

First-line treatment  
of negative pressure  
in the middle ear.

OTOVENT<sup>®</sup>

# Regulates and prevents.

OTOVENT is a front-line alternative for the treatment of negative pressure in the middle ear in children and adults.

Regulation of the pressure in the middle ear is a known and important mechanism in the treatment of disorders of the middle ear in children. Normally, the pressure in the middle ear is equalized by swallowing or yawning. If the mechanisms for regulating negative pressure are not wholly effective, negative pressure in the middle ear occurs due to collection and absorption of the air in the membranous lining of the middle ear. After a number of weeks gluey secretions develop, filling the middle ear (glue ear) and leading to hearing impairment. Untreated it may lead to deterioration in the elasticity of the eardrum, which may lead to chronic disorders of the middle ear in the future.

The OTOVENT-method is well proven first-line treatment in attempting to avoid surgical intervention with the insertion of a plastic "grommet" in the eardrum. Documentation is available proving the effectiveness of this method in both children and adults

## Two-phase method.

The OTOVENT-method may be divided into two phases:

**Inflation phase:** inflation of the balloon using one nostril.

**Deflation phase:** (if the inflation phase is ineffective) where air from the balloon is allowed to flow into the nostril at the same time as the individual swallows.

**The positive properties of the OTOVENT-method include:**

- both the passive inflation phase and the active deflation phase (where the air flows back) allows opening of the Eustachian tube.
- 70% obtain relief in the inflation phase. Therefore we always recommend this alternative in initial treatments. The combined inflation- and deflation phases should only be performed when equalization of pressure is not achieved by the inflation phase alone.

## How does OTOVENT work?

Inflating the tested balloon via the nostril creates a positive pressure in the nasopharynx, which can equalize the negative pressure in the middle ear via the Eustachian tube. In this way the pressure in the middle ear, and thereby the hearing, is normalized. When the balloon is inflated to grapefruit-size the technique is correct and therefore optimum

benefits from the treatment will be gained. Children generally view blowing up the balloon using the OTOVENT-method as a game, which makes carrying out the treatment easier. Slightly older children, who have learnt the OTOVENT-method, can both perform and monitor the treatment themselves.

No negative effects have been shown, either in clinical studies or reports. The OTOVENT-balloons in the pack are carefully manufactured to achieve the therapeutic pressure required to open the Eustachian tube. Where other balloons are used the therapeutic effects cannot be guaranteed.

Correctly used, the OTOVENT-method provides excellent results in the treatment of children and adults with SOM/OME. 50 % of children (from approximately 3-4 years) achieve equalization or a lower negative pressure in the middle ear.

## So how do you use the OTOVENT balloon?

**Stage 1.** Attach the nose-adapter to the balloon.

**Stage 2.** Hold the round part of the nose adapter tightly against the right nostril with the right hand. Close the left nostril with the left index finger.

**Stage 3.** Breathe in deeply, close the mouth and blow up the balloon to the size of a grapefruit.

**Stage 4.** Repeat the same procedure with the left nostril.

**NOTE!** Maximum 20 inflations per balloon.

The treatment works if you/the child experience a pressure increase and/or a "click" in the ear.

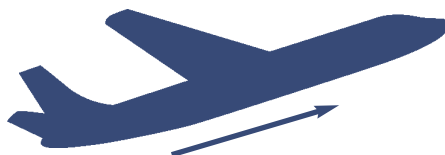


***If you/the child do not experience any change:***

*Repeat Stage 2. Then incline the head slightly forwards and turn the head to the right.*

*Then repeat Stage 3. When the balloon is inflated, try to swallow. Observe that the nose-adapter should be held tightly against the right nostril, left nostril squeezed shut with the left index finger and the mouth closed.*

*Repeat the same procedure via the left nostril with the head to the left.*



## OTOVENT also helps when flying.

During air travel a negative pressure may develop in the middle ear. Problems arise when the plane leaves its cruising altitude or starts its descent. This causes an increase in cabin atmospheric pressure, whereby a negative pressure forms behind the eardrum, causing it to bulge inward. If the negative pressure is not equalized this leads to an extremely painful condition called **Barotitis**, which may cause vertigo (normally transient) and hearing impairment. It has been shown that children under 8 years old develop varying degrees of barotitis during air travel. See the OTOVENT-brochure *"Say goodbye to pain when flying"* or for more information go to [www.abigo.se](http://www.abigo.se)



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