

# PAUL Y. LEE, D.D.S.

Orthodontics for Adults and Children

10251 Torre Ave. #118  
Cupertino, CA 95014  
Tel. (408) 996-1204

[www.paulleedds.com](http://www.paulleedds.com)

995 Montague Expwy.#117  
Milpitas, CA 95035  
Tel. (408) 946-0766

Some orthodontic procedures may improve airway. It has to be evaluated by a medical professional because many factors can be involved with airway problems. The following is list of references we have prepared for you. You may also find them on [www.pubmed.com](http://www.pubmed.com). These procedures may improve airway but the individual response to the procedure may vary.

## **RPE (RME):**

- Most of the air we breathe passes over the lower nasal floor, SARME (Surgical Assisted Rapid Maxillary Expansion) is likely to **improve nasal breathing**. – (Am J Orthod Dentofacial Orthop 2010;137:782-09)
- RME may be a useful approach in dealing with **abnormal breathing during sleep**. – (Sleep. 2004 Jun 12;27(4);606-7)
- Orthodontic therapeutic measures should be considered as a casual treatment option in children with **OSAS and craniofacial anomalies restricting the upper airway**. – (J orofac Orthop. 2006 Jan;67(1);58-67)
- RME have shown to have very favorable effects in the growing child on improvement of OSA –(By James A. McNamara, Jr.)
- A Rapid Maxillary expander is an effective appliance for treating children with OSAS. – (Sleep Med. 2007, Mar;8(2) 128-34)

## **Maxillary (Upper Jaw) Protraction:**

- An Increase in nasopharyngeal airway dimension following maxillary protraction, but no change in oropharyngeal measurements. (By Eur J Ortho 2006;28:184-189)
- The assessment of midface distraction osteogenesis in treatment of upper airway obstruction. (J Craniofac Surg. 2009 Sep;20 Suppl 2:1876-81)

## **Mandibular (Lower Jaw) Advancement:**

- Application of mandibular distraction osteogenesis is an important component and effective in the treatment of OSAS and permits mandibular advancement in the younger child. As more experience is gained with distraction osteogenesis in the treatment of children with OSAS, the role of distraction will become better defined. – (Zhonghua Zheng Xing Wai Ke Za Zhi. 2005 Jul;21(4):248-51)

The results reveal successful mandibular advancement with increase of mandibular volume by an average of 28.24% and increase of upper airway volume with a mean of 71.92%. Moreover, there were improved apnea index and oxygen saturation and elimination of OSA symptoms. In conclusion, the results demonstrate that eliminating symptoms of OSA and preventing tracheostomy. – (Int J Oral Maxillofac Surg. 2005 Jan;34(1):9-18)