

Home Inspection Guide

For Refugee Resettlement Agencies to Understand,
Identify, and Prevent Home Health and Safety Hazards

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Table of Contents

Lead Paint	3
Electrical Issues and Fire Safety	5
Water Damage and Mold	9
Pest Infestations	11
Structural Issues	14
Asbestos	15
References	16

Lead Paint

Most houses built before 1978 used lead paint. However, lead was banned from house paint in 1978 because of the numerous adverse health risks lead paint poses to residents¹.

Inhaling particles of lead dust can cause lead poisoning, resulting in headaches, high blood pressure, nausea, and permanent brain damage. In children, lead poisoning can lead to learning difficulties, weight loss, seizures, vomiting, hearing loss, and brain damage.

Recent studies on the impact of lead poisoning have found that significant racial disparities exist in rates of lead exposure. Blood lead levels are significantly higher on average for non-Hispanic Black children than for non-Hispanic white children. These disparities are closely tied to housing quality. Black and Hispanic children are more likely to live in residences with peeling paint (3.5 and 2.4%, respectively) compared to white children (1.9%). If peeled paint contains lead, infants and children can easily ingest the toxic flakes, increasing their risk for lead poisoning.

As a case manager, it is important to ensure that a potential residence is lead-free, to help combat housing inequities and ensure that a refugee family has a safe and healthy home.

Identifying a Residence with Lead Paint

If a house was built pre-1978, it likely has lead paint, although it may have been covered up with layers of other paint. Lead paint that has been painted over is still dangerous and poses a health risk to residents, especially if the paint covering it begins to deteriorate and exposes the lead paint underneath. When looking for lead paint, look for these common signs:

1. “Alligatoring”: Cracking and wrinkling that resembles scales.
2. Chalky residue when rubbed off. If you believe the lead paint has been painted over, this may be inconclusive. Try finding areas that might still have the original paint, such as closets or baseboards.
3. Peeling, flaking, or deteriorating paint. Check places where paint experiences lots of wear-and-tear, such as doors and door frames, windows and windowsills, stairs, railings, or banisters.

(3) *Written by Mia Sosa, a student research project for the University of Pennsylvania, in consultation with HIAS*



Figure 1: "Alligatoring" lead paint. This distinct pattern is a result of the oil base in lead paint. Not all oil-based paints are lead paints, but alligatoring is a good indicator of lead paint in a residence.



Figure 2: If paint is peeling back to reveal previous layers, especially in an older residence, pay close attention to the layers underneath, which may contain lead paint that has been painted over.

Electrical Issues & Fire Safety

There are many pathways for electricity to enter buildings, and serious problems can arise when those pathways are compromised. Electrical issues can lead to electrocution and fires.

Never attempt to touch or fix electrical issues yourself—a professional electrician should always handle any electrical repair work.

Exposed Wires

Check for exposed wires behind appliances and near electrical outlets; wires in these areas are hidden and often go unnoticed until they cause issues. There is no way to visually check if a wire is live (has an active current) so if you find an exposed wire, always assume it is live.

Do NOT touch or attempt to handle the wire yourself, as live wires can deliver large currents that can induce a shock large enough to cause cardiac arrest. Exposed wires require the attention of an electrician to be repaired.



Figure 3: Two examples of exposed wiring in a home. Check all areas of a residence carefully to ensure there are no exposed wires. **NEVER** touch exposed wires.

Ground-Fault Circuit Interrupters (GFCIs)

GFCIs are circuit breakers designed to protect against electrocution in the case of a ground fault (a deviation from the normal flow of the electrical current). GFCI outlets have monitoring sensors that detect the electrical current; when a ground fault is detected, the GFCI turns off electrical flows to the outlet. Federal codes require GFCI outlets in specific rooms of a residence, as well as in any locations where a water source is present. It's crucial to ensure that GFCI outlets are located where they're supposed to be and that they're fully functional—GFCIs greatly reduce the risk of severe shock and electrocution.

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Identifying GFCI outlets

1. GFCI outlets are rectangular with three slots and two buttons, which say “TEST” and “Reset” (see left).
2. Check that GFCI outlets are present in all bathrooms, kitchens, laundry rooms, basements, crawl spaces, garages, any outdoor spaces, and anywhere else with a water source (sink, faucet, etc.)

Figure 4: A ground-fault circuit interrupter

Testing a GFCI outlet

1. Press the TEST button.
2. You should hear a click signaling that the power has been cut off. Plug in a lamp, phone charger, or something else to test the outlet. If the GFCI is working correctly, the outlet won't supply power, and nothing plugged in will work.
3. Press the RESET button to turn the power back on.
4. If the TEST button does not trip the circuit and the outlet is still supplying power, it is a safety hazard and needs to be replaced by an electrician.

Ungrounded vs. Grounded Outlets

Ungrounded outlets have two slots, whereas grounded outlets have an additional, circular slot at the bottom where the grounding wire connects. Receptacles with three slots are known as three-slot outlets.

Three-slot outlets are not necessarily grounded. A two-slot outlet may have been mistakenly replaced with a three-slot outlet, but if the electrical system was not rewired, the outlet is still not grounded, and is still dangerous.

Special equipment is required to test if an outlet is grounded. Unless you have access to this equipment to test every outlet, it's generally safe to follow these assumptions:

1. Two-slot outlets are always ungrounded and present a safety hazard. Two-slot outlets should be replaced by an electrician.
2. Three-slot outlets are likely grounded, especially in a building built after 1962.
3. GFCI outlets may or may not be grounded and are generally safe.

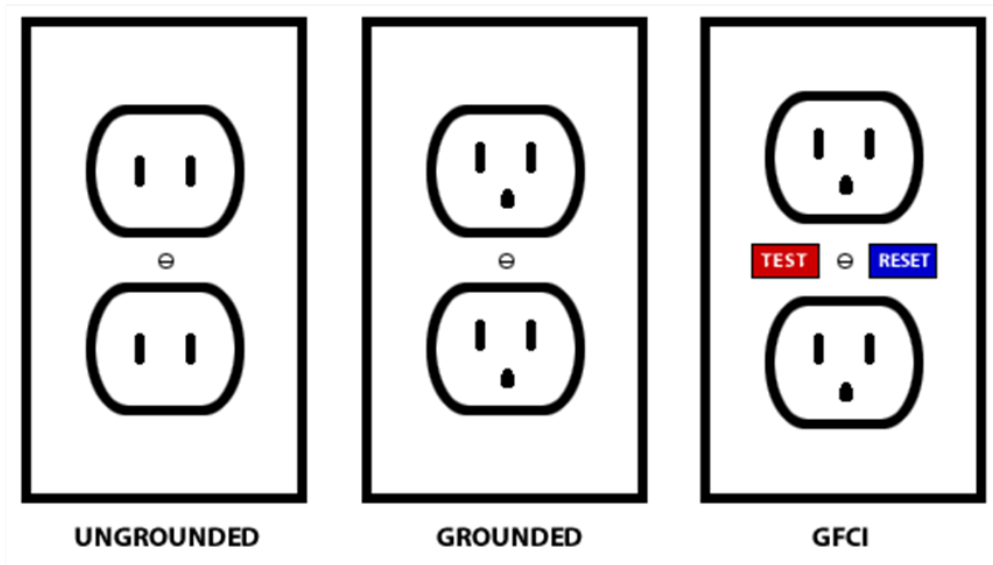


Figure 5: Ungrounded vs. Grounded vs. GFCI outlets

Exposed Lightbulbs

Exposed incandescent or LED lightbulbs in closets, basements, garages, and utility closets are a fire hazard commonly found in older residences. Exposed lightbulbs should be replaced with a new light that is fully enclosed.



Figure 6: Example of an exposed incandescent lightbulb. Any kind of exposed bulb is a safety hazard and should be replaced by an enclosed light fixture.

Smoke Alarms & Fire Extinguishers

Be sure to check that the housing unit has an adequate number of smoke alarms—and that smoke alarms are in the required locations—to comply with local fire safety laws. Make sure there is an accessible fire extinguisher and find out if it is serviced annually. Fire codes vary from state-to-state; you can find each state's fire safety codes [here](#).

To test the smoke detectors in a unit:

1. Press and hold the button on the smoke detector until a loud, high-pitched siren sounds.
2. If you are with someone else, ask them to walk to the furthest point in the unit from the smoke detector and ensure that they can hear the alarm.
3. If the sound is weak or the alarm doesn't sound at all, the batteries need to be replaced.
4. Stop pressing the button to stop the alarm.

The batteries in a smoke detector should be replaced every six months, and smoke detectors themselves should be replaced every ten years.

Fire Exits

In the case of a fire, a resident should be able to exit the building quickly and safely. A fire escape is one example of an approved exit. Windows and doors that open and close easily also facilitate safe exits. Big apartment complexes should have light-up exit signs to direct residents to safe exits in case of fire and dense smoke, which might obscure visibility. Check local codes to learn about sprinkler and/or fire ladder requirements as well.

Extension Cords

Extension cords temporarily extend the electrical capabilities of a residence. However, they can overheat and cause fires if used incorrectly. If you see multiple extension cords being used in a residence, this may suggest that the building doesn't have enough outlets to handle all the devices residents use daily and can pose a fire hazard.

Water Damage and Mold

Water can enter a house in many ways—thunderstorms, clogged gutters, leaking pipes and appliances, and blocked drains. Left untreated, water damage can impair the structural integrity of a building, cracking the foundation and rotting floors and ceilings. Water damage also creates an ideal breeding ground for mold. When inhaled, mold spores can exacerbate respiratory issues like asthma and trigger allergic reactions.

Extensive mold exposure has been shown to cause upper respiratory tract symptoms, coughing, and wheezing even in people who are otherwise healthy.

Water Damage

Important areas to check for signs of untreated water damage:

1. Walls and ceilings—look for stains, discoloration, bubbling, and peeling;
2. Floorboards—look for stains, discoloration, lifting, buckling, and sinking when stepped on;
3. Windows frames—check for discoloration, peeling, bubbling, and/or softening of the wood around windows;
4. Indoor plumbing fixtures—pay attention to the areas around sinks, tubs, toilets, and other sources of water, including washing machines and dishwashers.

Signs of Water Damage

1. Discoloration or staining, usually yellow, brown, or dark streaks or spots
2. Peeling or bubbling paint or wallpaper
3. Soft or bulging walls (water damage can make drywall or plaster become soft and spongy; if you suspect water damage in an area, press on the walls to see if they have an unusual, pliable, soft texture)



Figure 7: Example of water stains in the ceiling.



Figure 8: Example of bubbling paint caused by water damage.

Because water damage creates the ideal conditions for mold to grow, the two issues frequently co-occur.

Mold

Important areas to check for mold:

1. All the same places you check for water damage
2. In pantries and behind kitchen appliances
3. Behind the microwave, stove, and fridge
4. Air-conditioning and heating vents
5. Carpet, fabric, and upholstery
6. Mattresses, couches, chairs, curtains

Signs of Mold

1. Discoloration: while water damage leaves yellow or brown spots, mold can be green, white, black, or other colors, and is often speckled
2. Musty smell: a strong smell of mildew or must is an indicator of mold
3. Rotting wood or other surfaces
4. Slimy, fuzzy, or powdery colonies on surfaces



Figure 9: Mold growing around a windowsill.



Figure 10: Mold on the walls of a house.



Figure 11: Mold growth in a shower.

Pest Infestations

Pests are an unwanted presence in any home. Rodents can carry diseases, termites can compromise structural integrity, and roaches can trigger asthma. Dealing with pest infestations is costly and time-consuming, sometimes requiring residents to leave their residence for multiple hours if toxic chemicals are used. Pest infestations are most prevalent in low-income households, that are often the least financially equipped to remove them.

Under many state laws, landlords are required to “maintain the rental unit in a fit and habitable condition” which frequently includes maintaining the unit free of rodent infestations.

Rodents

Important areas to check for signs of rodents:

1. In drawers, cabinets, pantries, bins, or cupboards (anywhere food is stored)
2. Floors along walls
3. Wires
4. Behind appliances

Signs of a rodent infestation

1. Droppings: rodent droppings are small, round, brown pellets.
2. Tracks: look for feet or tail marks on dusty surfaces. They may also leave oily or dirty marks as they repeatedly walk from their nest to food sources.
3. Chewed wires or wood: rodent's teeth never stop growing, so they frequently chew on things to keep them short.
4. Nests: rodents make nests in dark, secluded areas out of paper, cotton, wall insulation, and fabric.
5. Noises in the walls: if you suspect a rodent infestation, listen closely to the walls for the sound of scratching or scampering rodents.
6. Bad smell: rodent's urine causes a smell often likened to the smell of stale ammonia.
7. Holes: in the walls, especially behind appliances or along baseboards



Figure 12: Rodent hole gnawed through a wood board



Figure 13: Mice nesting in wall insulation

Insects

Important areas to check for signs of insects:

1. Windows and window ledges
2. Countertops and other surfaces
3. Inside cabinets, closets, pantries, and crawl spaces
4. Corners, walls, and ceilings
5. Mattresses and upholstered furniture

General Signs of an Insect Infestation

1. Live bugs: while the occasional insect is likely normal, many live bugs are a sign of an infestation.
2. Dead bugs: many dead bugs of the same species indicate an infestation
3. Hollow wood: knock on wooden beams and floorboards, if they sound hollow, there may be an ant or termite issue.

Signs of Specific Insects

Roaches

1. Smears: cockroaches leave red/brown streaks or “smears” on surfaces they pass over.
2. Droppings: cockroach droppings resembling coffee grounds.
3. Eggs: breeding cockroaches leave behind egg cases that look like red or brown ovals.

4. Bad smell: cockroaches cause an oily, musty smell that is often very pungent.
5. Dead cockroaches



Figure 14: Cockroach smears on a surface



Figure 15: Dead cockroaches and droppings

Termites

1. Termite swarmers: finding these swarmers, dead or alive, inside a building is a sign of a termite colony.
2. Shelter tubes: these mud tubes may be found on the inner or outer foundation walls, up support pipes, or any other exposed surfaces.
3. Droppings: termite droppings are piles of dry, uniform pellets often found on floors and countertops.
4. Bad smell: termites smell musty, like mildew and mold, mimicking the odor of the decaying wood they feed on.



Figure 16: Termite tubes on the side of a house



Figure 17: Termite swarmers



Figure 18: A pile of termite droppings

Bed bugs

1. Stains: crushed bed bugs leave behind rust/red blood stains on sheets and mattresses.

2. Spots: bed bug droppings look like tiny, dark, magic marker dots on fabric.
3. Eggs and shed skins.
4. Bad smell: bedbugs smell sickly sweet, like berries.



Figure 19: Signs of bedbugs on a mattress

Structural Issues

Damage to a building's structure puts the security, integrity, and longevity of a building at risk. These issues can be expensive to remedy and can cause safety risks to building occupants. If you suspect any structural damage, immediately bring it to the attention of the landlord and ask if and how they will mitigate the issue.

Signs of Structural Damage

1. Doors and windows: Look for doors or windows that stick or don't close at all, won't stay closed, no longer fit the frame around them, or are separating from the wall.
2. Floors: the condition of the floors can offer insight into the state of a building's foundation. Excessive sloping, sagging, or cracking indicates a structural issue.
3. Cracks or bulging on walls or ceilings: while small cracks on their own don't necessarily signal a structural issue, multiple, large cracks, especially above doorways or paired with a sagging ceiling, indicate larger structural issues.
4. Sagging roof: sagging or uneven roof lines suggest an issue with the integrity of the roof.

Asbestos

Asbestos is a general term for a family of cancerous, fibrous minerals. Because of their high strength and heat resistance, they are commonly used in building construction as insulators or fire retardants, as well as in manufactured goods such as ceiling and floor tiles, roofing shingles, and certain cement products.

Exposure to asbestos can cause lung cancer and asbestosis, a non-cancerous lung disease. Despite these risks, asbestos is not banned for most uses in the U.S., although it is banned in over 50 other countries. Once asbestos enters the lungs, it cannot be removed; as a result, it can have life-long, potentially fatal health effects.

Identifying a Residence with Asbestos

Asbestos cannot be visually identified, but there are signs of the dangerous mineral in certain products.

1. Popcorn ceilings: popular from 1945 to the 1990s, popcorn ceilings in buildings from this period often contain asbestos.
2. Age of the building: most properties built before 1980, when new legislation limited its use, will have asbestos somewhere.

It's important to educate refugees on the risks of disturbing materials that may contain asbestos; disturbing the materials can cause asbestos fibers to be released and result in serious health hazards.

According to the Environmental Protection Agency (EPA), "Generally, asbestos-containing material that is in good condition and will not be disturbed (by remodeling, for example) will not release asbestos fibers. Asbestos-containing materials may release fibers when they are disturbed, damaged, removed improperly, repaired, cut, torn, sanded, sawed, drilled or scraped. Keep an eye on asbestos-containing materials and visually check them over time for signs of wear or damage. If you suspect material contains asbestos, don't touch it. Look for signs of wear or damage such as tears, abrasions, or water damage. Damaged material may release asbestos fibers."

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