Modern dentistry is about much more than improving the appearance of a smile. Advances in the science of complete dentistry have taught us to use a neuromuscular approach to bring the jaw into a relaxed position to help alleviate years of pain and discomfort.

**WHO IS AFFECTED?**

Temporomandibular joint disease (known as TMD or TMJ) affects 75 million people at any one time. It is a chronic degenerative disease that may take years to develop. People who suffer from TMD have a structural imbalance in their jaw-to-skull relationship, caused by an uncomfortable bite. Some of the more common symptoms of TMD include migraine type headaches, neck and shoulder tension, popping/clicking jaw joints, and pain in the TMJ area upon opening.

TMJ dysfunction (disease) causes the following:
- Alteration of the position of the temporomandibular joint by placing excessive pressure on the joint as well as the muscles and nerves around the joint.
- Twisting the jaw into a strained position. This further affects the muscles in the face, back, neck and shoulders.

**WHAT ARE THE SYMPTOMS?**

You may be a candidate for physiologic based dentistry if you experience any of the following symptoms on a regular basis:
- Headaches, migraines, or photosensitivity
- Unexplained loose teeth; worn, chipped or cracked teeth
- Cracking, chipping, or breaking dental restorations, and difficulty chewing
- Pain or soreness around the jaw joints
- Neck, shoulder or back pain; facial pain
- Clicking or grating sounds in the jaw joints
- Limited movement or locking of the jaw
- Numbness or tingling in fingers and arms
- Congestion or stuffiness of the ears; ringing or buzzing in the ears or vertigo
- Uncontrollable jaw or tongue movements
- Inability to find comfortable bite position

**HOW CAN YOU HELP ME?**

If you are diagnosed with TMD/ TMJ, following a comprehensive examination, the doctors will recommend a treatment plan to correct your bite to alleviate pain and discomfort. This may include utilizing transcutaneous electrical neurostimulation (TENS) of the major muscle groups of the head and neck to relieve pain and relax the muscle groups, followed by the use of electromyography (EMG) to diagnose the health of the muscles and the nerve cells that control them. Once the major muscle groups are in a relaxed state, our doctors, using either the Biopak or the K7 System to measure muscle activity, realign the lower jaw to a position that is balanced, comfortable, and requires the least amount of muscle activity to maintain. This balanced position is maintained through the use of an orthotic dental appliance. In most situations, our patients experience immediate relief upon relaxation and repositioning of the lower jaw. Following successful realignment of the lower jaw position, our patients have several options; continue to wear the orthotic, have their bite corrected using orthodontics, or restore their occlusion to a balanced bite.

**WHAT CAN I EXPECT FOLLOWING TREATMENT?**

We find that many patients experience a significant change in their facial appearance following completion of the treatment. Patients with a recessed lower jaw may have a slightly different profile. In addition, any restorations necessary to correct the bite will be created with consideration to the ideal aesthetic result of your smile. Not only will this procedure correct pain, it may improve the aesthetic aspect of your smile.
WHAT IS COSMETIC DENTISTRY?

Cosmetic dentistry allows us to conservatively restore your teeth back to their natural strength and beauty. We can enhance the appearance of your smile by closing gaps, straightening crooked teeth, correcting chipped teeth, and whitening teeth for a more youthful and healthy-looking smile.

A cosmetic dentist combines artistry with science to create a smile that is natural, functional, and in perfect balance for each patient. Our doctors have undergone advanced training through the internationally renowned Las Vegas Institute for Advanced Dental Studies to acquire the highest level of skill in restoring and perfecting your beautiful smile.

WHAT WILL MY NEW SMILE LOOK LIKE?

Every smile is as unique as the person who wears it. We take great care in designing a smile that suits each individual patient.

A series of careful facial measurements will help us create a smile that is in proportion to your bone structure, age and gender.

Our master lab technician will create lab-fabricated temporary veneers so you can “test drive” your new smile; evaluating the color, size and shape making sure they are exactly how you envision your perfect smile prior to final cementation.

WHAT TECHNOLOGIES DO YOU USE IN COSMETIC DENTISTRY?

Modern technology is an integral part of cosmetic dentistry. The use of intra-oral cameras, for example, allows us to see your teeth magnified on a high-resolution monitor, allowing for better diagnosis and more conservative treatment. Our digital x-rays and soft tissue lasers make your treatment safe, comfortable and virtually pain free.

WHAT DO YOU USE TO FILL CAVITIES?

The days of silver-mercury fillings are now nearly obsolete. We no longer utilize silver/mercury or amalgam restorations and welcome the opportunity to assist you in replacing these outdated restorations. Today’s porcelain inlays/onlays and composite resins create fillings that are not only natural looking, but also stronger than materials of the past.

WHAT ARE PORCELAIN VENEERS?

Porcelain veneers are thin shells of ceramic that bond directly to the front surfaces of the teeth. They are an ideal choice for improving your smile and have become increasingly popular due to their simplicity and versatility. When bonded to the teeth, the ultra-thin porcelain veneers are virtually undetectable and resistant to coffee, tea and cigarette stains. Their resemblance to healthy, white tooth enamel is unsurpassed by other restorative options.
Cosmetic dentistry is one of the fastest-growing trends in healthcare. Patients are realizing that they no longer have to live with gaps between their teeth, crowded or missing teeth, stained teeth or silver-mercury fillings. The advancements in dentistry in the past decade have nearly eliminated the use of metal of any kind in restoring teeth. Instead, patients can expect natural, tooth-colored restorations, smooth, white porcelain veneers and crowns, and a more beautiful result that will last for many years to come.

**HOW CAN YOU REPLACE MY MISSING TEETH?**

Many opportunities are available to replace missing teeth, including bridges, implants, or even precision-fit partial and full dentures that look and feel natural. Replacing missing teeth can improve your self-confidence in business and social interactions, while allowing other teeth to last longer by reducing the stress placed on remaining natural teeth.

**WHAT CAN BE DONE IF I HAVE STAINED OR DISCOLORED TEETH?**

Many people achieve a whiter, brighter smile with our simple smile whitening procedure. It’s safe, quick and inexpensive. You can choose to whiten only your upper or lower teeth, or your entire smile. Patients can gradually lift the stains through a convenient at-home or in-office whitening process, using trays and gentle whitening gel or a convenient in-office procedure.

**WHAT IS GUM CONTOURING?**

The aesthetic framing of the gum tissue is as important to the teeth as a quality frame is to an artist’s painting. Contouring is basically a simple gum lift, but makes a tremendous difference to your smile. The use of a laser and topical anesthetic quickly reshapes the gum line creating an even more beautiful smile.

**WHAT IS TOOTH BONDING?**

Bonding is a composite resin filling that can lighten stains, close minor gaps and correct crooked teeth. Our doctors will apply a bonding material to sculpt, color and shape the tooth. A high-intensity light hardens the resin and the doctor finely polishes the tooth, creating a natural-looking gorgeous smile.

**DON’T I NEED AN ORTHODONTIST TO FIX MY CROOKED TEETH?**

While Orthodontics are sometimes indicated, many patients have the option to go from teeth that are crowded to a perfect smile in as little as two weeks. By bonding porcelain veneers, our doctors can “mask” the teeth creating that Hollywood smile you’ve always dreamed about.

**SEDATION DENTISTRY**

Sedation dentistry provides a relaxing and anxiety-free experience for patients receiving dental treatment. Working with a board-certified anesthesiologist, sedatives are delivered intravenously while our doctors transform your smile—safely, comfortably, and worry-free.
Malocclusion (imperfect positioning of the teeth) presents in several different ways and includes a variety of complications including: crooked or crowded teeth, cross bite, edge to edge bite, anterior open bite, spaces, deep bite, and excessive overjet. Our practice corrects malocclusion through two primary methods:

**INVISALIGN**

A virtually invisible and hygienic treatment, the Invisalign System uses an innovative approach to effectively straighten your teeth. Invisalign™ treatment uses the unique SMARTForce™ Technology to create a series of custom-made removable aligners designed for you. Wearing these aligners, made of a virtually invisible plastic, gradually moves your teeth to the ideal position.

**BRACES**

Dental braces are devices that are placed directly on teeth to move them. They usually consist of “brackets” that are bonded to the teeth and a metal wire that is inserted through the brackets. The metal wires are “adjusted” and work together with the brackets to move teeth into the desired positions.

**WHO IS A GOOD CANDIDATE FOR BRACES?**

Braces can be for any age group, but there are optimal times to begin treatment.

It is recommended that children have an orthodontic evaluation at the age of 7 to determine if early intervention is needed. Early intervention optimizes results by taking advantage of a child’s skeletal bone growth and may require a two-phase orthodontic treatment.

The first phase (“phase-one”) is considered interceptive orthodontic treatment as it addresses overcrowding of teeth or bite problems at an early age.

As an example of interceptive treatment, a narrow upper jaw that has crowded teeth and does not fit correctly with the lower jaw can be widened with an expansion device called a “palatal expander.” This lets the upper jaw line up better with the lower jaw and allows room for upper teeth to fit in alignment.

Widening the palate can only occur during a small window of time in a growing child before the bone becomes too developed to change. Braces may be used depending on the specific situation during this phase. Once completed, there is a resting period to allow most or all the permanent teeth to come in.

Around the age of 12 or 13, “phase-two” treatment may begin. During this phase, the alignment of all the permanent teeth is addressed using full braces.

If the window of time for two-phase orthodontic treatment has already passed, results can still be achieved with only one phase of treatment. However, if there is significant crowding of teeth, dental extractions may be required to create room for teeth to move into alignment. Another method for creating room for teeth movement is called “interproximal reduction” (IPR). IPR involves minimal removal of tooth structure on the sides of the teeth to create more room. This method is limited to mild teeth crowding.

Essentially, anyone who desires to have straighter teeth or improve their bite may be a good candidate for braces.
SLEEP APNEA

The main types of sleep apnea are:

- **Obstructive Sleep Apnea**— the more common form that occurs when throat muscles relax
- **Central Sleep Apnea**— occurs when your brain doesn’t send proper signals to the muscles that control breathing
- **Complex Sleep Apnea Syndrome**— also known as treatment-emergent central sleep apnea and occurs when someone has both obstructive sleep apnea and central sleep apnea

Treatment of any of these three types of sleep apnea may ease your symptoms and help prevent heart problems and other complications.

**Causes of Obstructive Sleep Apnea**

Obstructive sleep apnea occurs when the muscles in the back of your throat relax. These muscles support the soft palate, uvula, the tonsils, the side walls of the throat, and the tongue. When the muscles relax, your airway narrows as you breathe in, and you can’t get an adequate breath in.

Your brain senses this inability to breathe and briefly rouses you from sleep so that you can reopen your airway. You may make a snoring, choking, or gasping sound. This awakening is usually so brief that you don’t remember it.

These disruptions impair your ability to reach the desired deep, restful phases of sleep. People with obstructive sleep apnea may not be aware that their sleep was interrupted.

**Causes of Central Sleep Apnea**

Central sleep apnea is a less common form of sleep apnea that occurs when your brain fails to transmit a signal to your breathing muscles. This means you make no effort to breathe for a short period of time. You may awaken with shortness of breath or have a difficult time getting to sleep or staying asleep.

**Risk Factors**

There are specific risk factors that predispose patients to sleep apnea. These risk factors include excess body mass index (BMI) which puts you at four times the risk of having sleep apnea. Having a thicker neck; for men, a circumference greater than 17”, and for women, a circumference greater than 15” will predispose you to sleep apnea. In addition, a narrow airway which occurs congenitally or from enlarged tonsils or adenoids, puts you at risk of sleep apnea. Men are two times more likely to have sleep apnea and, age plays an important role; the older you are, the more likely you are to have sleep apnea.

If there is an incidence of sleep apnea with one or both of your parents, you are at greater risk of having a sleep disorder. The use of alcohol, sedatives and/or tranquilizers tends to relax the muscles of your throat causing obstruction and sleep apnea.

Smoking puts you at three times the risk for sleep apnea, as well as nasal congestion and enlarged turbinates caused from chronic allergies.

**Complications of Sleep Apnea**

If you have sleep apnea, you may experience symptoms of one or more of the following; daytime fatigue, high blood pressure or heart problems, type 2 diabetes, metabolic syndrome, complications with medications and surgery, liver problems, sleep-deprived partners, acid reflux, atrial fibrillation, adult asthma, and daytime fatigue.

**Treatment of Sleep Apnea**

- Continuous positive airway pressure (CPAP, BiPAP or ASV machine) - for mild, moderate and severe sleep apnea
- Oral appliances - for mild to moderate sleep apnea when wearing a CPAP is not tolerable
- Surgical correction of the upper airway
- Life style changes
- Addressing associated risk factors

Sleep Apnea is a potentially serious sleep disorder in which breathing repeatedly stops and starts. You may have sleep apnea if you snore loudly, and you feel tired even after a full night's sleep.
WHAT ARE DENTAL IMPLANTS?

A dental implant is a cylindrical and/or tapered post, usually made of titanium, that serves as a substitute for the tooth root. When a damaged or decayed tooth is removed, both the visible part of the tooth, called the crown, and the root are lost.

A dental implant is placed in the jawbone so that it can fuse with your natural bone and become a strong foundation for replacement teeth. Implants can be used to replace an individual tooth or for an implant-supported bridge or denture containing multiple teeth.

Dental implants are the closest you can get to healthy, natural teeth. They will allow you to confidently eat, smile, laugh, talk, play and enjoy all your regular activities of everyday life without worrying about your teeth.

HOW DO DENTAL IMPLANTS WORK?

Teeth restored with dental implants look, feel and function just like natural teeth. You brush, floss and visit your dentist for regular check-ups and cleaning, the same as you would care for a natural tooth.

The placement of a dental implant usually involves several steps:

1. The dental implant is placed surgically into the jawbone.
2. As you heal, your dental implant will fuse with your natural jawbone, and form a strong, long-lasting foundation for your replacement teeth. This healing process can take weeks to months while you proceed with your everyday life in between appointments.
3. Once the implant fuses with the jawbone, a small connector, called an abutment, is placed on top of the dental implant to connect the implant to the replacement tooth or teeth.
4. An individual tooth, an implant-supported bridge or a denture containing multiple teeth are then attached to the abutment.

DENTAL IMPLANT OPTIONS

- **Single tooth implant**: restores a missing tooth with a dental implant fitted with a crown
- **Implant supported bridge**: restores missing teeth with dental implants fitted with a multi-unit bridge.
- **Implant supported denture**: restores a full arch of missing teeth with an implant supported denture.

BONE AUGMENTATION

Bone augmentation is a term that describes a variety of procedures used to “build” bone so that dental implants can be placed. These procedures typically involve grafting or adding bone or bone-like materials to either the upper or lower jaw.

Some people do not have adequate healthy natural bone to support dental implants. Inadequate bone may be caused by:

- Gum disease
- Tooth development defects
- Wearing dentures long term
- An injury to the face or trauma
- Spaces left empty in the mouth after teeth are removed
- Dental procedures where efforts were not made to restore natural bone

Several techniques are used to rebuild bone, restore your natural jaw line and smile, and provide a strong and sturdy foundation for implant-supported teeth.
In dentistry, the one constant that remains the same is change; and one of the most significant advancements to this day is the development and integration of dental implants. Dental implants serve as a durable, reliable option to replace your missing tooth or teeth, adding longevity and beauty to one of your most valuable assets, your smile.

**Bone grafts**

Bone grafting is a safe and highly successful procedure that involves the “building up” or adding bone to the jaw by using your own natural bone or synthetic bone materials.

Your implant(s) will be placed after the grafted bone has fused and become a strong integrated part of the existing bone. The amount of time the integration takes varies depending on the location of the graft and the density of the bone. This process can take three or more months.

**Sinus Lift (Sinus Augmentation or Sinus Elevation)**

Missing upper back teeth are among the most difficult to restore. When the back teeth in the upper jaw are missing, the sinus cavity becomes larger as the natural bone deteriorates over time. A sinus lift is a bone-augmentation procedure for patients who have insufficient natural bone in this area for dental implant placement. The procedure involves adding bone below the sinus so that one or more implants can be placed. The procedure does not affect speech, intonation or cause sinus problems.

After the bone has been given time to develop, usually for approximately 4 to 12 months, dental implants can be placed. Sinus augmentation, which many patients say causes only minimal discomfort, is designed to help ensure that your implants are long-lasting, with sturdy bone that will allow your new teeth to fit and function like healthy, natural teeth.

**Ridge Expansion (Ridge Modification)**

If the jaw is not wide enough to support dental implants, bone graft material can be added to a small ridge, or space, that is created along the top of the jaw. In some instances, implants can be placed right after a ridge expansion. Other situations require approximately 4 to 12 months to ensure that the ridge has fully healed.

Like all bone grafting techniques, ridge expansion helps ensure a strong foundation and a long lifespan for your new implant supported teeth. It can also be used to correct a difficult-to-clean indentation that can occur in the jawline near missing teeth.
INLAYS & ONLAYS

Unlike the large metal fillings of the past, our doctors prefer a more attractive restoration that strengthens the tooth. Inlays and onlays are the perfect solution to creating healthy, beautiful restorations for your teeth.

WHAT IS AN INLAY?

Inlays are like a composite filling and are used inside the cusp tips of a tooth. Inlays are created out of fired porcelain, allowing the doctors to match the color of your natural tooth, making the restoration invisible to the naked eye.

Much like a crown, our doctors will create a temporary inlay for your tooth, take an impression, and send the impression to the lab for the porcelain restoration. You will need to see our doctors to have the final inlay bonded to the tooth and polished.

WHAT IS AN ONLAY?

Onlays are made of fired porcelain, just like inlays. However, onlays are a more substantial restoration, extending out over one or more of the cusps of the tooth. Where a crown may have been necessary, an onlay can often be used to repair the damaged portion of the tooth, leaving much more of the original tooth structure intact.

Onlays are also made in the lab, and will require a return visit. Your temporary onlay should hold up to normal wear until your return appointment.

WHAT WAS WRONG WITH MY OLD FILLINGS?

In recent years, dentists have learned that the metal fillings in your mouth act much like metal does outside of the mouth. Exposed to heat and cold, such as hot coffee or ice cream, the metal fillings in your teeth expand and contract causing micro fractures in the structure of the teeth. As the silver-mercury fillings shift, they can weaken the teeth they were meant to protect and even cause the entire tooth to crack. The expansion and contraction also creates small openings between the filling and the tooth structure where harmful bacteria can enter the openings and become trapped, leading to further tooth decay. After 10 years, there is an 80% chance that decay will occur under and around the silver-mercury restoration.

WHY WOULD I WANT AN INLAY OR ONLAY INSTEAD OF A METAL FILLING?

An inlay or onlay is a much more reliable restoration for the tooth than a metal filling and is considered by most in the profession, as adhesive dentistry, because it bonds the tooth together making it much more stable. While traditional fillings can reduce tooth strength, inlays and onlays made of high strength porcelain can often increase tooth strength, lasting many years.