

NASOGASTRIC TUBES

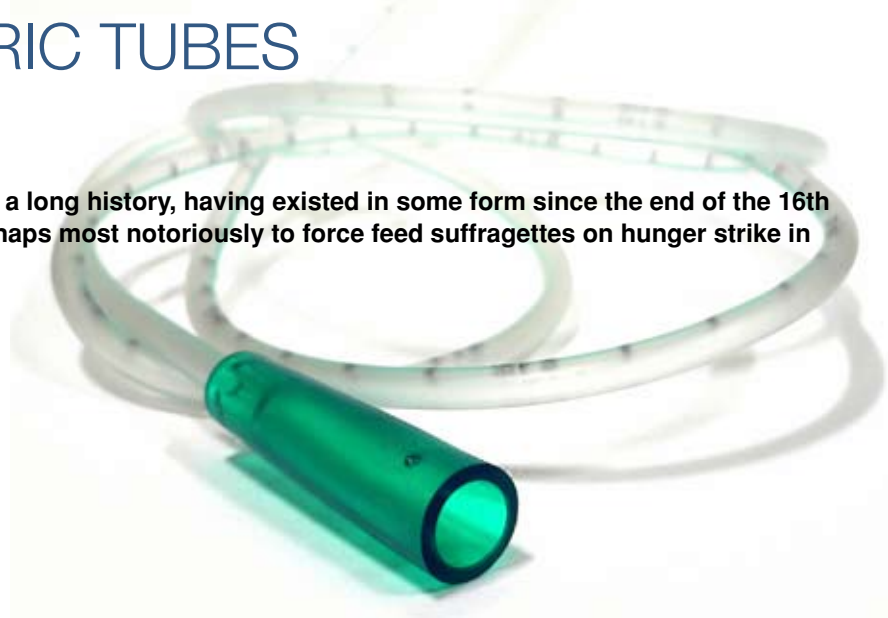


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Nasogastric (NG) feeding has a long history, having existed in some form since the end of the 16th century (4) and was used perhaps most notoriously to force feed suffragettes on hunger strike in the early 20th century (1).

Since the development of percutaneous endoscopic gastrostomy (PEG) placement in the 1980s, this has tended to be the main long-term enteral feeding method of choice in the UK. British Artificial Nutrition Survey (BANS) reports show that between 2006 and 2010 only 12 to 17 percent of enterally fed patients in the community were NG fed (7,8,14,15,16). This is not surprising as NG feeding is generally considered a short-term intervention due to the relatively short lifespan of the tubes themselves and the potential risks of NG tubes being misplaced, migrating or coming out.



were caused by tube misplacement in the two years prior to the alert. The NPSA stated that NG tube position must be confirmed by testing pH of aspirate using pH paper or by x-ray and not by any other method, to reduce the chance of feeding into the lungs via a misplaced tube.

By March 2011, the NPSA reported a further 21 deaths due to misplaced NG tubes since the original Alert was published six years earlier (10). In March 2012, the NPSA published a Rapid Response Report (11) reporting a further two deaths in the previous year due to staff flushing water via NG tubes before position had been established (by pH testing of aspirate).

As PEG tubes are unlikely to be misplaced in a similar way, this makes them a potentially safer option for long-term feeding. Studies have also shown that many patients consider PEG tubes to be more acceptable than NG tubes (5).

However, for various reasons, PEG placement is not always possible or appropriate and therefore NG feeding may still be the best feeding method for some patients in the community. NG feeding and replacement can be more difficult to manage in the commu- ▶

... the NPSA highlighted the dangers of bronchial NG insertion in a Patient Safety Alert in 2005 - 11 deaths were caused by tube misplacement in the two years prior to the alert.

Stroud et al (17) advise that accidental insertion of an NG tube into the lungs is relatively common, especially in patients with decreased levels of consciousness. It is therefore not surprising that the NPSA highlighted the dangers of bronchial NG insertion in a Patient Safety Alert in 2005 (9) - 11 deaths

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nity than in an acute setting, due to both lack of x-ray facilities and lack of staff competent to repass an NG tube - either as a planned replacement or when a tube has come out accidentally. Stroud et al (17) point out that 25 percent of NG tubes 'fall out' or are pulled out by patients.

Even if an NG tube does not come out or become displaced, tubes only have a finite lifespan and therefore tube replacement, usually after four to six weeks, will be required. If staff working in the community do not place NG tubes on a regular basis, they are likely to quickly lose former competence to do so and, as the NMC (12) makes plain, '(nurses) must recognise and work within the limits of (their) competence'. It is therefore inappropriate to expect most nurses who work solely in the community to be able to pass an NG tube.

The 2011 NPSA Alert (10) states that 'a full multi-disciplinary supported risk assessment is made and documented before a patient with a nasogastric tube is discharged from acute care to the community'. This necessitates a clear pathway to be in place prior to discharge into the community of any adult with a NG tube, and should cover amongst other things:

- how to access x-ray for confirmation of NG position (if pH of aspirate is not conclusive);
- planned replacement of the NG tube;
- unplanned replacement of the NG tube.

This pathway will generally be into an acute hospital and the worst case scenario is likely to be A&E attendance in any of the above situations. The costs associated with each such 'emergency' admission should be born in mind prior to initial discharge, as they may prove more costly than, for example, arranging direct access to ward staff for planned NG replacement.

NASAL BRIDLE

One option that can at least help to reduce the risk of NG tubes coming out is the nasal bridle or loop. Nasal bridles have been available since 1980, but their use has not been widespread due in part to complexity of insertion. However, a magnetic insertion system has been developed in recent years which has simplified the procedure (6).

In a randomised controlled trial published in 2010, Seder et al (13) showed that use of nasal bridles reduced unintentional NG tube dislodgement by more than 70 percent. They also found that preventing NG tubes from coming out unintentionally increased the likelihood of patients achieving their energy intake goals. However, use of nasal bridles is not common practice in many areas, possibly due to the perception that nasal bridles cause discomfort to patients, although Seder et al (13) state that anecdotal evidence does not support this. Both the latter findings are also supported by a study by Beavan et al (3).

There is an argument for NG placement in preference to PEG in the early stages following dysphagic stroke, but due to unintentional NG tube removal, a PEG may be placed sooner than is desirable. Anderson et al (2) have suggested that use of nasal bridles may help to prevent unnecessary PEG placement in both those who regain normal swallowing ability and those who do not survive their initial stroke.

For patients who have suffered a profound stroke where likelihood of recovery is unclear, it may be appropriate to initiate a trial of NG feeding for a fixed period of time with clear goals set. If the patient fails to meet the goals that were set, it may then be appropriate to deem continued tube feeding futile and to withdraw feeding. If a PEG has been placed due to frequent NG tube dislodgement, the option to withdraw tube feeding becomes more ethically complex and, therefore, use of nasal bridles may help to prevent this situation.

NG feeding continues to be a main stay of acute nutrition support, but for those being discharged into the community or for those whose needs are less than straightforward, considering how unplanned NG removal can be managed is important. ■

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Questions relating to: <i>Nasogastric tubes.</i>	
Type your answers below and then print for your records. Alternatively print and complete answers by hand.	
Q.1	Why is nasogastric (NG) feeding considered a short-term intervention?
A	
Q.2	What two common errors can occur with misplaced NG tubes?
A	
Q.3	Once inserted, how is the NG tube position confirmed?
A	
Q.4	Why are PEG tubes considered preferable to NG tubes?
A	
Q.5	What is involved in a risk assessment prior to any adult with a NG tube being discharged into the community?
A	
Q.6	What are the benefits of a nasal bridle?
A	
Q.7	With stroke patients, in what situation would a nasal bridle be effective?
A	
Q.8	Why is NG feeding difficult to manage in the community?
A	
Please type extra notes here . . .	