

# Addressing Pests through Asthma Remediation

*June 3, 2025*

RAMP's mission is to reduce the burden of asthma with a focus on health equity. Emphasizing both prevention and management, we build capacity, create linkages, and mobilize networks to advocate for policy and systems changes targeting the root causes of asthma disparities.





**UNIVERSITY OF CALIFORNIA**  
Agriculture and Natural Resources

Statewide Integrated  
Pest Management Program

This project was funded by the Department of Pesticide Regulation. The contents may not necessarily reflect the official views or policies of the State of California

Working together to reduce the burden of asthma

## Today's presentation

- Overview of IPM
- How Asthma Remediation can be used to address pests in accordance with IPM principles
- Decision-making and the workflow once pests are identified
- Putting it into practice
- Tools

## Indoor pest problems

- **Major pests (all can cause asthma):**

- German cockroaches
- Bed bugs
- Rodents

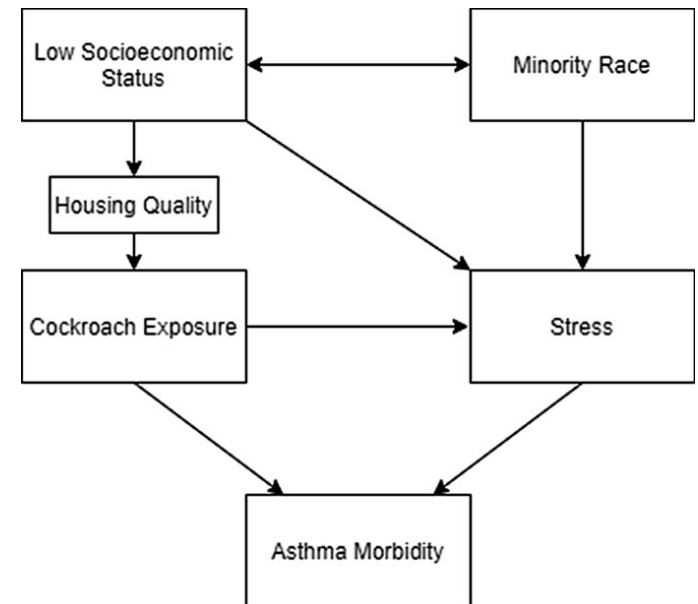
- **Minor pests:**

- Ants
- Flies
- Fleas
- Pantry pests





German cockroach: the most common indoor insect pest of public health significance. Found in residential settings, restaurants, food service, break rooms, public indoor spaces...



Inhalation of aerosolized frass (feces) and exuviae (shed skins) causes and exacerbates allergies and triggers asthma

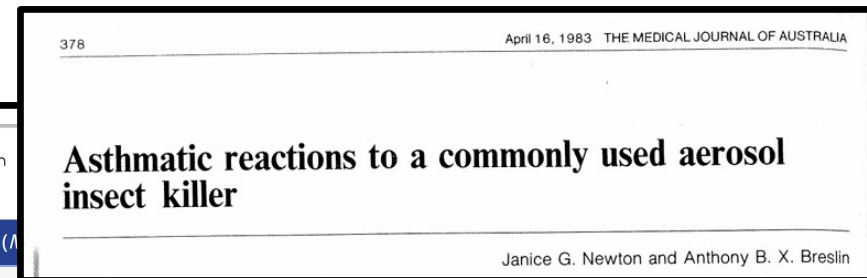
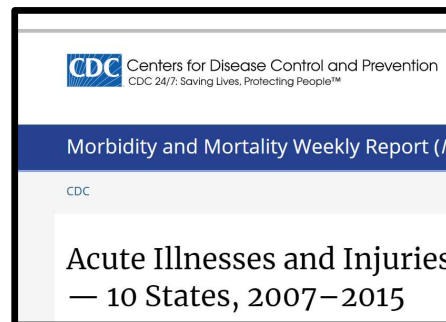
## Problems with conventional (prevailing) pest control

- **Reactive** (reliant upon complaints or pest problems before action is taken) *or* **Regular** (treatment provided on a schedule, regardless if pest is present)
- Chemically-focused (utilizing pesticides as the primary or only tactic)
- May be **ineffective**, leading to DiY pesticide use



## Problems with indoor pesticide use

- Pesticide residues on treated surfaces → pesticide exposure
- Pesticide aerosolization and drift → pesticide exposure
- Pesticide exposure may cause illness (“bug bombs”) and **may cause asthma!**
- Some pesticide products (esp. DiY) or application types **may be ineffective!**



## Problems with indoor pesticide use

- Pesticide exposure
- Pesticides may cause asthma!
- Pesticides may be ineffective!

### PESTS IN THE URBAN LANDSCAPE

Home, landscape, and structural pest news from the UC Statewide Integrated Pest Management Program



UCANR: Promoting healthy people and communities

#### Insecticide Sprays Ineffective for Cockroach Control

Published on: August 26, 2024

Nobody wants cockroaches in their home, especially since these pests can cause and worsen allergies in children, transmit diseases and bacteria, and contaminate foods.

If you find cockroaches in or around your home, do you reach for a do-it-yourself spray product? Well, you might not want to waste your money!

New research shows that some common consumer-grade insecticide sprays don't work to get rid of cockroach infestations. The study focused on products containing pyrethroids, which is a group of pesticides commonly found in many household insecticide products. Examples of pyrethroids include the active ingredients bifenthrin, cypermethrin, and permethrin.

In the study, both liquid and aerosol pyrethroid products killed less than 20% of German cockroaches on sprayed surfaces. Even when cockroaches were confined to the sprayed surfaces, most products took 8 to 24 hours to kill them, with some taking up to 5 days.



German cockroach adult. German cockroach adult. Photo by Jack Kelly Clark.

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exposure

may cause asthma!

may be ineffective!

April 16, 1983 THE MEDICAL JOURNAL OF AUSTRALIA

Adverse reactions to a commonly used aerosol killer

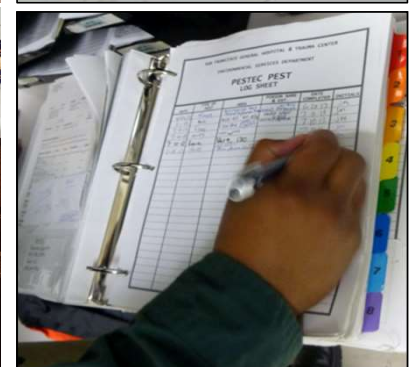
Janice G. Newton and Anthony B. X. Breslin

of Total Release Foggers

Working together to reduce the burden of asthma

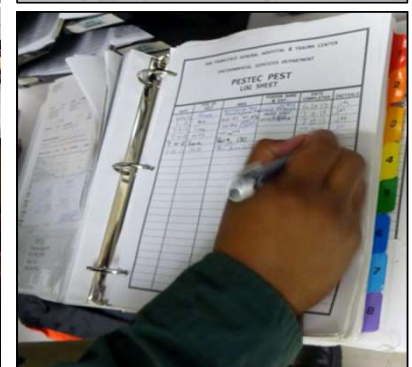
## What is integrated pest management (IPM)?

- A decision-making process that:
  - focuses on prevention
  - helps manage pests below unacceptable levels
  - minimizes negative impacts:
    - on the community
    - on the environment



## What is the IPM process?

- education and proper pest identification
- **prevention**
- monitoring
- treatment thresholds
- multiple integrated tactics
- evaluation



## How do we prevent pest problems?

- Deny pests their access to:

- structures
- food
- water
- shelter



## Cockroaches: what to look for



## How can we prevent cockroach infestations?

- keep food in insect-proof containers
- wash all dishes before bedtime
- wipe up food residues and grease deposits, vacuum (HEPA) crumbs from floor, crevices, behind appliances
- reduce clutter in kitchen and pantry
- use tight-fitting trash lid, empty often
- report suspected infestations & correct structural defects ASAP!

## Bed bugs: what to look for



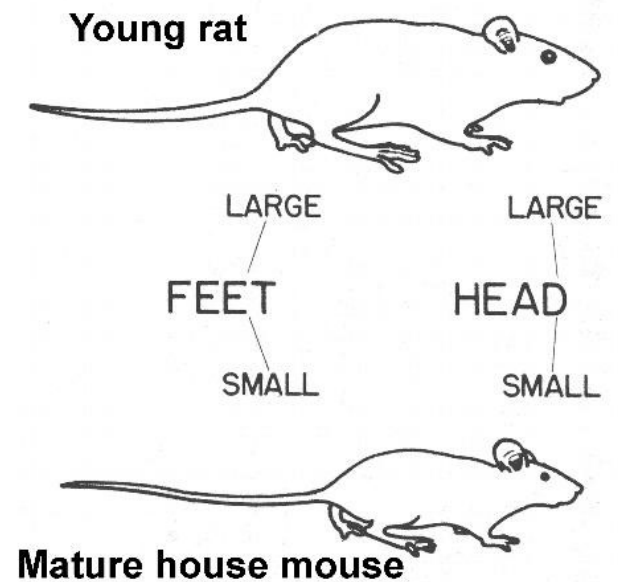
usually within 10 feet of a sleeping or resting area (not just beds!)

## How can we prevent bed bug infestations?

- avoid / be wary of secondhand bedroom furniture
- inspect sleeping / resting areas when traveling
- reduce clutter in bed / living rooms
- report suspected infestations (and correct structural defects) ASAP!
- confirmation requires signs and / or specimens!



## Rodents: what to look for



house mice usually forage within 15 feet of their nest

## How can we prevent rodent infestations?

- keep food in hard-walled containers
- ensure regular sanitation (as for cockroaches: dishes, crumbs, trash)
- clean up, store pet food over night
- reduce clutter throughout home
- report suspected infestations (and correct structural defects) ASAP!



## What does an IPM service look like?

- Strong policies, good communication, teamwork
- Strong knowledge of key pest biology, ecology
- Preventive practices, actions in place
- Regular monitoring, strong recordkeeping
- Combination of nonchemical and reduced-risk chemical tactics

UC IPM Pest Notes, Publication 74125  
Revised August 2023

UC IPM

**Hiring a Pest Control Company**

Integrated Pest Management for Home Gardeners and Landscape Professionals

Effective pest management requires pest identification, knowledge of pest biology and ecology, and an understanding of the different control measures available. If you do not have the time or ability to research your pest problem and control it, you may want to hire a pest control company to do the job for you. Some pest problems including bed bugs, termites, wildlife, and problems with large trees may require special licenses, specialized equipment, professional products, and technical experience to be effectively managed.

An experienced and licensed pest control representative can accurately identify pests and perform proper pest control services to help you solve challenging pest problems. Such services may be one-time or recurring, depending on the nature of the contract. A one-time service is in response to an incidental pest infestation, while a recurring service aims to manage existing infestations and prevent future pest problems over a long period.

Professionals working in this service industry are licensed by the State of California to identify pest problems and to safely and effectively use pesticides and other control methods. These professionals are trained on pest control regulations and methods as well as the principles of integrated pest management (IPM). Although professional pest control services may seem costly, the investment may actually save you time and money in the long term.

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**HIRING A PEST CONTROL COMPANY**

*Do your own research on the pest and effective management strategies*

If you see:  
don't know  
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University  
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If you are:  
the UC IPM  
PESTNOT  
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It may be  
landscap  
pests. Exa

Dust application into cracks and crevices using a hand bellows duster.

UNIVERSITY OF CALIFORNIA  
Department of Entomology and Plant Pathology

## Asthma Remediation through Community Supports

- Asthma Remediation covers minor to moderate environmental remediation
  - Lifetime cap of \$7500 per beneficiary

### Supplies

- Mattress and pillow dustcovers
- HEPA filtered vacuums
- De-humidifiers
- Air cleaners

### Services

- Minor mold removal and remediation services
- Ventilation improvements
- Integrated Pest Management (IPM)

\*Other interventions identified to be medically appropriate and cost effective.

# Integrating IPM into Asthma Remediation Practice

- What can asthma home visiting programs do?
- How context matters
- Developing a decision-tree

# What can asthma home visiting programs do?

## **Pay for cleaning crew to do one-time sanitation**

- Ask that they pull out the refrigerator and stove to vacuum and clean behind both
- Ask that they use only asthma-friendly cleaning products

## **Provide prevention supplies**

- General prevention supplies, like sealed food storage and garbage containers, and a vacuum with a HEPA filter.

If you identify a hoarding problem, reach out to county behavioral health services for resources

# What can asthma home visiting programs do?

**Contract with a licensed pest control operator (PCO) to provide IPM services** (as determined necessary by the licensed PCO):

- Conduct an assessment and short-term monitoring;
- Perform exclusion activities (repair holes and crevices that need sealing);  
and
- Implement a bait program for 3-6 months

# What can asthma home visiting programs do?

**Provide consumer supplies for pest management** like gel baits and rodent traps

**Connect client with free legal aid services, when appropriate,** so that they can understand their rights as tenants and determine whether to take steps like involving code enforcement

## How context matters



Client owns  
the home



Client rents  
the single  
family home



Client rents in  
multi-family  
housing  
complex

All clients with pest problems receive the services in the green box



**Pay for cleaning crew to do one-time sanitation**

- Ask that they pull out the refrigerator and stove to vacuum and clean behind both
- Ask that they use only asthma-friendly cleaning products

**Provide prevention supplies**

- General prevention supplies, like sealed food storage and garbage containers, and a vacuum with a HEPA filter.

If you identify a hoarding problem, reach out to county behavioral health services for resources

Some clients receive the green and blue services:

- homeowners
- renters willing to engage landlords and landlords are agreeable



**Contract with a licensed pest control operator (PCO) to provide IPM services (as determined necessary by the licensed PCO):**

- Conduct an assessment and short-term monitoring;
- Perform exclusion activities (repair holes and crevices that need sealing); and
- Implement a bait program for 3-6 months

Some clients receive the green and purple services:

- renters not willing to engage landlords
- renters who engage landlords, but landlords are not cooperative



**Provide consumer supplies for pest management** like gel baits and rodent traps

**Connect client with free legal aid services, when appropriate,** so that they can understand their rights as tenants and determine whether to take steps like involving code enforcement



Client owns the home

**Pay for cleaning crew to do one-time sanitation**

- Ask that they pull out the refrigerator and stove to vacuum and clean behind both
- Ask that they use only asthma-friendly cleaning products

**Provide prevention supplies**

- General prevention supplies, like sealed food storage and garbage containers, and a vacuum with a HEPA filter.

If you identify a hoarding problem, reach out to county behavioral health services for resources

**Contract with a licensed pest control operator (PCO) to provide IPM services** (as determined necessary by the licensed PCO):

- Conduct an assessment and short-term monitoring;
- Perform exclusion activities (repair holes and crevices that need sealing); and
- Implement a bait program for 3-6 months



Client rents the single family home

Client is OK with you engaging landlord

- Send landlord letter that:
  - Describes pest problem and impact on asthma;
  - Reminds them of the housing codes that require landlords to address pests
  - Explains the risks of pesticide sprays and promotes IPM practices
  - Offers to offset the costs of IPM services with Medi-Cal AR funds
- Follow-up with conversation

Landlord agrees to services

Landlord does NOT agree to services

**Contract with a licensed pest control operator (PCO) to provide IPM services** (as determined necessary by the licensed PCO):

- Conduct an assessment and short-term monitoring;
- Perform exclusion activities (repair holes and crevices that need sealing); and
- Implement a bait program for 3-6 months

**Pay for cleaning crew to do one-time sanitation**

- Ask that they pull out the refrigerator and stove to vacuum and clean behind both
- Ask that they use only asthma-friendly cleaning products

**Provide prevention supplies**

- General prevention supplies, like sealed food storage and garbage containers, and a vacuum with a HEPA filter.

If you identify a hoarding problem, reach out to county behavioral health services for resources

Client is not OK with you engaging landlord

**Provide consumer supplies for pest management** like gel baits and rodent traps

**Connect client with free legal aid services, when appropriate,** so that they can understand their rights as tenants and determine whether to take steps like involving code enforcement



Client rents in multi-family housing complex

Client is OK with you engaging landlord

- Send landlord letter that:
  - Describes pest problem and impact on asthma;
  - Reminds them of the housing codes that require landlords to address pests
  - Explains the risks of pesticide sprays and promotes IPM practices
  - Offers to offset the costs of IPM services with Medi-Cal AR funds
- Follow-up with conversation

Landlord does NOT agree to services

Landlord agrees to services

If the landlord has a contract with licensed IPM provider, AR programs can pay for additional unit-specific services, including services in blue box:

If the landlord has a contract with a licensed PCO, support the landlord to switch to IPM services with the current provider (sharing guidance document)

If the landlord does not have a contract with a licensed PCO, or if current PCO is unable to provide IPM services, encourage landlord to contract with a licensed IPM provider (sharing guidance document).

If successful, AR programs can support unit-specific services, including services in blue box:

**Licensed pest control operator (PCO) to provide IPM services (as they determine necessary)**

- Conduct an assessment and short-term monitoring;
- Perform exclusion activities (repair holes and crevices that need sealing); and
- Implement a bait program for 3-6 months

If unsuccessful

Client is not OK with you engaging landlord

**Provide consumer supplies for pest management** like gel baits and rodent traps

**Connect client with free legal aid services, when appropriate**, so that they can understand their rights as tenants and determine whether to take steps like involving code enforcement

**Pay for cleaning crew to do one-time sanitation**

- Ask that they pull out the refrigerator and stove to vacuum and clean behind both
- Ask that they use only asthma-friendly cleaning products

**Provide prevention supplies**

- General prevention supplies, like sealed food storage and garbage containers, and a vacuum with a HEPA filter.

If you identify a hoarding problem, reach out to county behavioral health services for resources

## Putting it into Practice

- It's more about having a conversation than inspecting a home
- It's about building trust and rapport
- Education focuses on prevention

## Tools

- We can also develop new tools to support implementation
- Examples of tools:
  - Sample letter to landlord
  - Lists of supplies that could be provided as part of AR
  - Guidance on connecting clients with free legal aid or medical-legal services
- What tools would be most useful to you?

## Next Steps

- Before we wrap up today:
  - Q&A
  - Brief survey
- After today's session:
  - Provide TA
  - Create tools
  - Small group discussions in September to discuss progress

**Brief Survey**  
**<https://www.surveymonkey.com/r/IPMforAR>**

