

Summary of findings:


46. Ear plugs compared to no ear plugs when swimming or bathing for prevention of tympanostomy tube otorrhoea

Patient or population: Children aged 6 months to 6 years with tympanostomy tubes (TT).

Setting: Community.

Intervention: Ear plugs (Soft, plastic, prefabricated ear plug (Doc's Proplugs) or mouldable silicone ear plug (Insta-Putty, Insta-Mold Products) when swimming or bathing. Duration was 1 year.

Comparison: No ear plugs when swimming or bathing.

Outcome № of participants (studies)	Relative effect (95% CI)	Anticipated absolute effects (95% CI)			Quality	What happens
		Without ear plugs	With ear plugs	Difference		
Rate of otorrhoea (annual) assessed with: physician diagnosed by otoscopy follow up: 1 years № of participants: 172 (1 RCT) ^{1,a}	-	The mean rate of otorrhoea (annual) was 1.2	-	MD 0.36 lower (0.45 lower to 0.27 lower)	 LOW ^{b,c}	In children with TTO who wear ear plugs compared to no ear plugs when swimming or bathing there are possibly fewer episodes of otorrhoea at 1 year follow-up.

*The risk in the intervention group (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; RR: Risk ratio; NS: Not significant; NNT: Number needed to treat; NNH: Number needed to harm; MD: Mean difference

GRADE Working Group grades of evidence

High quality: We are very confident that the true effect lies close to that of the estimate of the effect

Moderate quality: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different

Low quality: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect

Very low quality: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

Explanations

a. Studies taken from: Cochrane review, Moualed 2016 (Goldstein 2005)

b. Risk of Bias: Performance bias and attrition bias

c. Imprecision: Small study

References

1. Moualed D, Masterson L, Kumar S, Donnelly N. Water precautions for prevention of infection in children with ventilation tubes (grommets). The Cochrane database of systematic reviews. 2016(1):Cd010375. Epub 2016/01/28. doi: 10.1002/14651858.CD010375.pub2. PubMed PMID: 26816299.