaz de moho vaya a www.epa.gov/mold/pdfs/moldguide_sp.pdf

Otros recursos (Disponibles en inglés y español)

www.dca.ca.gov/publications/landlordbook/catenant.pdf

Agencia Para la Protección Ambiental de los Estados Unidos (EPA)
www.epa.gov/mold/pdfs/moldguide_sp.pdf
# Household Cleaning and Asthma

Keeping your home clean and dust-free is an important part of managing asthma. But many cleaning products can cause asthma or trigger asthma attacks, especially products with bleach, ammonia and vinegar. Here are some simple, low-cost ways to clean your house without causing problems for people with asthma.

## Cleaning

| Cleaning hard surfaces (multi-purpose solution) | • Plain water and a microfiber cloth will clean most surfaces and kill 99% of germs.  
• Use a mild unscented liquid dish or castile soap with water to cut grease and grime. Use a soap without anti-bacterial ingredients.  
• For scrubbing, add 1 tbsp. of baking soda to regular or soapy water.  
• Add lemon juice to regular or soapy water for a fresh smell and to cut grease. |
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<td>Dusting</td>
<td>• Use a dry microfiber cloth, or use a clean, slightly damp, soft cloth.</td>
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| Windows, glass, and mirrors | • Indoors, use plain water and a microfiber cloth.  
• Outdoors, add plain liquid soap to get rid of soot and grime. |
| Sinks, tubs, and tile | • Add 2 or 3 tbsp. of liquid soap to water and clean with a scrub brush.  
• Use baking soda or a scouring powder that does not contain bleach.  
• For small amounts of mold, mix liquid soap, baking soda, and 2 capfuls of hydrogen peroxide (3% solution). Let sit on surface. Wipe clean. |
| For odors | • Sprinkle baking soda in the bottom of trash cans.  
• Place a bowl or open box of baking soda in the refrigerator. Replace every 2 – 3 months.  
• Poke small holes in the top of a jar or plastic container. Fill the jar halfway with baking soda and close the container. Place near trash cans, litter boxes or other smelly places. |
| Ovens | • Scrub with baking soda or a scouring powder that does not contain bleach.  
• Make a paste with 1/4 cup baking soda, 2 tbsp. salt, and a little hot water. Apply to surface. Let sit 5 minutes. Scrub well. Remove with water and microfiber cloth. |
| Toilet bowls | • Pour a small amount of liquid soap or 1/4 cup baking soda into toilet bowl, then brush.  
• Wipe toilet seat and rim with hydrogen peroxide (3% solution). Hydrogen peroxide acts like a disinfectant. |
| Carpets, rugs, and floors | • Vacuum carpets, rugs, and floors at least once a week to reduce dust and dust mites.  
• Vacuum slowly.  
• Use a vacuum with a HEPA filter, which picks up smaller dust particles. |
La Limpieza y el Asma

Mantener su hogar limpio y libre de polvo es una parte importante en el manejo del asma. Pero muchos productos pueden causar asma o desencadenar los ataques de asma, especialmente los productos de limpieza con cloro, amoníaco y vinagre. Los siguientes son métodos simples y de bajo costo para limpiar su hogar sin causar problemas para las personas con asma.

| Superficies duras (limpiadores multi-usos) | • La limpieza con agua y un paño de microfibra limpia la mayoría de las superficies y mata el 99% de los gérmenes.  
• Ponga jabón líquido en el agua de limpieza para cortar la grasa y la suciedad. Use un jabón suave, sin aromas o perfumes, y sin ingredientes anti-microbianos.  
• Añádále 1 cucharada de bicarbonato de sodio a una pequeña cantidad de agua si es necesario refregar.  
• Añádále jugo de limón al agua, con o sin jabón, para un olor fresco y para ayudar a cortar grasa. |
| Desempolvar | • Use un paño seco de microfibra, o use un paño limpio y ligeramente húmedo. |
| Ventanas, vidrio, y espejos | • Adentro, use solo agua y un paño de microfibra.  
• Afuera, añádale jabón básico sin perfumes al agua para remover el hollín y la suciedad. |
| Fregaderos, lavabos, tinas y azulejo | • Añádále 2 o 3 cucharadas de jabón líquido al agua y lávelo con un cepillo.  
• Use bicarbonato de sodio o un polvo de limpieza sin cloro.  
• Para las pequeñas cantidades de moho, mescle jabón líquido, bicarbonato de sodio, y 2 tapas de agua oxigenada (solución del 3%). Déjelo reposar sobre la superficie por unos minutos, y después limpielo con agua y un paño de microfibra. |
| Para los olores | • Espolvoree bicarbonato de sodio en fondo de los recipientes de basura.  
• Ponga un recipiente con bicarbonato de sodio o una caja abierta de bicarbonato de sodio en el refrigerador. Reemplácelo cada 2-3 meses.  
• Hágale agujeros pequeños a la tapadera de un frasco o traste de plástico. Llene el recipiente a la mitad con bicarbonato de sodio y cierre el recipiente. Póngalo cerca de los recipientes de basura, las cajas de arena para los gatos, u otros lugares olorosos. |
| Hornos | • Refriéguelo con bicarbonato de sodio o un polvo sin cloro.  
• Haga una pasta con ¼ de taza de bicarbonato de sodio, 2 cucharadas de sal, y un poco de agua caliente. Aplíquelo a la superficie. Déjelo reposar por 5 minutos. Restriéguelo bien. Remueva la pasta usando agua y un paño de microfibra. |
| Inodoros | • Vacíe una cantidad pequeña de jabón líquido o ¼ de taza de bicarbonato de sodio al inodoro. Refriéguelo con un cepillo.  
• Limpie el asiento del inodoro con agua oxigenada (solución de 3%). |
| Alfombras, tapetes, y pisos | • Aspire las alfombras, los tapetes y los pisos por lo menos una vez por semana para reducir el polvo y los ácaros de polvo.  
• Aspire lentamente.  
• Use una aspiradora con un filtro HEPA, que levanta las partículas de polvo más pequeñas. |