Lingual Bladed Teeth

by Bernard Levin, D.D.S., M. Ed.,
Professor Emeritus, USC School of Dentistry

- Provide maximum chewing efficiency plus the esthetics of natural teeth
- Are articulated to achieve bilateral balance in most clinical situations
- Can be used for lingualized occlusion or monoplane (flat teeth) occlusion
- Are manufactured with color-stable, cross-linked acrylic resin, unbreakable, surgical stainless steel blades, and in a variety of popular shades

Patients and dentists have been aware of the limitations of artificial teeth for a long time. In 1895, G.V. Black invented a gnathodynometer to measure a wide range of chewing forces for various types of food. These forces varied from 5 to 175 pounds. Black found that denture patients used chewing forces of only 20 to 30 pounds because of pain or fear of pain. It is not surprising that Manley and Kapur and Soman conducted chewing tests and found that artificial dentures were only one sixth as efficient as natural teeth.

The difference in efficiency between natural and unnatural teeth is obvious. Natural teeth have crowns which are supported by roots, periodontal ligaments, and bony sockets. Artificial teeth are supported by a soft, thin layer of oral mucosa that rest on bony ridge, which cannot support the sturdy support available to natural teeth. Because of this difference, it is illogical to use the natural tooth forms for denture teeth.

After many disappointing experiences, various dentists abandoned the concept of natural tooth from and mechanical tooth forms to improve chewing efficiency. Hardy designed a serpentine-like, cast metal ribbon which protruded about 1mm from the occlusal surfaces of flat resin teeth. Cook designed Masticators: flat, cast metal mandibular teeth, except for the first bicuspid, which had sharp buccal cutting edges created by holes on the occlusal and buccal. Bader designed the Cutter Bar: a sharp-edged, mandibular tooth replaced in the first molar and second bicuspid area.

Since 1864

The two mechanical forms are no longer available. Many other mechanical forms have been designed, but not accepted, all using a monoplane or flat type of articulation. Not only was it impossible to obtain bilateral balance with these teeth, but their appearance were often unacceptable to many patients.

Sosin was the first to design a mechanical tooth that had excellent function and could be set in bilateral balance. He designed a cross-blade flat area of occlusion. These were custom-made from chrome alloy resin.

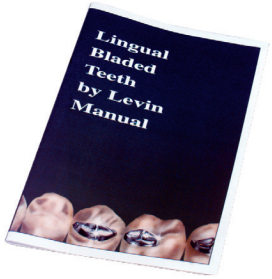
Then came the Lingual Bladed Teeth by Levin. He was influenced by Sosin's design but was interested in teeth with better esthetics. He made the Sosin blades smaller and placed them on the mesio-lingual cusps of the first and second maxillary molars, and the lingual cusps of the second bicuspid. The teeth are anatomical in form and as such look natural and esthetic. They are designed in a size suitable for most ridges. The maxillary bicuspids have ideal buccal length (9.5mm) for good esthetics. The first bicuspids can be eliminated if a spare problem exists. The blades which show very little or not at all when the patient is talking or smiling, are made of unbreakable cast chrome alloy, with .5mm edges and 2mm long. If desired, the blades can be sharpened with carborundum disks or heatless stones.

Lingualized Occlusion

A popular form of cusp occlusion, introduced by Payne, is called lingualized occlusion. In this form of occlusion, the buccal cusps do not contact and all the function is performed by the maxillary lingual cusps in the opposing fossae. The teeth must be modified by grinding when this form of occlusion is used. Lingual Bladed Teeth are ideal for this purpose as they are easy to modify and the functioning cusps have efficient cross-blades

Monoplane Occlusion

Another popular form of occlusion is called monoplane or flat occlusion. This type of occlusion uses monoplane or flat teeth. Some proponents make no effort to obtain balance and others obtain some balance with the use of a compensating curve or a balancing ramp. This concept can be utilized with the lingual bladed teeth by using flat teeth on the lower arch.



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