# Guidance on Head Lice Prevention and Control for School Districts and Child Care Facilities

This guidance document is provided to assist local health departments, elementary schools, preschools, and child care facilities in developing policies and procedures for the care of children found to have head lice. The California Department of Public Health (CDPH) recommends that schools and child care facilities maintain an active educational campaign for parents, guardians, and caregivers on the accurate diagnosis and proper treatment of head lice cases to prevent transmission of lice in schools and reduce lost school days due to head lice infestation.

Traditionally, policies in schools emphasized that a child infested with head lice could not return to school until nits (eggs or egg casings) were no longer found in the hair. There is no evidence that a "no-nit policy" prevents or shortens lengths of outbreaks (Pollack et al. 2000, Williams et al. 2001). The American Academy of Pediatrics, the National Association of School Nurses, and the U.S. Centers for Disease Control and Prevention are all opponents of no-nit policies (Frankowski and Weiner 2002; Schoessler 2004). The exclusion of a child from school can adversely affect their emotional, social, and academic well-being and often stigmatizes the child unnecessarily. In addition, transmission of head lice in the classroom setting is low (Mathias and Wallace 1989). Therefore, CDPH recommends that children should not be excluded from the classroom based on finding head lice or nits.

For the effective control of head lice in schools and child care facilities, CDPH recommends a multipronged approach:

- Early detection of head lice infestations through routine screening by parents/caregivers
- Treatment of children found to have live lice
- Distribution of educational material to school staff and parents/caregivers on head lice, nit combing, and treatment, such as CDPH's head lice flyer or fact sheet (available in English and Spanish). Parents/caregivers can also be directed to visit the CDPH Head Lice webpage for additional information (https://www.cdph.ca.gov/Programs/CID/DCDC/pages/headlice.aspx).

## Head Lice

Adult head lice, *Pediculus humanus capitis*, are tan or greyish-white, wingless insects approximately ⅛ inch in length (similar in size to a sesame seed) that live in people's hair and feed on human blood. Adult females lay eggs (nits) by gluing them to the base of hairs of the head, close to the scalp. Nits are yellow or white in color and are most often found within ¼ inch of the scalp; those farther away from the scalp are usually empty (the lice have already hatched) or are dead. Lice do not fly or jump and are spread from person to person by head-to-head contact.

Lice can be detected by parting the hair and examining near the scalp, most commonly near the ears and the back of the neck. Wetting the hair before combing has been shown to be a helpful method in diagnosing an active lice infestation (Jahnke 2009). Children ages 3-11 years old are at highest risk for head lice infestation. Head lice, while a significant nuisance problem, do not transmit disease to humans.

## Detection of Head Lice

There is a lack of evidence showing that routine class or school-wide screening reduces lice infestation rates (Frankowski 2010). Moreover, many schools lack the resources to do routine lice checks. Parents/caregivers should check their children for lice regularly. If lice are seen on a child at school, parents/caregivers should be notified at the end of the school day and given a copy of CDPH's head lice flyer. At home, all members of the family or household should be checked for head lice, and those with lice should be treated that night. The day following treatment, the child should be re-examined and admitted to class. If the child is still infested, the parent/caregiver should be contacted again.

While classroom or school-wide notification is not recommended after head lice have been detected in a student, this policy is at the discretion of the school nurse or administration.

## Environmental Control

Adult lice will die within two days without a blood meal. In a classroom where head lice are found, actions should be taken if possible to reduce head-to-head contact (Frankowski 2010). Always keep each child's hat and other clothing on separate hooks and hang each child's coat on the back of their chair.

Any items, such as clothing, bedding, and stuffed toys, that the child may have had contact with two days prior to treatment should be laundered (Burkhardt 2006). These items can be machine washed in hot water and dried using the high heat cycle as exposure to temperatures >130°F usually kills lice and nits within 5 minutes. Belongings that cannot be washed may be dry cleaned or placed in sealed plastic bags for two weeks to kill hatching lice (nits take 6-9 days to hatch and are unlikely to hatch away from the scalp). Combs, brushes, picks, and other hair care items can be soaked in hot water (>130°F) for 5-10 minutes. Vacuum the furniture, carpeting, and other fabric-covered items, where the infested child sat or laid.

Pesticide application to the school or home environment is not recommended.

## Treatment

It is important that parents/caregivers always follow the label instructions when administering products to treat head lice. Some treatments only kill live lice and a second treatment 7-10 days after the first treatment may be necessary to kill any lice that recently hatched. Reports of resistance to some over-the-counter treatments have been reported in California and therefore, not all lice may be killed by treatment. Combing and removal of nits may help to reduce the duration of infestation. CDPH recommends the combination of treatment with lice-killing products and nit combing.

Several brands of nit combs are available at local pharmacies. Metal flea combs also work well for nit combing and can be bought at pet stores. **Sometimes it may seem that the treatment used has failed when actually: 1) the substance on the hair shaft was misidentified as nits (i.e., dandruff, styling products, etc.), 2) treatment instructions were not properly followed, or 3) re-infestation with head lice has occurred.**

**Over-the-counter treatments:**

- **Pyrethrins** with piperonyl butoxide shampoo (i.e. A-200®*, Pronto®*, R&C®*, RID®*, Triple X®* for children 2 years of age and older), **and permethrin** (1%) lotion (i.e. Nix®* for children 2 months of age and older) treatments may be used to kill live lice but not nits, and may need to be used again 9-10 days later to kill newly hatched lice. A study of head lice in California indicates that some lice populations are resistant to permethrin and pyrethrins (Gao et al. 2003; Gellatly et al. 2016). If live lice are still observed after a full course of treatment, contact your healthcare provider or pharmacist.
- **Sklice**®* (0.5% ivermectin lotion) is a treatment for children 6 months of age and older. Ivermectin is derived from a soil bacterium and causes paralysis and death in lice. This is a single-use product.

**Available by prescription only:**

- **Ovide**®* (0.5% malathion lotion) is an effective product to kill lice and may kill some nits. This product can be used only on children 6 years of age and older. Ovide®* is flammable so parents/caregivers must not use hairdryers when applying this product (Meinking et al. 2002; Frankowski 2010). Retreatment may be necessary if live lice are seen 7-9 days after the initial treatment.
- **Natroba**®* (0.9% spinosad topical solution) is a treatment for children 6 months of age and older. Spinosad is derived from a soil-dwelling bacterium and works to "over-stimulate" lice and nits into paralysis and death (McCormack 2011). Retreatment may be necessary if live lice are seen 7-9 days after the initial treatment.
- **Stromectol**®* (ivermectin 3-mg tablet) can be given at any age (if weight $\geq$ 33 lbs). This product should only be used if head lice are resistant to all other topical treatments. Treatment with 2 single oral doses, given 7-10 days apart, has shown to be effective in the control of head lice.

**Alternative treatments:**

- **AirAllé**®*, formerly known as the LouseBuster®, is a device designed to deliver heated air at high flow to the scalp and hair to kill lice and nits. Treatment takes at least 30 minutes (Bush 2011). This product is expensive and may require specialized training to use.

There is no conclusive scientific evidence to support the use of products such as

vinegar, isopropyl alcohol, enzyme-based compounds, tea tree oil, or other alternative products advertised to dissolve the glue on the nits (to ease their removal) or kill the nits. Similarly, there are no conclusive scientific data to support claims that mayonnaise, olive oil, melted butter, petroleum jelly, or other alternative products on the hair "suffocate" the nits and lice. Drowning lice is also an ineffective way to kill lice (Takano-Lee et al. 2004). Natural products (i.e., herbal products) are not regulated for safety by the U.S. Food and Drug Administration (FDA) (Wadowski et al. 2015). The American Academy of Pediatrics does provide a list of alternative agents for head lice treatment (though not FDA-approved or recommended) for families that may choose to use them (https://publications.aap.org/pediatrics/article/150/4/e2022059282/189566/Head-Lice).

Please contact your local health department for more information. The list of references cited in this document is attached. These guidelines, an educational fact sheet and flyer (in English and Spanish), and other CDPH publications can be found on the CDPH Head Lice webpage.

Recommendations by state and federal experts and existing standards of practice outlined in this document are intended to provide guidance to individuals and agencies involved with head lice prevention and control in California. The information provided in this document are recommendations provided for informational purposes only and are not intended to be regulatory in effect.

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[*] Use of this product name does not imply commercial endorsement by the California Department of Public Health.

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Updated December 2022

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