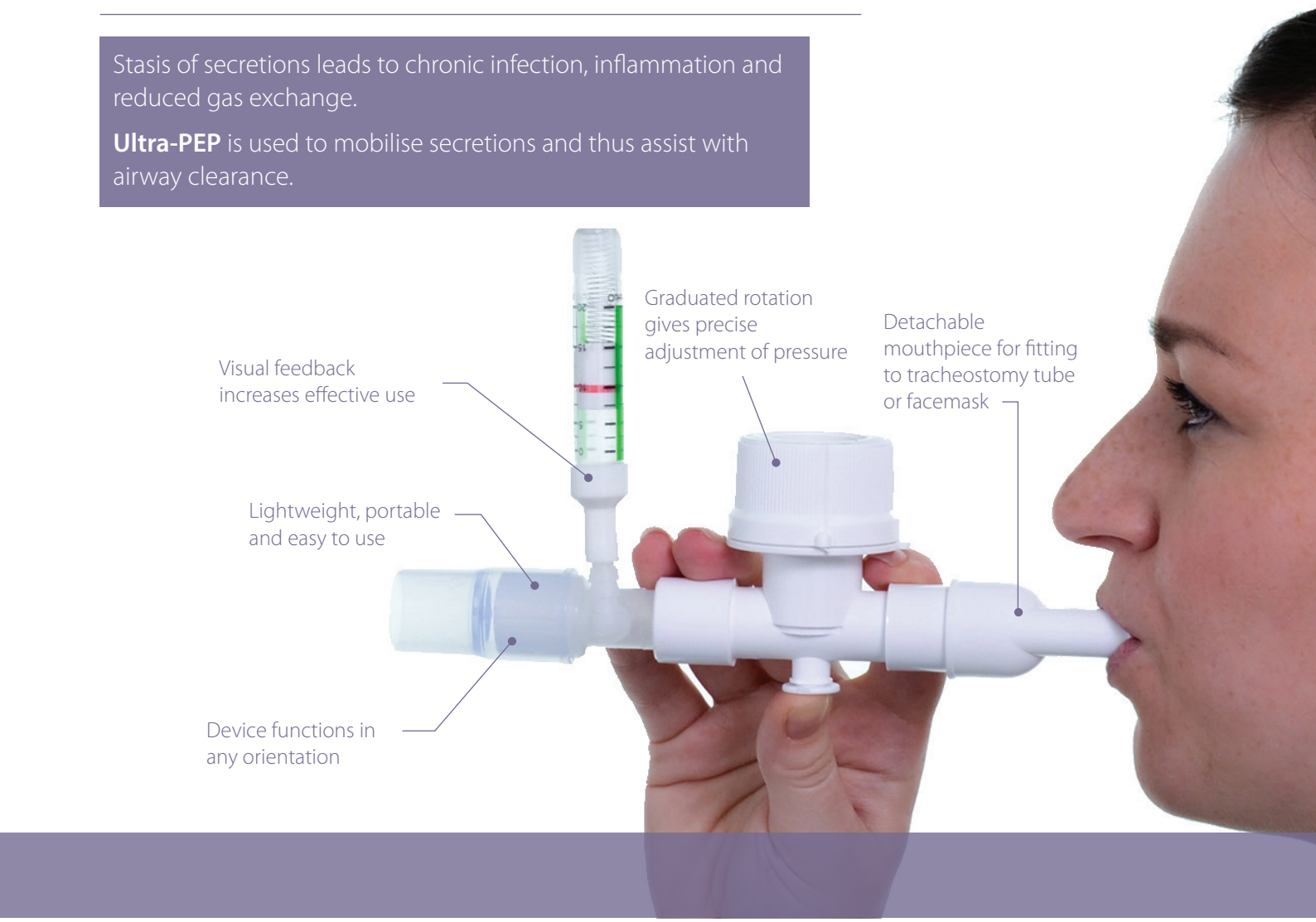
Ultra-PEP

by Armstrong Medical

Ultra-PEP

Stasis of secretions leads to chronic infection, inflammation and reduced gas exchange.

Ultra-PEP is used to mobilise secretions and thus assist with airway clearance.



Post-operative Pulmonary Complications

Post-operative pulmonary complications (PPC) are linked to increased length of stay and mortality.

Cardiac, thoracic and abdominal surgery present the highest risk of PPC. [1]

Anaesthesia may adversely affect the lung's defence mechanisms impairing the ability to cough and suppressing mucociliary clearance.

90% Anaesthetised patients with atelectasis.

36% Patients with radiographically diagnosed atelectasis that develop pneumonia. [2]

High flow humidified PEP

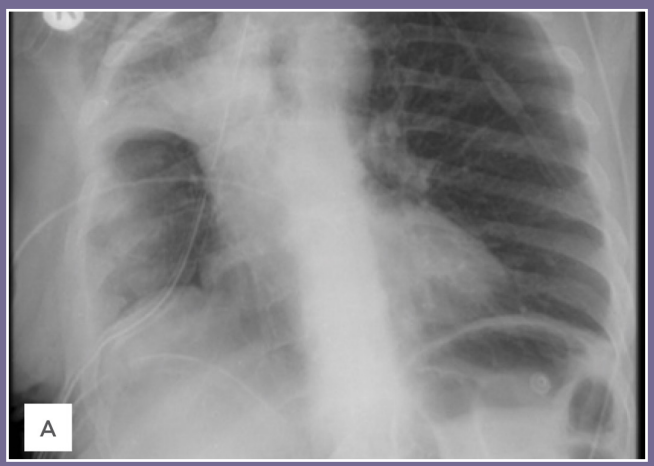
High flow humidified PEP combines two respiratory therapies for the prevention and treatment of post-op pulmonary complications.

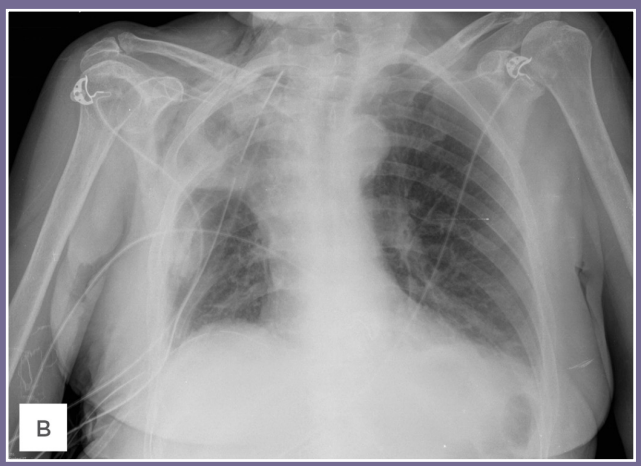
Humidified high flow with **AquaNASE®** maintains mucociliary function and improves oxygenation by delivering flows close to the patients' peak inspiratory requirement.

Ultra-PEP is used to mobilise secretions, assist with airway clearance and prevent or reverse post-operative atelectasis.

"Combining the known beneficial effects of HFNC therapy with PEP devices would add a higher and more reliable level of PEEP to patients." [3]

Evidence for use in current practice





Chest X-ray changes before and after treatment with positive expiratory pressure (PEP) therapy in a patient with respiratory failure following right upper lobectomy surgery. A) Before PEP therapy. B) Increased lung volume and improvement of basal atelectasis after PEP therapy. [3]

Clinical Indications

- COPD
- Bronchiectasis
- Chronic Bronchitis
- Emphysema
- Cystic Fibrosis
- Post-operative atelectasis
- Epithelial mucus-hypersecretion

Code	Description
AMPT1001	PEP exerciser with mouthpiece
AMPT1001/002	PEP exerciser with Manometer

Flowkit additional options include;

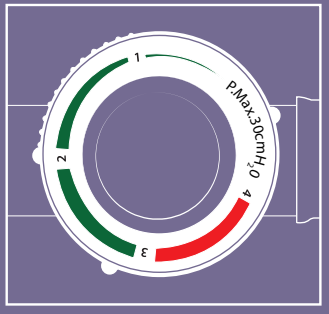
- Facemask
- Supplementary oxygen
- Nose clip

Instructions for use

1. Select pressure level as advised by your clinician.
2. Put the mouthpiece in your mouth and seal your lips around it, breathe a normal breath in, and then exhale slowly but firmly against the resistance. Try to breathe all the way out to the end of your breath. Exhalation should last six seconds. You should be able to hear a hissing sound as the air comes out of the valve.
3. Repeat for 10 breaths if possible, (you may need to cough before you reach 10th breath, if so take the device out of your mouth and cough to clear any loosened secretions).
4. Rest for 30 seconds.
5. Cough and clear any phlegm that has been loosened and rest again.
6. Repeat the above cycle at least 3 times or as often as is necessary to clear the chest.
7. Take the PEP device apart and wash it in soapy water (Maximum 50°C) once per week and allow it to fully air dry before reassembly.

Pressure settings

Valve Settings	Pressure range cmH_2O *
1	0-8
2	9-15
3	16-22
4	23-30



References

1. Canet J et al, Predication of postoperative pulmonary complications in a population – based surgical cohort. Anaesthesiology, (2010) 113 1-6

2. Hedenstierna G, Edmark L, Mechanisms of atelectasis in the perioperative period, Best practice and research clinical anaesthesiology (2010) 157-169

3. Glossop J, Agostini P, Positive pressure therapies used in the treatment of postoperative respiratory failure-EMJ Medical Journal , (2015) Vol 3.2, 110