

### **Systemic Diseases and Dental-Associated Inflammation**

In the last decade, research has shown that chronic systemic inflammation increases the risk of heart disease, stroke, diabetes and some cancers. The most widespread source of chronic systemic inflammation is dental-related infection divided into tooth infection (abscessed teeth) and periodontal disease (gum inflammation and bone disease). Both problems have been shown to increase medical health risks, but periodontal disease is the most widespread concern. It's estimated that over 90% of everyone has suffered with some form of periodontal disease, and over 50% have had the most aggressive form involving bone loss. With the bacterial infection leading to bone loss, your immune system triggers systemic inflammation. This leads to an increase in your medical risk for all chronic inflammatory diseases.

When systemic inflammation is present, your liver produces a substance called "C-Reactive Protein" or "CRP". While it was once thought that CRP was only an indication of conditions leading to the risk of systemic diseases, it's now understood that it's the presence of this protein which creates the disease. Ishwarlal Jialal, Professor of Pathology at UC Davis School of Medicine, has stated that there is now "conclusive evidence that CRP ... is in fact a key culprit that causes inflammation in the arteries, resulting in formation of clots and plaque that lead to heart attacks and strokes."

In addition to heart attacks and strokes, other research has shown that "high levels of CRP, in the so-called normal range, can be related to increased risks of atherosclerotic disease and Type-2 Diabetes." If you already suffer with diabetes, elevated CRP makes it more difficult to control your blood sugar levels.

Five other studies found "high levels of CRP predicted an increased risk of age-related macular degeneration (AMD), including neovascular AMD." Another study reports that, statistically, "people with the top 25% of CRP scores develop 2.5 times as much colon cancer as those in the bottom 25%. Also, CRP is implicated in Alzheimer's. Seniors with the highest 1/3 of CRP levels had significantly more cognitive decline than those in the bottom third."

The Mayo Clinic recommends having a C-Reactive Protein (CRP) test to monitor:

- Coronary artery disease risk
- Damage from a heart attack
- Inflammatory bowel disease
- Some forms of arthritis
- Pelvic inflammatory disease
- Lupus

- Infection after surgery

According to the American Heart Association, testing for elevated levels of CRP is most useful for people who have an intermediate risk of a heart attack within the next 10 years.

As you can see, elevated levels of C-Reactive Protein can have a tremendous effect on your overall health. Since periodontal and tooth infections are the most common source for chronic systemic inflammation and elevated CRP, it only makes sense to eliminate all forms of these problems. With proper diagnosis and a review of all significant medical factors, most of these risk factors can be resolved without surgery.

At SandlinDDS, we offer comprehensive evaluation of all dental factors contributing to systemic inflammation and elevated C-Reactive Protein. This includes non-invasive screening for the bacterial strains which trigger systemic inflammation, evaluation of your exposure level to these pathogens through DNA analysis, evaluation of your body's defense potential through gene analysis, and elimination of pathogens through non-surgical treatment including laser-assisted periodontal therapy.

### **References:**

<http://www.mayoclinic.org>

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