

Research recommendations for review question: What intraoperative or postoperative interventions are effective at preventing otorrhoea (ear discharge) after surgery for OME-related hearing loss in children under 12 years?

K.1.1 Research recommendation

What water precautions are effective in preventing otorrhea after ventilation tube (grommet) surgery for hearing loss associated with OME in children under 12 years?

K.1.2 Why this is important

Otorrhoea is a common complication after grommet surgery, which may both recur and lead to poor quality of life in children with otitis media with effusion. Water precautions are preventative measures which reduce the risk of otorrhoea following grommet surgery however there is a lack of high-quality evidence and further research is recommended.

K.1.3 Rationale for research recommendation

Table 10: Research recommendation rationale

Importance to ‘patients’ or the population	Further research is needed to identify the effectiveness of different water precautions in preventing otorrhea (ear discharge) after ventilation tube surgery for hearing loss associated with OME in children under 12 years. Water precautions are usually recommended as a preventative measure to prevent infection post-surgery.
Relevance to NICE guidance	The lack of evidence regarding this topic currently restricts NICE guidance from making evidence based detailed recommendations about what water precautions are effective in preventing otorrhoea after ventilation tube (grommet) surgery. The research is of interest and will fill this existing evidence gap.
Relevance to the NHS	This research could potentially prevent further complications and reduce the financial impact upon the NHS.
National priorities	The NHS Long Term Plan identifies the role of the NHS and includes secondary prevention, by preventing deterioration in health and reducing symptoms to improve quality of life.
Current evidence base	There is currently variation regarding the number of weeks that water precautions are advised for. The current evidence base does not analyse the effectiveness of different precautions, therefore it is unclear whether some interventions are more effective than others (such as earplugs versus headbands).

Equality considerations	The acceptability of water precautions may vary depending on the individual child and the type of water precaution used e.g. if the child has co-morbidities which affect the shape of the outer ear/pinna then ear buds would not be practicable, or ear buds may not be suitable for younger children or those more at risk of ingesting these.
Feasibility	Given the low cost nature of water precautions, this is considered a feasible research recommendation. Acceptability of the intervention for the child is likely to be the most significant barrier.
Other comments	None

NHS: National Health Service; NICE: National Institute for Health and Care Excellence; OME: otitis media with effusion

K.1.4 Modified PICO table

Table 11: Research recommendation modified PICO table

Population	All children under 12 years who have grommet (ventilation tube) surgery for OME-related hearing loss.
Intervention	<ul style="list-style-type: none"> • Wearing ear plugs • Wearing a swimming cap or headband • Avoidance of swimming • Length of time using water precautions
Comparator	<ul style="list-style-type: none"> • No water precautions • Different lengths of time using water precautions to be compared to each other • Head-to-head comparisons between different water precautions
Outcome	<p>Primary Outcomes</p> <ul style="list-style-type: none"> • Otorrhoea (ear discharge) or infection • Adverse effects of intervention • Surgical intervention to remove ventilation tubes • Acceptability of intervention <p>Secondary Outcomes</p> <ul style="list-style-type: none"> • Tube blockage • Tube extrusion • Hearing • Need for repeat ventilation tubes • Quality of life (measured by OM8-30 questionnaire, Health Utilities Index Mark 3 (HUI3) questionnaire, Otitis Media-6 (OM-6) questionnaire, Quality of Life in Children's Ear Problems (OMQ-14) questionnaire, Evaluation of Children's Listening and Processing Skills (ECLiPS) questionnaire, Auditory Behaviour in Everyday Life (ABEL) questionnaire, Early Listening Function (ELF) questionnaire, Parents' Evaluation of Aural/Oral Performance

	<p>of Children (PEACH) questionnaire, EuroQol 5 Dimensions (EQ-5D) questionnaire, Infant Toddler Quality of Life Questionnaire, or Child Health Questionnaire)</p> <ul style="list-style-type: none"> • Reduced incidents of otorrhea
Study design	<p>RCTs or prospective cohort studies would be preferable, though retrospective cohort studies may be considered. Non-randomised studies should have at least 40 participants per arm and should adequately adjust for the following covariates:</p> <ul style="list-style-type: none"> • Age • Craniofacial anomalies • Socioeconomic status • Additional sensory or learning needs
Timeframe	1-12 weeks
Additional information	None

OME: otitis media with effusion; RCT: randomised controlled trial