IMPLANTS
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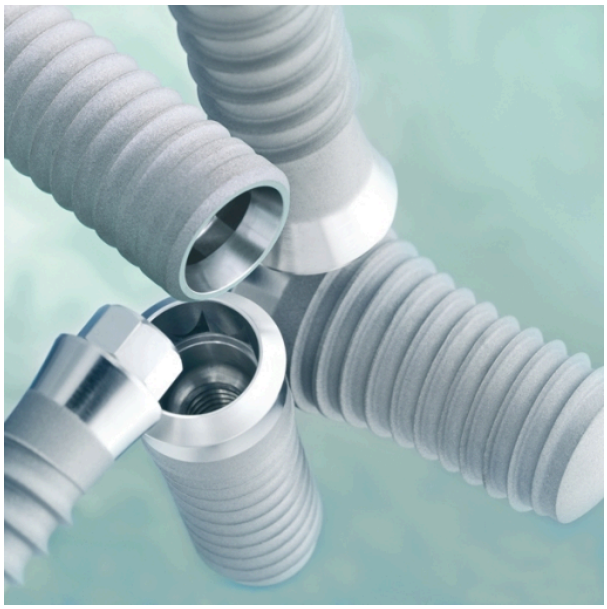
Implant Size: Does It Matter, and How Big IS Enough?

By Jeff Lineberry (/spear-review/author/jeff-lineberry/) on August 5, 2015 | (/bookmarks/bookmark/38561) SHARE



Dental implants are a mainstream treatment option for our patients in today's dental world and an excellent replacement option for missing dentition. Modern-day dental implants have been around since the 1970s, but it wasn't until the several years later that they began to be widely accepted as a "true" treatment option for patients.

As the years have gone by, root form implants have had changes in thread design, coatings on the implants, sizes and lengths available, connections (platform switching being one of them), etc. as well as the treatment protocols (delayed loading, immediate loading, progressive loading, etc.) All of this with the hopes of making implants easier, faster and more predictable and stabile in the long term for our patients.

For many years, it was believed that the biggest, longest implant (https://www.speareducation.com/spear-review/category/implants) you could place, the better it could handle the "load" and the better it would be for your patient. I remember having patients with 15 mm or 18 mm implants in place, even in the incisor area! It was also during this time that the implants seemed to be the driving factor for the design of the final restoration vs. the appropriate final restoration driving the implant placement.

As time has passed and we have become more accustomed to having a restorative-driven treatment plan for implants – and with the advent of cone beam 3-D imaging being readily available to assess the surgical site – implant placement has actually become more challenging as we have come to realize that often times, there is limited bone available in order to place them in the ideal position, yet at the same time has made the process more predictable. Having all of this information oftentimes leads the clinician to a crossroads in treatment: Do I graft or do I go to a smaller/shorter implant?

The most common areas in which this dilemma arises are in the posterior maxilla due to the sinuses and the lower mandible area that approximates the inferior alveolar nerve and lingual cortical plate. The bone density in the posterior maxilla is by and far the softest and least dense bone anywhere in the jaws and has been a challenging area of implant treatment for some time. The sinus area coupled with poor bone density makes it difficult to obtain ideal primary implant stability. That being sa ea would be a great "proving ground" for implant survival rates and thus, give us va ow implant size, length, and many other factors can have a positive impact, making implant placement in the posterior maxilla more predictable.

A recent large retrospective study[1] that included almost 1,400 implants suggests that implant size and length in relation to survivability wasn't a predictor of failure. This included implants less in 3.6 mm in diameter and less than 10 mm in length as well as implants placed into native bone alone vs. ones with a sinus elevation. Additionally, another study[2] in late 2014, evaluating more than 4,500 Straumann implants some as short as 6 mm in length, placed in the posterior mandible and posterior maxilla, with up to a 10-year follow up, having 100 percent and 87 percent success, respectively.

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So, the next time you see limited bone and think that there is not enough bone or that it won't work because the implants will be too small, you may want to reconsider. Stay tuned as technology and research continue to shape the future of dentistry.

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