Alma Medical

THE OXFORD HEAD ELEVATING LARYNGOSCOPY PILLOW

Description and User Manual

Contents:

THE OXFORD HEAD ELEVATING LARYNGOSCOPY PILLOW IS LATEX FREE, X-RAY TRANSLUCENT AND ANTI-STATIC

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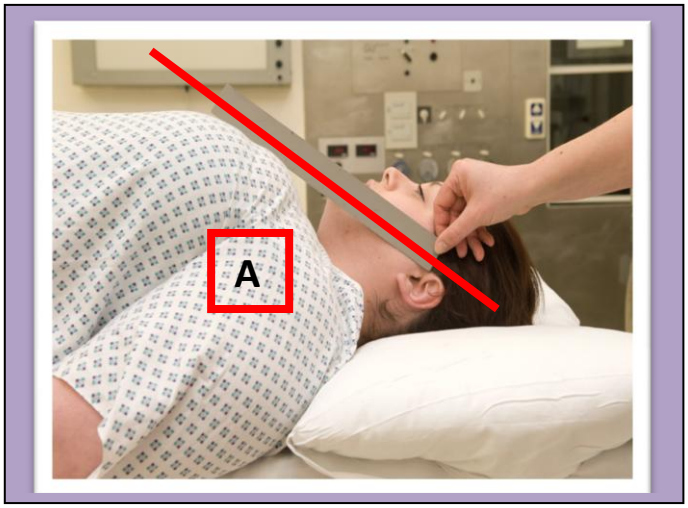
THE OXFORD HELP

Introduction

The Oxford Head Elevating Laryngoscopy Pillow recreates the 'ramping' method of positioning high BMI patients for anaesthesia so that they function, physiologically, like a patient with a normal BMI while still maintaining them in a conventional induction position. The upper airway anatomy is uniquely realigned.



To achieve the head elevated position you are trying to create an imaginary approximate line from the patient's external auditory meatus or the tragus to the suprasternal notch. This should also improve the patient's thyromental distance.

Compare the difference between pictures A and B. This patient has a BMI of 49.2.In picture A the patient is conventionally positioned. In picture B the patient is now correctly positioned on the Oxford Head Elevating Laryngoscopy Pillow.

The following has happened:

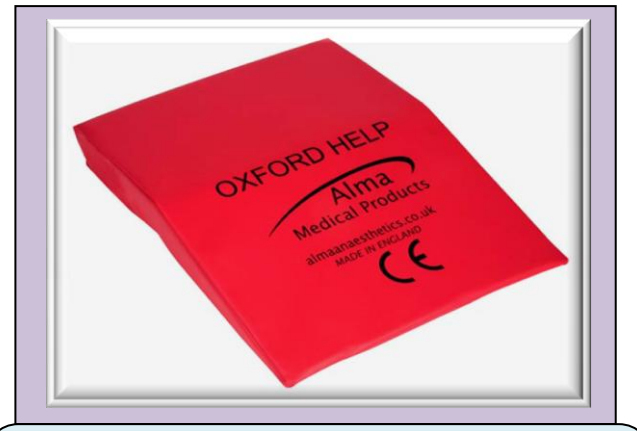
I. **The airway axis is better aligned**
II. **The thyromental distance has increased**
III. **The sniffing position is achieved**
IV. **Cricoid access is improved**

This is all completed instantly and the result will be:

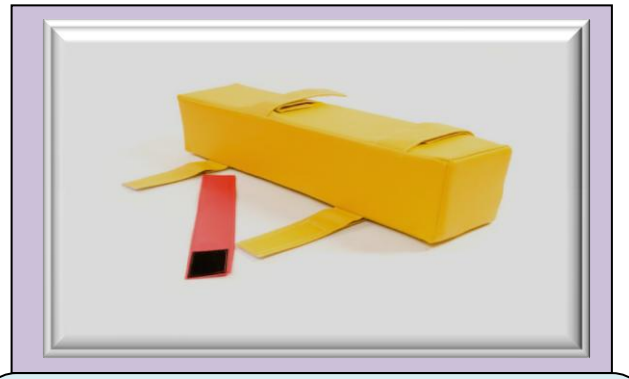
a) **Improved laryngoscopy**
b) **Enhanced view**
c) **Easy manual ventilation**
d) **Increased FRC and Vt**
e) **Patient comfort is increased**
f) **Comfortable operating position for clinician**

The Oxford HELP Components

OXH189 Headrest. **OXH193** Base Pillow. These components form the basic system and in most cases will be effective up to a BMI of 70.

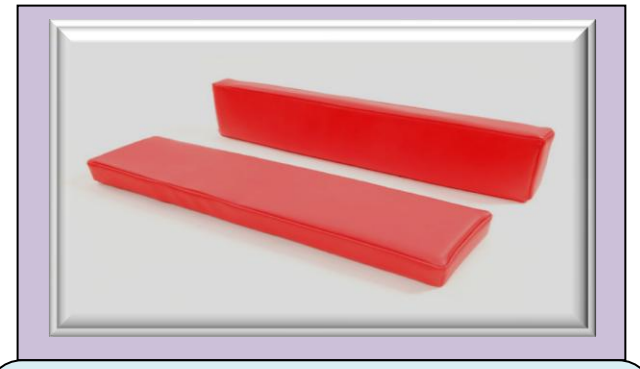


OXH186 Help Plus. Used in addition to and placed onto the Base Pillow. The ramping angle is increased to 25 degrees.



OXH190 Arm Supports. Used with armboards to support the arms and prevent neural damage. **OXH198** red extension straps for large diameter arms.

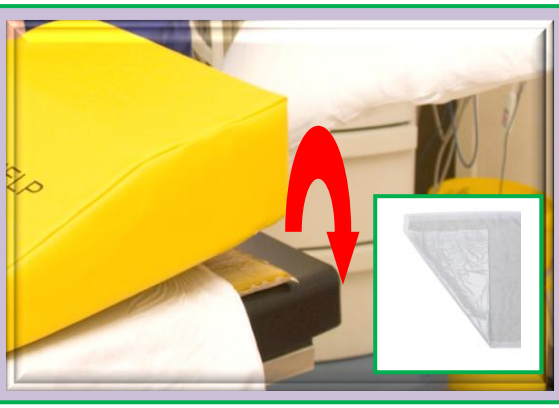
OXH195 Oxford Sinus. Placed under the patient's knees to prevent hyperextension.



OXH200 Arm Supports Plus. These augment the **OXH190** Arm Supports for higher BMI patients and are placed on top of **OXH190**.

OXH196 Oxford Cuneo. These triangular components can be used under the scapula or upper arm.

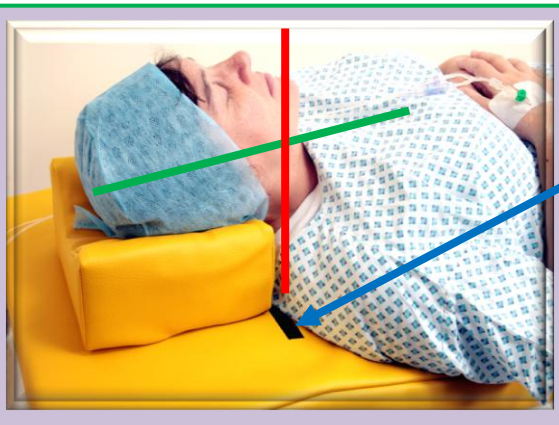
THE OXFORD HELP
User Instructions



The Oxford HELP Base Pillow is always placed on top of the patient canvas or sheet. It must always be used with the Headrest. Place it level with the end of the head of the table. The Oxford HELP is wipe clean but it is recommended to use a cover sheet such as an inco pad or similar.

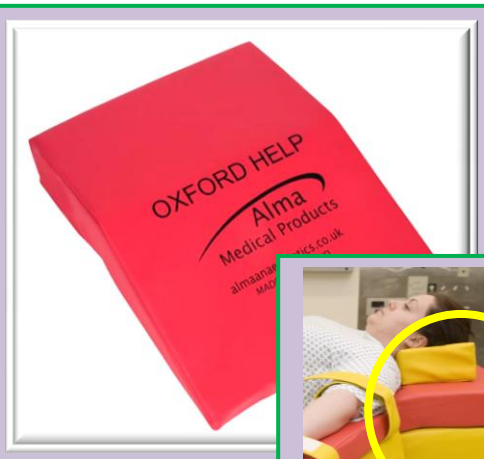
The Oxford HELP only weighs 1.5kg, however it can easily support weights of over 250kg without distorting or crushing.
The HELP is so light, it is important to support it at its proximal end whilst the patient moves back onto it. This will prevent the HELP slipping back.

The Headrest must always be used. It helps airway alignment and is an integral component for the successful use of the product and patient comfort.
The Headrest is placed at the base of the cervical spine to create a snug fit.



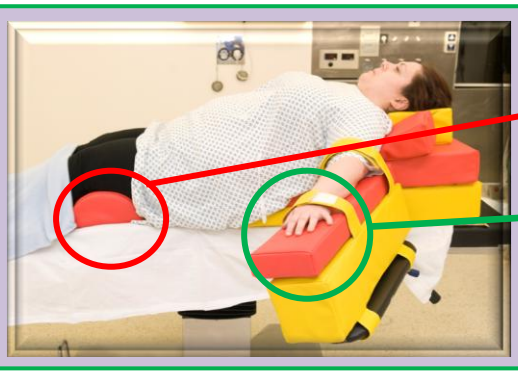
The top of the patient's shoulders should be lined up with the black marker line. In almost every case you will quickly achieve the head elevated position.
In some patients more adjustment may be needed and you may need the HELP Plus in very high BMI patients.

THE OXFORD HELP
User Instructions



The Oxford HELP Plus is the red upper pillow and must not be used alone. The HELP Plus is usually used in patients with a BMI of greater than 50. This is only a guide; most patients with a BMI of 70 can be correctly positioned on the Base Pillow. If you do use the HELP Plus you increase the ramping angle from 13 to 25 degrees. The HELP Plus is placed on top of the Base Pillow.

The Arm Supports are strapped to your existing armboards. You may need to remove the existing cover.
The patient's arms are then secured with the top straps. The upper straps are longer and are for the upper arm.



The Oxford Sinus is placed under the knees. This prevents hyperextension and improves patient comfort.
If using the Arm Supports Plus, place these on top of the yellow Arm Supports.

The Oxford Cuneo is used to support the scapula, the upper arms, or to protect the ulnar area. The Cuneo can also be used to extend the wrist for arterial line insertion.

THE OXFORD HELP

Positioning, Patient Handling and Aftercare

When moving from the trolley or bed to the operating table grasp the Base Pillow of the Oxford HELP and the canvas/draw sheet together.
Support the patient's head
The Oxford HELP will easily slide across with the patient.

Remember!

1. The Oxford HELP is designed to stay in place during surgery.

2. The Oxford HELP is designed to tilt laterally up to15 degrees and 22 degrees in Trendelenburg.

3. All patients on the Oxford HELP still require normal table supports, attachments and securing straps appropriate for the type of procedure undertaken.

Aftercare

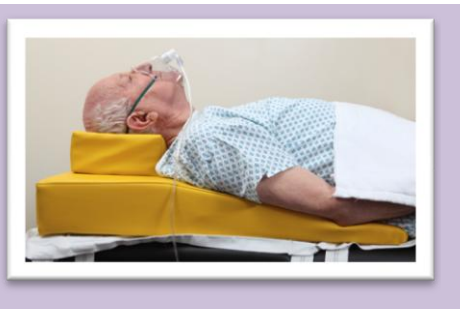
The Oxford HELP can be easily cleaned with any proprietary hospital cleaner
The Oxford HELP is **not** disposable
Please take care not to lacerate or puncture the Oxford HELP

and remember:

The Oxford HELP is not just for bariatrics, it can be used in all rapid sequence events, and should be used in your difficult airway algorithm. It is invaluable in regional anaesthesia including obstetrics.

THE OXFORD HELP
Clinical Benefits

The Oxford HELP is ideal for use in regional anaesthesia with sedation. The Oxford HELP prevents obstruction and affords a comfortable and reassuring posture for the patient, reducing anxiety and lowering oxygen consumption prior to induction.



Jaw support is usually unnecessary in the early stages of recovery on the Oxford HELP.
The HELP improves the respiratory dynamics of all compromised patients of all BMIs. When used in post anaesthetic care/recovery rooms, normal oxygen saturations are maintained.

The Oxford HELP dramatically reduces the risk of failed intubation in obstetric emergencies. Potentially high risk patients become low risk patients easily accommodated by junior staff out of hours or in remote clinical locations.

The HELP increases the thyromental space and improves cricoid access during rapid sequence inductions. Laryngoscopy is greatly improved.
In anaesthetic emergencies the Oxford HELP can be rapidly and easily positioned.

ADDITIONAL CLINICAL BENEFITS

Easy mask ventilation, improved pre-oxygenation and tolerance to apnoea

Ergonomic position for the anaesthetist

Eliminates need for costly, disposable difficult airway devices

Improved tidal volumes and lower ventilation pressures throughout anaesthesia

THE OXFORD H.E.L.P.
Clinical Evidence

1. The results of Rao et al were so positive that they stated, 'on the basis of our results we propose that positioning patients in the head-elevated position by elevating the back or trunk section of the table can be considered by clinicians as part of their pre-formulated strategy in their daily clinical practice in managing the airways of obese patients.' *(Rao SL, Kunselman AR, Schuler HG, DesHarnais S. Laryngoscopy and tracheal intubation in the head elevated position in obese patients: a randomized, controlled, equivalence trial. Anesth Analg 2008;107:1912-8)*

2. Cattano et al reinforce that great care should be taken to ensure that the head and neck is ramped up to establish a patent airway (Cattano D, Melnikov V, Khalil Y, Sridhar S, et al. An evaluation of the rapid airway management positioned in obese patients undergoing gastric bypass or laparoscopic gastric banding surgery. *Obes surg* 2009; 10:1007)

3. Lee et al found that ramping improved laryngeal view significantly in the 25 degree back-up position compared with supine. 'Direct laryngoscopy depends upon the forward flexion of the cervical spine and the extension of the head at the atlanto-occipital joint to align the oral, pharyngeal and laryngeal axes.' Their study of 40 patients showed that, if difficult intubation is associated with poor visibility of the larynx, then the 25% improvement in the view in the 25 degree head up position may be significant in how clinicians approach potentially difficult intubations. (*Lee BJ, Kang JM, Kim DO. Laryngeal exposure during laryngoscopy is better in the 25 degree back up position than in the supine position. Br Journal of Anaesthesia 2007; 99(4):581-586)*

4. Collins et al studied 60 morbidly obese patients to compare sniff position with ramped position. 'The result was that the ramped position improved laryngeal view when compared to a standard sniff position and this difference was statistically significant (P=0.037) which leads to the conclusion that the ramped position is superior to the standard 'sniff' position for direct laryngoscopy in morbidly obese patients.' (Collins JS, Lemmens HJ, Brodsky JB, Brock-Utne JG, et al. Laryngoscopy and morbid obesity: a comparison of the 'sniff' and 'ramped' positions. *Obes Surg*. 2004; Oct 14(9):1171-5)

5. Dixon et al also showed preoxygenation to be more effective in the 25 degree head up position (*Dixon BJ, Dixon JB, Carden JR, Burn AJ, et al. Preoxygenation is more effective in the 25 degree head-up position than in the supine position in severely obese patients: a randomized controlled study. Anesthesiology 2005; 102:1110-5)*

6. Brodsky et al (*Brodsky JB. Positioning the morbidly obese patient for anesthesia. Obesity surgery 2002; 12:751-758, Brodsky JB, Lemmens HJ, Brock-Utne JG, Vierra M, Saidman LJ. Morbid Obesity and tracheal intubation. Anesth Analg 2002; 94:732-6)* refer frequently to the importance of ramping the patient so that, 'An imaginary horizontal line should connect the patient's sternal notch with the external auditory meatus.' 'The Head Elevated Laryngoscopy Position (HELP) significantly improves the view during direct laryngoscopy.' They emphasize that the head and trunk must be elevated. Their intubation success rate was 99% compared with a similar rate of 97% demonstrated in the Keller study however in this study 15% required a bougie and only 33% had a grade 1 Cormack view. In the Brodsky et al study no one was reported to need a bougie and 75% had a grade 1 view. It was implied that this discrepancy was due to the patients in the Keller study being raised up by only 8 cm. (*Brodsky JB, Lemmens HJ, Brock-Utne JG, Saidman LJ, Levitan R. Anesthetic considerations for bariatric surgery: proper positioning is important for laryngoscopy. Anesth Analg 2003; 96:1841-1842)*

7. The most effective method of achieving the head elevated laryngoscopy position is by using a pre-manufactured device as described by Rich, '(it) eases the work of breathing for those patients who cannot lay flat secondary to obesity-induced orthopnea. Therefore, the patient is better able to tolerate the pre-induction period or longer period of time when required.' 'The elevation pillow can be prepositioned inserted and removed much faster and with less difficulty than that required to build and dismantle a ramp made of hospital linen.' *(Rich JM. Use of an elevation pillow to produce the head-elevated laryngoscopy position for airway management in morbidly obese and large-framed patients. Anesth Analg 2004; 98:264-79.)*

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