A basic concern of an edentulous patient is retention of their dentures. This has lead to the growth of a very large "Denture Adhesive" industry. Look in any drug store. The basic retention needs of denture wearers, has led to considerable experimentation and research efforts trying to perfect dentures that compensate for natural tooth loss, and to enhance retention by any means possible. Attachments, magnets, clasps, etc., have all been tried with minimal success. The use of a soft material denture lining, surfaced with multiple miniature suction cups, satisfies the requirements of retention and stability.

Solves Extreme Resorbed Ridges

The chief indication for a denture with multiple suction cups is the patient’s desire for extra retention and stability of his or her dentures. Many patients have extremely resorbed ridges and cannot master the use of dentures, let alone retain these prosthetic appliances in their mouths. The TCS SuctionCup addresses their problem, as well as knife-edge or flat ridges, and can be made with or without palates.

Contraindications - Allergic Reactions

The only physical tissue irritation encountered, has been caused by excessive suction cup height. These sore spots are easily treated, by trimming off part of the offending cup, using a modified nipper.

Technique

Before impressions are made, it is necessary to restore the optimum health to oral tissues. Sometimes this may require the patient to go without his or her dentures for several days. Otherwise, it is necessary that the tissue be reconditioned by relining the old dentures using special tissue-conditioning resins. Directions for the application and use of these soft resin materials are available from their manufacturers.

New Dentures

The first step in making a new set of dentures is making an accurate set of impression trays. The handle on the tray should be centered directly over the anterior ridge, so that it does not interfere with the movement of the lips. The borders of the tray should be slightly under extended and rounded. Severe under extensions can be corrected by using tracking stick modeling,
compounded to the tray, and manipulating the border tissues, producing a functionally accurate adaptation.

The final impression is made in a soft syringe type, rubber-based impression material, free of any voids or air bubbles.

Rebasing Old Dentures

Dentures may be rebased using the TCS SuctionCup Technique, providing the dentures have the correct occlusion, centric relation, and occlusal dimensions. Before rebasing old dentures with this technique, sufficient space must exist under the teeth for both the new silicone liner and new acrylic resin. Also prior to rebasing old dentures, the dentist may have to cut away much of the under impression surface of the denture, and first treat the tissue with a tissue conditioning resin.

The borders should be corrected with tracking stick-modeling compound, making sure they are nicely rounded and accurate. The soft syringe type, rubber-based impression material is then used for making the final impression directly into the old denture.

Placement of Dentures

After the laboratory has precisely processed the denture, it is returned to the dentist. Prior to the insertion, the new dentures are soaked in the fungicide solution for at least 15 minutes and then rinsed with distilled water before being place in the patient's mouth. The patient is asked to maintain a closing pressure on the dentures for several minutes in order to allow the suction cups to flare out and partly settle into the tissue. The occlusion is then checked with articulating paper, to allow for the necessary occlusal adjustments. The patient is then dismissed, with a warning to eat a soft diet for the next few days, and to leave the dentures out during sleeping hours.

The patient is recalled within a week for further occlusal adjustments, and again a month later for final adjustments. During this time, any sore spots that occur due to excessive height of individual suction cups are easily located and relieved and should be trimmed with modified cuticle nippers.

TCS SuctionCup

A simple technique (for the dentist) for enhancing the retention and stability of dentures has been described. A large number of small suction cups formed from a soft, resilient silicone rubber are processed in an otherwise conventional denture. They grip the oral tissue without causing any pathosis returns. The tissue tends to temporarily assume the form of the cups, but then returns to normal when the dentures are removed. The tissue displays a pink, moist, and healthy normal appearance.