

## Bed Bug Disease Transmission Potential and Bite Symptoms

### Disease transmission potentials

Although over 30 disease pathogens have been found in bed bugs, transmission of these pathogens to humans has never been documented and is considered highly unlikely. For this reason, bed bugs are not considered as a serious disease threat.

### Bite Symptoms

Instead, the bed bug's medical significance is mainly limited to the itching and inflammation associated with their bite. Please note that not everyone reacts to bed bug bites in the same fashion. Some people have reactions that are delayed for several days or more while others do not react at all. Reactions to bites can also vary significantly between individuals from mild itchy welt, to a more severe rash like symptom. The most common reactions appear as a raised, reddened welt similar to a mosquito bite. Bites tend to be very itchy and often appear in rows of 3-4 welts or more. There are currently a couple of explanations for why bites often appear in rows. The first explanation is based on the sensitivity of bed bugs in motion. A single bug may withdraw its mouthparts while feeding in response to the slightest disturbance, e.g., person twitching during sleep. After removing their mouthparts while feeding, the bed bug will move a short distance and then begin feeding again, resulting in several bites in a row caused by a single bed bug. The second explanation involves numerous bugs that are lined up one next to the other, all feeding at the same time (similar to cattle trough). The important point is that the number of welts does not always correlate with the number of bugs that bit the individual.

It is also important to note that bed bugs cannot be diagnosed by the bite alone. While a medical professional can examine the bites, they can only conclude that the bite symptoms are consistent with those produced by bed bugs. This is not a confirmation; however, it does

provide the grounds for suspecting that bed bugs may be present and that a professional should be called in to perform a bed bug inspection in the structure where the bites occurred.