



## dental insights: inflammation

Dentistry has long fought to preserve teeth and gums by taking aim against the chronic bacterial inflammation that causes gum disease. It's now the responsibility of our profession to ensure that our patients understand the broader health rewards of maintaining a healthy mouth, free of infection.

Medical research has revealed that chronic inflammation plays a significant role in the initiation and progression of serious illnesses – including cardiovascular disease, Type 2 diabetes, stroke, and more. *Recent studies indicate that chronic inflammation anywhere in the body – including the mouth – can create serious health risks.*

### What is inflammation?

In its appropriate role, inflammation is a good thing! It's the body's natural and necessary reaction to bacterial, viral or foreign bodies. Without it, we could not survive the numerous contacts we all have with these substances. However, when inflammation becomes chronic or long-term, what was once a healthy response now turns against the body and creates destructive effects.

*Think of a splinter in your finger.*

At first, you'll experience inflammation – swelling, tenderness, and redness – as blood flows to the area, using its immune system components to neutralize the splinter and the bacteria it carries. If you remove the splinter, your body generally will “mop up” the remaining bacteria over the course of a couple of days and you will heal uneventfully. This is the acute (short-term) inflammation scenario.

*But what happens if you don't remove the splinter?* Perhaps it went in too deeply. Or maybe you didn't even realize it was there. The area could become so sore and infected that you might need to see a physician, who would remove the splinter, clean and drain the area, and prescribe antibiotics.

*Why would leaving the splinter in your hand make such a big difference in the outcome?*

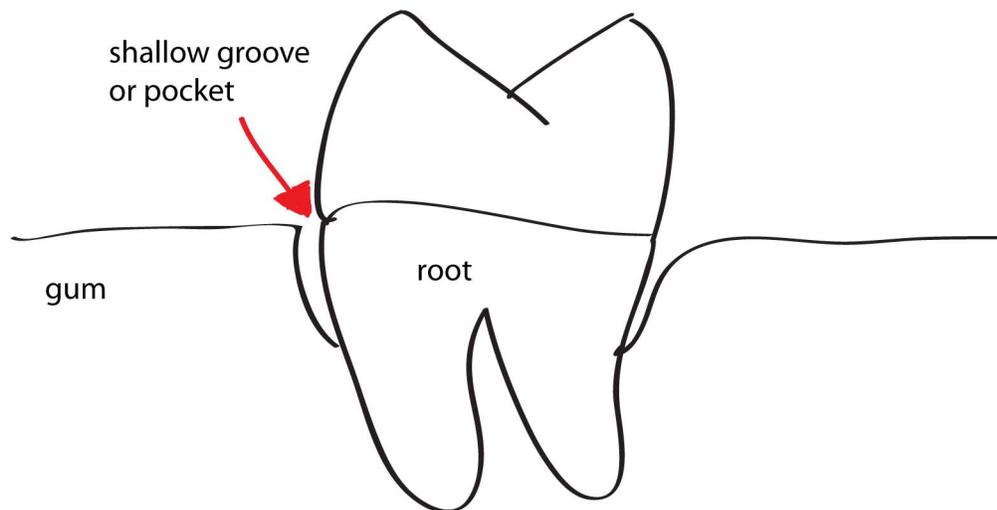
It's not the splinter that creates the problem. Not exactly. It's the bacteria that hide and multiply in the cracks and crevices all along the length of the splinter. As soon as they leave the safety of these hiding places, they enter your bodily tissues. The good news is that your body is just waiting to attack the bacterial invaders. But it doesn't have access to those crevices on the splinter – so the bacteria continue to grow and multiply, sending a never-ending stream of bacteria into your body. *This is the chronic inflammation scenario.*

Over the long term, in your body's zeal to attack and destroy the invading bacteria, healthy tissue is damaged as well. *Chronic inflammation, therefore, is unhealthy and can result in serious damage and destruction of healthy structures like gum and bone tissue.*

## Taking aim against chronic inflammation in the mouth

Just as you wouldn't want to leave a splinter in your hand, we don't want to provide any safe hiding places where bacteria can grow in your mouth.

Any area that doesn't have a natural blood supply can serve as a reservoir for chronic bacterial growth. The most common site for bacterial overgrowth is down under the gum, along the surface of each tooth – in the shallow groove around each tooth. As bacteria grow here, they live in the crevices along the root surface, away from the gum tissue and blood supply. Just as in the splinter scenario, they proceed to multiply – sending a constant stream of bacteria to invade the gum tissue. The body mounts its chronic inflammatory response. And, over time, gum and bone tissue disintegrate.



*As the body can never eliminate the overgrowth of bacteria, it is critically important to clean under the gum, where bacterial activity occurs, and between the teeth – manually removing as much bacteria as possible.*

This is why we stress proper cleaning tools and techniques: a brush for along and under the gum line, and floss (or a special brush) for cleaning between the teeth.

With proper care, you can keep bacterial levels low. A low bacteria level equals a low inflammation response. We know that a low inflammation response results in healthy teeth and gums. **And keeping healthy teeth and gums can keep the rest of you healthy too!**

**The information above is not intended to be a substitute for personalized dental advice, diagnosis, or treatment. Always seek the advice of your dentist with any questions you may have regarding a dental condition.**