

NASOPHARYNGEAL AIRWAY



“At the Milliner’s” pastel on paper, 1882, Edgar Degas, Museo Thyssen-Bornemisza, Madrid.

“Every hat according to its style, is waiting for its particular head....”

Charles Baudelaire.

And every nasopharyngeal airway according to its size, awaits its particular head!

NASOPHARYNGEAL AIRWAY

Introduction



An array of nasopharyngeal airways.

Nasopharyngeal airways are smooth non-cuffed tubes designed to provide a patent airway via the nasal cavity.

They are curved, softly flexible, sterile devices suitable for single use.

They are particularly useful when patients are too awake to tolerate an oral Guedel airway, or when the patient has clenching of the jaws (**in seizing patients for example**) or trismus.

Components

The device consists of two sections, (as above):

1. **Flange:**
 - This helps prevent inadvertent displacement into the nasal cavity.

2. **Stent:**

- This is smooth non-cuffed tube
- It lifts the tongue away from the oropharynx and provides a patent airway.

Uses

1. Opening of the airway in patients with a reduced conscious state, usually in cases where an oral Guedel airway cannot be inserted.
2. The airway can also be more efficiently suctioned via the device
3. Assisting in the more efficient bag-valve mask ventilation of a patient.

Advantages

These include:

1. Nasopharyngeal airways avoid damage to the teeth
2. They can be inserted when the mouth cannot be opened
3. Once inserted they are well tolerated by **awake** or **unconscious** patients even with an intact gag reflex.

Indications

1. Compromised airway:
 - Any patient with a reduced conscious state that results in a compromised airway.
2. Bag-valve-mask ventilation:
 - The nasopharyngeal airway can assist the efficient ventilation in those who are being ventilated by bag-valve-mask devices.

Contra-indications

1. Awake and uncooperative patients.
2. Suspected or confirmed fractures of the base of the skull.

Complications

1. Trauma to the nasal passages, with resultant bleeding, and possible aspiration of blood and / or further obstruction to the airway.

2. Insertion through the cribriform plate in cases of fracture of the floor of the anterior cranial fossa.
3. Devices that are too small can be inhaled and act as foreign bodies within the airway.
4. If too long a device is used, the esophageal intubation may occur or stimulation of the larynx may occur.
5. The device may be blocked by mucus, blood, secretions, and so patency should be regularly checked.

Sizing



Nasopharyngeal airways are sized according to their **internal diameter**, and the **length increases with increases in this diameter**.

Sizes used in adults are usually around 6-8 mm (**or about the same diameter as the patient's little finger**).

The best estimation is that the correct size nasopharyngeal airway will reach from the tip of the nose to the angle of the mandible (or tragus of the ear), as demonstrated above.

Insertion technique

Nasopharyngeal airways should be lubricated before insertion.

Suction should be on hand, should the procedure induce inadvertent epistaxis.

Gently insert along the **floor** of the nostril, i.e. perpendicular to the face (never upwards towards the cribriform plate).

If there is resistance to insertion, options include:

- Gently rotating the device clockwise and anti-clockwise
- Trying the other nostril
- Using a smaller tube.

The airway should be inserted all the way until the flange rests against the nares. The tip of the airway should now lie within the oropharynx.

Once the nasopharyngeal airway has been successfully inserted, a safety pin can be inserted through the device near the flange as an added precaution to assist in prevention of the device being inhaled, (as demonstrated below).



Alternative:

Note that a small un-cuffed *shortened* endotracheal tube with a safety pin though one end may be used as an alternative nasopharyngeal airway, when one of these specific devices are not available.

References

1. Bache J. et al. Practical Procedures in the Emergency Department, Mosby 1998.
2. Developing Anaesthesia Textbook v1.6 Dr David Pescod.

Dr J. Hayes

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