The Power of a Smile

By Gregory W. Egbert, DDS, MSD

There are few things in life that are more powerful than your smile. A smile demonstrates your self-confidence and reflects a positive attitude to those around you. The symmetry of your upper and lower jaws affects the way you smile and may also impact the alignment of your teeth. Straight white teeth are most often a result of years of orthodontic treatment and proper dental care. Many times, orthodontic treatment alone is insufficient in correcting a dental malocclusion (poor bite), especially if it is a result of a skeletal growth discrepancy.

Christine, a 17-year-old patient, was referred to our office with a complaint of an inability to chew because of her dental malocclusion. She had undergone three years of orthodontic treatment which had been unsuccessful in correcting her malocclusion. After careful clinical and radiographic examinations, she was diagnosed with a facial growth discrepancy. Her mandible (lower jaw) had grown too far forward, whereas her maxilla (upper jaw) was too far back. This condition had rendered her incapable of a normal masticatory function. Christine was taken to the operating room, where she was given general anesthetic and both her maxilla and mandible were broken and moved into proper alignment. The jaws were stabilized using titanium plates and screws and Christine went home the following morning. She returned to school one week later and was able to chew with a perfect bite.

Current literature reveals that nearly 20% of the population have some form of facial growth discrepancy. The most common musculoskeletal facial deformities include the following:

1. Mandibular prognathism (lower jaw too far forward)
2. Mandibular retrognathia (lower jaw too far back)
3. Maxillary hyperplasia (upper jaw too far forward)
4. Maxillary retrognathia (upper jaw too far back)
5. Maxillary apertognathia (anterior open bite/only the back teeth touch)
6. Transverse maxillary deficiency (upper jaw too narrow)
7. Vertical maxillary excess (shows excessive gum tissue)
“My jaw is too far back”, “I don’t like my gummy smile”, “My chin looks too big”, “I can’t close my teeth together” are some of the complaints expressed at initial jaw surgery evaluations. In order to address these complaints and achieve optimum results, it is important that patients work closely with an orthodontist and a maxillofacial surgeon. Generally, pre-surgical orthodontic treatment lasts six to twelve months. This is followed by orthognathic surgery and an additional four to six month post-operative orthodontic treatment to align the teeth.

Many types of asymmetry can be corrected with a single jaw surgery. More complex growth discrepancies require surgery to both upper and lower jaws and chin or cheek implants. The goal is to achieve not only a functional occlusion but a balanced facial relationship as well.

Vast improvements have been made in the field of Oral and Maxillofacial Surgery in the last fifteen years. In the past, the surgical procedures took four to five hours to complete, required a two- to three-day hospital stay and necessitated that the jaws be wired shut for eight weeks. Now, the procedures are generally completed in less than two hours, are performed on an outpatient surgical basis, and no longer require the use of wire fixation. Patients leave the hospital wearing rubber bands and generally need only ibuprofen for post-operative pain. They are then maintained on a soft diet for six weeks to allow the healing of the jaws. They return to school or work within a week, and to full physical activity after six weeks.

Post-surgical visits continue until the orthodontic treatment is completed. Once the braces are removed, patients return for post-operative photographs and a final checkup. It is rewarding to hear comments such as “Thank you for giving me a beautiful smile and making me a more confident person. I can’t wait to see my before and after pictures!”, “You have changed my life!”, and “Thank you for the miracle you have blessed me with! I am so grateful for everything you have done for me!!” It is extremely fulfilling to be part of a life-changing experience for our patients. Patients can now chew well, smile without embarrassment and radiate a new sense of self-confidence.

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