

What' s Bugging you?

Dealing with Infestations: Lice, Bed bugs and Scabies

Wingfield Rehmus, MD MPH
Dermatologist
BC Children' s Hospital
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What's bugging you? Dealing with infestations...

- What are they?
- How do you get them?
- Can they be treated?
- How not to get them
- Common questions/myths

What are head lice?



- *Pediculus humanus capitis*
- 2-3 mm long
- Found on head, eyebrows and eyelashes of people
- Bite to feed every few hours
- Not known to spread disease



Head lice - Background

- Nits
 - Eggs of lice
 - Firmly attached to hair shaft near base
 - Hatch in 8-9 days
 - If > 6mm (¼”) away from scalp, unlikely to still have live louse
 - Cannot hatch if temperature is lower than near the scalp
- Nymph
 - Smaller than adult
 - Reach maturity in 9-14 days
- Adults
 - Live about 30 days on person, only 1-2 if no human contact
 - Lay 6 eggs per day

How do you get head lice?

- Seen worldwide
- 1/10 in kids has headlice at some point
- Person to person contact
- Contact with something with lice on it
 - Less common
 - Hat, scarf, toque, comb, barrette, headband, pillowcase etc.

How do you know that you have them?

- Feeling of something crawling on head
- Itching at site of bites
- Sores on scalp or neck
- See lice on pillow, comb or brush
- See nits on hair (often hard to see lice because of color and speed)



<http://www.pediculosis-gesellschaft.de>
Deutsche Pediculosis Gesellschaft e.V

Treatment – Pesticide based treatments

- Permethrin, pyrethrines: Nix, Rid, R & C, Kwellada
- Wash hair
 - No combination shampoo/conditioner or conditioner
- Apply lice rinse
- Leave on for 10 minutes
- Do not re-wash hair for 1-2 days
- Comb dead and remaining live lice out with nit comb
- Repeat on day 9

- Note Lindane (Hexit, PMS-lindane) left on for only 4 minutes
 - no longer recommended as standard therapy

Treatment – non-pesticide chemical treatments

- Isopropyl myristate (Resultz) – dissolves waxy shell of louse
 - Apply to dry hair, leave on 10 minutes, rinse
- Dimethicone (NYDA) – suffocates louse
 - Apply to dry hair, leave on 30 minutes then comb
 - Allow to dry on hair overnight and shampoo in AM
- Not yet available in Canada but FDA approved
 - Ulesfia (benzyl alcohol 5%) - suffocates
 - Natroba (spinosad) - excites nervous system - louse becomes paralyzed and dies - no nit combing

Treatment – non-chemical options

- Vinegar, isopropyl alcohol, petrolatum, olive oil mayonnaise, butter – not found to be effective (petrolatum best of the group)

Potentially effective – small studies

- Cetaphil cleanser with hair dryer
- Tea tree and lavender oils
- Hot air



Lousebuster™

Treatment: Wet-combing

- Wash normally
- Apply thick conditioner
- Comb regularly
- Comb with special nit comb – from scalp
- Rinse after each combing
- Cover entire head
- Rinse
- Repeat - every 3-4 days for 2 weeks

Supplemental Measures

- Check everyone
- Treat those with nits/lice

- Remove nits
- Laundry
- Bag
- Soak

- Don' t fumigate



Common questions and myths

- Can head lice jump or fly?
- Are head lice a sign of dirtiness or poor hygiene?
- Can swimming in the pool get rid of head lice?
- What do I do if I still see active lice 8 hours after treatment?
- Should I treat the whole family?
- Is there anyone who can help?
 - www.licesquad.com
 - www.lice911.com

Body lice



- *Pediculus humanus humanus*
- Do not live on humans, but on clothes
- Nits present on seams occas on hair
- Lice bite several times per day
- Dies after 5-7 days without contact with human

Body lice - diagnosis

- Itching all over
- Bites especially around waistband, underarms
- See the lice on clothes



© Jere Mammino, DO

Body lice - treatment

- Launder clothing – change at least 1/week
- No chemical treatment needed
- Can transmit disease
 - epidemic typhus, trench fever, and epidemic relapsing fever

Pubic Lice “Crab lice”

- 1.1-1.8mm
- Attach to pubic, axillary, and chest hair
 - Can attach to eyelashes
- Transmission is by contact
 - Usually sexual

Pubic Lice - Treatment

- Permethrin 1%
- Wash, apply, leave, rinse, remove lice and nits
- Laundry
- All contacts from past month should be notified
- Avoid sexual contact until both partners treated

- Eyelashes/eyebrows – avoid permethrin – use ophtho grade petrolatum 2-4 times daily for 10 days
 - Manually remove lice and nits

What are scabies?

- *Sarcoptes scabiei* var. *hominis*
- Live in upper layers of skin
- Occurs world-wide
- All races, classes
- Spread easily in institutions

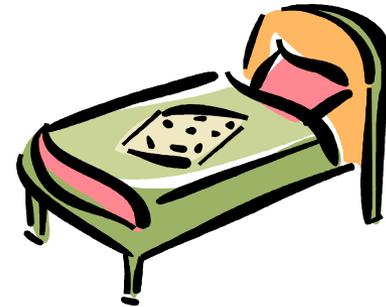
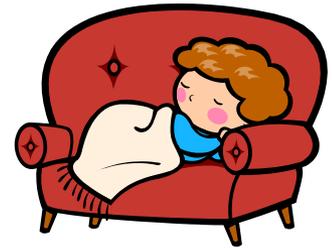


How do you get scabies



- Physical contact

- Person with scabies
- Objects touched by a person with scabies



Prevention/control

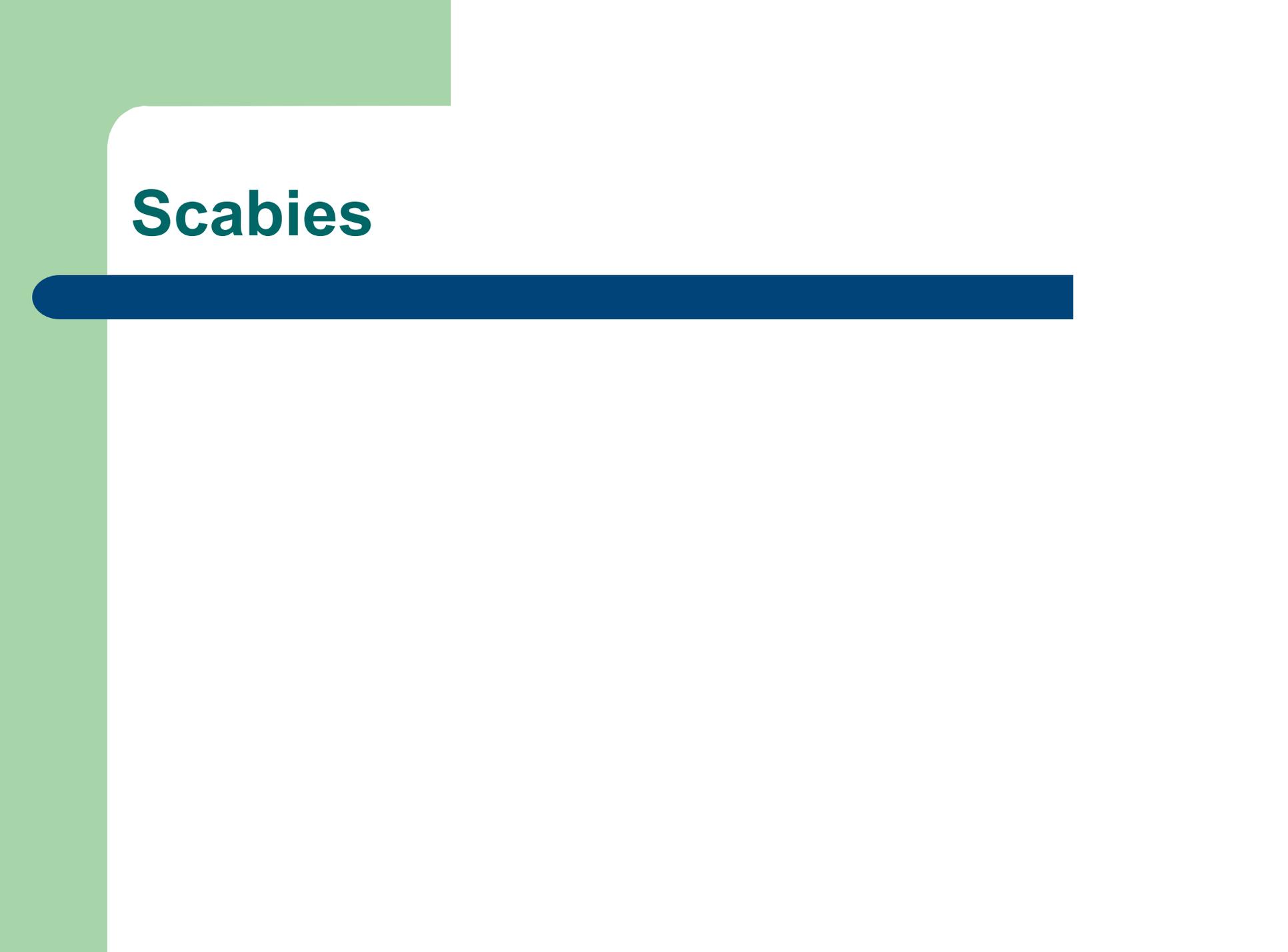
- Difficult to do!
 - Over-clothes
 - Avoid contact
 - Treat every possible carrier
-
- OK to go to work/school after 1 application of proper treatment

What happens if you have scabies?

- Itch!
- Rash appears up to 2 months after contact
- Between fingers, under arms, groin area, wrists
- Red, itchy bumps
- Burrows
- Only 10-15 mites

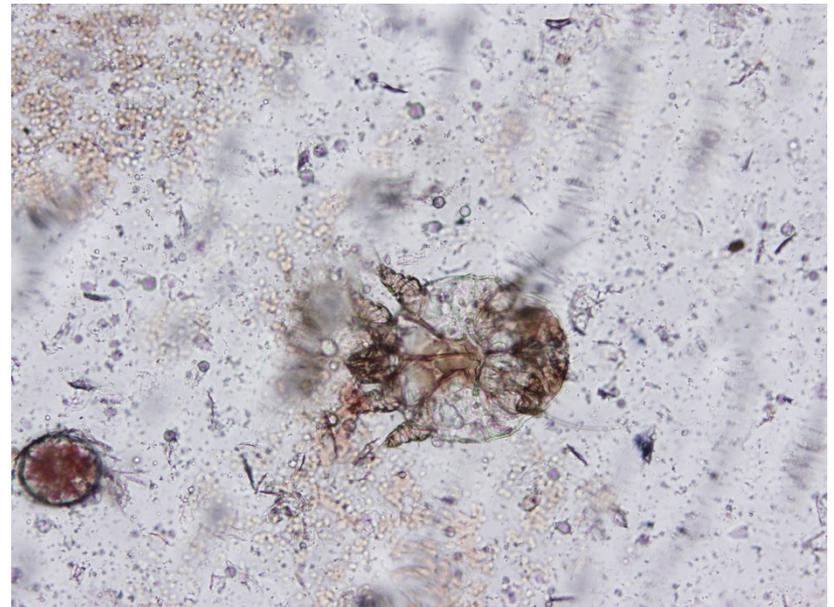


Scabies



Diagnosis

- Clinical diagnosis
 - Advantages and pitfalls
- Laboratory diagnosis
 - Mineral oil prep
 - KOH prep



Treatment

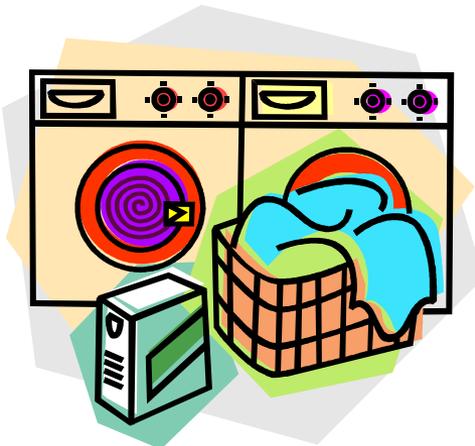
- Control the itch
- Stop the spread
- Prevent infection
 - Secondary skin infections can lead to problems

Treatment

- Permethrin 5%
- Sulfur
- Everyone! – all contacts
- Everywhere!
 - Under nails
 - In groin area
 - Between fingers
 - Head if < 2years old
- Topical cortisone may be helpful in controlling the itch

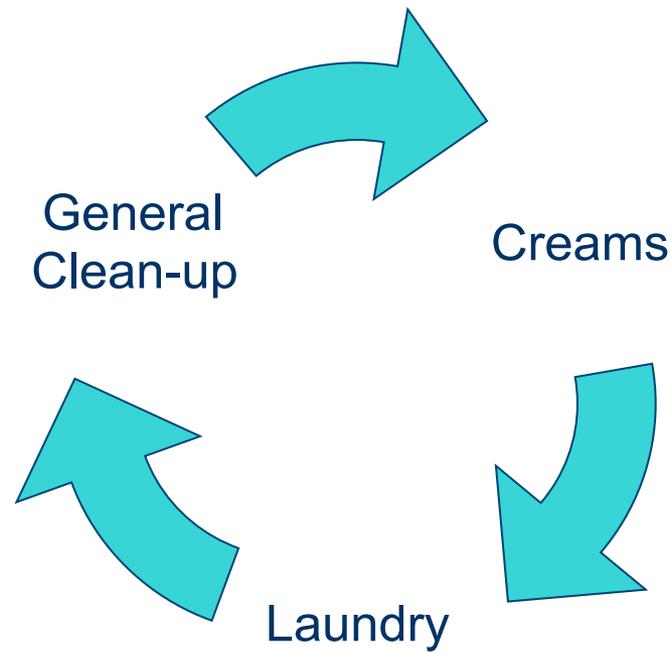
The cream's not all!

- Washing
- Vacuuming
- Sealing
- Telling others



Treatment – Not quite done yet!

- Repeat in 1 week



Follow-up

- Itch can persist for 3-6 weeks
 - Especially on palms and soles of babies - months
- Potential reinfestation

Special Note – Crusted scabies

- Seen in immunocompromised patients
 - Down syndrome
 - Neurologic disorders
 - AIDS
- Heavy burden of mites
- Less itchy
- Extremely contagious



Common Questions

- Pets?
- Spot treatment or cream?
- Sign of dirtiness?

Ivermectin

- Commonly used anti-helminth worldwide
 - Onchocerciasis control programs
- Effective against head-lice and scabies
 - Effective in mass-control efforts in other areas
 - Preferred treatment for crusted scabies
- Available as special access drug in Canada
 - For use in those over 15kg
 - 200µg/kg (3 and 6 mg pills)
 - Repeat in 1-2 weeks

Bed bugs

- Small oval, non-flying insects
- Do not live on people, but bite for food
- 5-7 mm flat bodies (apple seed)
- Live about 1 year
- Can survive for months without human contact

Bed bugs

- Re-emergent problem
- Killed by DDT
- Increasing due to travel, immigration, pesticide controls
- Houses, apartments, hotels, theaters, library books, transit vehicles

Bed bugs - In the home

- Mattresses and box springs - along seams
- Tiny cracks in furniture
- Wicker furniture
- Peeling wallpaper
- Edges of carpet
- Curtain folds
- Behind electrical plates
- Under baseboards



Bed bug - Clinical picture

- Painless bite
- Exposed skin
- Small itchy bumps
- “breakfast, lunch and dinner”
- Difficult to differentiate from any other bites
 - Fleas, mosquitos
- Not known to transmit disease

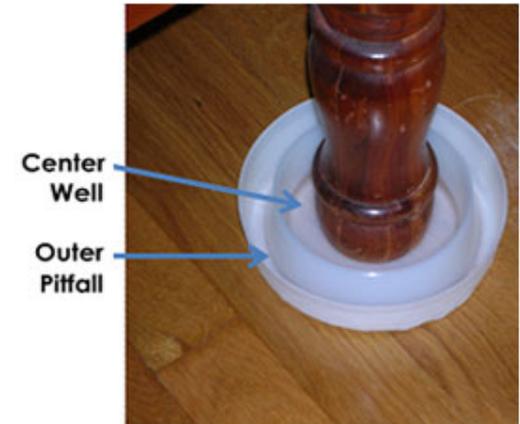


Bed bugs - Treatment

- Bites themselves rarely need treatment
 - Corticosteroids
 - Antihistamines
 - Prevent infection from scratching
 - Antibiotics if infected

Bed bugs - Confirmation

- Careful house inspection
 - Flashlight
 - Baby wipes, alcohol wipes
- Check mattress and box springs
- Double sided tape on bed legs
- Interceptors
- Remove electrical plates
- Check in couches, behind picture frames, in cracks and crevices
- Heavy infestation can give “sweet” smell to room



Climb-up interceptor

Bed bugs - Eradication

- Very difficult
- Pest control professional often required
- Spray wherever possible
- Steam cleaning
- Set out glue boards or sticky tape on legs of bed
- Seal all cracks
- Remove clutter
- Cover pillows/mattress with plastic cover for 1 year (or throw away if heavily infested)
- Wash linens and clothes on hot
- Vacuum, vacuum, vacuum

Bed bugs - Eradication

- Take bed frame apart and remove headboard
- Stay in same bedroom
- Consider painting furniture white
- Bed interceptors

Bed bugs - Prevention

- Hotel
 - Suitcase placement
 - Room inspection
 - Do not bring pillow from home
- Laundromat
 - Don't bring cloth bag unless washing
 - Place basket on top of washer
- Used furniture/clothing
 - Check carefully, vacuum, high heat

Bed bugs - home remedies

- Lavendar oil - reported to repel
- Sleeping with lights on - not helpful
- Conventional repellants (DEET) - not helpful
- Diatomaceous earth - can help if not severe infestation
- Boric acid - not helpful

Summary

- Infestations not a sign of dirtiness
- Stigma is harmful in control of spread
- Only body lice transmit disease
- Lice - treat only those with known infestation
- Scabies - treat all contacts
- Ivermectin is an alternative for severe infestations
- Cleaning is important for all
 - Heat is helpful
- An ounce of prevention.....

Thank you!

