The Future of Dental Implantology Is Now

The doctors of Amsterdam Dental Group discuss MIDI, an implant procedure at the forefront of dentistry

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But what exactly is behind this cutting-edge technique, and after all the technology talk, what does it mean for patients? How does it create more beautiful smiles while achieving greater patient comfort, more precise implant placement and shortened healing time?

The Technique Put Simply
Sophisticated technology and training is necessary to perform the MIDI technique. With the use of 3-D X-rays and scanners, the dentist is able to virtually recreate a patient’s mouth and jaw—precisely seeing the height, width and length of bone available for implant placement and the important surrounding gum tissue. Special implant planning software takes this data and the entire dental implant procedure is precisely planned before being performed in the patient’s mouth. The advantage is that all of the surgical decisions are planned and reviewed digitally in advance of the procedure.

The key to performing digitally planned MIDI implant procedures is the ability to 3-D print precise surgical guides. Whether for replacing one tooth or a complete dentition, this guide is the basis for MIDI’s precision and comfort. It is dentistry’s current answer to medicine’s robotic surgery, and the result: a more controlled implant procedure, greater patient comfort and superior results.

“By being able to plan the surgical procedure on the computer using a CAT scan, we can have a 3-D surgical guide printed...”
that will place the implant where it needs to go without us having to actually physically look at the bone,” explains Harold S. Baumgarten, D.M.D., of Amsterdam Dental, which has offices in Philadelphia and Paoli.

Once the computer planning is performed and the guide is fabricated, the MIDI technique can be completed. While it’s still a surgical procedure, less manipulation of gum tissue and bone exposure leads to reduced surgery time and often no sutures at all. “It’s a method of placing dental implants that minimizes patient discomfort, postoperative pain and swelling,” adds Dr. Baumgarten. The reduced pain also lessens the need for potent prescription opioid medications to manage it.

Amsterdam Dental Group’s Howard P. Fraiman, D.M.D., likens the procedure to having arthroscopic knee surgery versus the traditional method of “opening up a knee.” MIDI procedures feature much smaller surgical sites. “It’s the most precise, most comfortable implant procedure you can have,” he says.

**The Benefits of ‘Less Is More’**

For patients MIDI is the ideal scenario—less time, less discomfort, better results.

Computerized pre-planning inherently leads to patients spending far less time in the dental chair. It begins even before the procedure when many come face to face with anxiety. Not only is it a dental visit, but it is also dental surgery. Knowing the dentist was able to virtually replicate the patient’s full dental structure, anticipate any possible issues and plot a meticulous step-by-step course based on the patient’s specific case provides a great amount of peace of mind for the patient.

The minimally invasive nature of the procedure, combined with computer-guided precision of the implant placement itself, also results in shortened postoperative care. Patients generally return to their daily routine that same day, and dentists’ follow-up calls are met with little or no mention of discomfort.

“Unlike traditional implant surgery, MIDI pre-treatment, computer-guided planning helps us avoid steps that previously led to a more traumatic type of healing,” explains Amsterdam Dental’s Caleb J. Cross, D.M.D., M.B.A. “Most patients are pleasantly surprised.”

MIDI has few contraindications, and adults of all ages with varied health conditions benefit from the minimally invasive technique. The procedure also helps doctors maintain as much healthy tissue as possible, which can improve aesthetics and overall dental health.

The accuracy and precision of dental implant placement is paramount to the achievement of an aesthetic result, according to Dr. Fraiman.

“A successful, aesthetic dental implant and restoration requires close collaboration between the dental surgeon and restorative dentist,” he says. “These are two different fields: the surgical specialist to place implants accurately; and the restorative specialist to reconstruct implants aesthetically and functionally.”

The knowledge of both specialties provides insight as to how the implant placement and restoration influence each other. A dentist who is dual trained in these two specialties is uniquely qualified to provide the best possible result. Amsterdam Dental Group is one such practice with four dentists who are dual trained in periodontics and prosthodontics. Drs. Baumgarten, Fraiman and Cross, along with Jeffrey S. Ingber, D.M.D., have all completed post-doctoral specialty training in both Periodontics and Prosthodontics at the University of Pennsylvania School of Dental Medicine, where they remain active in the Penn Dental academic programs and regularly speak on the topic nationwide.

Restorations are all about the most finite of details. From the state-of-the-art CT scanner to the computer-guided surgical planning software, Amsterdam Dental’s dentists have no need to outsource any part of the implant process. This includes having a complete in-office dental laboratory that further reinforces MIDI’s “less time, better result” benefits.

“A lot of dental offices don’t have onsite labs,” Dr. Cross says. “If you want to change the shade, color or contour of a restoration, the dentist would have to send it back to the lab, which can take a minimum of four or five days. Having the lab on site, we can adjust in real time.”

The advantages to keeping such processes entirely in office are numerous. Most notably, as Dr. Baumgarten says, “Your doctor is actually doing it for you rather than sending it to somebody that may not even be a dentist.” In the end it comes down to “the ability to maintain total control from the beginning to the end of the procedure and making patients happy with the result,” Dr. Fraiman adds.

In the hands of a practice as skilled and comprehensive as Amsterdam Dental Group, MIDI and its cutting-edge results are here and now.

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Amsterdam Dental Group’s team of dentists includes (left to right) Howard P. Fraiman, D.M.D.; Harold S. Baumgarten, D.M.D.; Caleb J. Cross, D.M.D., M.B.A.; Fedele A. Musso, D.M.D.; and M. Barry Moskowitz, D.M.D.