NPA
NATIONAL PEDICULOSIS ASSOCIATION, INC
1005 Boylston Street STE 343
Newton, MA 02461
website: http://www.headlice.org
Serving the Public Since 1983

June 8, 2020

Robin M. Ikeda, MD, MPH
Associate Director for Policy and Strategy
Centers for Disease Control and Prevention
1600 Clifton Road, NE
Atlanta, GA 30333

Dear Dr. Ikeda:

With recognition of the U.S. Centers for Disease Control and Prevention's (CDC) role as the nation's public health protection agency, the National Pediculosis Association (NPA) has taken the opportunity to review the CDC's website information on head lice and pediculosis (See https://www.cdc.gov/parasites/lice/head/index.html). The NPA has identified areas of information that we believe warrant attention. This letter's purpose is to propose how the CDC can improve its guidance on head lice, which are blood-obligate communicable human parasites.

To offer context to the concerns detailed below, the NPA's not-for-profit mission is to promote the health and wellness of children regarding pediculosis. Our strategy is to provide the community with accurate information and practical measures to send children to school free of lice and nits. (See https://headlice.org/downloads/nonitpolicy.htm) Thus, our perspective is that children's health should be at the forefront of the CDC's educational material and recommendations on head lice.

**1)** The CDC's information **focuses on reactive checking and treatment;** we could find no mention of the value of proactive screening for head lice and their eggs (nits) nor the benefits of early detection. Further, the CDC bases diagnosis of an infestation on the presence of live lice only, de-emphasizing the importance of detecting nits. Although the language includes that "parents may choose to remove all nits found on hair for aesthetic reasons or to reduce the chance of unnecessary retreatment," this language implies that there is a choice, ignoring the personal hygiene, public health and communicable disease control benefits of combing nits from the hair. (See https://www.regulations.gov/document?D=FDA-2018-P-0599-0020)

**2)** The CDC's information **omits combing as a diagnostic screening method**. Parents aren't afforded the advantageous information that: "Diagnosis of louse infestation using a louse comb is four times more efficient than direct visual examination and twice as fast. The direct visual examination technique underestimates active infestation and detects past, nonactive infestations." (See https://pubmed.ncbi.nlm.nih.gov/11207962/ )

**3)** The treatment options given by the CDC are **limited to chemical treatments only**. These products are listed on the CDC's website with little or no discussion of their potential health risks. The treatments are referred to using terms such as "medicine," "recommended medicine," and "lice medicine." This terminology is misleading; it conveys an undeserved connotation of safety and endorsement. The treatments are not "medicines" for people or lice; they are pesticides and their use is potentially harmful, especially for those with possible underlying risks – e.g., sick and medicated children, pregnant or nursing mothers – or those with previous exposure to pediculicides – children receiving multiple and various pesticide treatments, and parents exposed by repeatedly treating themselves and others. The CDC's recommendation should be to warn about the lack of effectiveness of treatments, reported lice resistance, and most importantly to assess everyone's medical and lice treatment history to avoid overtreatment and before exposure to any additional pesticide chemicals.

**4)** The language used when discussing chemical treatments **does not adequately warn parents of the potential danger** associated with these products. (See https://publicintegrity.org/inequality-poverty-opportunity/workers-rights/safe-pesticides-now-first-in-poisonings/ and https://heinonline.org/HOL/LandingPage?handle=hein.journals/cardw13&div=38&id=&page= ) Most egregiously, the CDC includes the use of the chemical lindane among its treatment recommendations. According to the US Agency for Toxic Substances and Disease Registry, the Department of Health and Human Services (DHHS) has determined that HCH (all isomers) may reasonably be anticipated to cause cancer in humans. The International Agency for Research on Cancer (IARC) has classified HCH (all isomers) as possibly carcinogenic to humans. (See https://www.atsdr.cdc.gov/phs/phs.asp?id=752&tid=138#bookmark05) Lindane has been cancelled entirely by the EPA, banned as a pharmaceutical around the world via the Stockholm Convention and carries a U.S. Food and Drug Administration's (FDA) most stringent black box warning. Yet the CDC recommends lindane as a second-line treatment with no acknowledgment of its known risks. (See http://www.headlice.org/thelinda/actions/index.html)

The statement that "The drugs used to treat lice are insecticides and can be dangerous if they are misused or overused" is buried at the very end of the Treatment section under the heading "When treating head lice" rather, than being highlighted and prominently labeled as a warning. Additionally, the **source of the**

**pediculicide product information is not disclosed** nor validated as impartial and unaffiliated with product manufacturers.

**5)** As of January 17, 2020, the FDA acknowledged that "combing" stands on its own as an alternative treatment for head lice. (See https://www.regulations.gov/document?D=FDA-2018-P-0599-0020) The CDC's **website currently does not acknowledge combing as a valid non-chemical alternative** to the use of pesticide treatments. The CDC's website (in the Treatment General Guidelines section) recommends to "Comb dead and any remaining live lice out of the hair using a fine–toothed nit comb" after pediculicide treatment NPA's position is that, since a lice and nit removal comb can be effective in removing live lice, combing can be done *prior to* or *instead of* applying a pediculicide. By not offering combing as a treatment option, the CDC is presenting to parents only chemical treatments that are not 100% safe or effective, do not dislodge or remove nits, and for these reasons require a second chemical treatment or more. (See https://link.springer.com/article/10.2165/00128072-199901030-00005 )

**6)** The information in the Treatment section is **overly technical and complicated**, not written using language that is easily accessible to laypeople (e.g., parents), and makes unreasonable assumptions about parents' existing knowledge on the subject.

The wording does not enable a parent to understand quickly and easily what must be done safely, and when, and how. Terms such as "active infestation" are not defined the first time they are used. Directions on how to perform "checking" are not provided. A direction to retreat "after all eggs have hatched but before new eggs are produced" is not useful, as a layperson has no way to know when this has occurred.

Children's weight is described in units unfamiliar to American parents (i.e., kilograms rather than pounds and ounces). Further, much detailed information is provided on "supplemental measures" such as floor vacuuming that is elsewhere characterized as not required. The claim that "Many flea combs made for cats and dogs are also effective" is vague and unsubstantiated. Parents need to be directed to use a comb specifically designed to remove human head lice, not fleas.

**7)** The CDC website's FAQ section states, "Head lice are not known to spread disease." However, **it is inaccurate to rule out head lice as a vector of disease**. Research conducted in the early 20th century by French physician, bacteriologist and Nobel Prize winner Dr. Charles Nicolle, John C. Snyder, E.H. Murray and others confirmed: "head lice is also a vector for epidemic typhus just as body lice" (See references). Additionally, in September 1992, in response to a collection of scientific reprints provided by the NPA, the Armed Forces Pest Management Board (AFPMB) wrote:

*Three reviewers from our Medical Entomology Committee reviewed and independently submitted their analyses of the reprints. The results of review*

*were presented to the Medical Entomology Committee, and subsequently submitted to the AFPMB Council at our July meeting. The Medical Entomology Committee concluded that, based on the literature reviewed, the head louse potentially can serve as a secondary vector of normal louse-borne diseases, particularly epidemic typhus and louse-borne fever. However, the primary vector of both these diseases, based on epidemiological evidence, is the body louse.*

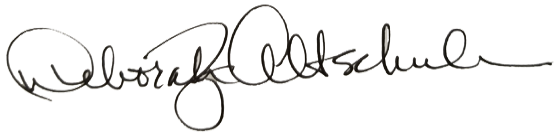
**8)** The CDC's FAQ section also states, **"Head lice should not be considered as a medical or public health hazard."** This conclusion contradicts the CDC recommendation to use pesticide treatments, which are themselves medical and public health hazards. (See #4 above.) Further, head lice are communicable parasites that require human blood for feeding, infest one's hair, defecate on one's scalp, mate, and literally glue their eggs to hair to hatch new lice. This makes pediculosis a compelling medical/hygiene issue for the individuals who have it. The communicability of pediculosis, the ability of head lice to transmit disease, and the potential toxicity of pesticide treatments to both humans and the environment make pediculosis a public health hazard. (See https://www.headlice.org/comb/?s=MVP+award)

As with all communicable disease strategies, guidance on pediculosis can help protect children or put them in harm's way. Parents must be afforded every opportunity to do what is scientifically sound, effective, safe, and beneficial for the protection of their families and communities.

Considering the issues detailed above, the NPA requests that the Centers for Disease Control and Prevention revise its published information on head lice. The guiding principle should be to provide thorough, accurate, parent-friendly advice in the best interest of those most frequently affected, recognizing that these individuals are likely to be children and their families.

The NPA appreciates the complexity of these times with COVID-19. Our intent here is to minimize pediculosis as an additional public health burden when children return to school and other group settings. We would be pleased to lend our assistance to the CDC in updating its published information on head lice in order to help achieve this goal.

Sincerely,



Deborah Z. Altschuler
President, National Pediculosis Association

npa@headlice.org

Cc: Executive Secretariat, Centers for Disease Control and Prevention (CDC)

Attachment: References on Head Lice and Disease

**References on Head Lice and Disease**


Altschuler, D. Z. 1990. Zinsser, Lice and History. Lice & Disease. Progress, The Newsletter of the National Pediculosis Association.
https://www.headlice.org/faq/disease/zinsser.htm

Amanzougaghene, N., F. Fenollar, D. Raoult, and O. Mediannikov. 2020. Where are we with human lice? A review of the current state of knowledge. Frontiers in Cellular and Infection Microbiology 16 pp.
https://doi.org/10.3389/fcimb.2019.00474 ,
https://www.frontiersin.org/articles/10.3389/fcimb.2019.00474/full

Buxton, P. A. 1939. The Louse: An Account of the Lice Which Infest Man, Their Medical Importance, and Control. Edward Arnold & Co. London, England, UK. 164 pp.

Murray, E. S., and S. B. Torrey. 1975. Virulence of Rickettsia prowazekii for head lice. Annals of the New York. Academy of Sciences 266(1):25-34.
https://doi.org/10.1111/j.1749-8906632.1975.tb35086.x

Nicolle, C. M. 1920 (30 Janvier 1920). Etat de nos connaissances expérimentales sur le Typhus Exanthématique (Expose des méthodes suivies et des problèmes qui restent à résourde). Bulletin de Institut Pasteur Dix-Huitieme Annee. XVIII (2) page-272.

Snyder, J. C. 1965. Typhus Fever Ricketssiae. pp. 1,059-1,094. In, Horsfall Jr. and F. L., I. Tamm. Viral and Rickettsial Infections of Man. Fourth Edition. J. B. Lippincott. Philadelphia, Pennsylvania, USA. 1,282 pp.
https://www.worldcat.org/title/viral-and-rickettsial-infections-of-man/oclc/398816