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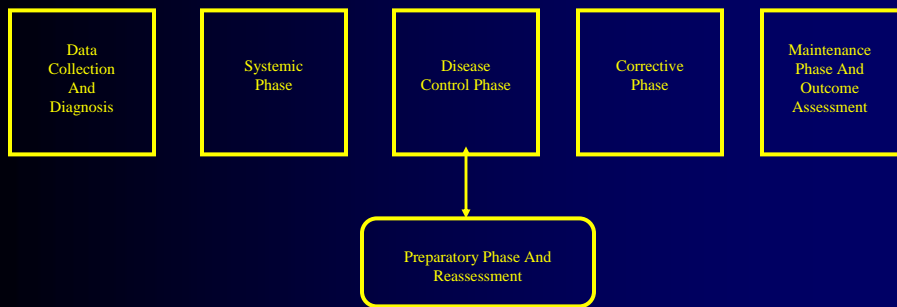
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# Tooth Supported Overdentures

## Where Are We Now?

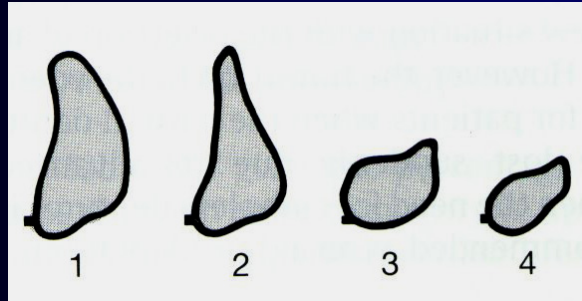
## Overall Treatment Includes The Following Areas



An example of a simple tooth supported overdenture patient with two remaining natural teeth which have been treated with root canal therapy and cut off near the FGM.

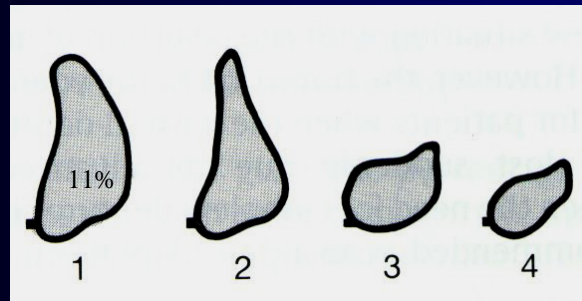
Source: Jeff Shotwell, University of Michigan, 2008

## Why bother to save any remaining teeth?



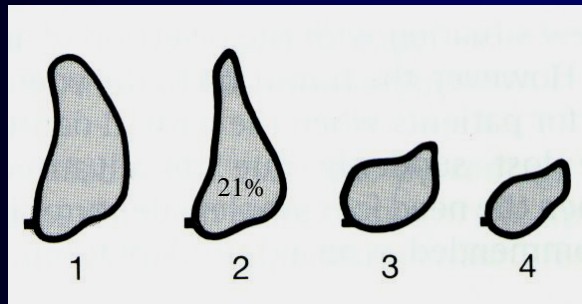
Source: Atwood, D.A., Reduction of residual ridges: A major disease entity. J. Prosthet. Dent 26 (1971) 266-279

Classification of the amount of resorption of the mandible as described by Atwood. Six groups were originally described, and four are represented here.



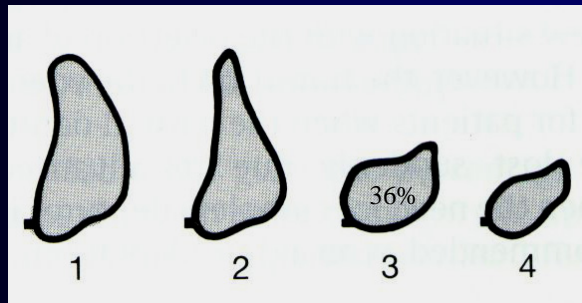
Source: Atwood, D.A., Reduction of residual ridges: A major disease entity. J. Prosthet. Dent 26 (1971) 266-279

The grade 1 mandible is called High. It can be described as well rounded, has slight atrophy of the alveolar ridge, and the bone height is only slightly reduced. Of the patients reviewed, 11% fell into this category.



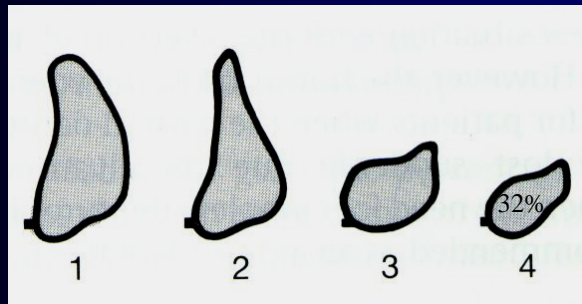
Source: Atwood, D.A., Reduction of residual ridges: A major disease entity. J. Prosthet. Dent 26 (1971) 266-279

The grade 2 mandible is called Knife Edged. This type of mandible has atrophy primarily in the facio-lingual dimension and not as much in the vertical dimension. This category of mandibular shape is often not favorable for implant placement despite the ridge height. Of the patients reviewed 21% fell in this group.



Source: Atwood, D.A., Reduction of residual ridges: A major disease entity. J. Prosthet. Dent 26 (1971) 266-279

The grade 3 mandible is described as Low, well rounded. This classification of mandible has advanced atrophy and severe reduction of ridge height. This ridge form is usually a favorable configuration for implant placement. 36% of the population reviewed by Atwood had this configuration.



Source: Atwood, D.A., Reduction of residual ridges: A major disease entity. J. Prosthet. Dent 26 (1971) 266-279

The grade 4 mandible is described as Depressed. With this grade we see total resorption of the alveolar ridge with advanced atrophy in all dimensions. Bone mass is greatly reduced and these cases are often not favorable for implant placement. Of the subjects reviewed 32% were of this type.



The lack of any remaining teeth means we have only the mucosal surface to support our lower denture.

Source: Jeff Shotwell, University of Michigan, 2008

In the past 20+ years, the implant supported overdenture has been gaining in clinical acceptance and patient demand.



A patient treated with two ball anchor type implants to support a lower overdenture.

Source: Jeff Shotwell, University of Michigan, 2008

## Development Of Overdentures

Neils Brill

Adaptation and The Hybrid Prosthesis

J. Prosthet Dent 5:811-24 1955

## Classification of Overdentures

- Immediate
- Transitional
- Remote

## Advantages of Overdentures

- \* Support And Stability
- \* Ridge Preservation
- \* Increased Biting Force For Patient
- \* Proprioception
- \* Retention
- \* Psychological Advantages For Patient

# Terminology

- \*Overlay Denture
- \*Hybrid Prosthesis (European)
- \*Telescoping Denture
- \*Tooth Supported Denture
- \*Overdenture

# Physiologic Basis For Overdentures

- \*Sensory Input From Periodontal Receptors
- \*Alveolar Bone Preservation
- \*Occlusal Forces Substantially Increased
- \*Masticatory Performance
- \*Tooth Mobility Greatly Reduced





## This Is The Type Of Patient Who May Benefit From Overdenture Treatment

Source: Jeff Shotwell, University of Michigan, 2008

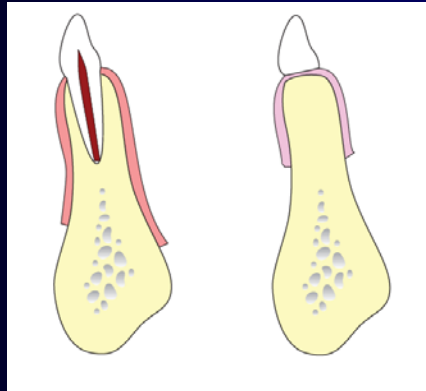
Source: Jeff Shotwell,  
University of Michigan, 2008





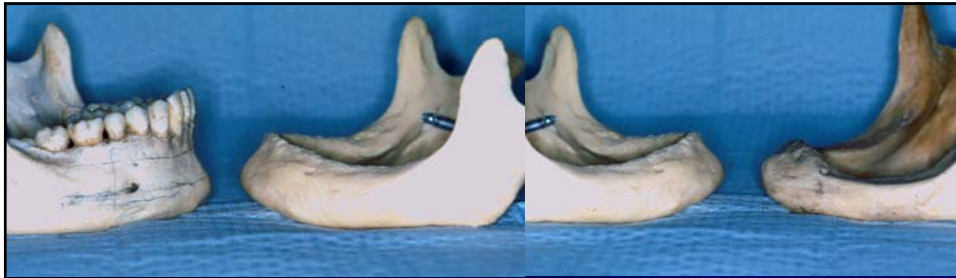
## Reshaping of the alveolar process post extraction

Source: Jeff Shotwell, University of Michigan, 2008



## Support mechanisms for a natural tooth and a conventional denture

Source: Jeff Shotwell, University of Michigan, 2008



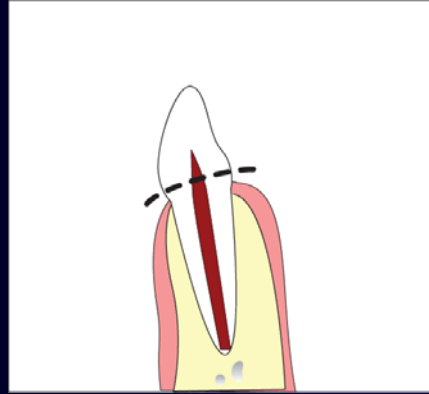
Influences on resorption pattern and location of anatomic landmarks relative to the crest of the ridge

Source: Jeff Shotwell, University of Michigan, 2008



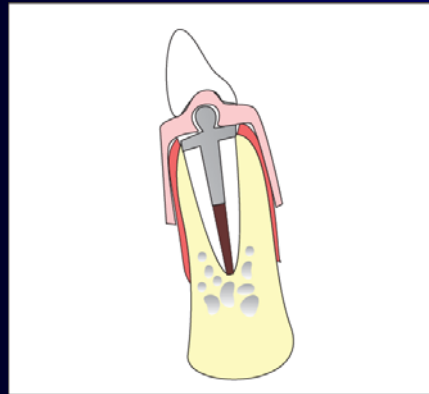
## Physiologic Basis For Overdentures

- \*Sensory Input From Periodontal Receptors
- \*Alveolar Bone Preservation
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## Root to crown ratio

Source: Jeff Shotwell, University of Michigan, 2008



## Secondary application of the retained root for retention of the lower denture

Source: Jeff Shotwell, University of Michigan, 2008

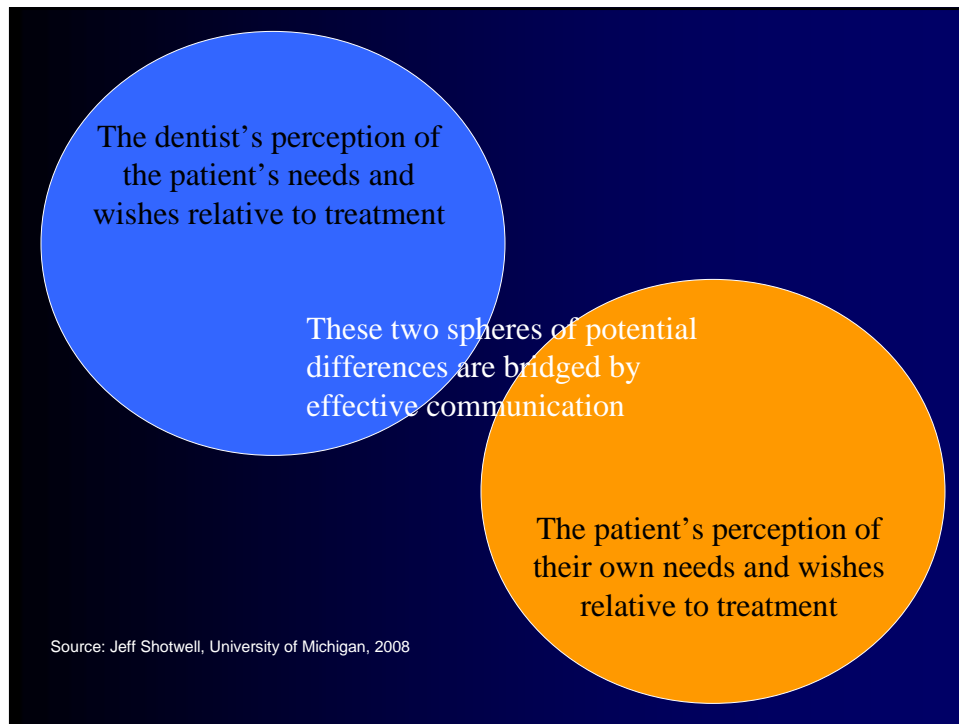
## Psychological Advantages For The Overdenture Patient

“I still have some of my own teeth.”

If the teeth are lost later due to caries, the transition and adaptation to complete dentures has been made more gradually.

## Factors Involved In Less Than Favorable Outcomes

- \*Unrealistic expectations on the part of the patient
- \*Ineffective communication with the patient
- \*Failure in patient compliance
- \*Endodontic / Periodontic Failure
- \*The use of compromised teeth as abutments
- \*Misunderstandings relative to fees



## Treatment of patients in which expectations were not mutually acceptable to the treating dentist and / or the patient

- \*I probably did not listen to my intuition.
- \*There were warning signs with the patient that I either ignored or "talked myself out of".
- \*I didn't want to disappoint the patient.
- \*I was afraid of a confrontation if I "stood my ground".

## Classification of Overdentures

Immediate

Transitional

Remove (Definitive)

## Immediate Overdentures

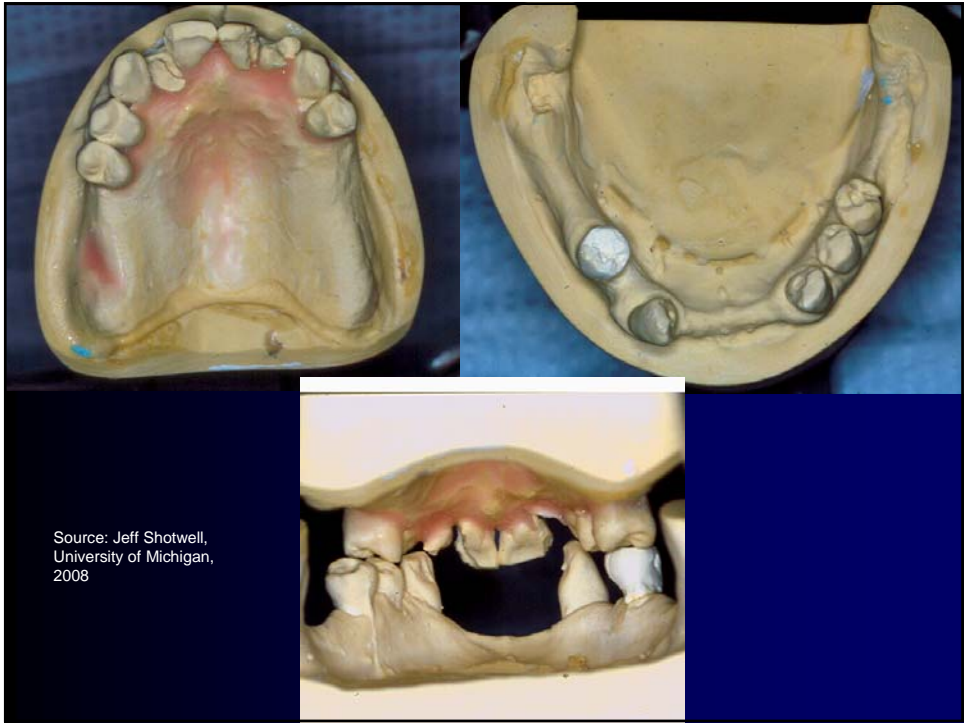


Source: Jeff Shotwell, University of Michigan, 2008



Source: Jeff Shotwell,  
University of Michigan, 2008



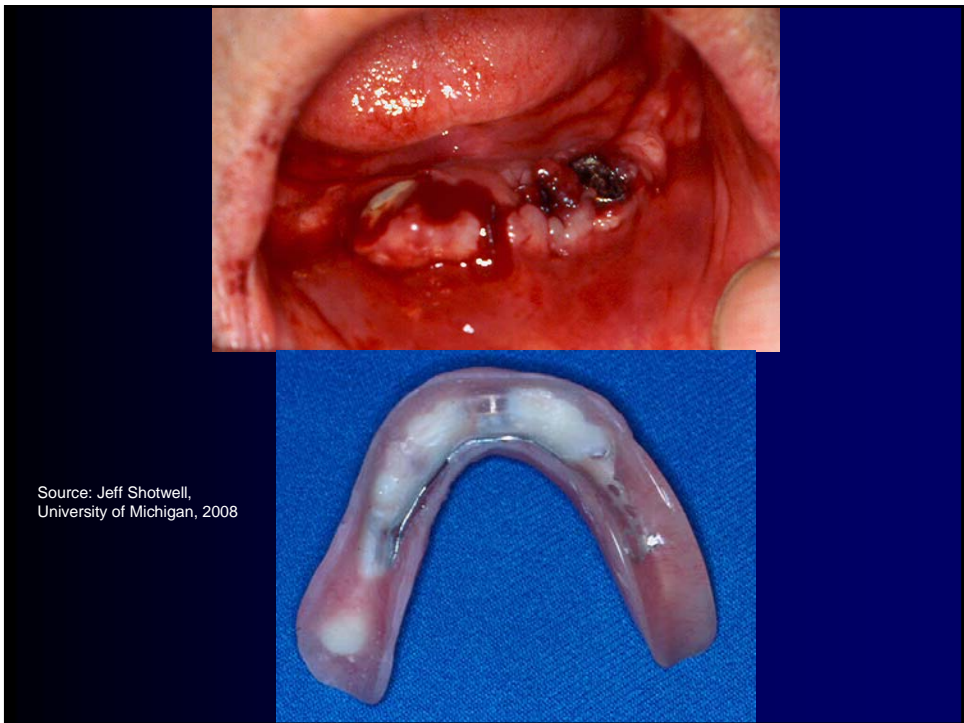




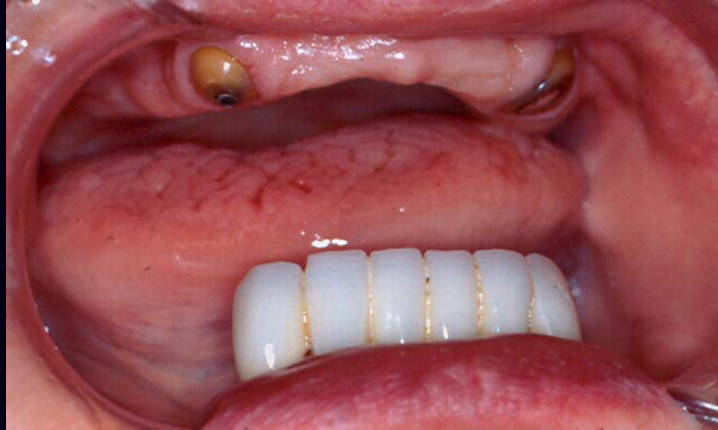
Source: Jeff Shotwell, University of Michigan, 2008

## Transitional Overdentures

Made by converting an existing removable partial denture to a full denture as a temporary appliance.



## Maxillary Overdentures To Prevent Combination Case Syndrome



Source: Jeff Shotwell, University of Michigan, 2008



Source: Jeff Shotwell, University of Michigan, 2008





Patient with heavy occlusal function unlike the previous patient

Source: Jeff Shotwell, University of Michigan, 2008

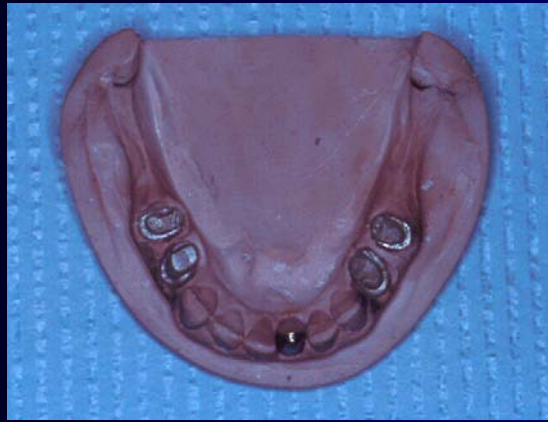


Source: Jeff Shotwell, University of Michigan, 2008

# The Remote Overdenture Second Generation Appliance After Healing



Source: Jeff Shotwell, University of Michigan, 2008



Source: Jeff Shotwell, University of Michigan, 2008



Source: Jeff Shotwell,  
University of Michigan,  
2008



Source: Jeff Shotwell, University of Michigan, 2008