



Optimal Oral Health

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Occlusal Therapy and Temporomandibular Joint Dysfunction (TMD or TMJ)

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During your comprehensive exam, you and your dentist may discover that you have problems with your bite or with your jaw joints, or both. Occlusal therapy may be suggested as part of the initial work you do together.

The jaw joint consists of a condyle (the ball) that fits snugly into its fossa (socket). Unlike other joints, the TMJ can move in three dimensions: side-to-side, front to back, and up and down. It is this flexibility that allows us to move our lower jaw so freely. There are muscles and ligaments that attach to the jaw and also to the skull that help hold it in place and move to the right place at the right time.

There are many causes of joint dysfunction: trauma, tumors, bony growths, arthritis and frequently poor bite relationships. The two most common are trauma and malocclusion or improper bite. When the joint is damaged, there can be noises that occur with function. Often characterized as clicks, pops, or grating, these noises are signs of damage inside of the joint or of muscles that aren't working together because of a poor bite.

Muscles that don't work in harmony can become sore and even tender to touch. Sometimes there is a sense of tension in the face or difficulty moving the jaw in all directions. If the ligaments or cartilage are damaged, there may be pain in the joint itself.

When there is a poor bite relationship, parafunctional bite habits may accompany this malocclusion. Such habits are clenching, grinding, tapping, or squeezing the teeth together. Parafunctional habits can result in sore jaw muscles and abnormally fast wear or breakdown of teeth. Sometimes the teeth fit together reasonably well, but the habits are present and cause premature wear and breakdown of the teeth.

Pankey-trained dentists have had extensive training in identifying unhealthy bite relationships and in their treatment. During the exam, your dentist spends time marking your teeth with bite ribbon to identify the way the teeth meet and rub together. Part of your comprehensive exam also includes a muscle examination; you might experience feeling some soreness or tenderness when those muscles are provoked.

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If any of these signs and symptoms is discovered, your dentist may suggest occlusal therapy. The process starts with an occlusal appliance. This hard acrylic appliance is fabricated to fit snugly over either your upper or lower teeth. It is then meticulously adjusted to fit as perfectly as possible against the opposing teeth. The appliance will be checked periodically and adjusted until your bite stabilizes against it. Wearing the appliance is a time of discovery for both you and your dentist. You will experience what a solid, stable bite feels like, and your dentist will learn much about how your lower jaw functions against your upper teeth. It is very likely that many of the signs and symptoms you both discovered will diminish or even disappear.

This is all valuable information for your dentist and gives insight into what your final treatment might look like. When the bite stabilizes on the appliance and the joints and muscles are comfortable, you will have experienced how your teeth might feel when your mouth is restored. How long this takes depends on your situation and the signs and symptoms with which you start.

Occlusal therapy frequently precedes the restorative work you and your dentist have agreed to complete. The appliance acts as a proving ground for the dentist to work out the mechanics of how your teeth fit together. As part of this occlusal therapy your dentist may ask permission to reshape teeth so they move smoothly against each other and fit together in the same solid position that you felt with the occlusal appliance.

In extreme cases where the joint has been badly damaged, appliance therapy will not work. In this instance your dentist may refer you to an oral surgeon who is specially trained in surgical treatment modalities. Surgical intervention is only necessary when there is no other choice and happens in less than 1% of cases.

Often occlusal appliances are fabricated when treatment is completed. This type of appliance is suggested when there is concern about ongoing habits that cause premature breakdown of teeth and restorative work that is present. Think about this type of appliance as a protector of your investment.

Regardless of the reason for occlusal therapy, the best dentists will be sure to spend time with you so that you have a clear understanding of why it is prescribed, what to expect, and an idea of what the anticipated outcome will be. You can also ask whatever questions you need to have answered before you proceed.