



# Opening the airways



**Emma Hammett**  
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for Life  
advises

on oropharyngeal and nasopharyngeal airways in the final article in her series on Resuscitation in a dental setting.

**A**n oropharyngeal airway (OPA) is a medical device designed to keep a person's airway open. It is included in the British Resuscitation Council minimum equipment list for Primary Dental Care. Nasopharyngeal airways (NPA) – endotracheal tubes that are designed to open and maintain a channel between the nostril and the nasopharynx – are not mentioned on this list, but many dentists choose to include them. They are a useful alternative to an OPA if there is a gag reflex present. Its purpose is to bypass upper airway obstruction at the level of the nose, nasopharynx or base of the tongue.

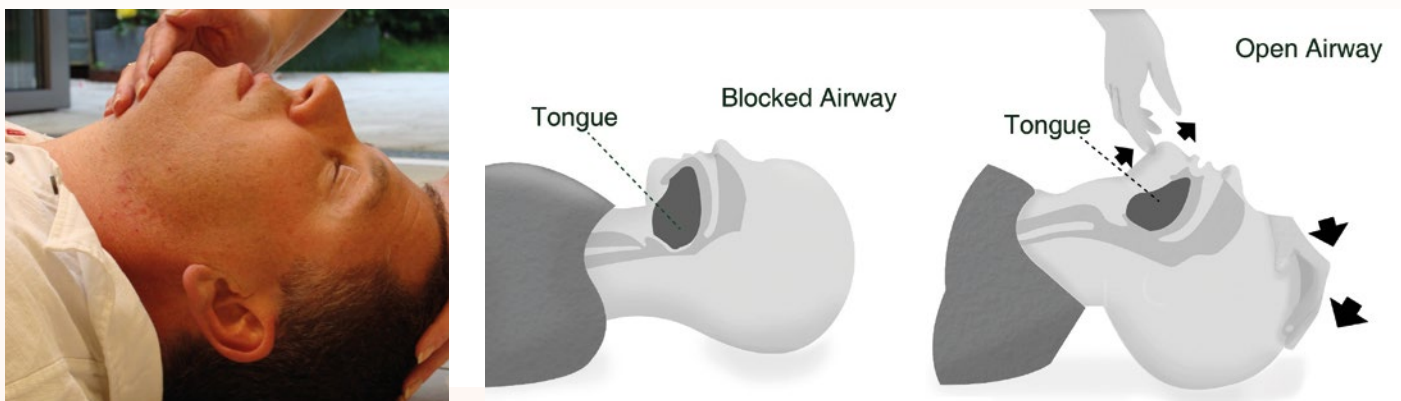
Pharyngeal airways are designed to provide additional support in securing the patency of an airway. It is vital that staff intending to use these simple airway adjuncts receive appropriate training to ensure they are fully competent before attempting to insert them into a patient.

It is important to recognise that there is a risk that by inserting an OPA, the airway obstruction can be worsened, usually by pushing the tongue backwards on insertion. The insertion can also cause trauma within the mouth and further down the airway and undetected foreign bodies may be pushed further down the airway causing further obstruction (this could be a particular problem in a dental setting).

Neither an NPA or and OPA will protect the airway from vomit, blood, food or saliva. It is essential to have suction ready and be prepared to clear the airway immediately if there are any signs of obstruction.

All clinicians within the practice should be confident in manually opening a patient's airway using the head tilt, chin lift or jaw thrust manoeuvre. (Figure 1) (This was

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**Fig. 1** An important first step after a patient has collapsed is to open the airway

covered in the second article in the series, A guide to resuscitation and emergency life support, in our January issue)

The OPA is a simple plastic J shaped hollow tube and is available in a variety of sizes from 00 for new born babies to a “4” for large adults. You should measure the device prior to insertion and this is done by holding it against the patient’s mouth and choosing an airway device that reaches from the centre of the two front teeth to the angle of the patient’s jaw. It is vital to size it appropriately, as a tube which is too short will fail to hold the tongue off the back of the throat and a tube that is too long could push against the epiglottis and obstruct the airway. See Figure 2 and Figure 3.

#### Steps to take as you insert an OPA:

- Open the airway
- Always check the mouth and pharynx (ideally with a torch) to ensure there is no debris or obvious obstruction, suction if necessary
- Oxygenate the patient if possible
- Holding by the widest end, insert the narrowest and shortest part of the J into the patient’s open mouth. Ensure their mouth is wide open to maximise your view on insertion
- Slide the OPA in with the concave surface facing the roof of the patient’s mouth
- Once you reach their soft palate, rotate the airway 180 degrees, it should sit facing downwards, behind the root of the tongue
- Clear the patient’s lips from beneath the flange of the OP and ensure it is safely resting on their teeth
- Test for ventilation
- If the patient begins to gag, remove the device immediately.

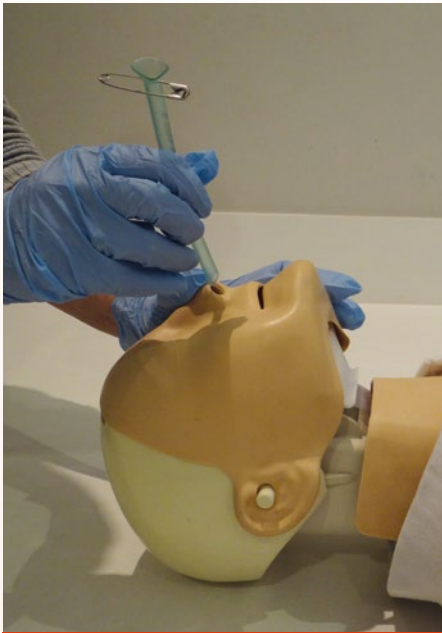
In children, the tube should be inserted with a tongue depressor. You should get the orientation right before you insert it so there is no need to rotate it. As a patient’s condition



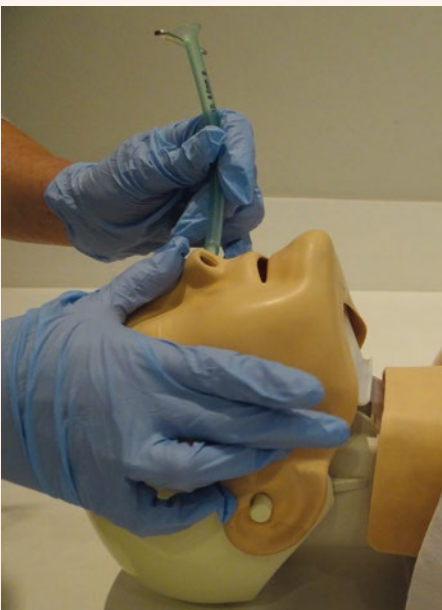
**Fig. 2** Size the OPA tube carefully



**Fig. 3** The OPA tube should be long enough to hold the tongue off the back of the throat, but not too long.



**Fig. 4** Inserting into the left nostril



**Fig. 5** Inserting into the right nostril

improves, they may wish to have the OP removed and it is essential that you enable this to happen and help them if necessary. The patient may need suctioning and positioning in the recovery position to continue to protect their airway.

### Nasopharyngeal Airways (NPAs)

Like OPAs, NPAs can prevent the tongue from falling to the back of the throat. They are soft plastic tubes with a bevelled end that should be inserted into the nostril. The advantage over the OP airway is that they are tolerated when someone has a gag reflex and so can be used to protect someone's airway if their level of consciousness is fluctuating, or if they

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are semi-conscious. If someone is having a prolonged seizure and is hypoxic, and their teeth are clamped together, an NPA airway may be very helpful to maintain the airway while oxygenating through a Bag and Valve Mask (BVM).

Inserting an NPA tube can cause trauma to the back of the nose. If the chosen tube is too long, it can also provoke gagging or vomiting. An NPA tube should be measured in a similar way to an OP airway. Typically, a size 6 mm is suitable for adult females and a 7 mm for adult males. Ideally the tube is measured from the tip of the patient's nose to their ear lobe.

### How to insert an NPA tube:

- Use a torch to ensure the mouth and pharynx are clear, suction if necessary
- Oxygenate the patient if possible
- Select the correct size of NP
- Lubricate with water-soluble lubricant
- Lift the tip of the nose
- Insert into the largest nostril, with the bevel towards the septum, gently but firmly direct the tube straight back towards the ear
- The tube has been specifically designed to fit the anatomical curvature of the right nostril. If inserting into the left nostril, start with the bevel towards the septum of the nose and once it has passed down the nasopharynx twist 180 degrees to sit in place with the natural curvature of the nasopharynx
- Twist the NP tube gently in an oscillating manner as you insert it
- If you experience resistance, remove the tube and try the other nostril, or use a smaller airway.

Best practice is to use two NPA tubes (one in each nostril) when someone requires airway support. See Figure 4 and Figure 5.

NPA airways should be used with extreme caution on infants and in people with suspected basal skull fractures. If you have not been specifically taught procedures in these situations, do not attempt it, but continue to ventilate as well as you can, and await the arrival of the paramedics.

It is strongly advised that you attend a fully regulated Practical or Online First Aid course to understand what to do in a medical emergency. Please visit <https://firstaidforlife.org.uk> or call 0208 675 4036 for more information about our courses.

### Author Information

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