

How to remove a foreign body from a child's nose

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With a co-operative patient, good illumination and the appropriate instrument, a nasal foreign body can often be removed easily. This article discusses how it is done, and when referral is needed.

General considerations

Unilateral purulent rhinorrhoea in a child suggests the presence of a foreign body until proved otherwise.

Vegetable matter, beads, rubbers and many other objects can be inserted into the nose. Possibly the most dangerous foreign body is an alkaline battery – it emits a low direct current flow that causes tissue lysis and necrosis and can erode the nasal septum within a few hours, leaving a permanent septal perforation and possibly significant cosmetic deformity due to septal collapse. It is therefore important to determine the nature of the foreign body rapidly. If removal of the foreign body is not immediately possible, an x-ray of the nose (occipitofrontal and lateral views) may help by at least determining if a battery is present (Figure 1). If a battery is present, removal must be organised on an emergency basis.

Most other foreign bodies can be

dealt with when resources are available, but removal should be done promptly because there is always a risk of inhalation of the object. If the foreign body is placed posteriorly in the nasal cavity it is safer to perform removal under general anaesthesia with an endotracheal tube in place to prevent possible aspiration of the foreign body.

Equipment

The first requirement is a co-operative patient and a co-operative carer to hold the patient firmly. Restraint is not generally recommended.

For the procedure, the following are needed:

- a form of adequate illumination such as a headlight (e.g. Voroscope; Figure 2)
- nasal decongestant and local anaesthetic or, preferably, Cophenylcaine Forte (lignocaine plus phenylephrine) spray (Cophenylcaine Forte is particularly useful if available because the phenylephrine allows mucosal shrinkage while the lignocaine

provides local anaesthesia)

- a large wax loop (Figure 3) measuring 3 or 4 mm in diameter with an angled tip that can be inserted beyond the foreign body and then be withdrawn, pulling the foreign body with it.

Occasionally, alligator forceps may be needed if flat foreign bodies, such as a piece of foil or paper, are found in the nose (Figure 3). Forceps should not be used with round foreign bodies because they are likely to slip off the foreign body, causing it to be propelled further into the nasal cavity and even possibly inhaled. Small Tilley dressing forceps may be suitable but are often too large for the child's nose.

Suction may be useful to remove vegetable or food matter but can fail if the matter is wedged tightly. Some children are frightened by the noise of suction apparatus.

Technique

On presentation, the first step is to insert two squirts of Cophenylcaine Forte spray or an adult nasal decongestant spray into the nose, and allow the child to play for

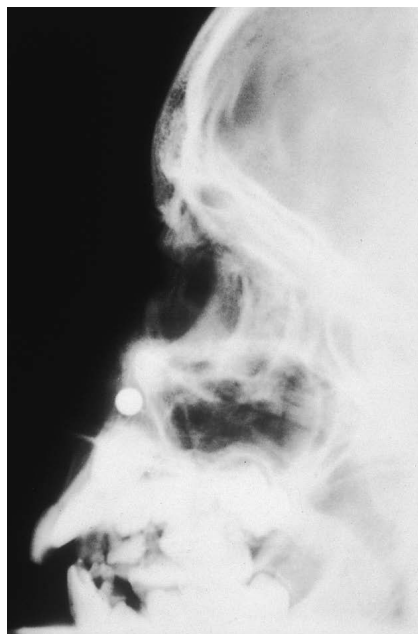


Figure 1. Alkaline batteries within the nasal cavity represent a surgical emergency.



Figure 2. Adequate mobile illumination is required, such as that provided by a Voroscope headlight.

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Figure 3. Instruments for nasal foreign body removal. From top to bottom: alligator forceps, small Tilley dressing forceps, angled wax loop, small nasal speculum. The wax loop is the most useful.

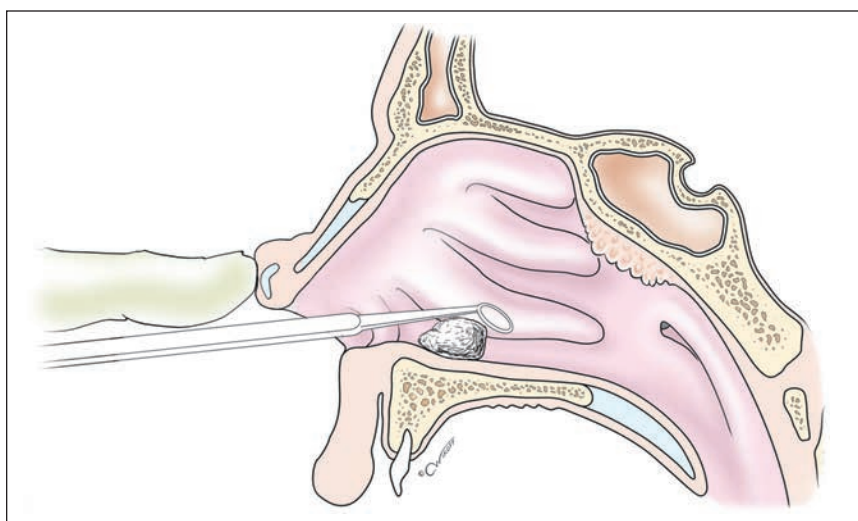


Figure 4. Diagram showing the technique of removing a foreign body from a child's nose. The tip of the nose is elevated by the doctor's index finger while an angled wax loop is used to remove the foreign body.

20 minutes. The child is then asked or assisted to blow the nose, and in many cases the foreign body will be delivered with little effort.

If this fails, ask the parent or carer to hold the child firmly in an upright position. Holding the wax loop in your dominant hand, elevate the tip of the child's nose with the index finger of your other hand. (I do not routinely use a nasal speculum because it is usually unnecessary in terms of visualisation and often adds to the level of discomfort associated with the procedure.) Pass the wax loop beyond the foreign body and then angle the tip to allow the loop to propel the foreign body out ahead of it as it is withdrawn from the nose (Figure 4).

The child will usually allow only one attempt at this technique, so make sure the conditions are right before you proceed. A struggling child who moves during the procedure may sustain a laceration to the nasal mucosa, resulting in bleeding that frightens the child, alarms the mother and obscures the view, and reduces the chances of co-operation from the parent or child for any further attempts.

Always remember to check the other side of the nose and the ears to ensure no other foreign bodies are present.

When referral is needed

Refer the child to an otorhinolaryngologist if the child is upset, if the parent and/or the child are not reasonably co-operative with the procedure, or if the initial attempt fails to deliver the foreign body. Some casualty departments have nitrous oxide available for minor procedures such as this, which can make the removal much less traumatic for all involved. General anaesthesia may be required.

If no foreign body is identified in spite of the parent or child giving a clear history of foreign body insertion, or if unilateral nasal discharge persists, referral is necessary to allow endoscopic examination or imaging to ensure the foreign body is not lodged further back in the nasal cavity.

After-care

If there is purulent nasal discharge, it is preferable to prescribe a course of oral antibiotic, such as amoxycillin, after the

foreign body is removed because local nasal infection and secondary sinusitis may be present. Washing the nose with a saline spray (such as Narium Nasal Mist or Fess) is helpful in cleansing the nose for two or three days after the procedure. Fess, which is a buffered isotonic saline solution, may help to neutralise the acidic buildup where there is infection, in turn promoting normal mucociliary clearance of the nose.

Conclusion

A foreign body in a child's nose should be removed promptly because of the risk of inhalation. If it is a battery, removal must be organised on an emergency basis. With a co-operative patient, good illumination and the appropriate instrument, a nasal foreign body can often be removed easily. It is important to check that there are not additional foreign bodies in the child's nose or ears.

The child should be referred to an otorhinolaryngologist if the child is upset or not co-operative, if the foreign body is lodged far back in the nasal cavity or if the initial attempt has failed to dislodge the foreign body.

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