



## What Effect does Pediatric Osteoporosis have on Children's Dental Procedures?

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Nowadays low bone density has affected a large number of children. Bone fractures are a major cause of hospitalization for children before age of 17 [1] and an increase in child fracturing bone rates has been reported over the past 2 decades [2]. Childhood factors such as lifestyle, diet, chronic illness, and medications have a short-term effect on bone health and a long-term effect on maximizing bone mass which affecting adult mortality [3].

Unchangeable internal factors (such as race, age, sex) are responsible for determining each person's maximum bone mass, while modifiable external factors (such as diet, hormones, disease, physical activity) are an important part of the changeable part that includes the entire final bone mass.

Adequate calcium and Vit D intake and regular exercise are the most important external factors in gaining bone mineral density and mass. Osteoporosis is a systemic skeletal disease characterized by decreased bone mass, destruction of the trabecular structure, decreased cortical thickness, changes in bone ultrastructural quality, increased cortical porosity, and decreased bone width [4,5] which prone the children to the risk of bone fractures.

Oral therapeutic considerations for children with osteoporosis  
Children diagnosed with low BMD and osteoporosis may increasingly be treated with medications that require intensive care while receiving oral and dental care. Dentists need to be very careful when taking the medical history of children and adolescents who need specific health care because some may have a history of low BMD and osteoporosis.

Educating the patient and his caregivers about the importance of oral health and the possibility of long-term side effects as well as invasive dental procedures is essential. It should be emphasized that before starting with Bisphosphonates, all potential sources of mucosal and odontogenic infection should be eliminated. Avoiding

oral surgery, especially in patients receiving or who have received Bisphosphonates IV, is critical to reducing the risk of BRONJ. People who take the oral form of this medicine have a significantly lower risk of BRONJ than those who receive IV.

Since most adolescents and young adults are referred for dental procedures (such as surgery of impacted teeth, third molars extractions, periodontal surgery, and tissue biopsies) before orthodontic treatments, consequently, the risk of BRONJ could be increased in these cases. Before invasive procedures, the pediatric dentist should consult with the patient's physician and obtain from parents an informed consent form with details that clearly state the possibility of complications.

BMD: Bone Mineral Density (BMD) is the amount of bone mineral in bone tissue.

BRONJ: Bisphosphonate Related Osteonecrosis of the Jaw (BRONJ) can be described as an area of bone in the jaw that has died and been exposed in the mouth for more than 8 weeks in a person taking any bisphosphonate. Although the exact cause is unknown, BRONJ is considered to be a side effect of bisphosphonate therapy.

Bisphosphonates are a class of drugs that prevent the loss of bone density, used to treat osteoporosis and similar diseases. They are the most commonly prescribed drugs used to treat osteoporosis.

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