

# Comprehensive Oral Rehabilitation & Esthetic Dentistry

presents

## A STRING OF PEARLS



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# “THE GUMMY SMILE”

## SUBJECTS:

- |                              |                             |                                |                              |
|------------------------------|-----------------------------|--------------------------------|------------------------------|
| 1. Upper Lip                 | Short/Hyperactive Lip       | Dentoalveolar Extrusion        | 1. Upper Lip                 |
| - Short                      | Behavior Modification       | Orthodontic Intrusion          | - Short                      |
| - Hyperactive                | Surgery                     | Functional Crown Lengthening   | - Hyperactive                |
| 2. Short Clinical Crown      | Botox?                      | Full Mouth Rehabilitation      | 2. Short Clinical Crown      |
| - Normal Variation           |                             | Vertical Maxillary Excess      | - Normal Variation           |
| - Incisal Wear               | Altered Passive Eruption    | Maxillary Le Forte 1 Impaction | - Incisal Wear               |
| - Altered Passive Eruption   | Esthetic Crown Lengthening  |                                | - Altered Passive Eruption   |
| 3. Dentoalveolar Extrusion   | Sulcular Incision           |                                | 3. Dentoalveolar Extrusion   |
| 4. Vertical Maxillary Excess | Internal Bevel Gingivectomy |                                | 4. Vertical Maxillary Excess |
| 5. Combination               |                             |                                | 5. Combination               |



### Differential Diagnosis

- Short or Hyperactive Upper Lip
  - Normal length: Young Female 20-22mm  
Young Male 22-24 mm
  - Normal Activity: 6-8mm
- Short Clinical Crown due to Altered Passive Eruption
  - Diagnosis: Short tooth and cannot feel CEJ in sulcus
- Dentoalveolar Extrusion
  - Diagnosis: Concave gingival line
- Vertical Maxillary Excess
  - Diagnosis: Lower 1/3 of face is longer than middle 1/3

## SUBJECTS:

# CORE ESTHETIC EVALUATION

- |  |  |   |
|--|--|---|
| Photography: Print, Slide, and Digital | Dental-Facial Midline                            | Determining the Incisal Edge Position of the Centrals |
| Diagnostic Records:                    | Centrals Exposed in Repose                       | Posterior Occlusal Plane                              |
| Facebow                                | Distal Extent of the Smile                       | Tooth Length and Width                                |
| DentoFacial Analyser                   | Buccal Corridors                                 | CEJs Located  |
| Centric Relation Registration          | Incisal Edges to Lower Lip                       | Incisal Wear  |
| Face Height                            | Gingival Architecture                            | Tooth Alignment and Color                             |
| Incisal Edge Position                  | Upper Lip Line                                   | Spacing Overlap, and Diastema                         |
| Lip Length                             | Angle of Incisal Plane- Maxillary and Mandibular |   |
| Lip Mobility                           |  |   |



Incisal edge position based on esthetics, phonetics, and function:

- Edge cradles by lower lip,
- No step up or down from canine to premolar,
- 35 y.o. female 3-4 mm central incisor exposed in repose. Male 1-2 mm. Lip lengthens 1 mm with each decade of life,
- “E” rule- <50% lengthen, >70% not lengthen,
- “F” rule- incisal edges lightly touch the wet-dry border of the lower lip
- Gingival Architecture- horizontal symmetry between cuspids and centrals. Lateral on or up to 1 mm below the line.

## SUBJECTS:

# OCCCLUSION

- |                        |                          |                                  |                |
|------------------------|--------------------------|----------------------------------|----------------|
| Philosophies           | Jaw relation records     | Differential Diagnosis for Wear  | Treatment      |
| Gnathology and C.R.    | Manipulated              | CNS Disorder                     | Medication     |
| Functionally Generated | Leaf Gauge               | CNS Parafunction                 | Splint Therapy |
| Bioesthetic            | Deprogrammer             | Dysfunction                      | Equilibration  |
| Neuromuscular          | Occlusal Appliances      | Constricted Envelope of Function | Orthodontics   |
| Integrated             | Full Coverage Splints    | De-constrict Envelope            |                |
| Instrumentation        | Partial Coverage Splints | Restorations                     |                |
| Articulators           | Occlusal Deprogrammers   | Increase VDO                     |                |
| Facebows               |                          | Orthodontic Intrusion            |                |
| Dentofacial analyzers  |                          |                                  |                |



- Centric relation is a functional, loaded position.
- The leaf gauge and the Lucia Jig are used routinely to locate centric relation.
- Toothpaste is a major contributor to abrasive tooth wear.

## FORCED ERUPTION & INTRUSION

### SUBJECTS:

Biology of Orthodontic Movement  
 Forced Eruption vs. Crown Lengthening Surgery  
 Biologic Transformation  
 Soft Tissue Alteration  
 Osseous Augmentation

Techniques and Materials  
 Extrusion for Restorative Space  
 Extrusion for Extraction Site Management

Extrusion for Implant Site Development  
 Fiberotomy vs. Flap Surgery vs. No Treatment  
 Limitations  
 Biologic Transformation

Techniques and Materials  
 Extrusion for Restorative Space  
 Extrusion for Extraction Site Management



### Forced Eruption

- 0.5-1.0 mm eruption per week, 3 months stabilization
- Fibers stretching causes the migration of bone, severing the fiber attachment leaves bone in the original position.
- Materials: orthodontic brackets, .018 wildcat or .0175 twist wire, composite, A-lastics, hemostat

### Intrusion

- The primary indication is to correct supereruption of teeth with or without wear.
- If anterior teeth are to be restored after the intrusion, the gingival crests are aligned rather than the incisal edges.
- Intrusion is a difficult orthodontic movement and Implant anchorage facilitates posterior intrusion.

### SUBJECTS:

## IMPLANTS

Surgical Anatomy  
 Data Gathering, Diagnosis, and Treatment Planning  
 Esthetic Implant Planning  
 12 Surgical Techniques for the GP  
 Bone Quality and Quantity  
 Soft Tissue Quality and Quantity  
 Bone Grafting  
 Membranes and barriers  
 Bone Harvest vs. Bone Bank vs.

Man Made  
 GTR pros and cons  
 Socket Preservation  
 Surgical Anatomy  
 Data Gathering, Diagnosis, and Treatment Planning  
 Esthetic Implant Planning  
 12 Surgical Techniques for the GP  
 Bone Quality and Quantity  
 Soft Tissue Quality and Quantity

Bone Grafting  
 Membranes and barriers  
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 Socket Preservation  
 Soft Tissue Grafting  
 Subepithelial Connective Tissue Graft  
 Pedicle Graft  
 Flap Design

Implant Location and Angulation  
 External vs. Internal vs No Hex  
 Implant Systems  
 Single Stage vs. Two Stage Surgery  
 Immediate Loading  
 Immediate Provisionalization  
 Incision Location  
 Suture Design  
 Sinus Lifts  
 Atraumatic Extraction  
 Teeth In A Day, Teeth In An Hour



- Implant systems should be chosen based on their advantage to a particular case rather than convenience. The implant prosthetic connection must add to the predictability of the final restoration.
- Internal Hex – Anterior Esthetics
- Single-stage (ITI) – easy prosthodontics and difficult surgical placement, mandibular posterior
- External Hex – overdenture and fixed-detachable, multiple units connected

## BIOMECHANICS OF PREPARATION

SUBJECTS: Nine Guidelines for Predictable Ceramic Crown Preparation  
 Ultraconservative, Full Veneer Preparation Design  
 Taper, Height, and Diameter  
 Retention vs. Resistance  
 Grooves, Channels, and Line Angles  
 Finish Line Location: Preventing Red and Recessed Gingiva

Finish Line Form and Depth  
 Choosing the Correct Margin for Each Ceramic System  
 Ceramic Systems: Indications and Contraindication  
 Functional Crown Preparation  
 Technique and Materials  
 Diamond vs. Carbide, Flat vs. Round Ended



3.5 mm preparation height bicuspids and anteriors, 4mm for molars

Ferrule effect requires a minimum of 2mm on sound tooth structure

Burs: 330 with a 2mm head, KS1 (Brassler, Microcopy), Football Diamond, KS6 (Brassler) or 2424C (Microcopy)

# ALTERING THE PERIODONTIUM WITH SURGERY

## SUBJECTS:

### Diagnosis

Altered Passive Eruption vs. Dentoalveolar Extrusion  
Tooth Length  
Feel CEJ?

### Grafting

Pedicle Grafts  
Connective Tissue Grafts

### Crown Lengthening Surgery

Functional Crown Lengthening  
Surgical Technique  
Instrumentation

### Diagnosis

Altered Passive Eruption vs. Dentoalveolar Extrusion  
Tooth Length  
Feel CEJ?

### Grafting

Pedicle Grafts  
Connective Tissue Grafts

### Crown Lengthening Surgery

Functional Crown Lengthening  
Surgical Technique  
Instrumentation

### Esthetic Crown Lengthening

Surgical Technique  
Instrumentation

### Crown Lengthening Surgery

Functional Crown Lengthening  
Surgical Technique  
Instrumentation

### Esthetic Crown Lengthening

Surgical Technique  
Instrumentation



Instrumentation: 15c blade, 7009 carbide bur, coarse  
bullet nosed diamond, Wedelstaedt Chisels

# BIOMECHANICS OF IMPRESSIONING

## SUBJECTS:

Accurate Alginate Impressions

Considerations in Choosing a Dental Stone

Material Selection: Polysulfide, Polyether, Polyvinyl Siloxane

Tray Selection: Full vs. Quadrant

Tissue Management: Mechanical, Chemical, Surgical

Mouth Preparation

Material Application

Removal/ Disinfection



Polyvinyl dimensionally stable over time, cross arch accurate, putty unpredictable, not hydrophilic, latex contamination possible

Retraction- minimum sulcus created by secondary cord Ultrapak #1 cord, 4 minutes

Chemical Agents- Aluminum Sulfate (Pascal Gel Cord), Ferric Sulfate (Astringent X 20%)

# OVATE PONTIC

## SUBJECTS:

Pontic Design

Biology of Pontics

Hygiene

Post-extraction Site Development

Ridge Requirements

Treatment options

Ridge Augmentation

Osseous Graft

Soft Tissue Graft

Prosthetic Timing

Tissue modification

Plasty tissue

Plasty Osseous

Pressure Mold

Laboratory Modification

Impressing the Ovate Pontic Site

Pre-extraction Site Development

Prevention of Ridge Defects

Directing Tissue Healing

Immediate Placement of the Final Prosthesis



Convex surface, 0.5-1.0 mm insertion into tissue, natural tooth form,  
angles lingually at FGM

Pressure mold begins at 4 weeks, add contour with composite, 10  
minutes pressure, add pressure in 2 week intervals

# DENTURES

## SUBJECTS:

Transition to Implants  
Insertion and Delivery  
Post op Adjustment  
Esthetic Determinants  
Coordinating With the Laboratory  
Occlusal Schemes

Reline and Rebase  
Setting Anterior Teeth  
Tooth Choices – Materials, Molds, Sizes  
Mini Transitional Implant Support  
Denture Recall and Recare

Radiographic and Surgical Stints  
Anatomy of the Edentulous Ridge  
Diagnostic Records  
3 Denture Techniques  
Linear, 5 Appointment  
Branching, Training Denture  
Accelerated Complete Denture  
Accelerated Single Denture

Custom Characterization and Staining  
Denture Base Materials  
Compression, Heat Processed  
Vacuum Pressed, Ivocap  
Resin Based, Eclipse  
Metal Bases  
Resilient Liners



- Denture cases should be classified and the technique should match the difficulty of the case.
- Adaptol wax is utilized for border molding in a linear technique.
- Hydrocast and Microseal is used to fabricate a functional impression.

# SEMILUNAR CORONALLY POSITIONED FLAP

SUBJECTS: Indications  
Requirements for Procedure  
Technique  
One Tooth  
Multiple Teeth  
Instrumentation  
Post-op Instructions



## Requirements:

1. 1.5mm or less of desired root coverage
2. At least 3 mm of keratinized tissue
3. Normal crest
4. Normal thickness of tissue

Technique: Do not do procedure on adjacent teeth

Notes: \_\_\_\_\_

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