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Water Softeners Not Found to Improve Childhood Eczema

Water softeners provide no additional clinical benefit to usual care in children with eczema, so the use of ion-exchange water softeners for the treatment of moderate to severe eczema in children should not be recommended. However, it is up to each family to decide whether or not the wider benefits of installing a water softener in their home are sufficient to consider buying one.

These are the findings of a study by Kim Thomas from the University of Nottingham, Nottingham, UK, and colleagues and published in this week's PLoS Medicine.

The authors conducted their randomised controlled trial among 336 children -- who all lived in hard water areas in England -- aged 6 months to 16 years with a diagnosis of eczema; they were randomised to receive either installation of an ion-exchange water softener plus usual eczema care, or usual eczema care alone for 12 weeks. Research nurses measured each child's eczema severity score at baseline and at 6, 12, and 16 weeks to record changes in eczema severity. The authors also analysed any changes in eczema symptoms over the study period such as sleep loss, itchiness, and the amount of topical treatments used.

Although both treatment groups improved in disease severity during the course of the trial, there were no clinically important differences between the groups in any of the outcomes that were measured objectively (without knowledge of the treatment that the child received). However, parents in the trial did report small health benefits in some of the more subjective outcomes, such as

sleep loss and itchiness, and just over 50% chose to buy the water softener at the end of the trial because of perceived improvements in the eczema and the wider benefits of water softeners.

The authors say: "The results of this study are clear, and as a result we cannot recommend the use of ion-exchange water softeners for the treatment of moderate to severe eczema in children."

They add, "Whether or not the wider benefits of installing a water softener in the home are sufficient to justify the purchase of a softener is something for individual householders to consider on a case by-case basis."

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Source: Kim S. Thomas, Tara Dean, Caroline O'Leary, Tracey H. Sach, Karin Koller, Anthony Frost, Hywel C. Williams. A Randomised Controlled Trial of Ion-Exchange Water Softeners for the Treatment of Eczema in Children. PLoS Medicine, 2011; 8 (2): e1000395 DOI: 10.1371/journal.pmed.1000395