

# CTMAX QUARTERLY

VOLUME 3, ISSUE 1      SPRING 2012

## WHAT IS ORTHOGNATHIC SURGERY?

The term **orthognathic** comes from the Greek words "orthos" meaning straighten and "gnathic" meaning of or related to the jaw. Hence the term orthognathic, meaning "straighten the jaw." In today's medical world, this term talks specifically to the surgical treatment aimed at straightening and/or realigning of the jaws. Many of you probably know a friend or two that has undergone orthognathic surgery. He or she may have told you that they were "having their jaw fixed," or they may have stated that they were "having their jaw broken." At the time, you may have asked yourself why this person was subjecting themselves to such a seemingly

brutal surgery and were too bashful to ask. In this section, we will give you an overview of what this friend was talking about. In addition, we will try to give you some insight into the personal motivations of that patient and how they often evolve to an excitement and enthusiasm about treatment. Let us now look at a treatment modality whose outcome not only restores normal function but often stops the progress of local disability, enhances the quality of life, and boosts self esteem. Such a rewarding and "upbeat" form of surgical treatment, the oral and maxillofacial surgeon feels privileged to have the opportunity to provide.



Fig. 1

Fig. 2



Fig. 3

### SPECIAL POINTS OF INTEREST:

- *What is Orthognathic Surgery?*
- *Who is a Candidate?*
- *How do I get started?*
- *Who is involved in the treatment team?*
- *Is it worth it, what can I expect from the outcome?*

## WHO IS A CANDIDATE FOR ORTHOGNATHIC SURGERY

Most individuals who would become orthognathic surgical patients are aware of their problem prior to the diagnosis. It is common, however, for that patient to be unaware of the current options that are available to treat their condition. In addition, they may have been misled to think that treatment is barbaric and only reserved for the worst of circumstances (the other guy or gal). How do we become candidates for orthognathic surgery? As our jaws mature through the course of normal growth and development, it is possible for the growth of the jaws to cease or to come to completion leaving a disharmony

of function and esthetics. For any number of reasons the jaws can, at that time, remain disproportionate in size and shape. The cause of this disharmony and disproportionality is often important when determining a final treatment plan and can be a result of any or all the following:

- **An unfavorable genetic expression of growth (most common)**
- **A history of trauma**
- **An abnormal or exuberant activity of a growth center from an unknown cause (e.g., the TMJ region)**

### • Tumor or other pathology

Fortunately, the majority of jaw disproportionality are merely a result of an unfavorable genetic expression of normal growth. As a result, most treatment plans are directed strictly at the return to balanced function and esthetics once an individual has reached skeletal maturity. Three of the more common disproportionate expressions of growth can be seen in examples demonstrated in the accompanying figures.

Fig. 1 - Mandibular Prognathism,  
Fig. 2 - Mandibular Retrognathia  
Fig. 3 - Vertical Maxillary Hyperplasia

### INSIDE THIS ISSUE:

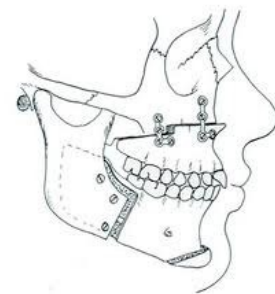
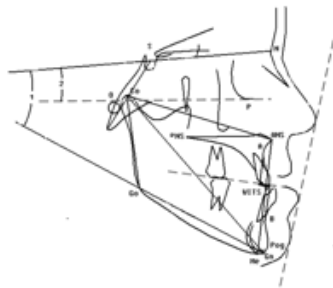
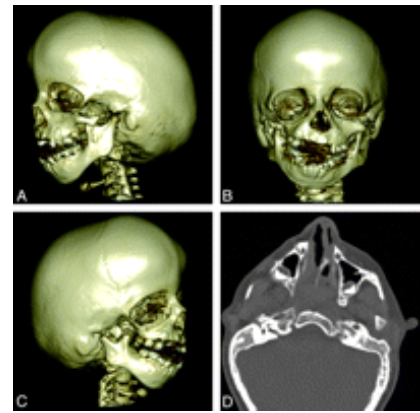
THE HISTORY OF ORTHOGNATHIC SX	2
THE BENEFITS OF SURGERY	2
PREDICTABLE AND RELIABLE OUTCOMES	3
EARLY ORTHODONTIC EVALUATION	3

# HISTORY OF ORTHOGNATHIC SURGERY

The history of orthognathic surgery dates back to the turn of the century. The current techniques and their predictability really developed and were refined from the middle of the last century up to the present. Initially, mandibular osteotomies were only performed in cases of severe malformations. But during the last century a precise and standardized procedure for correction of the mandible was established. Multiple modifications allowed control of small fragments, functionally stable osteosynthesis, and finally a precise positioning of the condyle. In 1955 Obwegeser and Trauner introduced the sagittal split osteotomy by an intraoral approach. It was the final breakthrough for orthognathic surgery as a standard treatment for corrections of the mandible. Surgery of the maxilla dates back to the nineteenth century. B. von Langenbeck from Berlin is said to have performed the first Le Fort I osteotomy

in 1859. After minor changes, Wassmund corrected a posttraumatic malocclusion by a Le Fort I osteotomy in 1927. But it was Axhausen who risked the total mobilization of the maxilla in 1934. By additional modifications and further refinements, Obwegeser paved the way for this approach to become a standard procedure in maxillofacial surgery. Tessier mobilized the whole mid-face by a Le Fort III osteotomy and showed new perspectives in the correction of severe malformations of the facial bones, creating the basis of modern craniofacial surgery. While the last 150 years were distinguished by the creation and standardization of surgical methods, the present focus lies on precise treatment planning and the consideration of functional aspects of the whole stomatognathic system and incorporation of a surgical orthodontist as a vital member of the multidisciplinary team. To date,

CTMAX has become a regional center of these refined techniques in Orthognathic Surgery and at the forefront in future utilization of new technology including 3D visualization by CT scans, stereolithographic models, and computer-aided treatment planning and simulation to allow surgery of complex cases and accurate predictions of soft tissue changes.



## REALIZING THE BENEFITS

The first question that comes to mind for the patient, parent, or lay person who is not, himself, pained with a skeletofacial deformity or bite disability of this kind is why bother having this problem fixed? As loved ones, parents or friends, we have grown to know the individual who is a sufferer from this condition and like the way he or she looks to us. Additionally, it doesn't often readily appear that this individual is suffering to any

great degree. After all, they are not limping, and "they look pretty happy." A long standing misconception of orthognathic surgery is that treatment in this area is directed solely or principally at improving facial appearance. In reality, there is nothing that is further from the truth. While the creation of balanced function is nearly always beneficial to one's appearance, it is not the fundamental reason why patients are encouraged to proceed with

treatment. In fact, there are often patients with what might be termed "silent malocclusions," where their outward physical appearance remains unaffected by their disability. This patient gleans very little cosmetic benefit from treatment, if any. So why then, do patients see the need to undergo a procedure of this kind?



## REALIZING THE BENEFITS (CONTINUED)

The answer to this question can be found by the orthognathic surgery patient in both medically and socially based categories. In the medically motivating area, there are numerous benefits that can be listed. Unfortunately, all do not lend themselves to a comprehensive discussion in this topic review. Moreover, many of the potential consequences of skeletal-facial disability that are treated with orthognathic surgery are avoided or never realized in the patient who undergoes treatment at an early age. The medically based areas of benefit would include but are not limited to:

1. Masticatory Insufficiency (the inability to chew food properly)
2. Myofascial Pain Dysfunction (MPD or painful spasm of the muscles of jaw function with associated dysfunction of the jaw)
3. Temporomandibular Joint Disease
4. Speech Impairment or Pathology
5. Periodontal Disease as an accelerated consequence of occlusal trauma
6. Structural Dental Disease (tooth fracture, attrition

and/or early tooth loss) as an accelerated consequence of occlusal trauma

7. Obstructive Sleep Apnea

Within the socially motivating area, there are two benefits that would be considered "quality of life" issues and are generally instantly gratifying consequences for the patient. These two would include "feeling good" and "looking good." If you have ever yourself been bothered by the slightest interference in your bite (a seed or popcorn kernel) you will immediately recall how uncomfortable that situa-

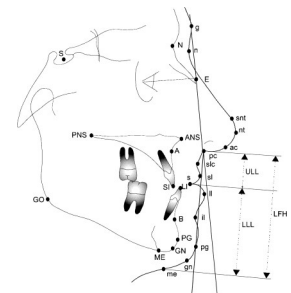
tion can be. Compound that inconvenience many fold and/or speculate on the inability to bring your front teeth together to incise food. Rectifying such a predicament can mean the ultimate in "feeling good," to that patient, even if it means surgery to accomplish it. Physical appearance is important to most all of us. The improvement in aesthetics achieved by restoring facial balance through orthognathic surgery can mean an invaluable boost to one's self confidence and overall feeling of well being. Often patients become more confident and outgoing as a consequence of higher self-esteem.

## PREDICTABLE AND RELIABLE OUTCOMES

Orthognathic surgery is not a new technique or area of maxillofacial surgery. The conceptualization and early practice of this form of surgery have been around for many decades and the most recent technology has been practiced for nearly twenty years. Due to the continuing modernization of instruments and techniques of stabilization the elective treatment of a patient with this form of surgery has become safer, more comfortable, and more reliable. Proce-

dures that once demanded nearly ten hours of surgery have been shortened to as little as three to four hours. Hospitalizations for surgery that would often necessitate four to six days as an inpatient and may have involved a period of time in the intensive care unit, now allow for discharge on the first post-operative day. Once recognized as an occasional surgery to which only the most grotesque deformities were relegated for treatment, orthognathic surgery has evolved

to a commonplace event, often occurring tandem to an adolescent orthodontic treatment. The results are predictable, stable, and most of all gratifying to the patient. If you have any further questions regarding orthognathic surgery or would care to discuss your particular case with us, please do not hesitate to visit us in one of our five offices located in northern Connecticut.



## GETTING STARTED - EARLY ORTHODONTIC INTERVENTION

Orthognathic surgery is often the treatment solution in cases where the bite problem is so severe that orthodontic treatment alone isn't enough to correct the problem, or where orthodontics alone would compromise your facial appearance. An important note: it is important that we see children earlier than our generation of parents was accustomed to. When we as parents were children, the patient did not go to the orthodontist until all the permanent teeth were in. Modern

orthodontic treatment is more than just straightening teeth.

We now evaluate the dental relationships much as we did in the past, but now evaluate facial growth issues as well.

Here is the important point: the eruption timing of the teeth does not correlate to skeletal growth. We often see 10-year olds with all their permanent teeth, and 14-year olds who have only the permanent incisors in. This



means that a child with a jaw growth problem (an undergrowth of the lower jaw, for example) get's treatment for the growth problem at the right time, and this may need to be timed separately from how the teeth are developing. The trends today suggest it is

important to see the orthodontist early. (age 7 is recommended by the American Association of Orthodontists) and the overall orthodontic treatment outcome can be functionally and esthetically better than 30 years ago.



291 Farmington Ave  
Farmington, CT 06032  
860-678-7528  
860-678-7933 fax

1080 Day Hill Road  
Windsor, CT 06095  
860-285-0889  
860-298-9030 fax

507 Hopmeadow St  
Simsbury, CT 06070  
860-658-0446  
860-651-1034 fax

663 East Main St  
Torrington, CT 06790  
860-496-6036

415 Silas Deane Hwy  
Wethersfield, CT 06109  
860-529-5394  
860-721-1033 fax



---

WWW.CMSLLC.COM

---



### Our Mission Statement

All of us at **Connecticut Maxillofacial Surgeons, LLC**, are dedicated to the highest quality of care in the specialty of Oral and Maxillofacial Surgery. We take pride in providing contemporary clinical care in a full scope of the specialty as well as serving in a leadership capacity for the future of our specialty on both a local and national level. CMS, LLC can truly be described as a unique group of service-oriented professionals whose aim is to provide the highest level of patient care in combination with a maximum of comfort, sensitivity, and compassion for each and every individual.

Through our presence on the Internet we hope to move beyond the realm of merely providing clinical care in the classic sense. First and foremost, we would like to further close the information gap between us and our patients. A more ambitious intent would be to not only fulfill a regional endeavor but also provide a broader understanding of our specialty on a global level. Through a depth of experience and resources that we possess as a group, we hope to provide an ever increasing knowledge base accessible by all of those with any interest.

### Definition of Oral & Maxillofacial Surgery:

*Oral and Maxillofacial Surgery is a medical and dental specialty of surgery which involves the diagnosis, surgery and adjunctive treatment of diseases and defects involving both the functional and aesthetic aspects of the hard and soft tissues of the oral and maxillofacial region.* (American Dental Association) More simply put in layman's terms, the oral and maxillofacial surgeon is the orthopedic surgeon of the facial region. He or she is an individual who addresses problems ranging from the removal of impacted teeth to the repair of facial trauma. He or she may be a doctor you would visit to:

- Have a [tooth extraction](#).
- Have teeth replaced by having [dental implants](#) inserted.
- Have oral surgical procedures performed in the office under outpatient [ambulatory anesthesia](#).
- Have a [jaw cyst or tumor](#) diagnosed, removed and reconstructed.
- Have your jaw aligned with [orthognathic surgery](#).
- Have you jaw joint repaired with [TMJ surgery](#).
- Have [jaw reconstruction](#) following cancer surgery.
- Have your facial bones realigned after [facial trauma](#).

## LAUNCHING OF THE CTMAX LEARNING CENTER



**Connecticut Maxillofacial Surgeons, L.L.C.** or **CTMAX**, is pleased to announce that the CTMAX Learning Center is now in full operation. Our events are designed to provide continuing education credits to those selected and able to attend. Attendees were selected for their interest in progressive methods of practice and patient treatment modalities. Located in our Simsbury office at 507 Hopmeadow St., in beautiful Simsbury Connecticut this facilities combines state-of-the art technology with all the comforts of home.

