Malocclusion

Occlusion is the contact between the biting surfaces of upper and lower teeth when you chew, swallow or are at rest. Although our teeth are designed to fit together, there may be stress placed on the chewing muscles, temporomandibular joint (TMJ) and the chewing surfaces of your teeth if they do not fit properly. This may result in teeth fracturing unnecessarily, wearing away of the enamel that covers your teeth, and the premature breakdown of existing dental restorations. ***Malocclusion*** is a "less than ideal" fit of your bite.

Studies have proven that during sleep we exert 4 to 6 times greater force in tooth contact than during the daytime. It is no wonder that damage during sleep is cumulative and contributes to rapid breakdown. Patients with malocclusion subconsciously clench and/or grind their teeth during sleep. This is called a parafunctional habit, or bruxism. Some people experience no symptoms associated with this activity, but others notice tight or tender chewing muscles, muscle spasms or pain. In turn, the muscles develop strength which can become part of a cycle that results in damage to the tissue, teeth and TMJ.

Symptoms

There are many different signs and symptoms of malocclusion. Rarely are all present, and sometimes only one may be present. The most common are:

1. Obvious and sometimes excessive wear on the biting surfaces or sides of teeth
2. Tenderness of the jaw muscles
3. Clicking, popping or grating sounds when opening or closing the mouth
4. Pain or difficulty in chewing certain foods
5. Limited range of motion (sometimes with pain) in yawning or opening your mouth wide
6. Locking of the jaw
7. Pain in or around the ear that may spread to the facial muscles
8. Headaches, particularly present upon walking
9. Generalized or localized teeth that ache
10. Tooth mobility
11. Ringing of the ears
12. Dizziness

Malocclusion is very common. The best way to diagnose an incorrect bite includes a thorough examination, a medical and dental history, and dental films. Impressions are also taken in order to fabricate models of your teeth. This allows for the most complete physical and visual analysis of your biting surfaces and chewing patterns.

Treatment

Each patient has very specific and different dental health care needs. As a result treatment plans will vary. We believe a comprehensive, yet conservative approach is best and may recommend one or more of the following options.

Option One: If symptoms are acute, our first priority is to treat the pain by relaxing the muscles. Recommendations may include applying warm, moist heat to the face, muscle massage, switching to a soft diet, or perhaps using a mild pain or muscle relaxant medication. Occasionally physical therapy is appropriate.

Option Two: A patient's awareness of their tooth-to-tooth contact during walking hours is the next step. Teeth should not be in contact, except, during chewing. Contact often occurs during stress, concentration, swallowing, or out of habit. Contact may be clenching, grinding, or simply having the teeth together. If you find that you do have tooth contact, lightly place the tip of your tongue to the roof of your mouth to reverse this habit, allowing your muscles to relax and your lower jaw to drop slightly, thus separating your teeth.

It is at this phase that a bite splint for nighttime use may be recommended for prevention, maintenance and further diagnosis. A splint will prevent tooth-to-tooth contact making it impossible for you to exert excessive forces and allowing your facial muscles to relax. This will help position your TMJ (jaw joint) in the most ideal position. In the past bite splints were made of soft plastic and were found to increase the stress and strain to the TMJ and muscles because patients could actually "chew" on them during sleep. Today, splints are custom made of rigid acrylic. A splint protects your teeth and existing dentistry and helps prevent further damage to your dental health. Dr. Amie Rockow-Nelson and her team will discuss this option with you and provide detailed information regarding the appliance, the process and anticipated results.

Option Three: Once a bite splint has been worn, correcting the way your teeth fit together can be done through a process called equilibration. Using the models of your teeth, Dr Amie Rockow-Nelson first works in the lab to complete a trial equilibration, examining the contacts made by each opposing tooth, and looking at the patterns of wear in order to determine the most accurate changes to be made to the occlusion. During clinical equilibration, conservative changes are made to the biting surfaces of selective teeth, which may be interfering with a stable bite. These changes result in the biting forces being redirected according to what was shown and presented on the trial equilibrated models.

If the malocclusion is more complex, changing the biting surface with dental restorations or an orthodontic consultation may be necessary.

Option Four: Muscle pain in areas surrounding the head, neck, shoulders, and upper back are closely related to the facial and TMJ muscles. All can be affected by accidents, which cause injuries (commonly car or sports), and may require relaxation therapy by a registered physical therapist. Although stress can be a contributing factor, it is generally not the cause of these symptoms.

Option Five: When muscle symptoms have occurred for a long period of time and the components of the TMJ are irreversibly malpositioned, have become arthritic or are severely injured, surgery may be recommended.