# An open randomised study of autoinflation in 4- to 11-year-old school children with otitis media with effusion in primary care

Ian Williamson,[1]* Jane Vennik,[1] Anthony Harnden,[2] Merryn Voysey,[2] Rafael Perera,[2] Maria Breen,[2] Brendan Bradley,[2] Sadie Kelly,[2] Guiqing Yao,[3] James Raftery,[3] David Mant[2] and Paul Little[1]

[1]Primary Medical Care, University of Southampton, Southampton, UK
[2]University of Oxford, Nuffield Department of Primary Care Health Sciences, Oxford, UK
[3]Faculty of Medicine, University of Southampton, Southampton General Hospital, Southampton, UK

*Corresponding author

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## Plain English summary

### Autoinflation in children with otitis media with effusion

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# Plain English summary

Otitis media with effusion is known more commonly as glue ear and is a very common condition in young school children. It is a collection of fluid behind the eardrum causing hearing loss at a time when children are developing language and social skills, and can also lead to physical ill health and poor quality of life (QoL). Although children tend to improve naturally by 3 months, some children do not and have persistent or recurrent untreatable problems, eventually requiring surgery. Autoinflation is a simple technique that increases pressure in the nose, which opens the Eustachian tubes and equalises middle ear pressures, in turn helping to clear the fluid. This study was designed to examine if regular autoinflation with a purpose-made nasal balloon alongside standard care was better than standard care alone in clearing middle ear fluid in affected children seen in primary care. To answer this question we studied 320 children aged 4–11 years with confirmed glue ear and recent or current symptoms. All children received standard care, but half ($n = 160$) performed autoinflation three times per day for up to 3 months. Children and their parents were trained to use the nasal balloon by the study nurse. We assessed the children again at 1 and 3 months and found that children using autoinflation were 36% (at 1 month) and 37% (at 3 months) more likely to show resolution of fluid than children who received standard care alone. Additionally, QoL was significantly improved in children who had performed autoinflation. The method was also found to be good value for money for the NHS over the 3-month period. Most children were able to perform the technique and comply with the treatment schedule. This study has shown that autoinflation with a nasal balloon, when used in addition to standard care, is an effective treatment for both clearing the middle ear fluid and improving the QoL of children with glue ear symptoms, and we think it should be more widely used.

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Editorial contact: nihredit@southampton.ac.uk

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