

# TECHNIQUE CLINIC

## Closed-Coil Spring for Anterior Crossbite Correction

**W**e have found an easy and quick way to correct a single-tooth anterior crossbite without complicated auxiliaries such as Z-springs or multiloop wires. This is the procedure, as illustrated in a patient with a blocked-out and rotated upper lateral incisor (A):

1. After raising the bite to accommodate the crossbite correction, place a nickel titanium open-coil spring on the archwire. We use an .018" or .016" × .016" heat-activated nickel titanium base wire. Activate the spring to open adequate space for the blocked-out tooth to be brought into the arch (B).

2. When a space nearly wide enough for the tooth has been opened, slide the eyelets of a closed-coil spring over the archwire on either side of the open-coil spring (C). The closed-coil spring may be 6mm, 9mm, or 12mm long, depending on the distance of the blocked-out tooth from the archwire. Leave the open-coil spring in place to continue space opening and to anchor the eyelet ends of the closed-coil spring. The additional thickness of the eyelets will slightly reactivate the space-opening spring.

3. Bond a lingual button to the lingually oriented surface of the tooth in crossbite, placing it



toward the gingival margin to encourage bodily tooth movement. Loop the closed-coil spring over the neck of the lingual button (D). If necessary, the attachment can be secured with a dab of composite, which may also make it more comfortable for the patient. The bonded button and its point of attachment to the closed-coil spring should be positioned



to facilitate any desired rotation of the blocked-out tooth.

4. The closed-coil spring generally requires no reactivation or adjustment during tooth movement. The crossbite shown here was successfully corrected in three weeks (E), and final rotation using elastic thread took another four weeks (F).

Of the many possible ways

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to correct a single-tooth anterior crossbite, we have found this to be the most reliable. If elastic thread is used in place of the closed-coil spring, the thread is likely to break. Furthermore, the force of a nickel titanium spring can be better controlled, and it has a long range of action.



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