

## A Safer Debonding/Debanding Technique

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Debonding and debanding carry the risk of swallowing or aspiration of the attachments as they are removed. Ingestion of similar materials, such as endodontic instruments and pieces of orthodontic retainers, has been reported to cause serious health problems—including an esophageal perforation that required surgical intervention.<sup>1-3</sup>

Most orthodontists remove the wires and attachments separately. The present article describes a debonding/debanding technique that eliminates the possibility of swallowing or inhalation of attachments, yet requires no more chairtime than conventional methods.

### Procedure

Keep the archwires tied to the brackets with the elastomeric or metal ligatures. Follow these steps:

- 1. Tie a ligature wire over the archwire and around all the attachments, from one end to the other, in a figure-8 pattern (Fig. 1).
- 2. Ask the patient to bite down firmly on a cotton roll, then break each bond at the bracket-enamel interface with a debonding plier (Fig. 2).
- 3. Use a debanding plier to dislodge each band, working from mesial to distal (Fig. 3). At this point, all brackets and bands should be detached from the teeth.
- 4. Remove the entire assembly of brackets, bands, and archwire (Fig. 4).
- 5. Clean off any remaining adhesive, and polish all tooth surfaces.

### Discussion

If the archwire is long enough, it can be cinched back to the distal attachments at both ends. The figure-8 ligature wire will then not be needed to hold all the attachments together.

Having the patient bite down on a cotton roll will reduce any discomfort or pain caused by the pressure of the pliers, especially on mobile teeth. □

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### FIGURES



**Fig. 1** Bands and brackets tied together with figure-8 ligature wire.



**Fig. 2** Patient bites down on cotton roll while brackets are removed with debonding plier.



**Fig. 3** Bands dislodged with debanding plier.



**Fig. 4** Bands, brackets, and archwire after removal.

### **REFERENCES**

**1** Goultschin, J. and Heling, B.: Accidental swallowing of an endodontic instrument, *Oral Surg. Oral Med. Oral Pathol.* 32:621-622, 1971.

**2** Parkhouse, R.C.: Medical complications in orthodontics, *Br. J. Orthod.* 18:51-57, 1991.

**3** Nimmo, A.; Werley, M.S.; Martin, J.S.; and Tansy, M.F.: Particulate inhalation during the removal of amalgam restorations, *J. Prosth. Dent.* 63:228-233, 1990.