



Mouthpiece Modification for Herbst Appliances

The risk of an orofacial sports injury is almost two times higher when a player does not wear a mouthpiece.¹ Ultra-Guard* is a popular orthodontic sports mouthpiece that protects the upper and lower teeth, lips, and cheeks. This Pearl describes the steps involved in modifying such a mouthguard to fit patients with Herbst** appliances (for a link to a video demonstration, see the online version of this article at www.jco-online.com).

Technique

The objective is to make the Ultra-Guard mouthpiece (A) fit comfortably under the telescoping arms of the Herbst appliance. This is achieved by removing material from the cheek protection shields and the occlusal bite tabs to accommodate the upper bands and the lower piv-

ots of the appliance. I recommend using curved, 5½" Mayo scissors (B).

Smooth the cut rubber edges with a Hatho Miniature Scotch-Brite*** polishing brush on a laboratory handpiece (C). I use a medium-abrasive (red) brush on a moderate-speed setting. The polishing brush gives a professional finish to the modified mouthpiece.

Even after these modifications, a patient will sometimes push the mouthpiece forward when biting down. In this case, quickly warm the Ultra-Guard with a dental torch and adapt it in the patient's mouth for a better fit (D). I also recommend adding comfort caps over the exposed lower screws for more comfort and protection.

This Pearl will work for both Herbst Type I (lower pivots on buccal cantilevers) and Type II (lower pivots on first premolar crowns). It can be easily adapted to other bite-jumping appliances, such as the Forsus Fatigue Resistant Device.†

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REFERENCES

1. Knapik, J.J.; Marshall, S.W.; Lee, R.B.; Darakjy, S.S.; Jones, S.B.; Mitchener, T.A.; delaCruz, G.G.; and Jones, B.H.: Mouthguards in sport activities: History, physical properties, and injury prevention effectiveness, *Sports Med.* 37:117-144, 2007.

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

