

#### Timothy Kosinski, MS, DDS, MAGD

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### About the Webinar Speaker

Dr. Timothy Kosinski is an Adjunct Assistant Professor at the University of Detroit Mercy School of Dentistry. He has a private practice in Bingham Farms, MI for the past 26 years. Along with his DDS degree from the University of Detroit Mercy he also has a Mastership in Biochemistry from Wayne State University School of Medicine. Dr. Kosinski is a Diplomate of the American Board of Oral Implantology/Implant Dentistry, the International Congress of Oral Implantologists and the American Society of Osseointegration. He is a Fellow of the American Academy of Implant Dentistry and has received his Mastership and Lifelong Learning and Service Recognition from the Academy of General Dentistry. Dr. Kosinski has received many honors including Fellowship in the American and International College of Dentists and the Academy of Dentistry International. He is a member of OKU and the Pierre Fauchard Academy. Dr. Kosinski was the University of Detroit Mercy School of Dentistry Alumni Association's, "Alumnus of the Year," Dr. Kosinski serves on the editorial review board of REALITY, the information source for esthetic dentistry. He has published 80 articles on the surgical and prosthetic phases of implant dentistry and was a contributor to the textbooks, Principles and Practices of Implant Dentistry and 2010's Dental Implantation and Technology. He was featured on Nobelbiocare's Nobelvision, lectures extensively and has placed over 6500 dental implants.



#### Overview

- Dental implants have become an important method of restoring missing teeth with function and esthetics.
- Patient request and demand this type of therapy
- Materials and methods have made implant dentistry predictable with a long term positive prognosis



#### What to Know

- Surgical placement of dental implants involves a comprehensive understanding of both the surgical and prosthetic applications.
- Today's implant dentistry is prosthetically driven. There must be a clear visualization of the completed restorative case prior to any surgical intervention.
- Anatomic considerations must be understood, including position of the nerves, sinuses and undercuts.
- The thickness and angulation of bone must be studied and the integrity of the buccal and lingual plates clearly understood. The aesthetic zone of the anterior maxilla is critical to an acceptable restoration. Simply placing an implant where there is adequate bone is no longer acceptable.
- Smile design and emergence profile has developed into an art unto itself.

The Best Tips & Techniques for Dental Implants



- CT (computer tomography) diagnosing and preparation of any case can help the practitioner guarantee success since all the fears can be alleviated prior to any surgical intervention.
- CT scanning is a remarkable tool in the diagnosing of implant position and placement. Scanning software allows for fabrication of precise planning and surgical guides which nearly ensure a positive result.
- Communication with the patient concerning this innovative therapy reduces anxiety of an unknown procedure and increases treatment acceptance.
- · Reconstruction is made simpler since implants are ideally placed.
- Our newest computer software allows us to simulate the placement of implants accurately without ever touching the patient.

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- The newest Cone Beam 3 D Dental Imaging systems provides the dentist with complete information on the vital anatomy in the areas to be considered for dental implants by producing a three dimensional view of all the oral structures.
- This helps us to create an accurate treatment plan and increases our chances for a predictable surgical and prosthetic result.
- The high resolution volumetric images give us for the first time 3 dimensional views of bone and tooth structure and orientation.
- Implant type, size, shape and position are determined prior to any surgical intervention on the patient.
- Any bone irregularities or deformities are determined without elongation or magnification of conventional radiographs. CT allows us to simply become better diagnosticians and surgeons.



- CT scanning is becoming more prevalent for use in ensuring proper dental implant placement, especially in the esthetic zone. The two dimensional images provided by bitewings, periapicals, panoramic or even medical CT scans may not be enough in diagnosing complicated or challenging situations.
- The newest CT planning softwares, such as NobelGuide CT by Nobelbiocare, provides as much information as possible to assist during surgical planning. We can now visualize the vital anatomy in 2-D and 3 dimensions prior to surgery, and can assess the location of implants virtually.
- As critical is the possibility of knowing precisely where tooth restorations need to be located.
- Diagnosing any anatomic issues specific to the patient, planning the implant type, determining position and orientation in the bone area are all easily accomplished. The process is user friendly and intuitive.
- Following diagnosis, a surgical guide is created from the 3-D images. This helps place the implant in the proper position depending on the type of prosthesis chosen, without the need for any flap incisions.



- Flapless surgical placement of dental implants has become more popular as technology and digital radiography has allowed us to visualize the underlying anatomy more effectively.
- Regular evaluations are a necessary part of the total implant dentistry practice, this includes hygiene, visual oral and radiographic examinations.
- Maintenance is critical to the long term positive prognosis of any dental restoration.
- The prosthesis must be designed in such a way that the patient can maintain it not only today but in the future.
- Minimizing surgical damage with flapless designs is tissue friendly, however, flap designs still need to be available for backup during complications.



- Placing dental implants in ideal position, angulation and depth, considering all emergence profile and smile design desires using flapless procedures is only obtainable by using our modern technology.
- This technique proves to be a cost effective solution to assist the implant dentist in planning an aesthetic final result and minimizing surgical challenges.
- Benefits include: Patients are positively influenced by the concept of virtual placement, safety and ease of surgery of implants in a procedure that they may psychologically feel is extremely invasive and CT scanning, diagnosis and guided procedures have elevated implant dentistry to a realm that any dentist who develops an interest in growing professionally can certainly accomplish.
- Quantity and quality of bone can be determined and buccal and cortical thickness surrounding trabecular bone is evaluated so that all the implants are properly positioned.
- Success with implant dentistry is based on the need to achieve primary stabilization and secondary integration of the titanium fixtures and also maintaining hard and soft tissue contours to create long term function and esthetics. Any anatomic irregularities or limitations need to be addressed prior to implant placement. This saves the practitioner a lot of time and effort in doing the case properly from the first steps. Measure twice, cut once is a statement that can be readily accepted in dentistry today.



- CAD/CAM technology is also changing the restorative aspects of our practices. Improved materials and techniques are fast becoming preferential to conventional casting procedure. Precision procedures, biocompatibility, mechanical strength and aesthetics is making the fabrication of our prostheses constantly better and more predictable. CAD/CAM created Zirconia abutments and crowns provide outstanding strength and aesthetics. This is a time saving and cost effective process eliminating many of the problems associated with conventional laboratory casting.
- Single flapless surgical procedures can be simply done by most practitioners provided they understand their limitations and understand important anatomy, such as the position of the mandibular nerve, mental foramen and maxillary sinuses. Digital radiography allows them to predictably measure ideal angulation and depth of any implant system. Taking radiographs to insure proper position is easily obtained. Infiltration of the soft tissue with anesthetic, rather than a complete block of the site, will make the patient and doctor aware of vital anatomy. Following a careful step by step process, realizing the exact position of each drill can make the surgical procedure less scary for the practitioner.
- Small diameter implants have become all the rage in dentistry today. However, the concepts described above cannot be forgotten. Often these small diameter implants are placed in narrow ridges. One best know the exact position and shape of that ridge before blindly attempting implant placement.

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#### Misconceptions and/or Questions

- Surgical placement of implants should only be attempted by trained specialists like oral surgeons or periodontists.
- CT diagnosis is difficult to learn and requires very expensive software.
- The general dentist should not get involved in implant dentistry.
- Surgical placement of implants is more important than the prosthetic reconstruction.
- Any dental laboratory can provide dental implant prosthetics.
- Implants are simply placed where there is adequate bone.
- Dental implants last forever.
- Immediate placement and immediate loading of implants cannot be accomplished.

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#### Misconceptions and/or Questions

- What are some of the benefits of implant dentistry?
  - increased confidence when smiling, speaking and eating, especially if dentures or partials are replaced or retained with dental implants.
  - Elimination of denture adhesives
  - Improved comfort, speech and appearance.
  - Preservation of the integrity of facial structures.
  - Adjacent teeth are not ground down for a bridge
  - Implants can be easier to maintain since they are cleaned like natural teeth
  - Improved ability to taste food
  - Looking and feeling younger
  - Restored self esteem
  - Improved quality of life.
- Where is the best place to obtain further dental implant training or education?



#### Conclusions

- Dental implants are titanium fixtures that are surgically embedded in the jaw and simulate the roots of teeth. They can be used to attach a single tooth, multiple teeth or even to stabilize dentures so they do not move around. The procedures today are fairly simple and precise. Most patient experience some soreness but are not debilitated.
- Modern dental implants have been successful for over 30 years now. They are intended to be permanent, however, many things contribute to their long term success including home care and maintenance. Cigarette smoking can cause problems with implant healing. Engineering is an important part of the success of the dental implant reconstruction. Placing the correct type and number of implants is important.
- The investment made in proper and comprehensive implant therapy is an investment in the patient's overall health and quality of life. Appearance is improved and facial structures are preserved. There are many factors involved in cost including the number of implants placed and the type of teeth placed over them. A thorough consultation is required to determine final cost, but all fees should be presented prior to any commitment for treatment.

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