

# Boone County Schools

## Bed Bug Procedures

### **Introduction**

According to 902KAR 2:170 (Medical conditions which may pose a threat in the school environment): Bed bugs, while having the potential to harbor pathogens in their bodies, are not known to transmit diseases to humans and are not regarded as a medical threat. Boone County Schools' policy for Contagious Diseases and Parasites (09.213) provides exclusion guidelines from school based on medical conditions, infections, and communicable diseases or conditions as defined by the Cabinet for Health and Family Services. The Cabinet and the Department of Public Health have not issued any state mandates or policies identifying bed bugs as a public health hazard and have no policies in place recommending exclusion or notification if bed bugs are present in the student's home. Therefore, students in the Boone County Schools who may have bed bug bites, or whose homes may have bed bugs, shall not be excluded from regular school attendance. If bed bug presence is suspected, as evidenced by bug bites on a student, school personnel shall notify parents/guardians of suspected students and provide them with the following information in order to address the infestation.

### **Identification of bed bugs**

Adult bed bugs have flattened oval, wingless bodies with well-developed antennae. They are rusty red to deep mahogany in color and are about 1/5 inch long. They are easily visible to the naked eye (a mature bug can be compared to the size of an apple seed) and, being unable to jump or fly, move at about the speed of a crawling ant. The nymphs (immature or newly hatched bed bugs) are colorless until the first feeding and then become a lighter yellowish-white in color. Positive identification often requires the help of a professional; experience has shown that only a small percentage of suspect specimens examined are actually bed bugs.

Bed bugs feed on the blood of humans and other warm-blooded hosts (birds, mice and rats, and even household pets). While a typical bed bug feeds every 5 to 10 days, they have been known to go as long as up to 18 months without a blood meal.

Home infestation occurs after bed bugs 'hitch hike' their way into a residence via luggage or used furniture (mattresses, upholstered couches and chairs, or pillows). Once transported, the bugs hide in cracks and crevices in a room (usually the bedroom) during the day in order to be close to a blood source at night.

### **Identification of bed bug bites**

Bed bug bites appear as itchy red bumps or welts with localized swelling and can be found on areas of the skin that were exposed during sleep. The degree of redness, swelling and itching depends on the victims' individual allergic response to the saliva of the bed bug. The saliva acts as an anticoagulant and is injected into the victim's skin when the bed bug is feeding. Bites often appear in a row or cluster: this pattern occurs when the bed bug is disturbed while feeding (referred to as 'breakfast, lunch and dinner'). The bites of fleas, mites, lice,

scabies, and spiders, along with other communicable rash-producing diseases, can mimic bed bug bites. It is important to seek medical attention if bites appear to be severe in nature, are infected, or if bites alone are the only evidence of bed bugs (i.e. no evidence of bed bug infestation when parents/guardians are contacted).

### **Parent/Guardian notification**

If bed bug bites are suspected on a student, parent notification is an important first step in the management process. It will be necessary for the parent/guardian to inspect the home for potential infestation (infestation information to follow) and follow up with treating an infestation. Bed bugs often seem to arise out of nowhere and frequently the presence of the itchy bites is the first evidence of the bugs' presence.

### **Infestation information**

An increase in immigration and international travel, along with the reduced use of urban pesticides, are important factors identified in the recent resurgence of bed bugs in this country.

Unlike cockroaches that feed on filth, bed bugs feed on blood and can occur in the cleanest environments. Low infestations may be difficult to detect and, as mentioned earlier, the earliest sign of the presence of bed bugs may be the appearance of bites.

Checking for bed bug infestation initially involves looking for the *evidence* of bed bug presence rather than the actual bugs themselves. Bed bugs congregate in habitual hiding spots; these areas become marked by dark spotting and staining---this staining is the dried excrement the bugs pass after ingesting blood.

Thorough inspection of mattresses and other upholstered pieces of furniture, particularly around edges, seams, and tufting, along with the crevices of wooden night stands and other bedroom furniture should be done. The area behind the bed's headboard is another favorite hiding spot for bed bugs. Using a flashlight to check bed linens in the middle of the night provides the best opportunity to verify the presence of bed bugs as they are active at night and will be seen crawling in search of food. Placing long strips of double-sided carpet tape near or around the bed (or couch, if someone sleeps on that at night) is another easy way to detect the presence of bed bugs---or insect presence in general.

### **Preventing infestations**

- While traveling, inspect any room you're about to stay in for evidence of bed bug infestation. If found, request a new room---but check that new room for evidence of infestation, too.
- When staying in a hotel/motel room, do not place luggage on the floor by the bed: place it on a luggage stand.

- After returning home, inspect luggage for any bugs that may have 'hitched a ride' home with you.
- Be aware of any bug bites seen on you or your children's skin, particularly bites that appear on skin that was exposed during sleep.
- Change bed linens at least once a week and launder in hot water.
- Do not bring home any used furniture, especially mattresses and upholstered pieces, without a thorough inspection prior to doing so.
- Vacuum around your home at least once a week, paying special attention to areas surrounding bed and furniture posts.
- Prevent bed bugs from getting into homes and buildings by removing debris from around the building, repairing cracks in walls and caulking windows and doors.

### **Treatment of infestations**

Once an infestation has been identified, managing bed bugs requires a multifaceted approach that usually includes room cleaning, room modification and insecticidal treatment to the residence.

- Infected bedding and clothing must be laundered in hot water; bagging after laundering can prevent the clothing from becoming re-infested.
- Mattresses and pillows can be permanently cased in plastic mattress/pillow covers in order to deter the nightly migration of bed bugs as they seek a blood source, but often severely infested mattresses must be discarded and should be labeled as infested prior to disposal.
- Dismantle bed frames to expose additional bug hiding spots; pull the bed frames away from the wall and place frame legs into dishes to prevent bugs from climbing back onto the bed.
- Items that cannot be laundered can be de-infested by heating for several minutes in a clothes dryer on a high heat setting.
- Bed bugs can succumb to temperatures below 32 degrees; sources vary in the length of time required for total extermination at this low temperature from several days to at least 2 weeks.
- Reduce clutter in rooms to limit the hiding places for bed bugs.
- Site vacuuming can help remove some of the bugs, and steam cleaning of carpets may help kill bugs and eggs that vacuuming missed.
- Treatment with an insecticide by a professional is the most effective method of bed bug elimination. Professional extermination is not effective in killing bed bug eggs; depending on the temperature, those eggs take approximately 1 to 3 weeks to hatch.

- Because of this, a follow-up inspection is recommended 3 weeks after the pesticide treatment. Only use pesticide products if instructions are completely and accurately read, understood and followed.
- If you rent, contact your landlord and agree on a plan to manage the infestation. Landlords are generally legally required to contract with a professional licensed pest control exterminator; however, tenants have an obligation to work with owners and landlords in order to facilitate the clean-up.
- Homeowners should contact an experienced, licensed pest exterminator.

### **Considerations for school management and control**

Bed bugs are nocturnal. They are most active the hour before dawn, seeking a source of heat and carbon dioxide (found in warm-blooded mammals) in order to feed on blood. In the daytime they tend to stay out of the light; and while they can hide in almost any crevice or protected location, the most common hiding place is around a bed close to where people sleep. Infestations are typically concentrated on or about bedding, mattresses or upholstered furniture where people sleep. Only cases of severe infestations are bed bugs carried from place-to-place by people on clothing they are currently wearing.

School procedure: If a bedbug infestation is suspected in the home based on the presence of bug bites and parent communication the school reserves the right to inspect the child's clothing, (including shoes, coat or jacket), back pack and other items of potential transmission (such as a wheelchair) daily upon arrival to school. A daily change of clothing upon arrival to school maybe required.

Bus procedures: Students experiencing infestation in their homes may continue to ride the bus. They will have assigned seats and drivers are to clean the seats, flooring and walls by those seats after they students vacate the bus with alcohol or an alcohol-based product. This treatment will only be effective if the alcohol comes in contact with the bug so thorough and consistent treatment is recommended.

Following these procedures will reduce the potential for an infestation in school. Good housekeeping----mechanical removal of any bugs present by through vacuuming, and the control of debris and litter both in and around a building----will also greatly assist in control of any bugs that could potentially be transported to school in a back pack or on students' clothing.

### **Sources**

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