

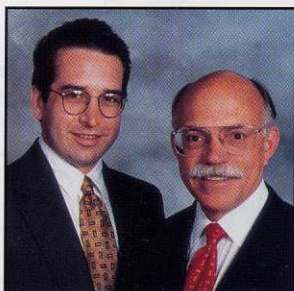
# PROSTHODONTIC

## —Insights—

A Digest of Recent Trends, Techniques and Clinical Concepts of Dental and Facial Esthetics

### TEETH IN A DAY™

#### In the Upper Jaw



Glenn J. Wolfinger, D.M.D., F.A.C.P.  
Thomas J. Balshi, D.D.S., F.A.C.P.

#### Introduction

Patients who gag easily or are unable to wear removable dentures are primary candidates when considering a *TEETH IN A DAY™* rehabilitation.

The protocol for an implant supported non-removable prosthesis in just one day, which we call *TEETH IN A DAY™*, began nearly eight years ago at Prosthodontics Intermedica with immediately loading dental implants in edentulous mandibles. These rehabilitations were successful in the mandibular arch because of the superior quality and bone density in the anterior of the lower jaw.

Patient needs and requests soon led to immediate loading of dental implants in the maxilla, or upper jaw. The following patient report represents a culmination of circumstances that led to the decision to immediately load the maxillary arch using the *TEETH IN A DAY™* protocol. Maxillary implants were loaded at the time of placement and were combined with a few implants that had been previously osseointegrated in order to restore ideal form and function throughout the arch. A patient becomes a candidate for a *TEETH IN A DAY™* procedure after assessing their dental history, their teeth and oral structures, and establishing a clear understanding of the patient's needs and desires.

#### Patient Treatment

A 54-year-old female patient was referred with a history of over 30 years of crowns and fixed partial dentures in both the maxilla and mandible (Fig 1). These restorations were supported by endodontically treated teeth that continued to deteriorate due to a compromised dentition and parafunctional habits. Over time the parafunctional habits of bruxing and clenching were responsible for multiple root fractures and the loss of numerous teeth (Fig 3). Her primary concern was to avoid wearing a complete removable maxillary denture.

(Continued on page 2.)



Figure 1  
Preoperative smile distorted by failing temporary teeth.



Figure 2  
A *TEETH IN A DAY™* smile.



The patient's medical history indicated good general health. Medications used at the time of treatment included Zyrtec for allergies, Vioxx for pain, Evista to supplement hormone replacement therapy and Periostat to control periodontal inflammation. She did report having sensitivity to penicillin.

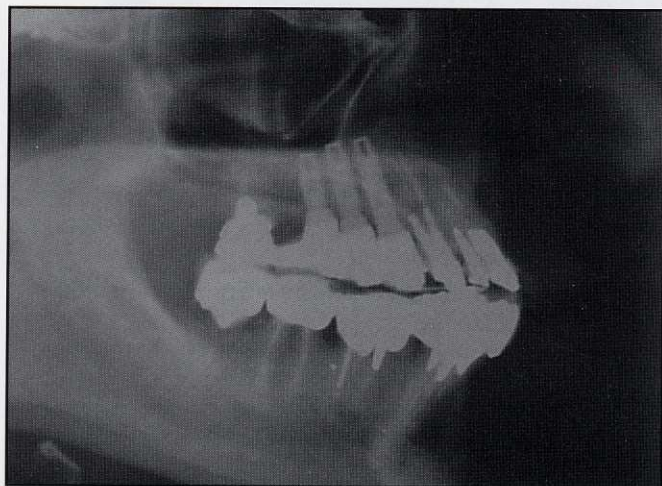


Figure 3  
Preoperative lateral cephalometric film; note labial flair.

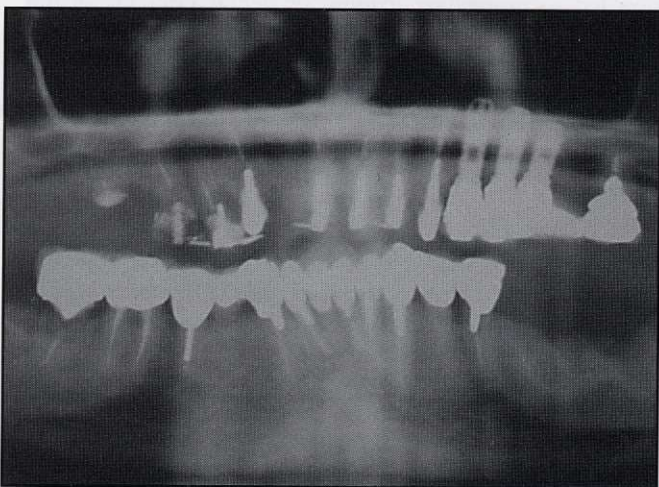


Figure 4a  
Preoperative panradiograph.



Figure 4b  
Pretreatment provisional restorations.

In evaluating her dental condition, the maxillary arch was in a state of complete deterioration (Fig 4a,b,c). The only signs of stability in the maxilla were three Brånemark osseointegrated implants that had been successfully placed in 1992 in the right bicuspid and molar area. The remaining natural dentition in the maxilla (teeth #'s 6-15) had completely deteriorated and the patient was experiencing cosmetic and esthetic compromise due to the discoloration and fracture of these provisional restorations. The mandibular dentition suffered with failing traditional fixed prosthodontics in the left posterior and the loss of molars on the right side (Fig 5).

## Treatment Planning

Because of the patient's habit of bruxing and clenching and a history of fracturing many traditional fixed prosthodontic restorations, multiple implants would be placed throughout the maxilla in order to obtain as much support as possible to stabilize the *TEETH IN A DAY*™ prosthesis. A zygoma implant was planned for the left side where bone volume in the posterior was minimal (Fig 6, 8a, 9b), and pterygomaxillary implants would be placed to provide additional support for both the right and left posterior areas.

A decision was made to immediately load the maxillary implants based on the fact that the patient did not want to use a complete removable denture and there appeared to be sufficient areas of stable bone anchorage. There was no clinical reason or patient demand to immediate load the mandibular posterior implants because the mandibular anterior crowns and fixed bridge would be retained.

## Informed Consent

The written informed consents for *TEETH IN A DAY*™ treatment to include the removal of the remaining maxillary dentition and multiple mandibular posterior teeth were thoroughly reviewed and signed by the patient; as well as the consent for implant placement in both the maxillary and mandibular arches. The patient was then scheduled for *TEETH IN A DAY*™ under general anesthesia.

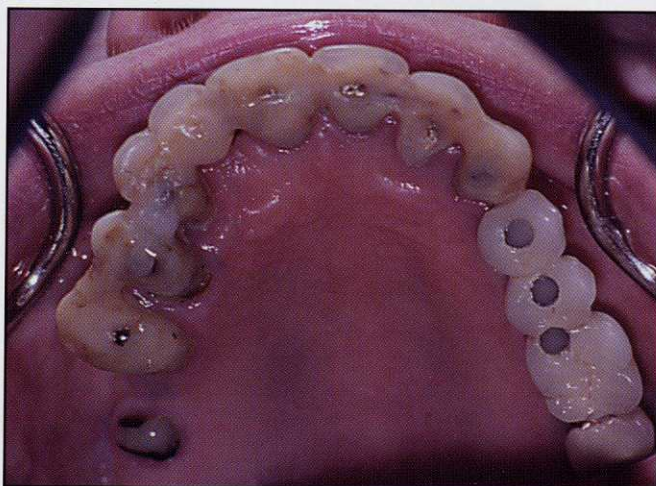


Figure 4c  
Pretreatment palatal view.

(Continued on page 3.)





Figure 5  
Pretreatment mandibular arch.

## Establishing The Preliminary Dentition

Registration of the appropriate jaw position was required prior to implant surgery to establish lip support and the occlusal vertical dimension for the *TEETH IN A DAY™* prosthesis. These records permitted articulation of master casts used to fabricate a complete maxillary full arch acrylic

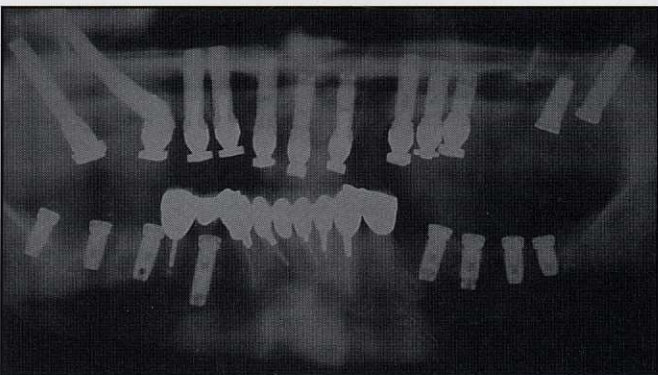


Figure 6  
*TEETH IN A DAY™* panradiograph immediately following surgery.

prosthesis to be placed at the time of first stage surgery. This restoration then becomes the *TEETH IN A DAY™* prosthesis.

## The Surgical Procedure

A board certified anesthesiologist provided nasal intubation for general anesthesia. Local anesthetics were then delivered and the remaining maxillary teeth were removed. The same procedure was completed in the mandibular posterior where multiple teeth were removed. After all visible pathology was removed from the surgical sites, the area was irrigated with an antibiotic solution. The patient was then re-draped in the traditional sterile protocol for implant placement. The maxillary left area was opened to obtain visibility for the placement of the zygoma implant. This follows the traditional zygoma protocol. A 45 mm long zygoma implant was placed in the area of tooth #14.

Immediately following the placement of the maxillary implants, all of the newly placed implants in the anterior and left side received appropriate abutments. The three original

maxillary implants that were placed in 1992 had the abutments changed to 1 mm EsthetiCone abutments to enable a more esthetically pleasing restoration. Two implants in the maxillary right posterior had cover screws placed and were left submerged submucosally in the traditional 2-stage protocol. The prosthetic reconstruction, which had been fabricated in the laboratory at the newly restored occlusal vertical dimension, was then attached to all of the maxillary abutments except the last two on the right side using the conversion prosthesis technique.

The maxillary teeth were set into the precise special position and the conversion prosthesis was then removed from the mouth. Clinical laboratory technician team members refined this prosthesis and added additional reinforcing acrylic throughout the lingual and cervical areas to provide improved esthetics. This custom-made conversion prosthesis then becomes the *TEETH IN A DAY™* restoration.

While the maxillary prosthesis was refined in the laboratory, the mandibular implants were surgically placed. Four implants were inserted into both the left and right posterior regions. Cover screws were used on all eight mandibular implants and these were left submerged in the traditional Brånemark protocol since they would not be functional for at least three months.

After completing implant surgery in the mandible,



Figure 7  
*TEETH IN A DAY™* two weeks after surgery, facial edema subsiding.

the maxillary *TEETH IN A DAY™* refined and polished prosthesis was returned to the operating room from the laboratory and fastened to the titanium abutments with gold

(Continued on page 4.)



retaining screws. A little over four hours after implant treatment began, the patient awoke to see a new and esthetically pleasing smile and felt an entirely new and comfortable occlusal vertical dimension. She was delighted with her "new look" and the *TEETH IN A DAY™* treatment.

## Post-Operative

The day after surgery, the patient reported normally acceptable levels of facial swelling as anticipated by the nature of these procedures. The patient followed postop instructions with the use of ice packs and the appropriate medications to help control the swelling.

Two weeks following surgery the patient returned for suture removal and occlusal evaluation. The swelling had completely subsided and slight adjustments could then be made to the occlusion in an effort to establish even contact and force distribution for the anterior region. With the surgical swelling diminished, the patient was even more delighted with the restoration of her facial appearance and her beautiful smile demonstrating both function and artistically attractive *TEETH IN A DAY™* esthetics (Fig 7).

Five months after the initial surgery, the construction of the prosthesis for the mandibular implants took place. The maxilla was permitted to heal for an additional time. Eight months after the initial surgery the patient underwent the second stage surgery for the two maxillary right implants that had been left submerged. At that time the final impression of all the maxillary implants was made for construction of the maxillary porcelain fused to gold *custom designed* tissue integrated prosthesis to be delivered two weeks later (Fig 8a, b, c, Fig 9a, b, c, Fig 2). A hard acrylic occlusal guard was also constructed to help manage the patient's bruxing and clenching habits.

## Summary

*TEETH IN A DAY™* provides an implant supported prosthodontic reconstruction for patients who have an extreme aversion to the use of removable prostheses. Other patients may want their newly placed implant-supported teeth to be available for use immediately because of personal commitments or because of the nature of their business. This procedure can be performed under local or general anesthesia. Optimal esthetics are an extremely important aspect in achieving patient satisfaction; and special attention must be made to reestablish the occlusal vertical dimension for form and function.

In the maxillary *TEETH IN A DAY™* case presented, all of the implants appeared to be well osseointegrated and functioning under load since the time of implant placement. Six months post-operatively the patient reported that her dentition felt "healthy and strong and more beautiful than ever".

## Acknowledgments:

1. The Dental Implant Team at Prosthodontics Intermedica, Fort Washington, PA
2. Robert Winkelman, CDT, MDT and technicians at Fort Washington Dental Lab, Inc. Tel: 1-800-541-3490; 215-628-4994  
Email: fortwdental@aol.com  
Web site: <http://fwashingtondentallab.com>

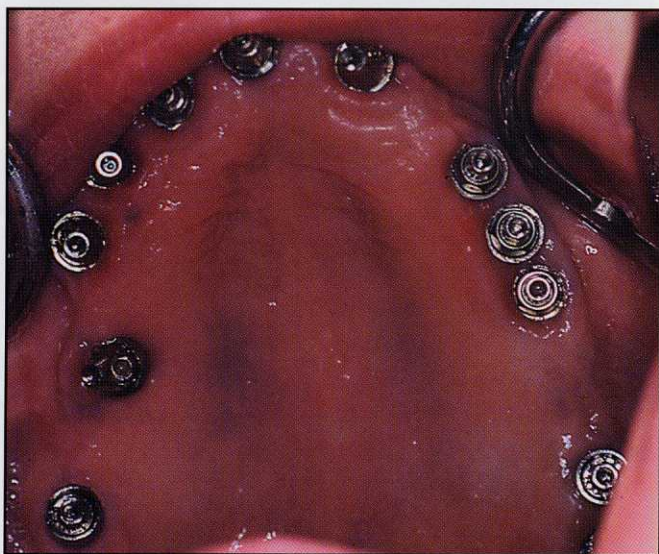


Figure 8a  
Palatal view of abutments 8 months after *TEETH IN A DAY™* surgery.

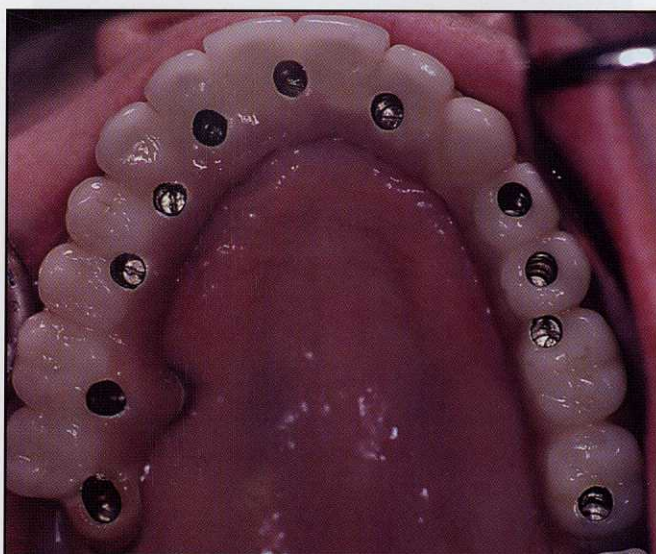


Figure 8b  
Custom designed porcelain fused to gold implant retained prosthesis.



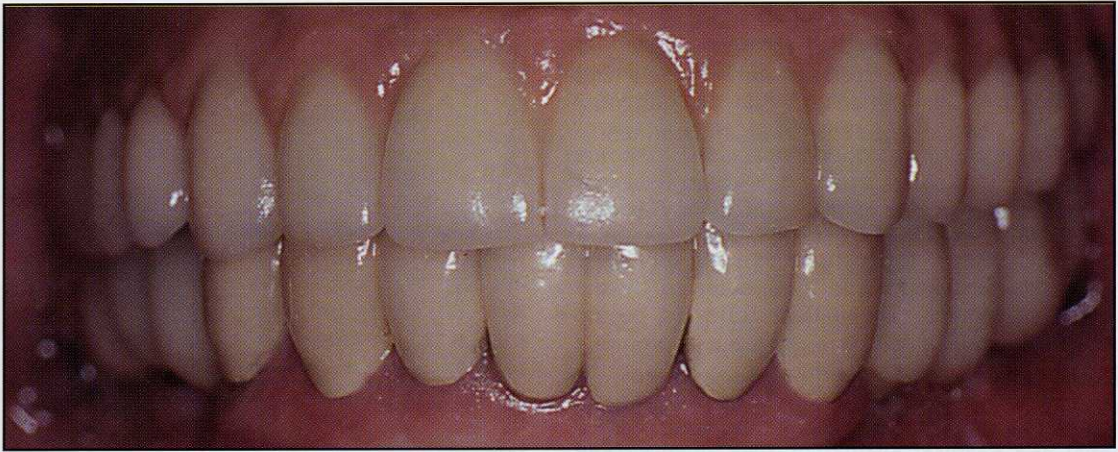


Figure 8c  
The final implant supported rehabilitation.

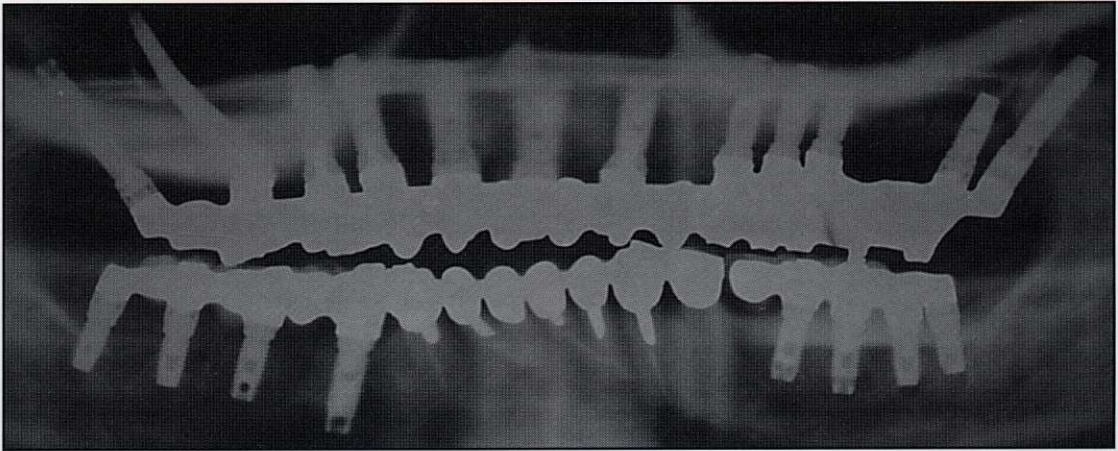


Figure 9a  
Postoperative panradiograph.

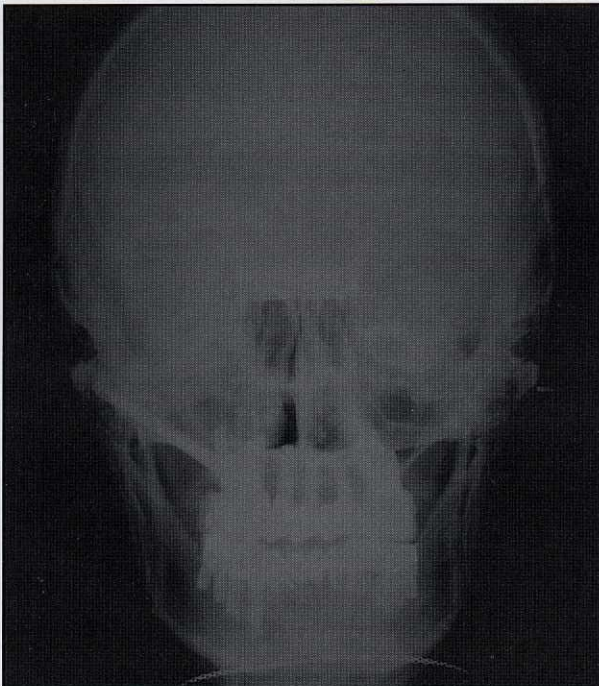


Figure 9b  
Postoperative anterior/posterior cephalometric film.

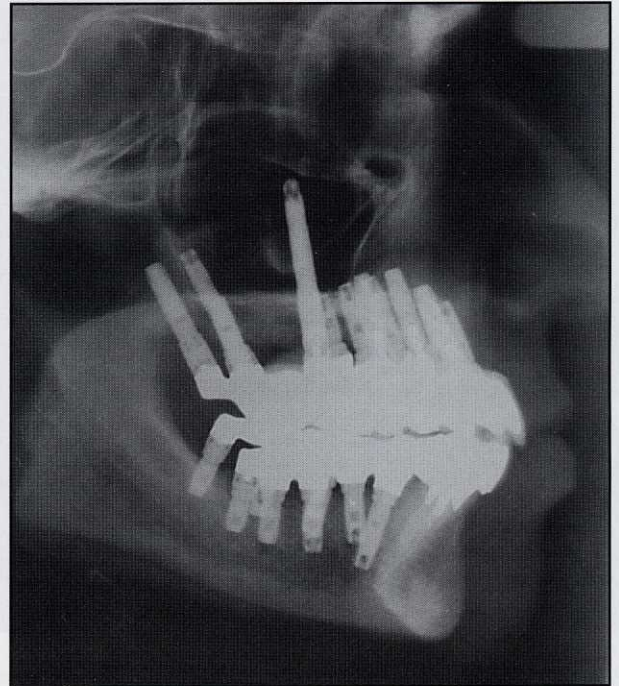


Figure 9c  
Postoperative lateral cephalometric film.





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Prosthodontics Intermedia  
467 Pennsylvania Avenue, Suite 201  
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**Presenters:** Thomas J. Balshi, DDS, FACP, Board Certified Prosthodontist  
Glenn J. Wolfinger, DMD, FACP, Board Certified Prosthodontist  
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