



Using Insect Repellents on Children

FACT SHEET 18-044-0618

Applying insect repellents helps protect children from insect bites, particularly bites from mosquitoes and ticks. While parents want to protect their children from insect bites and insect-borne diseases, they often have questions about how to use insect repellents safely and properly. This fact sheet addresses common questions about using insect repellents on children and provides references for additional reading.

Why should I use insect repellent on my child?

Insects, especially mosquitoes and biting flies, leave itchy, uncomfortable bites and can potentially transmit diseases like West Nile virus, dengue, chikungunya, and Zika virus. Not only are children exposed to biting insects more often than adults, children are also more susceptible to insect-borne diseases because their immune systems are not fully developed. Insect repellents help protect children from mosquito, tick, flea, and chigger bites when properly applied to skin.

How do I know if a repellent is safe and effective to use on my child?

Parents should always select insect repellents registered by the U.S. Environmental Protection Agency (EPA), which have been tested for both safety and efficacy when used as directed. These products can be identified by an EPA registration number, which is found at the bottom of the printed label on the repellent can/bottle. Although EPA-registered insect repellents can be safely used on children, there are age restrictions for very young children. According to the Centers for Disease Control and Prevention (CDC), you should not use insect repellent on babies younger than 2 months of age. Additionally, do not use products containing Oil of Lemon Eucalyptus (OLE) or Para-menthane-diol (PMD) on children younger than 3 years old.

How do I safely apply insect repellent to my child?

Always follow the directions for use and any precautions stated on the product label. As an example, an EPA approved insect repellent label states: **DIRECTIONS FOR USE.** It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

- Hold 4 to 6 inches from skin while spraying. Keeping nozzle pointed away from face. Slightly moisten skin with a slow sweeping motion.
- Excessive amounts or frequent application is unnecessary.
- Do not exceed two application per day.
- Apply on face by first spraying small amounts in palms of hands and spreading on face and neck, avoiding your eyes.
- Do not apply to hands of small children.
- When using on children, apply to your hands and then apply it to the child's hands. To apply to a child's face and neck, spray the product into your hands and apply to the child. Take care to avoid mouth and eyes and apply sparingly around ears. Do not allow children to handle the products.
- Do not spray directly to face.
- Avoid contact with lips, cuts, wounds, or irritated skin.
- Do not apply under clothing.

Never allow children to handle or apply repellents themselves. Apply just enough insect repellent to cover exposed skin. Applying extra repellent will not give any better or longer-lasting protection. Do not apply repellent to children's hands because children may put their hands in their mouth or touch their eyes. Avoid spraying insect repellent in enclosed areas or near food, and avoid breathing in the spray during application. Wash insect repellent off skin and clothing when it is no

longer needed. Also, do not use products that combine DEET with sunscreen. The DEET may make the sun protection factor (SPF) less effective. These two-in-one products can overexpose your child to DEET because the sunscreen needs to be reapplied more often than the DEET does.

Which EPA-registered insect repellents are best for exposed skin?

Scientific studies have shown that the most effective EPA-registered insect repellents for skin application contain the active ingredients DEET (N,N-diethyl-m-toluamide), Picaridin, IR3535, OLE or PMD. Products containing these active ingredients provide long-lasting protection from biting insects and are recommended by the CDC and EPA.

Are DEET and picaridin safe for children?

The American Academy of Pediatrics (AAP) states that DEET-based repellents (at concentrations of 30% or lower) are safe to use on children. The AAP has not yet issued a specific recommendation or opinion regarding the use of picaridin on children.

Can I use insect repellents if my child has hypersensitive skin?

As with most substances, a small number of children may be exceptionally sensitive to a particular repellent. This sensitivity usually causes a skin reaction such as a rash or a hot sensation. If this happens, stop using the repellent immediately, wash the affected area with soap and water, and contact your healthcare provider for more guidance. If you go to a doctor, it is helpful to take the repellent or a copy of the repellent label with you.

Is it safe to use permethrin on children's clothing?

Yes, permethrin is safe for use on children's clothing. Permethrin has been used since the 1990s as a clothing insect repellent and has an excellent safety record. In 2009, the EPA specifically studied the safety of permethrin clothing worn by teens, children, and toddlers; the EPA found that the permethrin-treated clothing met all the safety standards set for children. Five percent (5%) permethrin is also licensed by the U.S. Food and Drug Administration for use on children in lice shampoos and scabies skin treatments. Note: Permethrin-containing products other than lice and scabies treatments should not be applied to skin.

How else can children and adults protect themselves from insect bites?

In addition to using repellent, children can also prevent insect bites by wearing long pants and long-sleeved shirts while outdoors. In tick habitats, tuck pant cuffs into socks and shirt into pants to prevent ticks from crawling underneath clothing. Use a broad-brimmed hat to prevent sunburn and keep insects away from your child's face. Protect infants and toddlers by placing mosquito netting over strollers and car seats. Check children carefully for ticks at the end of the day and remove attached ticks immediately. Reduce mosquitoes around your home by getting rid of standing water in containers and toys to prevent mosquitoes from breeding. Check doors and window screens for holes and repair the screens to prevent mosquitoes from getting inside homes. Reduce tick populations by regularly mowing the lawn, getting rid of hiding or living spaces for mice and other animals, and properly disposing of food and garbage in trash cans with tight-fitting lids.

How do I safely store insect repellents?

When not using insect repellents, store them in a cool, dry place out of the reach of children, preferably in a locked cabinet.

Where can I get more information about using insect repellents on children?

American Academy of Pediatrics: <https://healthychildren.org/English/safety-prevention/at-play/Pages/Insect-Repellents.aspx>

U.S. Centers for Disease Control and Prevention: <https://wwwnc.cdc.gov/travel/page/avoid-bug-bites>

U.S. Environmental Protection Agency: [or https://www.epa.gov/insect-repellents/find-repellent-right-you](https://www.epa.gov/insect-repellents/find-repellent-right-you)