

## INFORMATION ON PINHOLE SURGICAL TECHNIQUE FOR GUM REPOSITIONING



You might have noticed, or your dentist might have discussed with you the presence of gum recession in certain areas of your mouth. While this condition advances (on some faster than others), further recession of the gum may occur which could lead to premature tooth loss. Additionally, for fillings at the gum line, it is important to have sufficient width of attached gum to withstand the irritation caused by the fillings or edges. Sufficient width of attached gum is also necessary to withstand the repeated forces of tooth brushing and food.

**Recommended treatment:** In order to treat this condition, there are 2 cosmetic periodontal procedures available:

1. Free connective tissue grafting: this procedure is usually done by a specialist periodontist as it involves cutting a piece of gum from the palate (roof of the mouth) and suture it over the recessed area. Although the success rate of the procedure is comparable to the method that I propose, this kind of procedure is limited to the size of the gum that can be taken from the roof of the mouth and it might not cover all the recessed areas in one procedure. Also there is also an increased discomfort as the procedure involves scalpel incisions and sutures in at least 2 areas of your mouth.
2. **The Pinhole Surgical Technique (PST)**, has the advantage of a minimally invasive procedure (similar to keyhole surgery for abdomen operations) and does not require grafting of gum tissue from anywhere else. Because there is no incision, there is no need for stitches in general. The access points for the surgery will heal by primary intention in within 1-2 days, with complete healing in 7-10 days.

Regardless of the procedure chosen, it is worth pointing out that both procedures require healthy gums, with no active periodontal (gum) disease, where symptoms are bleeding gums, deep pockets, or loose teeth.



## DESCRIPTION OF THE PINHOLE PROCEDURE:

- local anesthetic will be administered as part of the procedure;
- preparation of tooth surfaces is done with a fine bur to clean the exposed root surface. Any root covering fillings will need to be removed as gum does not stick over filling material;
- a small pinhole or several pinholes will be placed on the gum above the teeth and under the lip, depending on the number of teeth being treated;
- specially designed, patented instruments will be used to gently loosen and drape the gum tissues over the exposed areas on the teeth;
- resorbable collagen strips will then be placed through the pinhole to increase the width of the gum and secure the tissue in place. This material will dissolve and will be replaced by your own tissue in within a few weeks, as part of the healing process. **(Observation: the collagen is specifically manufactured and sterilized for use in oral surgery procedures, periodontics and implantology, and it has porcine (pig) origin. Special consideration should be taken if your religious, dietary, moral beliefs or medical conditions forbid you for coming in contact with pig tissue. Since this is the only material that so far gives predictable results, if you cannot tolerate this material the procedure cannot be performed);**
- unforeseen circumstances might call for change from the anticipated surgical plan. This may include, but are not limited to: inclusion of additional teeth not originally planned, termination of the procedure prior to completion of all surgery planned and placement of sutures if indicated.

**Expected benefits:** the purpose of the PST procedure is to create a widened zone of attached gum tissue adequate to reduce the likelihood of additional gum recession and to cover the exposed root surfaces in order to enhance the appearance of the teeth and gum line and to prevent/treat root sensitivity or root decay. If the recession of the gum is associated with the retraction of the interdental papilla (gum between teeth), the covering of the recession will be limited (usually about 3 mm from the tip of the interdental gums) and the interdental gum will not be restored to a higher position. In this situation the main benefit will be the thickening of the existing gum and the thickening of the attached mucosa which, in turn, will prevent further recession.

**Principal risks and complications:** the amount of root coverage will depend on many factors including but not limited to: the severity of the recession, blood supply to the tissue, amount of tissue and bone loss interproximally (in between teeth), overall systemic and oral health of the patient and compliance with the post operative instructions. In addition, the success of the PST can be affected by: medical conditions, dietary and nutritional problems, smoking, alcohol consumption, clenching and grinding of teeth, improper oral hygiene and medication patient might be taking. There might be a need for a second procedure if the initial surgery is not satisfactory.



Complications from PST may include but are not limited to: bleeding, bruising and swelling, pain, infection, transient or permanent tooth sensitivity, temporary or even permanent numbness of lips, chin and gums, allergic reactions and accidental swallowing of foreign matter. The exact duration of any complications cannot be determined and they might be irreversible.

It is imperative that the post op instructions to be followed diligently to prevent complication or failure of the procedure. Please read the last page of this document for a full list of the instructions.

#### THE PINHOLE SURGICAL PROCEDURE WILL IMPROVE:

- Thickness of the gum and attachment of the gum to the underlying bone (primary purpose), making it more able to withstand brushing and food impaction
- Coverage of the exposed roots, to a degree depending of the severity of the initial situation (secondary purpose). You should note that if there is a recession of the gums in between the teeth, the root coverage will not be 100%

#### THE PINHOLE SURGICAL PROCEDURE WILL NOT FIX:

- Gum disease, loose teeth, periodontal pockets (contraindication of the procedure)
- Black triangles (a condition in which the gums in between teeth has receded leaving triangular spaces that look dark from afar)



## POST OP INSTRUCTIONS FOR THE FIRST 6 WEEKS

1. No brushing over surgical sites (just tongue side and biting side)
2. No flossing (water-pick only, from tongue side or inside - on low power)
3. No interdental toothbrushes or teepees
4. No electric toothbrushes for 6 weeks
5. No touching: with finger or any other device or object
6. Do not lick surgical area
7. Do not use cotton swabs, cloth or any soft or hard object to clean the area
8. Do not sleep with hands under the cheek where surgery was done
9. No facial massages for 3 weeks or massage that area of the face for any reason
10. No looking: do not obsess over or question doctor about appearance of gums for 6 weeks. The reason is because you cannot look without pulling cheek, thus putting tension on the surgical site
11. Rinse only with lips apart: sloshing only
12. No chipmunk cheeks when you rinse
13. Do not play wind instruments for 6 weeks
14. Do not suck on straws
15. Do not blow balloons
16. No spitting
17. No mints over surgical area
18. No smoking, chewing tobacco, cigar, pipe or recreational marijuana.
19. No clenching or grinding of teeth
20. No heavy lifting that require clenching of the teeth
21. No heavy exercise or vigorous dancing or physical activity for 3 weeks
22. No snorkeling for 6 months
23. Ice packs (in a cloth) over area at 10 minutes intervals for the first 48 hours to minimize swelling
24. Don't be alarmed about swelling or bruising for the first week
25. Do not eat crunchy or sticky food that can get stuck on or in between your teeth
26. Expect cold sensitivity for 6 weeks or longer. Do report sensitivity during check-up appointments.
27. Pain control: take paracetamol/ibuprofen if needed (do not take ibuprofen if allergic/asthmatic.
28. Call doctor/dentist immediately if you have unexpected pain, continuous bleeding, or heat from the surgical site
29. Return for review at least 1 week, 3 weeks (decided on a case by case basis) and 6 weeks after surgery
30. After 6th week you may brush surgical area with special extra soft brush for 6 months

### INSTRUCTIONS FOR HYGIENISTS AND DENTISTS

1. Please do not brush or touch with the polishing bristles or cups the gums on the surgical area for the first 6 weeks, and only instruct on modified Bass brushing technique, rolling away from gums.
2. Please do not probe the area for pockets for the first 6 MONTHS after surgery