Dental Implants:
Ideal Tooth Replacement

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Fellow Misch International Implant Institute
Fellow Academy Of General Dentistry
Associate Fellow American Academy Of Implant Dentistry
Certified /NYS Conscious Sedation
Patient Education At The Tischler Dental
Conscious Sedation

Relaxation and cooperation while maintaining responsiveness.

Medical history is important
Reasons for tooth loss

1. Trauma- Injury
2. Gum Disease- Loss of supporting structures of bone
3. Genetic Causes- Missing teeth, history of gum disease
4. Severe Decay- Allowing decay to progress
5. Failed Root Canal
6. Cracked tooth from biting stress
Age is directly related to indicators of tooth loss. (Marcus et al)

1965 average life span 65 years old
1990 average life span 78 years old

Population above 50 in 1995 68 million
Population above 50 in 2020 115 million

Average 65 year old in 1995 will live to 81 years old, and this is increasing!
NIH/NIDR Study (1988-1991)

10.5% of US adult population totally edentulous (18 Million People)

17% of US adult population edentulous in one or both arches (30 Million People) Not found to be gender specific.

45 million US adults are missing posterior teeth in one or more quadrants

Misch C.E Contemporary Implant Dentistry  Mosby 2nd Edition
Consequences of tooth loss

1. Loss of width and height of bone

2. Decrease in facial height, loss of muscles of facial expression and negative facial esthetic skin changes, increased length of upper lip.

3. Lessened chewing ability leading to decreased nutritional uptake

4. Shifting of remaining teeth, negative esthetics and change in bite

5. Higher susceptibility to decay and gum problems in remaining teeth
Consequences of tooth loss
Psychological Consequences Of Tooth Loss

20% of edentulous patients don’t wear both removable prosthesis all the time. (NIH Oral health of US adults national findings Publ No 87 1987)

7% of edentulous patients are not able to wear their dentures at all (NIH)

88% of denture wearers have difficulty with speech (Misch LS Misch CE Denture Satisfaction: a patients perspective, Int J Oral Implant 1991)

Source Misch C.E Contemporary Implant Dentistry Mosby 2nd Edition
62.5% of mandibular denture wearers had awareness of movement (Misch)
50% of denture wearers avoided certain food (Misch)
17% of denture wearers masticated better without prosthesis (Misch)
16.5% of mandibular denture wearers never wear denture (Misch)

Source: Misch C.E Contemporary Implant Dentistry, Mosby 2nd Edition
Disadvantages Of Removable Dentures

1. Average bite force in first molar area 150-250 PSI with electronic strain gauge studies and edentulous person with dentures 50PSI (Howell, 1948)

2. 32% less masticatory efficiency with natural teeth compared to complete dentures (Rissen et al J Prosth Dent 1978)
Disadvantages Of Removable Dentures Cont’d

“Compromised dental function may favor systemic changes creating illness and lower life expectancy” (Chen and Lowenstien *JADA* 1984)
Disadvantages Of Removable Dentures Cont’d

4. Tissue borne dentures yield: Increased bone loss, increased caries on rest teeth, increased mobility of rest teeth, increased bleeding upon probing, greater plaque retention, non compliance of use, speech inhibition, taste inhibition. (Vermeulen A et al: Ten year evaluation of removable partial dentures: survival rates based on re-treatment, not wearing and replacement, *J Prosthet Dent* 1996)
PROSTHETIC REPLACEMENT ANALOGIES

Hip replacement - 80% 10 year survival

Knee - 50% need to be replaced in 10 years

Dental Implants - 90% success rate over 10 years
What is a dental implant?

“Titanium structure surgically inserted into the remaining bone to support teeth for function and esthetics”

Dates back thousands of years - Chinese, Egyptians, Incas

Titanium - Biologically compatible, integrates with bone
Can support a single tooth, multiple teeth, or dentures
Different designs are available through various companies
Surgically placed in bone and bone grows around it
The Tooth - The Root Form Implant

- Bone
- Gum Tissue (Gingiva)
- Natural Root
- Implant
- Natural Tooth Crown
- Prosthetic Crown
Options with Dental Implants: Single tooth replacement (continued)

- The Single Tooth Implant
  - The implant replaces the tooth root.
  - The post which will support the crown.
  - The prosthetic crown.
What is a dental implant?

Mandible found in Honduras from A.D 600
Pieces of shell.
Peabody Museum, Harvard

Modern Dental Implant

Ring M Abrams
Advantages Of Implant Prosthesis

Bone maintenance of height and width

Bite height dimension maintenance

Ideally esthetic tooth positioning

Improved psychological health

Regained biting awareness

Increased stability in chewing
Advantages Of Implant Prosthesis Cont’d

Increased retention
Increased phonetics
Increased Biting force
Increased success rate of prosthesis
Eliminates need to involve adjacent teeth
Options with Dental Implants:
Single tooth replacement
Options with Dental Implants:
Implant Supported Bridge
Options with Dental Implants:
Implant Supported Dentures
Comparison of Tooth Replacement Options: Dentures

Full dentures -
Creates further bone loss and will need to be relined
Inhibits speech, and taste ability

Partial dentures -
Loosen teeth they are attached to as bone is lost
Inhibits speech and taste ability
The conventional three-unit bridge requires the preparation of adjacent natural teeth...
Comparison of Tooth Replacement Options: Crowns and Bridges

1. Necessitates removal of healthy tooth structure
2. Can create need for root canal
3. Can have decay on supporting teeth
Rational For Single Tooth Implants

Rational For Single Tooth Implants
Cont’d

**Summary:**

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<th>Prosthesis</th>
<th>Success rate 5 yr</th>
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<tr>
<td>Removable Denture</td>
<td>83%</td>
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<td>Conventional Bridge</td>
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<td>Implant</td>
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Benefits Of Dental Implants

1. Prevents further bone loss through stimulation of bone
2. Increases retention and stability of dentures
3. Reduces denture size - less palate on full denture
4. Does not compromise adjacent teeth
5. Offers biting awareness
6. Offers improved psychological health
7. Improved esthetics - ideal tooth placement
Benefits Of Dental Implants
Benefits Of Dental Implants
Benefits Of Dental Implants

Before

After
Benefits Of Dental Implants

Before

After
Benefits Of Dental Implants

Before

After
Bone levels for implants

There must be sufficient bone to place a dental implant or else bone must be added

Determined by X-Rays and or CAT Scans

Bone grafts

Sinus augmentation
Bone levels for implants
Implant Treatment at The Tischler Family Dental Center
### Patient Information

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### Placed Implants

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Platelet Rich Plasma

NEW!

Platelet Rich Plasma On Demand!

HARVEST’s new SmartPReP™ technology meets the demand.
Bone levels for implants

Bone can be added through a variety of bone grafting procedures.
Bone levels for implants

Sinus Grafting
Sequence of treatment

1. Initial Exam- X-Rays, Study Models, Health History, CAT Scans
2. Treatment Planning/Forms
3. Surgical Appointments
4. Restorative Appointments
Questions?

FAQ's

How long will implants last?

Does it hurt?

How much will it cost?

Does insurance cover implants?

Now your questions: