



OMS

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Dental Implants in Patients With Osteoporosis: A Systematic Review with Meta-Analysis

Intro: Osteoporosis is considered a very common skeletal disease and is characterized by low bone density in human bone tissues. Imbalances in bone remodeling causes a constant decrease in bone volume and quantity, and osteoporosis affects many individuals, mainly older women, worldwide. The International Osteoporosis Foundation estimates that osteoporosis affects more than 200 million individuals worldwide, possibly reaching 300 million. In osteoporosis, defective bone formation leads to a deterioration in the microstructure of trabecular bone and increases in cortical porosity, bone fragility, and the possibility of fracture. For this reason, the disease is significant in implantology. Two types of primary osteoporosis are known: postmenopausal and senile. Postmenopausal osteoporosis

results from the acceleration of bone loss due to low levels of estrogen, whereas senile osteoporosis occurs at an older age and is associated with a reduction in bone mass. Dental implant therapy for totally or partially edentulous patients is known to be a highly effective treatment for the recovery of proper chewing function. However, some implants may be lost early as a result of biological risk factors, e.g. osteoporosis. An impairment of systemic bone metabolism may be a risk factor affecting osteointegration and its maintenance. Little is known about the interactions between osteoporosis conditions and implant survival.

Abstract: There is currently no consensus regarding the survival rate of osseointegrated implants in patients with osteoporosis. A system-

atic review with meta-analysis was performed to evaluate the survival rate of implants in such patients. The PubMed/MEDLINE, Web Science, Cochrane Library, and SciElo databases were used to identify articles published up to September 2016. The systematic review was performed in accordance with PRISMA/PICO requirements and the risk of bias was assessed. The relative risk of implant

failure and mean marginal bone loss were analyzed with a 95% confidence interval. Fifteen studies involving 8859 patients and 29,798 implants were included. The main outcome of the meta-analysis indicated that there was no difference in implant survival rate between patients with and without osteoporosis, either at the implant level or at the patient level. However, the meta-analysis for

DENTAL FUN FACT

DID YOU KNOW...

“THE ANCIENT CHINESE USUALLY WRAPPED TINY PARCHMENT AROUND THEIR PAINFUL TEETH WHICH CONTAINED WRITTEN INCANTATIONS AND PRAYERS TO RELIEVE PAIN.”

(<https://thedentistsofficefallon.com/dental-fun-facts-ii/>)

NEWS YOU CAN USE

Dental Care for Patients Taking Bone Protecting Drugs

Risks for a rare condition: Osteonecrosis for the jaw (ONJ)

- ONJ is a rare disease in which an area of the jaw bone starts to die because it's not getting enough blood. Researchers and dentist in the National Dental Practice-Based Research Network conducted two studies to determine the chance that someone will have ONJ, and what factors may increase these chances.

Findings from the studies show that ONJ is very rare, but bisphosphonates increase the risk of developing it.

- In a study of 572,000 dental patients, only 23 patients had ONJ.
- The risk of ONJ was 9 to 12 times greater for study participants who took bisphosphonates than for those who didn't
- Only 6 of the 23 ONJ patients had taken oral bisphosphonates.
- A study of 191 ONJ patients showed that the stronger the bisphosphonates the greater the ONJ risk.
- Having a tooth pulled also increased the risk of developing ONJ.

the secondary outcome revealed a significant difference in marginal bone loss around implants between patients with and without osteoporosis. Data heterogeneity was low. An in-

crease in peri-implant bone loss was observed in osteoporosis group. Randomized and controlled clinical studies should be conducted to analyze possible biases.

1. Starck W, Epker B. Dental implants in patients with osteoporosis: a systematic review with meta-analysis. *Int J Oral Maxillofac. Surg.* 2018; 47: 480-491. © 2017 International Association of Oral and

Maxillofacial Surgeons.
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Dr. Brian Simpson
announces the thirty fifth meeting of the
NANUET IMPLANT STUDY GROUP

Speaker: Chuck Genco
Director for Implant Solutions
BonaDent Dental Laboratories, Seneca Falls NY

**“Immediate Implant Load
Solutions”**

Thursday, September 6, 2018
Dinner: 6:30 Presentation: 7:00 — 9:00 pm

Hudson House 134 Main Street Nyack, NY

2 CE credits awarded by the Ninth District Dental Association
Cost: \$50.00

To register, please call: 845-623-3497
or email office@drbriansimpson.com

“There is a majestic grandeur in tranquility.”
-Washington Irving