

Periodontal Plastic Surgery

By Thomas Jackson, DDS

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The popularity of television shows like “Extreme Makeover” and the allure to have white, straight, and youthful-looking teeth have made cosmetic dentistry quite popular. And with modern ceramic materials and bonding technology, great cosmetic changes can be made to your smile.

There are times, however, that the end result doesn’t meet the patient’s level of expectation, despite using the best dental materials available. This usually happens when the cosmetic importance of the gum tissue is overlooked in cosmetic restorative dentistry (bonding, crowns, bridges, and veneers).

For three-quarters of the population, the gingival (gum) tissue can be seen while speaking and smiling—either the triangular tissue between the teeth (papilla) or the margin at the necks of the teeth. This visible tissue can have a cosmetic influence on the overall appearance of the smile, because it gives the teeth size, shape, and character.

The two most important aspects to smile design are achieving left and right symmetry of the teeth while harmonizing the teeth and smile within the framework of the “golden proportion.” In the analysis of beauty, the golden proportion is the universal ratio of height to width that is found to be visually pleasing. This ratio of beauty can actually be found in writings dating back to the ancient Greeks.

In order to achieve what our society recognizes as a beautiful smile, a person’s gingival tissue and teeth must also fit within the parameters of the golden proportion. Often, the symmetry and shape of the existing gingival tissue or teeth may not lend themselves to this proportion. In this case, corrective surgical gum procedures (called periodontal plastic surgery) must be used before a client will have the “great smile” they expect.

The most common condition contributing to the asymmetry of tooth size is gingival recession. Clinically, this can be seen when

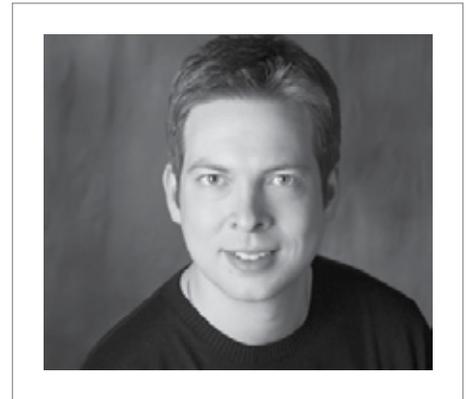
the gums at the necks of the teeth recede, making teeth look longer as root structure appears. This can lead to root sensitivity and can become a cosmetic problem.

If a patient is considering cosmetic restorative dentistry, it is critical to repair the recession first, prior to the application of dental materials. Even if there is no plan to perform cosmetic dentistry, repairing the recession can improve the smile. The procedure to repair the recession is a type of gingival graft that can either utilize the patient’s own tissue or tissue supplied by a donor. It is a highly successful procedure in that it will often completely repair the recession defect.

Another common condition that creates cosmetic problems is a “gummy smile.” In this situation, a person’s smile reveals an excessive amount of gum tissue, and the teeth may appear short. In this case, it is necessary to change the position of the gumline first in order to maintain the golden proportion. The procedure to reposition the gumline is called crown lengthening. In essence, it is gum shortening—reducing the amount of gingiva visible while at the same time creating a longer tooth to a pleasing proportion.

Those who need to repair a badly damaged tooth may also encounter gingival issues. There are mechanical principles that must be adhered to in the restoration of a tooth. If a large amount of tooth structure has been lost either by breakage or decay, a dentist will often remove a portion of the surrounding gum tissue to get access to the needed additional tooth structure. Unfortunately, if this procedure is done in the cosmetic zone, the tooth will appear longer, and not in symmetry and proportion to the other teeth. In lieu of gum tissue removal, a procedure called “forced eruption” is used to gently lengthen the visible tooth to create access to the necessary tooth structure.

The last common gingival irregularity comes after a tooth has been extracted. We



Thomas Jackson, DDS, is advanced trained in periodontics and periodontal prosthesis. Dr. Jackson is a board-certified periodontist and the founder of the Chicago Center For Cosmetic & Implant Dentistry. He lectures nationally and internationally on issues relating to dental implants and cosmetics. Dr. Jackson is an associate professor at Northwestern University’s Feinberg School of Medicine, and he may be reached at 847-842-6900.

know that once a tooth has been removed, the width of the extraction socket will shrink drastically (called alveolar atrophy). The gingival tissue gives shape to original as well as replacement teeth. Any reduction in width of the missing tooth site means little chance of recreating a normal-looking replacement tooth. In this case, prior to cosmetic restorative dentistry, an augmentation procedure must be done to recreate the normal contour of the missing tooth site.

All of these procedures are commonly done by periodontists—dentists who specialize in periodontal plastic surgery as well as treatment of periodontal disease and dental implant placement. A periodontist has completed three years of additional training beyond dental school. Some periodontists become board-certified after passing both a written and oral examination.

If you are considering cosmetic restorative dentistry, a team approach between your cosmetic dentist and periodontist can help you achieve the best possible results. U