

Ortho-Tain, Inc.

950 Green Bay Road, Suite 100
Winnetka, IL 60093
1-800-541-6612

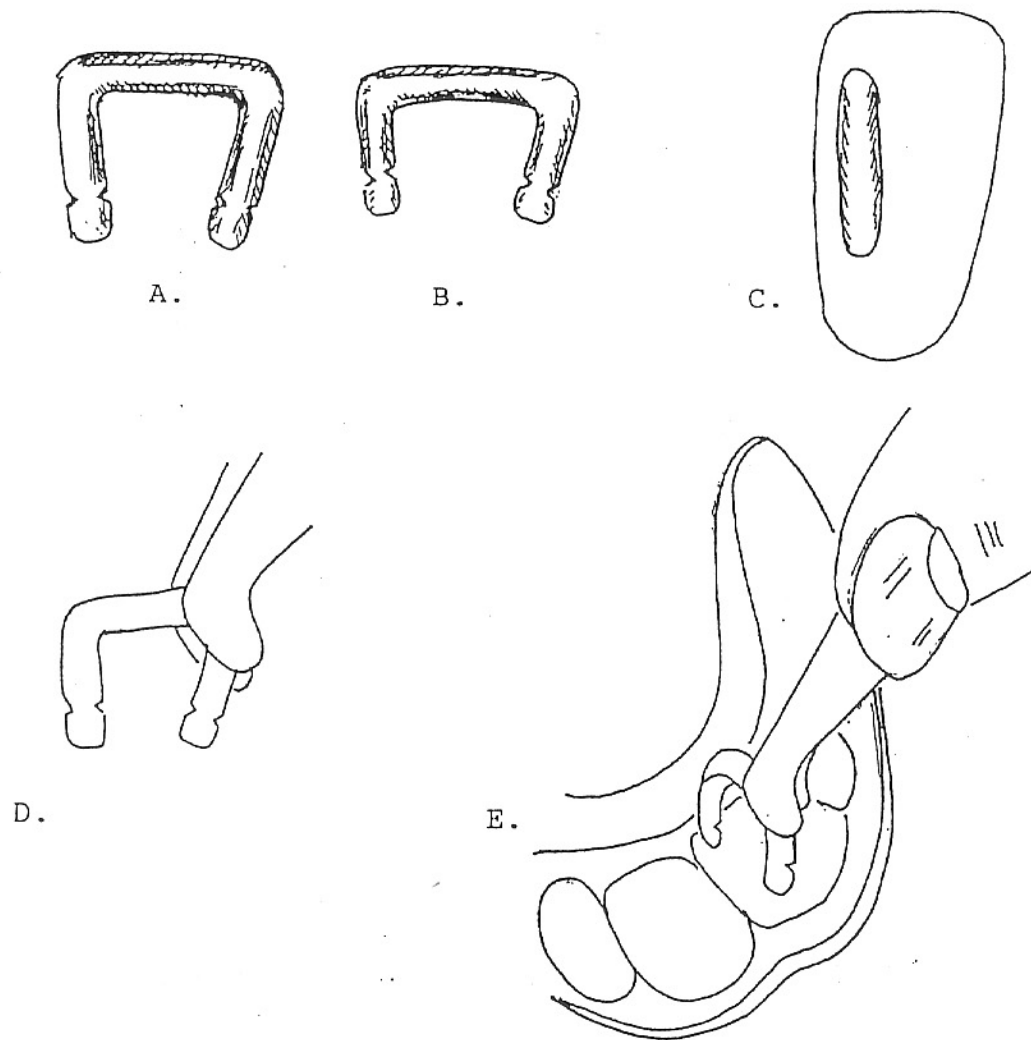
ROTATION CLEATS: WHEN AND HOW TO USE THEM

Rotation cleats are used to efficiently finish a rotation while using an active pliable plastic or rubberized appliance. They can also be used to retain overcorrected rotations in positioners. The cleats are made of 0.033 inch round wire with an undercut barb at the end of both legs (see illustration). The legs of the cleat also are bent to create an undercut to be better retained when pushed into the plastic or rubber.

If the teeth are being rotated by the rubbery appliance, the cleats should not be placed until the rotations are almost completed by about two-thirds or three-fourths toward their final ideal position. Cleats can also be used to aid in the tipping of teeth into a more ideal position, or to help in guiding an erupting tooth to an ideal position. For example, in a pseudo-Class III mandible where the upper and lower incisors touch end-to-end at initial contact as the mandible is slowly closed, then slides forward into an artificial anterior displacement causing the false Class III position, the artificial position can easily be corrected by the use of cleats. The cleats in these cases are placed lingual to the upper incisors (often 2 on the lingual surface of each of the four upper teeth), and labial to the lower incisors (usually one in the center of each lower tooth). Within one month the pseudo-Class III position is usually fully corrected and will not usually require retention.

When the cleats are used to complete a rotation, they are placed parallel to the long axis of the tooth and positioned in order to exert pressure on the tooth in the desired direction. They are usually placed on the mesial or distal on either the labial or lingual surface of upper or lower incisors (see illustration). Always check the appliance in the mouth to verify the correct placement of the cleats before dismissing the patient. Shovel-shaped incisors of Oriental patients are particularly sensitive to misplacement of upper lingual cleats and must be carefully checked.

The cleat is held with a serrated plier, such as a Howe, and the ends of the cleat are heated in a sharp blue flame (such as a small butane portable jeweler's torch, or an orthodontic blow pipe with natural gas and compressed air; not a Bunsen burner) to red hot. The cleat is then quickly pushed into the plastic at the selected location and held there for a couple of seconds to allow the melted plastic to harden around the barbed ends of the cleat (see illustration). The appliance is then tried in the mouth to verify the correctness of cleat placement. The placement of cleats is used in about 50% of G appliance mixed dentition and positioner cases, and rarely in Nite-Guide deciduous cases.



- A. A lingual cleat with longer legs.
- B. A labial cleat with shorter legs.
- C. Cleat placed along long axis of tooth.
- D. Grab the cleat with a serrated plier (howe) at corner.
- E. After heating the ends of the cleat red hot, quickly insert it into the proper position and hold it momentarily for the plastic to solidify around the legs with undercuts.

(See illustration) The appliance is then tried in the mouth to verify the correctness of cleat placement. The placement of cleats is used in about 50% of G appliance (mixed dentition), and positioner cases (adult dentition), and rarely in Nite-Guide (deciduous cases).