



Osteoporosis and Oral Health

Osteoporosis, thinning of bone, is often considered a “silent” disease and one that is associated with few warning signs in its early stages. It weakens bone which can result in painful fractures. However, early signs of osteoporosis may be seen in the mouth. When dentists observe bone loss in the jaw, not related to periodontal disease, it may be a sign of bone loss in other parts of the body.

Osteoporosis is one of the most common bone diseases affecting millions of people, especially affecting over one-third of females above the age of 65. Osteoporosis is characterized by decreased bone density and weakened bones. As it progresses, osteoporosis can weaken bones to the point that they break under otherwise normal stresses. Symptoms of osteoporosis often go unnoticed until a major bone fracture occurs. However, sometimes your dentist may suspect osteoporosis during your regular dental exam.

Your Mouth Can Be an Indicator of Osteoporosis Warning Signs

- Loose teeth
- Gums coming detached from the teeth
- Severe gum disease
- Dentures that don't fit well
- Difficulty eating or speaking

If your dentist detects any of these signs, they may take dental X-rays, if osteoporosis is suspected. The X-rays can show differences in jawbone density. An examination of X-rays taken over a period of time can show if there is a decrease in bone density, which may signify advancing stages of osteoporosis.

Risk Factors

Although osteoporosis affects both men and women, post-menopausal women are particularly susceptible to osteoporosis because diminished hormone levels may speed up bone loss. Women with osteoporosis are three times more likely to experience tooth loss than those without the disease. Very thin young women who may not produce enough female hormones or may have an eating disorder, may be at an increased risk for developing osteoporosis. Other risk factors include:

- Heredity
- Lack of exercise
- Calcium deficiency
- Smoking
- High caffeine and/or high alcohol consumption
- Certain medications (such as some steroids)

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Oral Health Impacts

Besides causing weakened bones, which can lead to fractures throughout the body, osteoporosis can also have significant effects on your oral health. In advanced stages, osteoporosis can lead to tooth loss or erosion of the jawbone. Although tooth loss is a well-documented consequence of periodontitis, the relationship between periodontitis and skeletal bone density is less clear. Some studies have found a strong and direct relationship among bone loss, periodontitis, and tooth loss. It is possible that the loss of alveolar bone mineral density leaves bone more susceptible to periodontal bacteria, increasing the risk for periodontitis and tooth loss. Once teeth are lost, the jawbone can begin to lose its shape, which can affect your ability to eat, drink, and communicate effectively.

Keep Your Teeth and Bones Strong

Most people, especially women, will reach their peak bone mass by the time they are in their early 20's. Prevention of osteoporosis should start in adolescence since it may be a critical time for bone mass formation. Calcium is essential to building strong bones and adolescents should be encouraged to drink milk and eat other healthy foods that contain calcium, such as yogurt and broccoli. Adolescents should also be encouraged to consume less soda as the phosphoric acid in most soda drinks can limit calcium absorption.

Recommended Activities

- Daily intake of the recommended amount of calcium (women/1200mg, men/800mg, and over age 65/1500mg)
- Perform weight bearing activities and muscle strengthening exercises
- Eat a healthy diet, including calcium and Vitamin D
- Do not smoke
- Reduce the amount of caffeine and alcohol consumed
- Visit your dentist regularly

Sources:

American Dental Association: www.ada.org;

Academy of General Dentistry: www.agd.org;

National Institute of Dental and Craniofacial Research: www.nidcr.nih.gov;

National Institute of Arthritis and Musculoskeletal and Skin Diseases: www.niams.nih.gov