



Active Nickel Titanium Lingual Retainer for Minor Tooth Movement

Incisor crowding can relapse even when lingual retainers are bonded or when patients are dedicated in wearing removable retainers. Orthodontists have employed a variety of simple methods for retreatment, most notably a series of modified clear retainers. This Pearl reviews the use of an “active” nickel titanium lingual retainer for minor tooth movement without the need for patient compliance, as first reported by Liou and colleagues.¹

The anterior portion of a lower .014" nickel titanium archwire is used because a lower archwire better approximates the narrower lingual arch. The wire is extended from canine to canine, with the ends kept passive. If the cingulae of the canines are prominent, the wire can be heat-treated and stepped out so that the ends rest gently on the surfaces of the teeth.

Floss loops are threaded interproximally to secure the archwire to the teeth, and the archwire is activated by tightly pulling the floss at the affected teeth (A). The wire should conform closely to the lingual anatomy and be visibly kinked in the interproximal region (B). It is bonded to the teeth by starting from one end and walking the composite to the other end.

Incisor realignment will occur within a few days—five days in the patient shown here (C). To

prevent space from opening due to wire binding while the patient is unmonitored, a light interproximal reduction can be performed, the ends of the wire can be left unbonded to the canines, or a single-overlay modified clear retainer can be worn only at night. After alignment, the nickel titanium wire is removed, and a new passive retainer wire is bonded.

REFERENCES

1. Liou, E.J.; Chen, L.I.; and Huang, C.S.: Nickel-titanium mandibular bonded lingual 3-3 retainer: For permanent retention and solving relapse of mandibular anterior crowding, *Am. J. Orthod.* 119:443-449, 2001.



NEAL D. KRAVITZ, DMD, MS
Associate Editor for Pearls
25055 Riding Plaza, Suite 110
South Riding, VA 20152
nealkravitz@gmail.com

