



# STANDARD AGREEMENT FOR THE SALE OF REAL ESTATE

**ASR**

This form recommended and approved for, but not restricted to use by, the members of the Pennsylvania Association of Realtors® (PAR).

## PARTIES

**BUYER(S): Stephen Boerner, Melissa Boerner**
**SELLER(S): Richard Gities**
**BUYER'S MAILING ADDRESS:**
**SELLER'S MAILING ADDRESS:**

## PROPERTY

 ADDRESS (including postal city) **246 N 3rd St** ~~4th~~ **4CD**
**ZIP 19106**

 in the municipality of **Philadelphia**, County of **Philadelphia**,  
 in the School District of **Philadelphia**, in the Commonwealth of Pennsylvania.

 Tax ID #(s): **888053476 and 888053477**

Identification (e.g., Parcel #; Lot, Block; Deed Book, Page, Recording Date):

## BUYER'S RELATIONSHIP WITH PA LICENSED BROKER

☐ **No Business Relationship (Buyer is not represented by a broker)**

 Broker (Company) **Kurfiss Sotheby's International Realty**

 Licensee(s) (Name) **Nina Furia**

 Company License # **RB050068C**

 State License # **RS349502**

 Company Address **8431 Germantown Ave, Philadelphia, PA 19118-3340**

 Direct Phone(s) **(202)494-5255**

 Company Phone **(215)298-9415**

Cell Phone(s)

Company Fax

 Email **nina@kurfiss.com**

Broker is (check only one):

Licensee(s) is (check only one):

☐ Buyer Agent (Broker represents Buyer only)

☐ Buyer Agent (all company licensees represent Buyer)

☒ Dual Agent (See Dual and/or Designated Agent box below)

☒ Buyer Agent with Designated Agency (only Licensee(s) named above represent Buyer)

☐ Dual Agent (See Dual and/or Designated Agent box below)

☐ Transaction Licensee (Broker and Licensee(s) provide real estate services but do not represent Buyer)

## SELLER'S RELATIONSHIP WITH PA LICENSED BROKER

☐ **No Business Relationship (Seller is not represented by a broker)**

 Broker (Company) **Kurfiss Sotheby's International Realty**

 Licensee(s) (Name) **Juliana Martell**

 Company License # **RB050068C**

State License #

Company Address

Direct Phone(s)

 Company Phone **(215)298-9415-**

 Cell Phone(s) **(856)366-0224**

Company Fax

 Email **julianamartell@gmail.com**

Broker is (check only one):

Licensee(s) is (check only one):

☐ Seller Agent (Broker represents Seller only)

☐ Seller Agent (all company licensees represent Seller)

☒ Dual Agent (See Dual and/or Designated Agent box below)

☒ Seller Agent with Designated Agency (only Licensee(s) named above represent Seller)

☐ Dual Agent (See Dual and/or Designated Agent box below)

☐ Transaction Licensee (Broker and Licensee(s) provide real estate services but do not represent Seller)

## DUAL AND/OR DESIGNATED AGENCY

A Broker is a Dual Agent when a Broker represents both Buyer and Seller in the same transaction. A Licensee is a Dual Agent when a Licensee represents Buyer and Seller in the same transaction. All of Broker's licensees are also Dual Agents UNLESS there are separate Designated Agents for Buyer and Seller. If the same Licensee is designated for Buyer and Seller, the Licensee is a Dual Agent.

By signing this Agreement, Buyer and Seller each acknowledge having been previously informed of, and consented to, dual agency, if applicable. SB MB

Buyer Initials:

ASR Page 1 of 14

 Seller Initials: RG

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rev. 5/20; rel. 7/20

**WIRE FRAUD NOTICE****WFN**

This form recommended and approved for, but not restricted to use by, the members of the Pennsylvania Association of Realtors® (PAR).

1 Scammers are hacking the email accounts of title companies, real estate agents, settlement attorneys and others resulting in fraudulent wire  
 2 instructions being used to divert funds to the account of the hacker. This behavior can be common in real estate transactions because sensi-  
 3 tive data such as social security numbers, bank account numbers and wiring instructions are often sent by unsecured email for transactions  
 4 involving large amounts of money. **DO NOT** provide personal information such as social security numbers, bank account numbers and credit  
 5 card numbers except through secured email or personal delivery to the intended recipient.

6 If you receive an email with wiring instructions or an email changing the wiring instructions:

7 1. **DO NOT wire any funds without personally speaking with the intended recipient of the wire, even if the email appears to be from**  
 8 **someone you know.** Confirm the instructions, routing number and account number.

9 2. **Call a verified phone number, not the phone number provided in the email!** The emails include information intended to look legit-  
 10 imate and may appear to be from a familiar name or email address and may even contain a company logo and other symbols meant to  
 11 gain your trust.

12 3. **If you believe you have received questionable or suspicious wire transfer instructions, immediately notify your bank, the escrow**  
 13 **agent, and your real estate professional.** Once money has been wired it is almost always unrecoverable. Banks are not responsible for  
 14 funds that are voluntarily wired to a fraudulent account. If you suspect that you have been victimized by wire fraud, contact the local  
 15 office of the Federal Bureau of Investigation or file a complaint with the Internet Crime Complaint Center at [www.ic3.gov](http://www.ic3.gov).

16 **CONSUMER** DocuSigned by: Stephen Boerner E722950987E44A7 **DATE** 3/10/2022  
 17 **PRINTED NAME** Stephen Boerner  
 18 **CONSUMER** E722950987E44A7 **DATE** 3/10/2022  
 19 **PRINTED NAME** Melissa Boerner  
 20 **CONSUMER** **DATE** \_\_\_\_\_  
 21 **PRINTED NAME** \_\_\_\_\_

22 **BROKER (COMPANY)** Kurfiss Sotheby's International Realty **DATE** 3/10/2022  
 23 **LICENSEE** DocuSigned by: Nina Furia ABA642C80D614CF... **DATE** \_\_\_\_\_



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 rel. 3/20

**CHANGE IN TERMS ADDENDUM TO AGREEMENT OF SALE****CTA**

This form recommended and approved for, but not restricted to use by, the members of the Pennsylvania Association of Realtors® (PAR).

**1 PROPERTY 246 N 3rd St # 4CD, Philadelphia, PA 19106-1121****2 SELLER Richard Gities****3 BUYER Stephen Boerner, Melissa Boerner****4 The following terms of the Agreement of Sale are changed as stated below:****5 1. REPAIRS**

6 Seller, at Seller's expense, will complete the following repairs no later than \_\_\_\_\_ days prior to Settlement Date (prior to  
 7 settlement, if not specified), in a workmanlike manner, with all required permits, according to the attached contractor's proposal(s),  
 8 if any, the terms of which, including the persons and specifications contained therein, shall become part of this Agreement:  
 9 \_\_\_\_\_  
 10 \_\_\_\_\_  
 11 \_\_\_\_\_  
 12 \_\_\_\_\_  
 13 \_\_\_\_\_  
 14 \_\_\_\_\_  
 15 \_\_\_\_\_  
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 22 \_\_\_\_\_  
 23 \_\_\_\_\_

**24 2. SELLER ASSIST**

25 Seller Assist is changed to \$ \_\_\_\_\_, or \_\_\_\_\_ % of the Purchase price, maximum, toward Buyer's costs as per-  
 26 mitted by the mortgage lender, if any. Seller is only obligated to pay up to the amount or percentage which is approved by mortgage  
 27 lender.

**28 3. PURCHASE PRICE**

29 Purchase price is changed from \$ \_\_\_\_\_ to \$ \_\_\_\_\_.

**30 4. ACCEPTANCE & SETTLEMENT**

31 (A) Written acceptance of all parties will be on or before: \_\_\_\_\_  
 32 (B) Settlement Date is changed from April 7, 2022 to April 15, 2022

**33 5. MORTGAGE TERMS**

34 (A) **Mortgage Type** is changed from \_\_\_\_\_ to \_\_\_\_\_

**35 (B) Mortgage amount**

36 1. First mortgage amount is changed from \$ \_\_\_\_\_ to \$ \_\_\_\_\_

37 2. Second mortgage amount is changed from \$ \_\_\_\_\_ to \$ \_\_\_\_\_

**38 (C) Mortgage Lender**

39 1. First mortgage lender is changed to \_\_\_\_\_

40 2. Second mortgage lender is changed to \_\_\_\_\_

41 3. Buyer will submit a completed, written mortgage application to the identified lender(s), if any, according to the terms of the  
 42 Mortgage Contingency paragraph of the Agreement of Sale on or before: \_\_\_\_\_

**43 (D) Loan-To-Value (LTV) ratio (For conventional loans)**

44 First mortgage LTV ratio not to exceed \_\_\_\_\_ % Second mortgage LTV ratio not to exceed \_\_\_\_\_ %

45 (E) **Date for Buyer to deliver documentation** of lender's approval of Buyer's mortgage, whether conditional or outright, is  
 46 changed from \_\_\_\_\_ to \_\_\_\_\_

47 Buyer Initials: 

CTA Page 1 of 2

Seller Initials: \_\_\_\_\_



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48 **6. TIME PERIODS**

49 (A) The time period in paragraph \_\_\_\_\_, line \_\_\_\_\_ of Agreement of Sale is changed to \_\_\_\_\_.

50 The time period in paragraph \_\_\_\_\_, line \_\_\_\_\_ of Agreement of Sale is changed to \_\_\_\_\_.

51 The time period in paragraph \_\_\_\_\_, line \_\_\_\_\_ of Agreement of Sale is changed to \_\_\_\_\_.

52 The time period in paragraph \_\_\_\_\_, line \_\_\_\_\_ of Agreement of Sale is changed to \_\_\_\_\_.

53 The time period in paragraph \_\_\_\_\_, line \_\_\_\_\_ of Agreement of Sale is changed to \_\_\_\_\_.

54 (B) The time period in paragraph \_\_\_\_\_, line \_\_\_\_\_ of the \_\_\_\_\_ Addendum is changed to \_\_\_\_\_.

55 The time period in paragraph \_\_\_\_\_, line \_\_\_\_\_ of the \_\_\_\_\_ Addendum is changed to \_\_\_\_\_.

56 The time period in paragraph \_\_\_\_\_, line \_\_\_\_\_ of the \_\_\_\_\_ Addendum is changed to \_\_\_\_\_.

57 The time period in paragraph \_\_\_\_\_, line \_\_\_\_\_ of the \_\_\_\_\_ Addendum is changed to \_\_\_\_\_.

58 The time period in paragraph \_\_\_\_\_, line \_\_\_\_\_ of the \_\_\_\_\_ Addendum is changed to \_\_\_\_\_.

59 **7. OTHER**

60 \_\_\_\_\_

61 \_\_\_\_\_

62 \_\_\_\_\_

63 \_\_\_\_\_

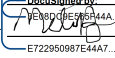
64 \_\_\_\_\_

65 \_\_\_\_\_

66 \_\_\_\_\_

67 \_\_\_\_\_

68 All other terms and conditions of the Agreement, including all other time periods, remain unchanged and in full force and effect.

69	<b>BUYER</b>		<b>Stephen Boerner</b>	<b>DATE</b>	3/10/2022
70	<b>BUYER</b>		<b>Melissa Boerner</b>	<b>DATE</b>	3/10/2022
71	<b>BUYER</b>		<b>Richard Gities</b>	<b>DATE</b>	
72	<b>SELLER</b>			<b>DATE</b>	
73	<b>SELLER</b>			<b>DATE</b>	
74	<b>SELLER</b>			<b>DATE</b>	

## DISCLOSURE OF BUSINESS RELATIONSHIPS

### (In Compliance with the Real Estate Settlement Procedures Act)

Stephen Boerner, Melissa Boerner

TO: \_\_\_\_\_  
(Buyer or Seller)

PROPERTY: **246 N 3rd St # 4CD, Philadelphia, PA 19106-1121**

3/10/2022

FROM: **Kurfiss|Sotheby's International Realty  
Delaware River Closing Services, LLC  
Integrity Home Lending**

DATE: \_\_\_\_\_

This is to give you notice that the above companies have business relationships with certain providers of services related to the sale or purchase of real estate and the settlement of mortgage loans. The name of the provider and the nature of the relationship is set forth below.

- A. **Integrity Home Lending** (Mortgage Broker) - **Integrity Home Lending** provides mortgage loans and loan services. Kurfiss|Sotheby's International Realty and **Integrity Home Lending** have common ownership and financial interest.
- B. **Delaware River Closing Services, LLC** (Title insurance agency, title examinations and closing services) Kurfiss Real Estate and Delaware River Closing Services, LLC have common ownership and financial interest.
- C. **Kurfiss|Sotheby's International Realty** - (Real Estate Company, sales and leasing of residential and commercial real estate) Delaware River Closing Services, LLC, Centennial Lending Group, LLC and Kurfiss|Sotheby's International Realty have common ownership and financial interest.

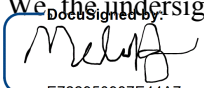
You are not required to use Delaware River Closing Services, LLC or Centennial Lending Group, LLC as a condition for settlement of your loan, or the purchase or sale of the subject property. You may be able to get these services at a lower rate by shopping with other financial service providers.

A lender may require the use of an attorney, credit reporting agency or real estate appraiser chosen to represent the lender's interest.

A **Conveyance Fee** in the amount of **\$295**. shall be charged to Buyer at the time of final settlement for services such as:

- Review of dates and deadlines from executed Agreement of Sale
- Preparation of settlement notices to all interested parties
- Coordination of estimated closing costs with all involved parties (i.e. lender, title, etc.)
- Assisting buyer in obtaining the required documentation for mortgage approval
- Coordinating the date, place and time of settlement

We, the undersigned, acknowledge the receipt of a copy of this disclosure form.

 3/10/2022  
E722950987E44A7...  
Client's Signature (Date)

 3/10/2022  
ABA642C80D614CF...  
Agent Signature (Date)

 3/10/2022  
3E08DC9E565F44A...  
Client's Signature (Date)

CLIENT'S EMAIL ADDRESS

8/06



Kurfiss

**Sotheby's**  
 INTERNATIONAL REALTY

## KURFISS SOTHEBY'S INTERNATIONAL REALTY BROKER SERVICES FEE

1. Closing Services. When an Agreement of Sale is executed, there are many services associated with completing the real estate transaction. These services may include, but are not limited to those listed below.
  - # Send out letter to conveyancing company to introduce file.
  - # Order Condominium Association Resale Package or Homeowner Association Resale Package, if applicable.
  - # Supply information and application to seller if Use and Occupancy (U&O) is required by their Township.
  - # Review Agreement of Sale for commissions, seller assists and home warranty.
  - # Obtain Buyer/Seller Social Security numbers to order domestic relations certifications and Patriot Act certifications.
  - # Obtain mortgage/home equity loan payoff figures(s) from current lien holders.
  - # Obtain and review title commitment.
  - # Order Title and obtain charges from conveyancing company or Title Company of Buyer's choice for preparation of final estimate of closing costs and proceeds.
  - # Provide Title Company contact information to mortgage company, if necessary.
  - # Order Title Insurance
  - # Obtain a quote for home owners' insurance, if applicable
  - # Contact Mortgage company to discuss financing program, if applicable
  - # Order tax, water, sewer and trash certifications, if necessary.
  - # When applicable, handle requests for deed package, power of attorney documents, death certificate/estate issues, divorce issues/final decree, property settlement agreement, clear mortgage satisfactions, LLC/Corporation documents, tax claim certifications.
  - # Forward Addendums that affect the Agreement of Sale to the title Company.
  - # Request escrow letter for Mortgage Company, if necessary.
  - # Coordinate and schedule closing date.
  - # Order escrow check for settlement.
  - # Prepare and send out settlement notice to Buyer/Seller/Agents.
  - # Compile and send package of all items needed by Title Company.
  - # Request preliminary HUD from Title Company.
  - # Prepare folder for closing and send to agent prior to settlement.
  - # Obtain copy of the final HUD.
  
2. Information Services. Given changes to the real estate industry and consumer requirements for information and services, Kurfiss SIR has invested heavily in its operations, including, but not limited to hardware, software, technology and personnel, in order to deliver the quality of service related to those demands.

3. Fee. Although not all transactions are equal and some may require more services than others, a flat fee of \$295.00 will be charged on all transactions to cover these services. This fee may appear on the HUD sheet as a flat fee commission. We are not alone in our necessity to pass on these charges but do strive to keep them at a minimum and currently have the lowest charge amongst our competitors. The costs associated with the performance of the foregoing services are charged by Delaware River Closing Services, Inc. This fee shall be charged to the undersigned at settlement, in addition to the Broker's Commission. This fee is not negotiable, if we are to function at our best; we thank you for your understanding.
4. Authorization. On behalf of Kurfiss Sotheby's International Realty, many of the foregoing closing services are performed by Delaware River Closing Services, Inc., a corporation which has a business relationship with Kurfiss Sotheby's International Realty. The undersigned hereby authorizes Delaware River Closing Services, Inc. to perform the above services.

Acknowledged and Agreed to:

DocuSigned by:  
  
3E08DC9E565F44A...  
Name/Signature

3/10/2022

Date

DocuSigned by:  
  
E722950987E44A7...  
Name/Signature

3/10/2022

Date



# Kurfiss

# Sotheby's

INTERNATIONAL REALTY

At Kurfiss Sotheby's you will be provided with a comprehensive concierge service package that will include a full range of competitive real estate, financing, moving and insurance products and services that are generally required in every real estate transaction. We have chosen specific product and service providers that may contact you regarding their valuable offers. In no way will we ever share your personal and confidential information to anyone without your prior specific written approval. These product and service providers will only be provided with your contact information only so that they may communicate directly with you. All Kurfiss agents are trained and educated on these valuable service providers, please consult with them if you have any questions. Even if you have a service provider in mind, we encourage you to receive an additional quote from the providers listed so that you can be assured that you are receiving the most competitive rate(s) available.

## DELAWARE RIVER CLOSING SERVICES

### INTEGRITY HOME LENDING

We understand that we may be contacted by these providers so that they may offer competitive quotes and programs. We acknowledge that we are not required to use any of the service providers listed and we understand that Kurfiss Sotheby's may receive some financial or other benefit. **There are frequently other settlement providers available with similar services. You are free to shop around to determine that you are receiving the best services and the best rate for these services.**

☐ **Yes**, I have read and understand the valuable services that Kurfiss Sotheby's and their service providers may offer and wish to review and consider these services.

☐ **No**, I have read and understand the valuable services that Kurfiss Sotheby's and their service providers may offer however, I am not interested in reviewing or considering these valuable services.

DocuSigned by:  
  
 3E08DC9E569F40A  
 Buyer (Please Sign and Print) **Stephen Boerner** 3/10/2022  
 Date

DocuSigned by:  
  
 E722950987E7445  
 Buyer (Please Sign and Print) **Melissa Boerner** 3/10/2022  
 Date

DocuSigned by:  
  
 ABA642C80D614CF  
 Agent (Please Sign and Print) **Nina Furia** 3/10/2022  
 Date





Kurfiss

Sotheby's

INTERNATIONAL REALTY

6038 Lower York Road  
 New Hope, Pennsylvania 18938  
 P: 215-794-3227  
 F: 215-794-3998

### DOMESTIC RELATIONS Notice to Buyers and Sellers

In December of 1997, Governor Ridge signed into law legislation that allows overdue child support obligations to be placed as liens on property. All title companies now require a certification from the Domestic Relations Office of the County affected verifying that no unpaid support has produced a lien against the property.

The information provided below is required by the Domestic Relations Office in order to issue certification. There may be a fee charged by the Domestic Relations Office that will appear on your settlement statement.

Stephen Boerner

Name

Stephen Boerner

Home Number

215-530-0545

Street Address

424 N New St

Cell/Mobile Number

City, State, Zip Code

Bethlehem

Work Number

215-530-0545

County

**Email Address**

Melissa Boerner

Name

Melissa Bemer

Home Number

610-613-5939

Street Address

3 Hedgerow Lane

Cell/Mobile Number

City, State, Zip Code

wayne

Work Number

610-613-5939

County

**Email Address**

Each office is independently owned and operated.

**CAUTION — Your Action is Required Soon**

US Department of Housing  
and Urban Development  
Federal Housing Administration (FHA)



OMB Approval No: 2502-0538  
(exp. 06/30/2021)

# For Your Protection: Get a Home Inspection

## You must make a choice on getting a Home Inspection. It is not done automatically

You have the right to examine carefully your potential new home with a professional home inspector. But a home inspection is not required by law, and will occur only if you ask for one and make the arrangements. You may schedule the inspection for before or after signing your contract. You may be able to negotiate with the seller to make the contract contingent on the results of the inspection. For this reason, it is usually in your best interest to conduct your home inspection as soon as possible if you want one. In a home inspection, a professional home inspector takes an in-depth, unbiased look at your potential new home to:

- ✓ **Evaluate the physical condition: structure, construction, and mechanical systems;**
- ✓ **Identify items that need to be repaired and**
- ✓ **Estimate the remaining useful life of the major systems, equipment, structure, and finishes.**

## **The Appraisal is NOT a Home Inspection and does not replace an inspection.**

An appraisal estimates the market value of the home to protect the lender. An appraisal does not examine or evaluate the condition of the home to protect the homebuyer. An appraisal only makes sure that the home meets FHA and/or your lender's minimum property standards. A home inspection provides much more detail.

## **FHA and Lenders may not Guarantee the Condition of your Potential New Home**

If you find problems with your new home after closing, neither FHA nor your lender may give or lend you money for repairs. Additionally, neither FHA nor your lender may buy the home back from you. Ask a qualified home inspector to inspect your potential new home and give you the information you need to make a wise decision.

## **Your Home Inspector may test for Radon, Health/Safety, and Energy Efficiency**

EPA, HUD and DOE recommend that houses be tested and inspected for radon, health and safety, and energy efficiency, respectively. Specific tests are available to you. You may ask about tests with your home inspector, in addition to the structural and mechanical systems inspection. For more information: Radon — call 1-800-SOS-Radon; Health and Safety — see the HUD Healthy Homes Program at [www.HUD.gov](http://www.HUD.gov); Energy Efficiency — see the DOE EnergyStar Program at [www.energystar.gov](http://www.energystar.gov).

## **Selecting a Trained Professional Home Inspector**

Seek referrals from friends, neighbors, other buyers, realtors, as well as local listings from licensing authorities and local advertisements. In addition, consult the American Society of Home Inspectors (ASHI) on the web at: [www.ashi.org](http://www.ashi.org) or by telephone at: 1-800-743-2744.

☐ I/☒ We (check one) have read this document and understand that if I/we wish to get a home inspection, it is best do so as soon as possible. The appraisal is not a home inspection. I/we will make a voluntary choice whether to get a home inspection. A home inspection will be done only if I/we ask for one and schedule it. Your lender may not perform a home inspection and neither FHA nor your lender may guarantee the condition of the home. Health and safety tests can be included in the home inspection if I/we choose.

DocuSigned by:  
  
(Signed) Homebuyer  
Stephen Boerner  
3/10/2022  
Date

DocuSigned by:  
  
(Signed) Homebuyer  
Melissa Boerner  
3/10/2022  
Date

Public reporting burden for this collection is estimated at an average of 30 minutes to review the instructions, find the information, and complete this form. The agency cannot conduct or sponsor a collection of information unless a valid OMB number is displayed. You are not required to respond to a collection of information if this number is not displayed. Valid OMB numbers can be located on the OMB Internet page at <http://www.whitehouse.gov/library/omb/OMBINVC.html> - HUD if desired you can call 1-200-827-1000 to get information on where to send comments or suggestions about this form.



HUD-92564-CN (expiration)

DS  
MB

DS  
SB



# Protect Your Family From Lead in Your Home



March 2021

# Are You Planning to Buy or Rent a Home Built Before 1978?

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Did you know that many homes built before 1978 have **lead-based paint**? Lead from paint, chips, and dust can pose serious health hazards.

## Read this entire brochure to learn:

- # How lead gets into the body
- # How lead affects health
- # What you can do to protect your family
- # Where to go for more information

## Before renting or buying a pre-1978 home or apartment, federal law requires:

- #? Sellers must disclose known information on lead-based paint or lead-based paint hazards before selling a house.
- #? Real estate sales contracts must include a specific warning statement about lead-based paint. Buyers have up to 10 days to check for lead.
- #? Landlords must disclose known information on lead-based paint or lead-based paint hazards before leases take effect. Leases must include a specific warning statement about lead-based paint.

## If undertaking renovations, repairs, or painting (RRP) projects in your pre-1978 home or apartment:

- # Read EPA's pamphlet, *The Lead-Safe Certified Guide to Renovate Right*, to learn about the lead-safe work practices that contractors are required to follow when working in your home (see page 12).



## Simple Steps to Protect Your Family from Lead Hazards

### If you think your home has lead-based paint:

- # Don't try to remove lead-based paint yourself.
- # Always keep painted surfaces in good condition to minimize deterioration.
- # Get your home checked for lead hazards. Find a certified inspector or risk assessor at [epa.gov/lead](http://epa.gov/lead).
- # Talk to your landlord about fixing surfaces with peeling or chipping paint.
- # Regularly clean floors, window sills, and other surfaces.
- # Take precautions to avoid exposure to lead dust when remodeling.
- # When renovating, repairing, or painting, hire only EPA- or state-approved Lead-Safe certified renovation firms.
- # Before buying, renting, or renovating your home, have it checked for lead-based paint.
- # Consult your health care provider about testing your children for lead. Your pediatrician can check for lead with a simple blood test.
- # Wash children's hands, bottles, pacifiers, and toys often.
- # Make sure children eat healthy, low-fat foods high in iron, calcium, and vitamin C.
- # Remove shoes or wipe soil off shoes before entering your house.

# Lead Gets into the Body in Many Ways

---

## Adults and children can get lead into their bodies if they:

- # Breathe in lead dust (especially during activities such as renovations, repairs, or painting that disturb painted surfaces).
- # Swallow lead dust that has settled on food, food preparation surfaces, and other places.
- # Eat paint chips or soil that contains lead.

## Lead is especially dangerous to children under the age of 6.

- # At this age, children's brains and nervous systems are more sensitive to the damaging effects of lead.
- # Children's growing bodies absorb more lead.
- # Babies and young children often put their hands and other objects in their mouths. These objects can have lead dust on them.



## Women of childbearing age should know that lead is dangerous to a developing fetus.

- # Women with a high lead level in their system before or during pregnancy risk exposing the fetus to lead through the placenta during fetal development.



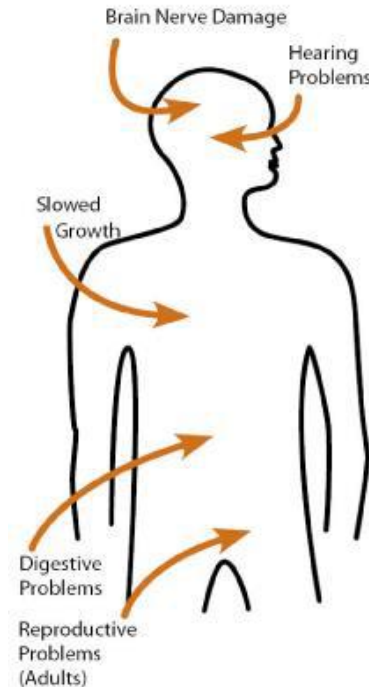
# Health Effects of Lead

**Lead affects the body in many ways.** It is important to know that even exposure to low levels of lead can severely harm children.

## In children, exposure to lead can cause:

- #? Nervous system and kidney damage
- #? Learning disabilities, attention-deficit disorder, and decreased intelligence
- #? Speech, language, and behavior problems
- #? Poor muscle coordination
- #? Decreased muscle and bone growth
- #? Hearing damage

While low-lead exposure is most common, exposure to high amounts of lead can have devastating effects on children, including seizures, unconsciousness, and in some cases, death.



Although children are especially susceptible to lead exposure, lead can be dangerous for adults, too.

## In adults, exposure to lead can cause:

- #? Harm to a developing fetus
- #? Increased chance of high blood pressure during pregnancy
- #? Fertility problems (in men and women)
- #? High blood pressure
- #? Digestive problems
- #? Nerve disorders
- #? Memory and concentration problems
- #? Muscle and joint pain

# Check Your Family for Lead

---

**Get your children and home tested if you think your home has lead.**

Children's blood lead levels tend to increase rapidly from 6 to 12 months of age, and tend to peak at 18 to 24 months of age.

Consult your doctor for advice on testing your children. A simple blood test can detect lead. Blood lead tests are usually recommended for:

- #? Children at ages 1 and 2
- #? Children or other family members who have been exposed to high levels of lead
- #? Children who should be tested under your state or local health screening plan

**Your doctor can explain what the test results mean and if more testing will be needed.**



## Where Lead-Based Paint Is Found

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In general, the older your home or childcare facility, the more likely it has lead-based paint.<sup>1</sup>

**Many homes, including private, federally-assisted, federally-owned housing, and childcare facilities built before 1978 have lead-based paint.** In 1978, the federal government banned consumer uses of lead-containing paint.<sup>2</sup>

Learn how to determine if paint is lead-based paint on page 7.

### Lead can be found:

- #? In homes and childcare facilities in the city, country, or suburbs,
- #? In private and public single-family homes and apartments,
- #? On surfaces inside and outside of the house, and
- #? In soil around a home. (Soil can pick up lead from exterior paint or other sources, such as past use of leaded gas in cars.)

Learn more about where lead is found at [epa.gov/lead](https://www.epa.gov/lead).

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<sup>1</sup> “Lead-based paint” is currently defined by the federal government as paint with lead levels greater than or equal to 1.0 milligram per square centimeter (mg/cm<sup>2</sup>), or more than 0.5% by weight.

<sup>2</sup> “Lead-containing paint” is currently defined by the federal government as lead in new dried paint in excess of 90 parts per million (ppm) by weight.

# Identifying Lead-Based Paint and Lead-Based Paint Hazards

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**Deteriorated lead-based paint (peeling, chipping, chalking, cracking, or damaged paint)** is a hazard and needs immediate attention. **Lead-based paint** may also be a hazard when found on surfaces that children can chew or that get a lot of wear and tear, such as:

- #? On windows and window sills
- #? Doors and door frames
- #? Stairs, railings, banisters, and porches

**Lead-based paint is usually not a hazard if it is in good condition** and if it is not on an impact or friction surface like a window.

**Lead dust** can form when lead-based paint is scraped, sanded, or heated. Lead dust also forms when painted surfaces containing lead bump or rub together. Lead paint chips and dust can get on surfaces and objects that people touch. Settled lead dust can reenter the air when the home is vacuumed or swept, or when people walk through it. EPA currently defines the following levels of lead in dust as hazardous:

- #? 10 micrograms per square foot ( $\mu\text{g}/\text{ft}^2$ ) and higher for floors, including carpeted floors
- #? 100  $\mu\text{g}/\text{ft}^2$  and higher for interior window sills

**Lead in soil** can be a hazard when children play in bare soil or when people bring soil into the house on their shoes. EPA currently defines the following levels of lead in soil as hazardous:

- #? 400 parts per million (ppm) and higher in play areas of bare soil
- #? 1,200 ppm (average) and higher in bare soil in the remainder of the yard

**Remember, lead from paint chips-which you can see-and lead dust-which you may not be able to see-both can be hazards.**

The only way to find out if paint, dust, or soil lead hazards exist is to test for them. The next page describes how to do this.

# Checking Your Home for Lead

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You can get your home tested for lead in several different ways:

- # A lead-based paint **inspection** tells you if your home has lead-based paint and where it is located. It won't tell you whether your home currently has lead hazards. A trained and certified testing professional, called a lead-based paint inspector, will conduct a paint inspection using methods, such as:
  - #? Portable x-ray fluorescence (XRF) machine
  - #? Lab tests of paint samples
- #? A **risk assessment** tells you if your home currently has any lead hazards from lead in paint, dust, or soil. It also tells you what actions to take to address any hazards. A trained and certified testing professional, called a risk assessor, will:
  - #? Sample paint that is deteriorated on doors, windows, floors, stairs, and walls
  - #? Sample dust near painted surfaces and sample bare soil in the yard
  - #? Get lab tests of paint, dust, and soil samples
  - #? A combination inspection and risk assessment tells you if your home has any lead-based paint and if your home has any lead hazards, and where both are located.



Be sure to read the report provided to you after your inspection or risk assessment is completed, and ask questions about anything you do not understand.

## Checking Your Home for Lead, continued

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In preparing for renovation, repair, or painting work in a pre-1978 home, Lead-Safe Certified renovators (see page 12) may:

- #? Take paint chip samples to determine if lead-based paint is present in the area planned for renovation and send them to an EPA-recognized lead lab for analysis. In housing receiving federal assistance, the person collecting these samples must be a certified lead-based paint inspector or risk assessor
- #? Use EPA-recognized tests kits to determine if lead-based paint is absent (but not in housing receiving federal assistance)
- #? Presume that lead-based paint is present and use lead-safe work practices

There are state and federal programs in place to ensure that testing is done safely, reliably, and effectively. Contact your state or local agency for more information, visit [epa.gov/lead](https://www.epa.gov/lead), or call **1-800-424-LEAD (5323)** for a list of contacts in your area.<sup>3</sup>

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<sup>3</sup> Hearing- or speech-challenged individuals may access this number through TTY by calling the Federal Relay Service at 1-800-877-8339.

## What You Can Do Now to Protect Your Family

---

**If you suspect that your house has lead-based paint hazards, you can take some immediate steps to reduce your family's risk:**

- #? If you rent, notify your landlord of peeling or chipping paint.
- #? Keep painted surfaces clean and free of dust. Clean floors, window frames, window sills, and other surfaces weekly. Use a mop or sponge with warm water and a general all-purpose cleaner. (Remember: never mix ammonia and bleach products together because they can form a dangerous gas.)
- #? Carefully clean up paint chips immediately without creating dust.
- #? Thoroughly rinse sponges and mop heads often during cleaning of dirty or dusty areas, and again afterward.
- #? Wash your hands and your children's hands often, especially before they eat and before nap time and bed time.
- #? Keep play areas clean. Wash bottles, pacifiers, toys, and stuffed animals regularly.
- #? Keep children from chewing window sills or other painted surfaces, or eating soil.
- #? When renovating, repairing, or painting, hire only EPA- or state-approved Lead-Safe Certified renovation firms (see page 12).
- #? Clean or remove shoes before entering your home to avoid tracking in lead from soil.
- #? Make sure children eat nutritious, low-fat meals high in iron, and calcium, such as spinach and dairy products. Children with good diets absorb less lead.

## Reducing Lead Hazards

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**Disturbing lead-based paint or removing lead improperly can increase the hazard to your family by spreading even more lead dust around the house.**

#? In addition to day-to-day cleaning and good nutrition, you can **temporarily** reduce lead-based paint hazards by taking actions, such as repairing damaged painted surfaces and planting grass to cover lead-contaminated soil. These actions are not permanent solutions and will need ongoing attention.

#? You can minimize exposure to lead when renovating, repairing, or painting by hiring an EPA- or state-certified renovator who is trained in the use of lead-safe work practices. If you are a do-it-yourselfer, learn how to use lead-safe work practices in your home.

#? To remove lead hazards permanently, you should hire a certified lead abatement contractor. Abatement (or permanent hazard elimination) methods include removing, sealing, or enclosing lead-based paint with special materials. Just painting over the hazard with regular paint is not permanent control.

**Always use a certified contractor who is trained to address lead hazards safely.**

#? Hire a Lead-Safe Certified firm (see page 12) to perform renovation, repair, or painting (RRP) projects that disturb painted surfaces.

#? To correct lead hazards permanently, hire a certified lead abatement contractor. This will ensure your contractor knows how to work safely and has the proper equipment to clean up thoroughly.

Certified contractors will employ qualified workers and follow strict safety rules as set by their state or by the federal government.



## Reducing Lead Hazards, continued

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**If your home has had lead abatement work done** or if the housing is receiving federal assistance, once the work is completed, dust cleanup activities must be conducted until clearance testing indicates that lead dust levels are below the following levels:

- #? 10 micrograms per square foot ( $\mu\text{g}/\text{ft}^2$ ) for floors, including carpeted floors
- #? 100  $\mu\text{g}/\text{ft}^2$  for interior windows sills
- #? 400  $\mu\text{g}/\text{ft}^2$  for window troughs

**Abatements are designed to permanently eliminate lead-based paint hazards.** However, lead dust can be reintroduced into an abated area.

- # Use a HEPA vacuum on all furniture and other items returned to the area, to reduce the potential for reintroducing lead dust.
- # Regularly clean floors, window sills, troughs, and other hard surfaces with a damp cloth or sponge and a general all-purpose cleaner. Please see page 9 for more information on steps you can take to protect your home after the abatement. For help in locating certified lead abatement professionals in your area, call your state or local agency (see pages 15 and 16), [epa.gov/lead](http://epa.gov/lead), or call 1-800-424-LEAD.

# Renovating, Repairing or Painting a Home with Lead-Based Paint

If you hire a contractor to conduct renovation, repair, or painting (RRP) projects in your pre-1978 home or childcare facility (such as pre-school and kindergarten), your contractor must:

- #? Be a Lead-Safe Certified firm approved by EPA or an EPA-authorized state program
- #? Use qualified trained individuals (Lead-Safe Certified renovators) who follow specific lead-safe work practices to prevent lead contamination
- #? Provide a copy of EPA's lead hazard information document, *The Lead-Safe Certified Guide to Renovate Right*



**RRP contractors working in pre-1978 homes and childcare facilities must follow lead-safe work practices that:**

- #? **Contain the work area.** The area must be contained so that dust and debris do not escape from the work area. Warning signs must be put up, and plastic or other impermeable material and tape must be used.
- #? **Avoid renovation methods that generate large amounts of lead-contaminated dust.** Some methods generate so much lead-contaminated dust that their use is prohibited. They are:
  - # Open-flame burning or torching
  - # Sanding, grinding, planing, needle gunning, or blasting with power tools and equipment not equipped with a shroud and HEPA vacuum attachment
  - # Using a heat gun at temperatures greater than 1100°F
- #? **Clean up thoroughly.** The work area should be cleaned up daily. When all the work is done, the area must be cleaned up using special cleaning methods.
- #? **Dispose of waste properly.** Collect and seal waste in a heavy duty bag or sheeting. When transported, ensure that waste is contained to prevent release of dust and debris.

To learn more about EPA's requirements for RRP projects, visit [epa.gov/getleadsafe](http://epa.gov/getleadsafe), or read *The Lead-Safe Certified Guide to Renovate Right*.



## Other Sources of Lead

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### Lead in Drinking Water

The most common sources of lead in drinking water are lead pipes, faucets, and fixtures.

Lead pipes are more likely to be found in older cities and homes built before 1986.

You can't smell or taste lead in drinking water.

To find out for certain if you have lead in drinking water, have your water tested.

Remember older homes with a private well can also have plumbing materials that contain lead.

### Important Steps You Can Take to Reduce Lead in Drinking Water

- #? Use only cold water for drinking, cooking and making baby formula. Remember, boiling water does not remove lead from water.
- #? Before drinking, flush your home's pipes by running the tap, taking a shower, doing laundry, or doing a load of dishes.
- #? Regularly clean your faucet's screen (also known as an aerator).
- #? If you use a filter certified to remove lead, don't forget to read the directions to learn when to change the cartridge. Using a filter after it has expired can make it less effective at removing lead.

Contact your water company to determine if the pipe that connects your home to the water main (called a service line) is made from lead. Your area's water company can also provide information about the lead levels in your system's drinking water.

For more information about lead in drinking water, please contact EPA's Safe Drinking Water Hotline at 1-800-426-4791. If you have other questions about lead poisoning prevention, call 1-800 424-LEAD.\*

Call your local health department or water company to find out about testing your water, or visit [epa.gov/safewater](http://epa.gov/safewater) for EPA's lead in drinking water information. Some states or utilities offer programs to pay for water testing for residents. Contact your state or local water company to learn more.

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\* Hearing- or speech-challenged individuals may access this number through TTY by calling the Federal Relay Service at 1-800-877-8339.

## Other Sources of Lead, continued

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- # **Lead smelters** or other industries that release lead into the air.
- #? **Your job.** If you work with lead, you could bring it home on your body or clothes. Shower and change clothes before coming home. Launder your work clothes separately from the rest of your family's clothes.
- #? **Hobbies** that use lead, such as making pottery or stained glass, or refinishing furniture. Call your local health department for information about hobbies that may use lead.
- #? Old **toys** and **furniture** may have been painted with lead-containing paint. Older toys and other children's products may have parts that contain lead.<sup>4</sup>
- #? Food and liquids cooked or stored in **lead crystal** or **lead-glazed pottery or porcelain** may contain lead.
- #? Folk remedies, such as “**greta**” and “**azarcon**,” used to treat an upset stomach.

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<sup>4</sup> In 1978, the federal government banned toys, other children's products, and furniture with lead-containing paint. In 2008, the federal government banned lead in most children's products. The federal government currently bans lead in excess of 100 ppm by weight in most children's products.

## For More Information

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### **The National Lead Information Center**

Learn how to protect children from lead poisoning and get other information about lead hazards on the Web at [epa.gov/lead](http://epa.gov/lead) and [hud.gov/lead](http://hud.gov/lead), or call **1-800-424-LEAD (5323)**.

### **EPA's Safe Drinking Water Hotline**

For information about lead in drinking water, call **1-800-426-4791**, or visit [epa.gov/safewater](http://epa.gov/safewater) for information about lead in drinking water.

### **Consumer Product Safety Commission (CPSC) Hotline**

For information on lead in toys and other consumer products, or to report an unsafe consumer product or a product-related injury, call **1-800-638-2772**, or visit CPSC's website at [cpsc.gov](http://cpsc.gov) or [saferproducts.gov](http://saferproducts.gov).

### **State and Local Health and Environmental Agencies**

Some states, tribes, and cities have their own rules related to lead-based paint. Check with your local agency to see which laws apply to you. Most agencies can also provide information on finding a lead abatement firm in your area, and on possible sources of financial aid for reducing lead hazards. Receive up-to-date address and phone information for your state or local contacts on the Web at [epa.gov/lead](http://epa.gov/lead), or contact the National Lead Information Center at **1-800-424-LEAD**.

Hearing- or speech-challenged individuals may access any of the phone numbers in this brochure through TTY by calling the toll-free Federal Relay Service at **1-800-877-8339**.

# U. S. Environmental Protection Agency (EPA)

## Regional Offices

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The mission of EPA is to protect human health and the environment. Your Regional EPA Office can provide further information regarding regulations and lead protection programs.

**Region 1** (Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont)

Regional Lead Contact  
U.S. EPA Region 1  
5 Post Office Square, Suite 100, OES 05-4  
Boston, MA 02109-3912  
(888) 372-7341

**Region 2** (New Jersey, New York, Puerto Rico, Virgin Islands)

Regional Lead Contact  
U.S. EPA Region 2  
2890 Woodbridge Avenue  
Building 205, Mail Stop 225  
Edison, NJ 08837-3679  
(732) 906-6809

**Region 3** (Delaware, Maryland, Pennsylvania, Virginia, DC, West Virginia)

Regional Lead Contact  
U.S. EPA Region 3  
1650 Arch Street  
Philadelphia, PA 19103  
(215) 814-2088

**Region 4** (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee)

Regional Lead Contact  
U.S. EPA Region 4  
AFC Tower, 12th Floor, Air, Pesticides & Toxics  
61 Forsyth Street, SW  
Atlanta, GA 30303  
(404) 562-8998

**Region 5** (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin)

Regional Lead Contact  
U.S. EPA Region 5 (LL-17J)  
77 West Jackson Boulevard  
Chicago, IL 60604-3666  
(312) 353-3808

**Region 6** (Arkansas, Louisiana, New Mexico, Oklahoma, Texas, and 66 Tribes)

Regional Lead Contact  
U.S. EPA Region 6  
1445 Ross Avenue, 12th Floor  
Dallas, TX 75202-2733  
(214) 665-2704

**Region 7** (Iowa, Kansas, Missouri, Nebraska)

Regional Lead Contact  
U.S. EPA Region 7  
11201 Renner Blvd.  
Lenexa, KS 66219  
(800) 223-0425

**Region 8** (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming)

Regional Lead Contact  
U.S. EPA Region 8  
1595 Wynkoop St.  
Denver, CO 80202  
(303) 312-6966

**Region 9** (Arizona, California, Hawaii, Nevada)

Regional Lead Contact  
U.S. EPA Region 9 (CMD-4-2)  
75 Hawthorne Street  
San Francisco, CA 94105  
(415) 947-4280

**Region 10** (Alaska, Idaho, Oregon, Washington)

Regional Lead Contact  
U.S. EPA Region 10 (20-C04)  
Air and Toxics Enforcement Section  
1200 Sixth Avenue, Suite 155  
Seattle, WA 98101  
(206) 553-1200

## Consumer Product Safety Commission (CPSC)

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The CPSC protects the public against unreasonable risk of injury from consumer products through education, safety standards activities, and enforcement. Contact CPSC for further information regarding consumer product safety and regulations.

### **CPSC**

4330 East West Highway  
Bethesda, MD 20814-4421  
1-800-638-2772  
[cpsc.gov](http://cpsc.gov) or [saferproducts.gov](http://saferproducts.gov)

## U. S. Department of Housing and Urban Development (HUD)

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HUD's mission is to create strong, sustainable, inclusive communities and quality affordable homes for all. Contact to Office Lead Hazard Control and Healthy Homes for further information regarding the Lead Safe Housing Rule, which protects families in pre-1978 assisted housing, and for the lead hazard control and research grant programs.

### **HUD**

451 Seventh Street, SW, Room 8236  
Washington, DC 20410-3000  
(202) 402-7698  
[hud.gov/lead](http://hud.gov/lead)

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U. S. EPA Washington DC 20460  
U. S. CPSC Bethesda MD 20814  
U. S. HUD Washington DC 20410

EPA-747-K-12-001  
March 2021

# IMPORTANT!

## **Lead From Paint, Dust, and Soil in and Around Your Home Can Be Dangerous if Not Managed Properly**

- # Children under 6 years old are most at risk for lead poisoning in your home.
- # Lead exposure can harm young children and babies even before they are born.
- # Homes, schools, and child care facilities built before 1978 are likely to contain lead-based paint.
- # Even children who seem healthy may have dangerous levels of lead in their bodies.
- # Disturbing surfaces with lead-based paint or removing lead-based paint improperly can increase the danger to your family.
- # People can get lead into their bodies by breathing or swallowing lead dust, or by eating soil or paint chips containing lead.
- # People have many options for reducing lead hazards. Generally, lead-based paint that is in good condition is not a hazard (see page 10).



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# A BRIEF GUIDE TO MOLD, MOISTURE, AND YOUR HOME

**Indoor Air Quality (IAQ)**

*EPA 402-K-02-003  
(Reprinted 09/2012)*

**This Guide provides  
information and guidance  
for homeowners and  
renters on how to clean  
up residential mold  
problems and how to  
prevent mold growth.**

*U.S. Environmental Protection Agency  
Office of Air and Radiation  
Indoor Environments Division  
1200 Pennsylvania Avenue, N. W.  
Mailcode: 6609J  
Washington, DC 20460  
[www.epa.gov/iaq](http://www.epa.gov/iaq)*



# A BRIEF GUIDE TO MOLD, MOISTURE, AND YOUR HOME

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# MOLD BASICS

- The key to mold control is moisture control.
- If mold is a problem in your home, you should clean up the mold promptly *and* fix the water problem.
- It is important to dry water-damaged areas and items within 24-48 hours to prevent mold growth.



## Why is mold growing in my home?



*Mold growing outdoors on firewood. Molds come in many colors; both white and black molds are shown here.*

Molds are part of the natural environment. Outdoors, molds play a part in nature by breaking down dead organic matter such as fallen leaves and dead trees, but indoors, mold growth should be avoided. Molds reproduce by means of tiny spores; the spores are invisible to the naked eye and float through outdoor and indoor air. Mold may begin growing indoors when mold spores land on surfaces that are wet. There are many types of mold, and none of them will grow without water or moisture.

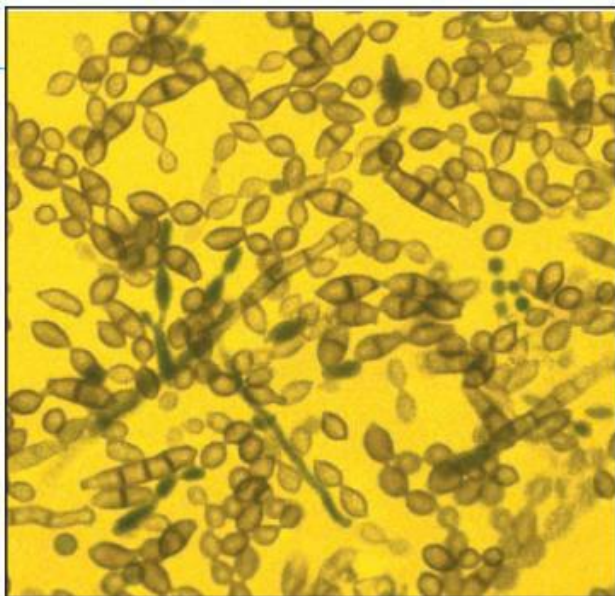
**Can mold cause health problems?** Molds are usually not a problem indoors, unless mold spores land on a wet or damp spot and begin growing. Molds have the potential to cause health problems. Molds produce allergens (substances that can cause allergic reactions), irritants, and in some cases, potentially toxic substances (mycotoxins).

Inhaling or touching mold or mold spores may cause allergic reactions in sensitive individuals. Allergic responses include hay fever-type symptoms, such as sneezing, runny nose, red eyes, and skin rash (dermatitis). Allergic reactions to mold are common. They can be immediate or delayed. Molds can also cause asthma attacks in people with asthma who are allergic to mold. In addition, mold exposure can irritate the eyes, skin, nose, throat, and lungs of both mold-

allergic and non-allergic people. Symptoms other than the allergic and irritant types are not commonly reported as a result of inhaling mold.

Research on mold and health effects is ongoing. This brochure provides a brief overview; it does not describe all potential health effects related to mold exposure. For more detailed information consult a health professional. You may also wish to consult your state or local health department.

**How do I get rid of mold?** It is impossible to get rid of all mold and mold spores indoors; some mold spores will be found floating through the air and in house dust. The mold spores will not grow if moisture is not present. Indoor mold growth can and should be prevented or controlled by controlling moisture indoors. If there is mold growth in your home, you must clean up the mold **and** fix the water problem. If you clean up the mold, but don't fix the water problem, then, most likely, the mold problem will come back.



*Magnified mold spores.*

**Molds can gradually destroy the things they grow on. You can prevent damage to your home and furnishings, save money, and avoid potential health problems by controlling moisture and eliminating mold growth.**





*Leaky window – mold is beginning to rot the wooden frame and windowsill.*

If you already have a mold problem –  
**ACT QUICKLY.**

Mold damages what it grows on. The longer it grows, the more damage it can cause.

**Who should do the cleanup?** Who should do the cleanup depends on a number of factors. One consideration is the size of the mold problem. If the moldy area is less than about 10 square feet (less than roughly a 3 ft. by 3 ft. patch), in most cases, you can handle the job yourself, following the guidelines below. However:

- If there has been a lot of water damage, and/or mold growth covers more than 10 square feet, consult the U.S. Environmental Protection Agency (EPA) guide: *Mold Remediation in Schools and Commercial Buildings*. Although focused on schools and commercial

buildings, this document is applicable to other building types. It is available on the Internet at: [www.epa.gov/mold](http://www.epa.gov/mold).

- If you choose to hire a contractor (or other professional service provider) to do the cleanup, make sure the contractor has experience cleaning up mold. Check references and ask the contractor to follow the recommendations in EPA's *Mold Remediation in Schools and Commercial Buildings*, the guidelines of the American Conference of Governmental Industrial Hygienists (ACGIH), or other guidelines from professional or government organizations.
- If you suspect that the heating/ventilation/air conditioning (HVAC) system may be contaminated with mold (it is part of an identified moisture problem, for instance, or there is mold near the intake to the system), consult EPA's guide *Should You Have the Air Ducts in Your Home Cleaned?* before taking further action. Do not run the HVAC system if you know or suspect that it is contaminated with mold - it could spread mold throughout the building. Visit [www.epa.gov/iaq/pubs](http://www.epa.gov/iaq/pubs) to download a copy of the EPA guide.
- If the water and/or mold damage was caused by sewage or other contaminated water, then call in a professional who has experience cleaning and fixing buildings damaged by contaminated water.
- If you have health concerns, consult a health professional before starting cleanup.



# MOLD **CLEANUP** GUIDELINES

## BATHROOM TIP

Places that are often or always damp can be hard to maintain completely free of mold. If there's some mold in the shower or elsewhere in the bathroom that seems to reappear, increasing the ventilation (running a fan or opening a window) and cleaning more frequently will usually prevent mold from recurring, or at least keep the mold to a minimum.



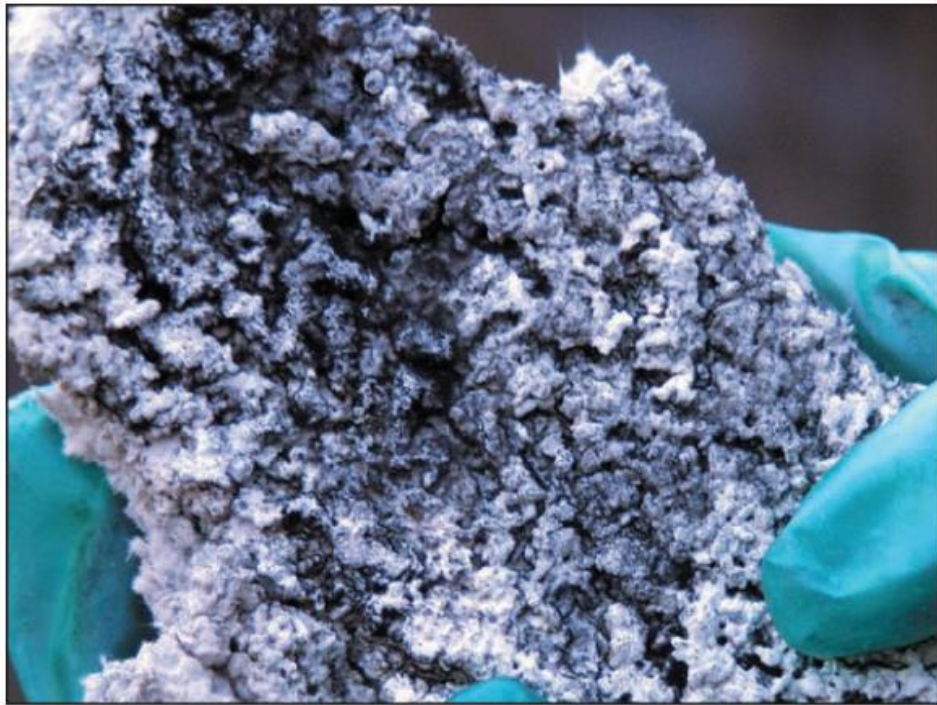
**Tips and techniques** The tips and techniques presented in this section will help you clean up your mold problem. Professional cleaners or remediators may use methods not covered in this publication. Please note that mold may cause staining and cosmetic damage. It may not be possible to clean an item so that its original appearance is restored.

- Fix plumbing leaks and other water problems as soon as possible. Dry all items completely.
- Scrub mold off hard surfaces with detergent and water, and dry completely.

*Mold growing on the underside of a plastic lawnchair in an area where rainwater drips through and deposits organic material.*



*Mold growing  
on a piece of  
ceiling tile.*



- Absorbent or porous materials, such as ceiling tiles and carpet, may have to be thrown away if they become moldy. Mold can grow on or fill in the empty spaces and crevices of porous materials, so the mold may be difficult or impossible to remove completely.
- Avoid exposing yourself or others to mold (see discussions: **What to Wear When Cleaning Moldy Areas** and **Hidden Mold**.)
- Do not paint or caulk moldy surfaces. Clean up the mold and dry the surfaces before painting. Paint applied over moldy surfaces is likely to peel.
- If you are unsure about how to clean an item, or if the item is expensive or of sentimental value, you may wish to consult a specialist. Specialists in furniture repair, restoration, painting, art restoration and conservation, carpet and rug cleaning, water damage, and fire or water restoration are commonly listed in phone books. Be sure to ask for and check references. Look for specialists who are affiliated with professional organizations.



# WHAT TO WEAR WHEN CLEANING MOLDY AREAS



*Mold growing on a suitcase stored in a humid basement.*

It is important  
to take  
precautions to  
**LIMIT  
YOUR  
EXPOSURE**  
to mold and  
mold spores.

- **Avoid breathing in mold or mold spores.** In order to limit your exposure to airborne mold, you may want to wear an N-95 respirator, available at many hardware stores and from companies that advertise on the Internet. (They cost about \$12 to \$25.) Some N-95 respirators resemble a paper dust mask with a nozzle on the front, others are made primarily of plastic or rubber and have removable cartridges that trap most of the mold spores from entering. In order to be effective, the respirator or mask must fit properly, so carefully follow the instructions supplied with the respirator. Please note that the Occupational Safety and Health Administration (OSHA) requires that respirators fit properly (fit testing) when used in an occupational setting; consult OSHA for more information (800-321-OSHA or [osha.gov/](http://osha.gov/)).



- **Wear gloves.** Long gloves that extend to the middle of the forearm are recommended. When working with water and a mild detergent, ordinary household rubber gloves may be used. If you are using a disinfectant, a biocide such as chlorine bleach, or a strong cleaning solution, you should select gloves made from natural rubber, neoprene, nitrile, polyurethane, or PVC (see **Cleanup and Biocides**). Avoid touching mold or moldy items with your bare hands.



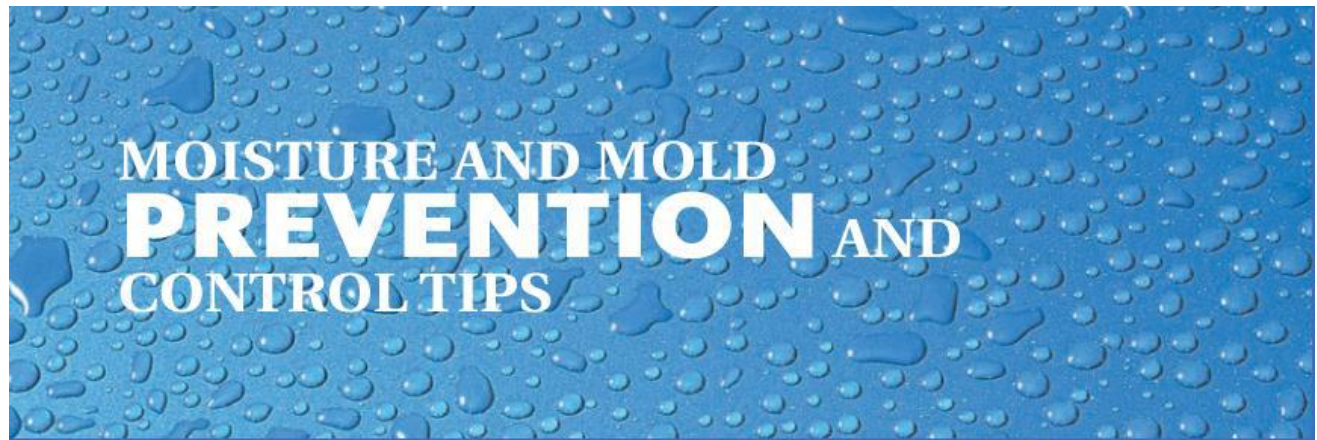
*Cleaning while wearing N-95 respirator, gloves, and goggles.*

- **Wear goggles.** Goggles that do not have ventilation holes are recommended. Avoid getting mold or mold spores in your eyes.

## **How do I know when the remediation or cleanup is finished?**

You must have completely fixed the water or moisture problem before the cleanup or remediation can be considered finished.

- You should have completed mold removal. Visible mold and moldy odors should not be present. Please note that mold may cause staining and cosmetic damage.
- You should have revisited the site(s) shortly after cleanup and it should show no signs of water damage or mold growth.
- People should have been able to occupy or re-occupy the area without health complaints or physical symptoms.
- Ultimately, this is a judgment call; there is no easy answer.



# MOISTURE

Control is the Key to  
**Mold Control**



*Mold growing  
on the surface  
of a unit  
ventilator.*

- When water leaks or spills occur indoors - **ACT QUICKLY.** If wet or damp materials or areas are dried 24-48 hours after a leak or spill happens, in most cases mold will not grow.

- Clean and repair roof gutters regularly.
- Make sure the ground slopes away from the building foundation, so that water does not enter or collect around the foundation.
- Keep air conditioning drip pans clean and the drain lines unobstructed and flowing properly.





*Condensation on the inside of a window-pane.*

■ Keep indoor humidity low. If possible, keep indoor humidity below 60 percent (ideally between 30 and 50 percent) relative humidity. Relative humidity can be measured with a moisture or humidity meter, a small, inexpensive (\$10-\$50) instrument available at many hardware stores.

■ If you see condensation or moisture collecting on windows, walls or pipes - ACT QUICKLY to dry the wet surface and reduce the moisture/water source. Condensation can be a sign of high humidity.

### **Actions that will help to reduce humidity:**

- ◆ Vent appliances that produce moisture, such as clothes dryers, stoves, and kerosene heaters to the outside where possible. (Combustion appliances such as stoves and kerosene heaters produce water vapor and will increase the humidity unless vented to the outside.)
- ◆ Use air conditioners and/or de-humidifiers when needed.
- ◆ Run the bathroom fan or open the window when showering. Use exhaust fans or open windows whenever cooking, running the dishwasher or dishwashing, etc.

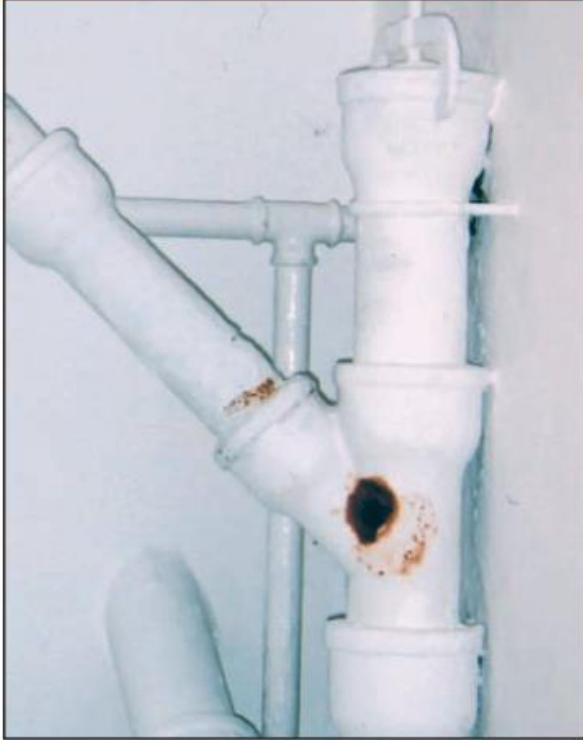
## Actions that will help prevent condensation:

- ◆ Reduce the humidity (see preceeding page).
- ◆ Increase ventilation or air movement by opening doors and/or windows, when practical. Use fans as needed.
- ◆ Cover cold surfaces, such as cold water pipes, with insulation.
- ◆ Increase air temperature.

*Mold growing on a wooden headboard in a room with high humidity.*



**Renters:** Report all plumbing leaks and moisture problems immediately to your building owner, manager, or superintendent. In cases where persistent water problems are not addressed, you may want to contact local, state, or federal health or housing authorities.



*Rust is an indicator that condensation occurs on this drainpipe. The pipe should be insulated to prevent condensation.*

### **Testing or sampling for mold**

Is sampling for mold needed? **In most cases, if visible mold growth is present, sampling is unnecessary.** Since no EPA or other federal limits have been set for mold or mold spores, sampling cannot be used to check a building's compliance with federal mold standards.

Surface sampling may be useful to determine if an area has been

adequately cleaned or remediated. Sampling for mold should be conducted by professionals who have specific experience in designing mold sampling protocols, sampling methods, and interpreting results. Sample analysis should follow analytical methods recommended by the American Industrial Hygiene Association (AIHA), the American Conference of Governmental Industrial Hygienists (ACGIH), or other professional organizations.



# HIDDEN MOLD

*Mold growing on the back side of wallpaper.*



**Suspicion of hidden mold** You may suspect hidden mold if a building smells moldy, but you cannot see the source, or if you know there has been water damage and residents are reporting health problems. Mold may be hidden in places such as the back side of dry wall, wallpaper, or paneling, the top side of ceiling tiles, the underside of carpets and pads, etc. Other possible locations of hidden mold include areas inside walls around pipes (with leaking or condensing pipes), the surface of walls behind furniture (where condensation forms), inside ductwork, and in roof materials above ceiling tiles (due to roof leaks or insufficient insulation).

**Investigating hidden mold problems** Investigating hidden mold problems may be difficult and will require caution when the investigation involves disturbing potential sites of mold growth. For example, removal of wallpaper can lead to a massive release of spores if there is mold growing on the underside of the paper. If you believe that you may have a hidden mold problem, consider hiring an experienced professional.



**Cleanup and Biocides** Biocides are substances that can destroy living organisms. The use of a chemical or biocide that kills organisms such as mold (chlorine bleach, for example) is not recommended as a routine practice during mold cleanup. There may be instances, however, when professional judgment may indicate its use (for example, when immune-compromised individuals are present). In most cases, it is not possible or desirable to sterilize an area; a background level of mold spores will remain - these spores will not grow if the moisture problem has been resolved. If you choose to use disinfectants or biocides, always ventilate the area and exhaust the air to the outdoors. Never mix chlorine bleach solution with other cleaning solutions or detergents that contain ammonia because toxic fumes could be produced.

**Please note:** Dead mold may still cause allergic reactions in some people, so it is not enough to simply kill the mold, it must also be removed.

*Water stain on a basement wall — locate and fix the source of the water promptly.*



## ADDITIONAL **RESOURCES**

For more information on mold related issues including mold cleanup and moisture control/condensation/humidity issues, visit:

**[www.epa.gov/mold](http://www.epa.gov/mold)**



*Mold growing on fallen leaves.*

*This document is available on the Environmental Protection Agency, Indoor Environments Division website at: [www.epa.gov/mold](http://www.epa.gov/mold)*

## NOTES

### Acknowledgements

EPA would like to thank Paul Ellringer, PE, CIH, for providing the photo on page 14.

Please note that this document presents recommendations. EPA does not regulate mold or mold spores in indoor air.



**Indoor Air Quality (IAQ)**