Advanced Concepts with Dental Implants
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Notes: ____________________________________________
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Resources

Consequences of Missing Teeth
⇒ Psychological
⇒ Anatomical
⇒ Esthetic

Types of Dental Implants
Subperiosteal—placed onto the bone
Transosteal—External surgical procedure
Endosteal—placed into the bone
⇒ Immediate Transitional (ITI)
⇒ Mini & Small Implants
⇒ Temporary Anchor Device (TADS)

20 Million Edentulous
50% Adults Missing ≥ 1 teeth
50 Million missing ≥ 5 teeth
≥65 y/o average 10 missing teeth

Implants ~250 lbs biting force
Denture ~6 lbs biting force
BONE RESORPTION

Health
Esthetics
Prevention
Fountain of Youth
**Candidate Criteria**

<table>
<thead>
<tr>
<th>Previous Dental History</th>
<th>Patient Assessment</th>
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<tr>
<td></td>
<td>Health History / Risk Assessment</td>
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<table>
<thead>
<tr>
<th>Radiographic assessment</th>
<th>Oral Evaluation</th>
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<td>Risk Behaviors</td>
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**Appointment Flow:**

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<thead>
<tr>
<th>Consult</th>
<th>Radiographs</th>
<th>Study Models</th>
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**Surgical**

<table>
<thead>
<tr>
<th>Healing</th>
<th>Prosthetic</th>
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**Bone Types**

- **D1**: Dense Compact Fine (Oak) Ant Mand
- **D2**: Dense Thick Porous Compact (Pine) Mandible = BEST
- **D3**: Porous Compact Fine (Balsa) Maxilla
- **D4**: Fine (Styrofoam) Post Mand

**Additional Surgical Procedures:**

<table>
<thead>
<tr>
<th>Sinus Lift</th>
<th>Bone Graft</th>
<th>Membrane</th>
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<table>
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<tr>
<th>Osteotomy</th>
<th>Tissue Graft</th>
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**Resources**


Single Stage Surgery

⇒ Transmucosal healing abutment placed

Two Stage Surgery

⇒ Standard Tx
⇒ Second surgery abutment placed

In-Office Education

<table>
<thead>
<tr>
<th>Models</th>
<th>Photos</th>
<th>Literature</th>
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<tr>
<td>Flip Chart</td>
<td>Pt Referrals</td>
<td>Interactive Video</td>
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Dental Professional Education

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<thead>
<tr>
<th>Webinars</th>
<th>CE</th>
<th>Certification</th>
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<tr>
<td>Publications</td>
<td>Digital Journals</td>
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</table>
Radiographic Guidelines:

- Vertical BW or PAX
- Monitor M/D bone
- Baseline at prosthetic insert
- 6-8 months—compare to baseline

Dental Professional Assessment

- Tissue Consistency, color, form
- Inflammation / bleeding
- Exudate
- Radiographic bone level
- Occlusion
- Mobility
- Selfcare

Notes: __________________________________________

Resources

www.whatimplantisthat.com
Initial Crestal Bone Loss

- Abutment connection
- Implant surface alteration
- Prosthetic table
- Excessive stress
- Frequent component change

Secondary Crestal Bone Loss

- Biofilm
- Stress

Mobility

Percussion

Tissue Assessment

“There are conflicting reports concerning the need for keratinized tissue around implants”

~World Workshop Periodontics

Probing—Is It Safe?

- Gentle Pressure
- Fixed reference point
- 1st year—eval color, form, consistency, BOP, depth
- After 1st year—of stable probing, x-ray to monitor M?D bone
- Correlate probing depth to bone loss

Resources

Probes

- PerioWise® (Premier): www.premier.com
- Colorvue™ (Hu-Friedy): www.hu-friedy.com
- Click-Probe™ (Kerr): www.kerrhawe.com

**Implant Failure and Diseases**

**Peri-implant Mucositis**
- Inflammatory change
- Involves soft tissue only
- Similar to gingivitis
- Primary cause = plaque

**Peri-implantitis**
- Involves hard and soft tissues
- Similar to adult periodontitis
- Includes Peri-implant Mucositis
- Bone loss

**CIST** Cumulative Interceptive Supportive Therapy

- **PPD ≤ 3 mm**
  - - plaque - BOP
  - + plaque + BOP
  - No tx.

- **PPD 4-5 mm**
  - + BOP no bone loss
  - + BOP bone loss ≤2mm

- **+ Radiographic Evidence**
  - PPD ≥5mm
  - + BOP bone loss >2mm

**Mechanical debridement + polishing**

**Antiseptic cleansing (CHX)**

**Systemic/local antibiotic therapy**

**Regenerative or resective therapy**

Adapted from consensus workshop group
ITI conference, Dec 2003
Supportive Therapies

Accepted
- Implant scalers
- Air polishers
- No abrasives
- Non-metal OH aids

Contraindicated
- Traditional ultrasonic scalers
- Traditional metal scalers
- Abrasives

Instrument Selection Guidelines
- Light-weight
- “Implant friendly”
- Disposable Rigid
- Autoclavable
- Cost efficient Sharpenable

Non-Surgical Peri-Mucositis Treatment
- Non-surgical therapy:
  - Daily biofilm management
  - Debridement
  - Antimicrobials
  - Antibiotics?

Resources
Barnes CM, Toothaker RW, Ross JA.
**Peri-implantitis Treatment**

⇒ **Surgical**
- Degranulation
- Debridement of implant
- Detoxification
- Guided bone regeneration

**Other Complications**
- Residual Cement
- 1 year - 9mm pocket mesial
- Post-SRP Arestin Tx
- 5mm Pocket

**Tobacco and Dental Implants**
⇒ AAP Position Paper
⇒ Increases risk of implant failure
⇒ Fibrotic tissue / deceptive color
⇒ Decreased Healing response
  - Healing capacity only 28%
⇒ 80-90% chronic perio pt’s are smokers

**Resources**
- [www.smokefree.gov](http://www.smokefree.gov)
- [www.perio.org](http://www.perio.org)
- [www.adha.org](http://www.adha.org)
Bisphosphonates and Osteonecrosis (ONJ)

Determining Re-Care Intervals

Why Teeth Lost?  
Partial or Fully Edentulous?  
OH Compliance  
Current Implant Status

General Dental Health  
Tissue Condition  
Restoration Design  
Systemic Health

Signs and Symptoms  
Pharmacology

Protecting the Investment / Natural Teeth

⇒ Biofilm Management  
⇒ Fluoride
  ♦ NO ACP  
⇒ Interproximal Device  
⇒ Whitening

Self-Care Product Selection

( see back pages in handout)

Alternative Implant Treatments

Conclusion:

Action Plan

What:  
Who:  
When:

Resources


### WHERE CAN I FIND WHAT I NEED TO SUCCEED?

#### PROFESSIONAL ORGANIZATIONS:

<table>
<thead>
<tr>
<th>Organization</th>
<th>Website</th>
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<tbody>
<tr>
<td>Academy of Osseointegration</td>
<td><a href="http://www.osseo.org">www.osseo.org</a></td>
</tr>
<tr>
<td>Association of Dental Implant Auxiliaries</td>
<td><a href="http://www.adiaonline.org">www.adiaonline.org</a></td>
</tr>
<tr>
<td>And Practice Management</td>
<td></td>
</tr>
<tr>
<td>International Congress of Oral Implantologists (ICOI)</td>
<td><a href="http://www.icoi.org">www.icoi.org</a></td>
</tr>
<tr>
<td>American Academy Implant Dentistry</td>
<td><a href="http://www.aaid-implant.org">www.aaid-implant.org</a></td>
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#### PRODUCTS:

<table>
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<tr>
<td>Hu-Friedy</td>
<td><a href="http://www.hu-friedy.com">www.hu-friedy.com</a></td>
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<tr>
<td>Advanced Implant Technologies (AIT)</td>
<td><a href="http://www.aitdental.com">www.aitdental.com</a></td>
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<tr>
<td>Premier</td>
<td><a href="http://www.premier.com">www.premier.com</a></td>
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<tr>
<td>Hartzell Titanium Coated</td>
<td><a href="http://www.ghartzellandson.com">www.ghartzellandson.com</a></td>
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<tr>
<td>Hartzell Suvan-O’Hehir</td>
<td><a href="http://www.ghartzellandson.com">www.ghartzellandson.com</a></td>
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<td>A-Titan Implant Scaler Kit</td>
<td><a href="http://www.atitan.com">www.atitan.com</a></td>
</tr>
<tr>
<td>Hartzell Ultrasonic Insert</td>
<td><a href="http://www.ghartzellandson.com">www.ghartzellandson.com</a></td>
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<tr>
<td>Midwest Quixonic</td>
<td><a href="http://www.dentsply.com">www.dentsply.com</a></td>
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<tr>
<td>Cavitron Softip™</td>
<td><a href="http://www.dentsply.com">www.dentsply.com</a></td>
</tr>
<tr>
<td>Salvin Sonic Scaler attachments and tips</td>
<td><a href="http://www.salvin.com">www.salvin.com</a></td>
</tr>
<tr>
<td>Titanium Implant Scaler (T.I.S.)</td>
<td><a href="http://www.tonyriso.com">www.tonyriso.com</a></td>
</tr>
<tr>
<td>ImplakClean™</td>
<td><a href="http://www.pac-dent.com">www.pac-dent.com</a></td>
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<tr>
<td>Titanium Implant kits</td>
<td><a href="http://www.citagenix.com">www.citagenix.com</a></td>
</tr>
<tr>
<td>ImplantPro™</td>
<td><a href="http://www.brasselerusa.com">www.brasselerusa.com</a></td>
</tr>
<tr>
<td>EMS Piezo Tip</td>
<td><a href="http://www.ems-company.com">www.ems-company.com</a></td>
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<tr>
<td>Satelec Piezoelectric Implant Insert</td>
<td><a href="http://www.acteongroup.com">www.acteongroup.com</a></td>
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- Click-Probe™ (Kerr) www.kerrhawe.com

Plaque Removal Products

Proxi-Floss™ www.aitdental.com
Bridge and Implant Floss www.thortonfloss.com
Sturdyfloss™ www.sturdyfloss.com
Peri-O-Floss® www.phbinc.com
Nylon coated proxybrushes www.gumbrand.com
Proxy-tip™ www.aitdental.com
Sulcabrush® www.sulcabrasch.com
GUM® Soft picks® www.gumbrand.com
GUM® Go-Betweens® www.gumbrand.com
Perio aid® www.perio-aid.net
Philips AirFloss www.sonicare.com/dp
Philips Sonicare® www.sonicare.com/dp

Denture Care Products

Smile Again / ProTech Denture Cleaner www.dentallabproducts.com

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