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## “What is so important about my bite?”

Most patients are accustomed to their dentist checking for cavities and gum disease. However, in modern dentistry, an examination of the bite and how the teeth chew is just as important as checking for cavities and periodontal disease. In fact, a healthy bite, along with cavity control and sound periodontal health, will provide a person the best chance of keeping their teeth for a lifetime.

## What can go wrong with my bite?

It is best to look at how your teeth come together as a system consisting of three parts.

1. The jaw joints or TMJs
2. The muscles
3. The teeth

In a healthy bite all three of these parts work in harmony with one another.

The jaw joints are pain free, glide smoothly and evenly when opening, closing and moving from side to side. They also do not make noises, i.e. clicking, popping or crunchy noises. In short, you do not have to pull your jaw out of joint to have your teeth come together.

The muscles are relaxed and comfortable throughout the day and night and do not get fatigued or sore from normal chewing or getting your teeth cleaned.

The teeth are not loose. They do not show signs of cracking or wearing down. There is no significant recession of the gums and they are not cold, hot or pressure sensitive.



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## I have some of these changes. Isn't that just a sign of getting older?

The good news is that none of these changes is a part of aging. When you think about it, your teeth rarely touch when you are chewing. Just think how you react when you do bite into something that is very hard, like a seed. The teeth immediately separate. This is a natural protective mechanism so they will not bang together. However, if your bite is not in harmony with the muscles and the jaw joint, they will hit together, usually at night when you are sleeping and unaware of the damage being done. In short, if the jaw joints, muscles and teeth work in harmony, you greatly increase the stability, predictability and longevity of your dental health.

## So where do we start and what are we really trying to accomplish?

A properly trained dentist in bite therapy can greatly increase your ability to maintain your teeth for a lifetime of comfort, function and esthetics. The key to successful therapy of the bite is a very comprehensive dental and bite examination including appropriate x-rays, gum health assessment, plaster models, and bite measurements.

When these have been studied, the dentist can discuss the most effective and conservative treatment that will have the most predictable outcome.

Not to get too technical, but the dentist will make every effort to create an environment in your mouth with these goals in mind:

1. Your jaw joints should hinge comfortably and smoothly and not be pulled out place when you bite down together.
2. Your chewing muscles should be comfortable and be able to chew without tiring during normal chewing.
3. Your teeth should all hit at the same time with equal pressure from the eye tooth back when you tap your teeth together.
4. During chewing, your back teeth should not rub on each other. Your eye teeth should touch smoothly and lift the back teeth apart. The food will be chewed because the back teeth come so close to each other.
5. When you bite something off in front, the front teeth should hit flush along their edges and the back teeth should be separated.



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## How can my bite be made stable?

To achieve a stable bite the dentist must be very careful to make sure the first two parts of the system (jaw joints and muscles) are comfortable and functioning properly. The most conservative and predictable way to achieve this is through the use of a bite splint.

## What is a bite splint and how does it work?

A bite splint is a precisely made thin orthopedic device that fits snugly on top of the lower or upper teeth to simulate a balanced and stable bite. It is made out of a hard dense composite material similar to a tooth colored filling. It is flat and smooth and allows the dentist to simulate a stable and comfortable bite without altering the teeth in any way. When the bite is made even with the splint, the jaw muscles relax and will allow the jaw joints to move to their most comfortable and healthy position. At this point all three parts have been stabilized.

## When do I wear the splint?

Most people only need to wear the splint at night when they are sleeping. Most of the harmful muscle activity and grinding happens while in a deep, dreaming sleep. Some day-time grinders will, of course, wear it during waking hours as well as during the night.

## Will the splint change the position of my teeth?

The splint is not made to reposition your teeth. It is made to have the jaws reposition themselves. Because the jaws and muscles will slowly move to a healthier position, the splint surface will have to be adjusted at the dental office several times. This is to make sure that you are not creating just a new and different out-of-balance bite.



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## How often will I need my splint adjusted?

It depends on the severity of the problem but typically you are seen approximately every week for two to three weeks, then every three to four weeks. If the splint is worn about eight hours a night, the total treatment time is three to four months.

## What happens after the splint therapy is completed?

First it must be stressed that if you simply stopped wearing the splint, your jaw joints, muscles and teeth would return to their pre-therapy condition. So to maintain your improvement you have choices.

1. You can continue to wear the splint. You will be stable as long as the splint stays stable. Splints do tend to wear out and you could be looking at replacing it in about five years. If you have any dentistry done, the splint will have to be reshaped as your dentistry changes.
2. A far more practical decision is to have a dentist well trained in **equilibration** balance your teeth so they match the balance and stability of the jaw joints and muscles.

## What is Equilibration?

Equilibration is very carefully and precisely reshaping the biting surfaces of the teeth. This is done to harmonize the teeth with the now comfortable and correct muscle and jaw joint position. You do not have to be numb and you will only feel the vibration on the teeth as the dentist optimizes your bite. Many times the reshaping takes place on existing fillings and crowns. However, it is sometimes necessary to reshape natural tooth enamel. In this case, the dentist will have studied the procedure before hand to insure that minimal amounts are removed. For example, most natural teeth have approximately 3mm of enamel and usually only about    mm is affected by equilibration. When this procedure is completed, the splint may no longer be necessary and any dentistry performed is completed with a very predictable outcome.