

Problem Solvers 22 Surgery for Dentures or Pre-prosthetic Surgery

Synonyms: Alveoloplasty, frenectomy, tuberosity reduction, alveolectomy, pre-prosthetic surgery, tori, tori removal, edentulism, vestibuloplasty, gingivectomy.

The average rate of edentulism or being without any teeth is 20% by age 60 in the United States. There are over 30 million people without teeth and the majority of these people are treated with dentures. This article will discuss reasons why surgery may be needed prior to or after denture fabrication.

Surgery for dentures can prevent problems

In the United States 20% of people have no teeth by age 60. If both dental arches are considered, there are over 30 million people that have no teeth. In order to treat these people dentures are often made. Dentures must be able to be placed without rubbing on sharp areas of bone. So many dentists must discuss pre-prosthetic (before dentures) surgery.

Types of pre-prosthetic surgery:

- **Edentulation:** This is when all the teeth in a given arch need to be removed. The extractions are done and the sockets are cleaned out of any abscesses or debris.
- **Alveoloplasty:** This is when the bone around the extracted teeth is smoothed so there will be no sharp ledges or bony projections that can poke through the gum causing denture sores and pain.
- **Alveolectomy:** This is a procedure where part of the alveolar process or bone of the jaw is removed and smoothed to allow the denture to sit smoothly on the remaining bone. This involves more bone removal than the alveoloplasty.
- **Tuberosity reduction:** This is when the bone in the upper jaw is too big for the denture and it must be reduced in size so the denture can fit over the back area of the upper jaw.
- **Tori removal:** There are often bony projections in the mouth in the roof of the mouth (torus palatinus) or inside the lower jaw (torus mandibularis). These often need to be removed as the denture can't fit around these big knots of bone!
- **Soft tissue removal:** When excess flabby tissue is present along the ridge it must be removed. This can be called a gingivectomy or excision of hyperplastic tissue. If people have worn ill-fitting dentures for long periods of time, the resulting flap or "epulis" is removed so the new denture has a smooth base to sit upon.

Frequently asked questions:

My denture makes me gag, did I need some surgery prior to the dentures?

Usually this means the denture was extended too far and needs to be trimmed. Soft palate surgery is rarely part of pre-prosthetic surgery.

I have sores constantly and feel big bumps of bone in the back that are raw, what can be done?

In the back of the upper jaw, the tuberosity is a large bump of bone. The denture slides over this thin tissue all the time and if the bone is too prominent, it may need to be trimmed. Then the denture can be relined. The dentist will try and adjust the denture before performing the surgery but if the denture is too thin (less than 2 mm) the bone should have been reduced prior to surgery.

I am tongue-tied; will this interfere with wearing dentures?

Having a piece of tissue that is prominent may not interfere with denture wear but may interfere with proper speech. To correct this, a frenectomy or tissue trimming can be done.

I have a sharp pain under my denture on the bottom when I chew, what is that?

When people lose extensive amounts of bone in the lower jaw, the mental nerves can be exposed. This can lead to “zingers” or sharp pain. The dentures can be adjusted and soft liners can be tried in the denture. This is not an indication for surgery.

I can't keep my denture in my mouth, they fall out. My dentist told me I have very little bone and it's really flat, could anything else be done? There are two possible options:

Pre-prosthetic surgery could be done to the tissues where they could be slid back and “up” to expose more bone. The moving of tissue is called a vestibuloplasty and may not be successful but is an attempt to expose more bone for the denture to grab on to.

More frequently, ridge augmentation can be done to “build up the bone” so the denture has more to grab on to. This augmentation can be done with a person's bone, donated bone, soft tissue or from different grafting media. This may help to prevent the denture from sliding and may add to the retention of the dentures.

I had my dentures made and my smile is too gummy, I am embarrassed! What can be done?

When teeth are removed, and the underlying bone is not trimmed, the dentures may not look good. Dentures must be at least two millimeters in width and they sit “on “ the bone. If teeth that are healthy are removed the remaining bone is healthy. Placing 2 millimeters or more of acrylic over the remaining bone can lead to the denture teeth being placed too far above the ridge with an ensuing “gummy smile!” While maintaining this bone is wonderful for eventual implant placement, it can lead to failure cosmetically for a person receiving dentures. This bone must be trimmed, and new dentures made, if the cosmetics are poor. If you have a “horsey” smile or a “gummy smile” and your dentist cannot satisfy you, you were probably a candidate for pre-prosthetic surgery.

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