

Parasite re-infection reduced by handwashing or nail clipping in Ethiopian children

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Promotion of handwashing with soap and weekly nail clipping are both successful strategies to decrease intestinal parasite re-infection rates in school aged Ethiopian children, according to a study published by Mahmud Abdulkader Mahmud and colleagues from Mekelle University, Ethiopia, in this week's *PLOS Medicine*.

The researchers reached these conclusions by conducting a cluster randomized controlled trial in which 367 parasite-negative school-aged children in Northern Ethiopia were randomly assigned to either the handwashing [intervention](#), the nail clipping intervention, both interventions, or neither intervention for 6 months. For the handwashing intervention, fieldworkers visited each intervention household weekly, encouraged all the [household members](#) to wash their hands with water and soap at key times such as before meals and after defecation, and checked on the household's use of soap. For the nail clipping intervention, the fieldworkers clipped the nails of children in the intervention groups every week.

After adjustment for factors likely to affect re-infection such as latrine use and drinking water source, 14% of the children in the handwashing with [soap](#) groups (handwashing alone and handwashing plus nail clipping) were re-infected with parasites compared to 29% of the children in the no handwashing groups (nail clipping only or neither intervention). Similarly, 17% of the children in the nail clipping groups were re-infected compared to 26% in the no nail clipping groups. Finally, handwashing (but not nail clipping) significantly reduced the rate of anemia among the children.

These findings support the implementation of proper handwashing and weekly nail clipping as a public health measure to reduce parasite re-

infection rates in resource-limited regions. However, although both interventions were effective under trial conditions that included intensive monitoring and follow up, it is not clear if handwashing and nail clipping will work as well under real-life conditions.

More information: Mahmud MA, Spigt M, Bezabih AM, Pavon IL, Dinant G-J, Velasco RB (2015) Efficacy of Handwashing with Soap and Nail Clipping on Intestinal Parasitic Infections in School-Aged Children: A Factorial Cluster Randomized Controlled Trial. *PLoS Med* 12(6): e1001837. [DOI: 10.1371/journal.pmed.1001837](https://doi.org/10.1371/journal.pmed.1001837)

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