

TMD for the GP

John R Droter DDS
Annapolis, Maryland

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John R Droter DDS

www.jrdroter.com

John R Droter, DDS

To get today's lecture slides:
go to www.APSleep.com

Seminar Download

Spear TMD

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John R. Droter, DDS
Facial Pain, Diagnosis and TMD Rehabilitation

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SEMINAR DOWNLOADS

Upcoming Seminars

July 20, 2016 D-PAS Hand on- In Office, Annapolis MD
July 21-23 2016 Droter Hands on- In office, Annapolis MD
Call Kim 301-805-9400

Pankey TMD Week, Key Biscayne FL
October 23-27, 2016
October 22-26, 2017
Call [LD Pankey Institute](http://LDPankeyInstitute.com) 305.428.5500

Spear TMD Course 1 with Dr Herb Blumenthal
Aug 11-13, 2016, Scottsdale Arizona
Call [Spear Education \(866\) 781-0072](http://SpearEducation.com)

Most Popular and Common Downloads

TMD Supersheet Download
[SuperTMDx13.11](#)

Brux supersheet Download



Hello. I am:

**John R Droter DDS
Annapolis, Maryland**

*Annapolis, Maryland
John R Droter DDS*

Milestones



Visiting Faculty Spear Education 2013

Visiting Faculty LD Pankey Institute 2008

Visiting Faculty Orthodontic Program
Washington Hospital Center 2000

On staff AAMC: Orthopedic Rounds
In OR for TMJ Surgery

Devoted Facial Pain Practice 1996
(No Hygiene to Check!!)

CT and MRI Imaging Joints 1992
Guy Haddix, DDS: Mentor
(3,100 images and rising)

Post Grad CE- GPR, LD Pankey Institute, Dawson, Mahan, Gremillion, Spear, Kois



Dr Guy Haddix
had been taking CT
scans since 1990

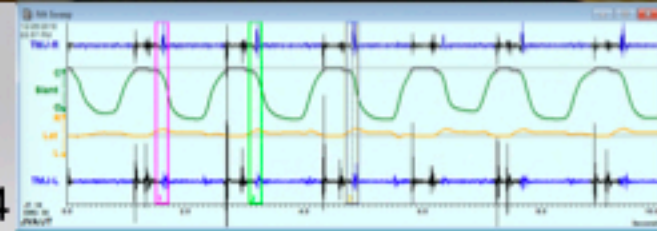


CT and MRI Scans in
my practice since 1992.



Closet full of printed
scans just as digital
appeared!!

Compare CT, Mounted models, MRI,
JVA before and after a case.
What can I see now?



JVA since 2004

Disclosures:

Atomic Skis- Sponsored.
I do benefit financially.

LD Pankey Institute- I am paid
a small honorarium for lectures

Spear Education- Paid
honorarium for lectures

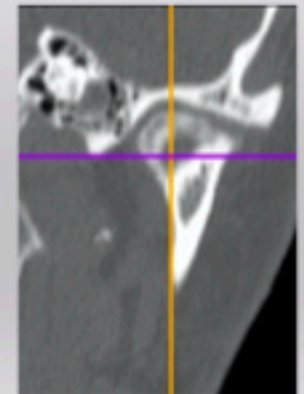
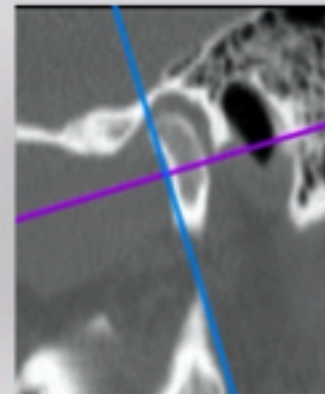
Patent on sleep device: LatBrux
Co-Owner of ArrowPath Sleep



All of my slides have been altered with
respect to cropping and exposure.
None have been "photoshopped" to misrepresent reality

I have chosen the most representative slice of and MRI and CT
scans to best represent what you would see if viewing all images

Ski Coach for National Ski Patrol
Level 3 Certified Professional Ski Instructors of America





APS

ArrowPath Sleep

www.APSleep.com
info@apsleep.com



APS In Office Anterior Stop 2.5mm



APS Airway Bite 4mm



APS Home Trial Anterior Stop



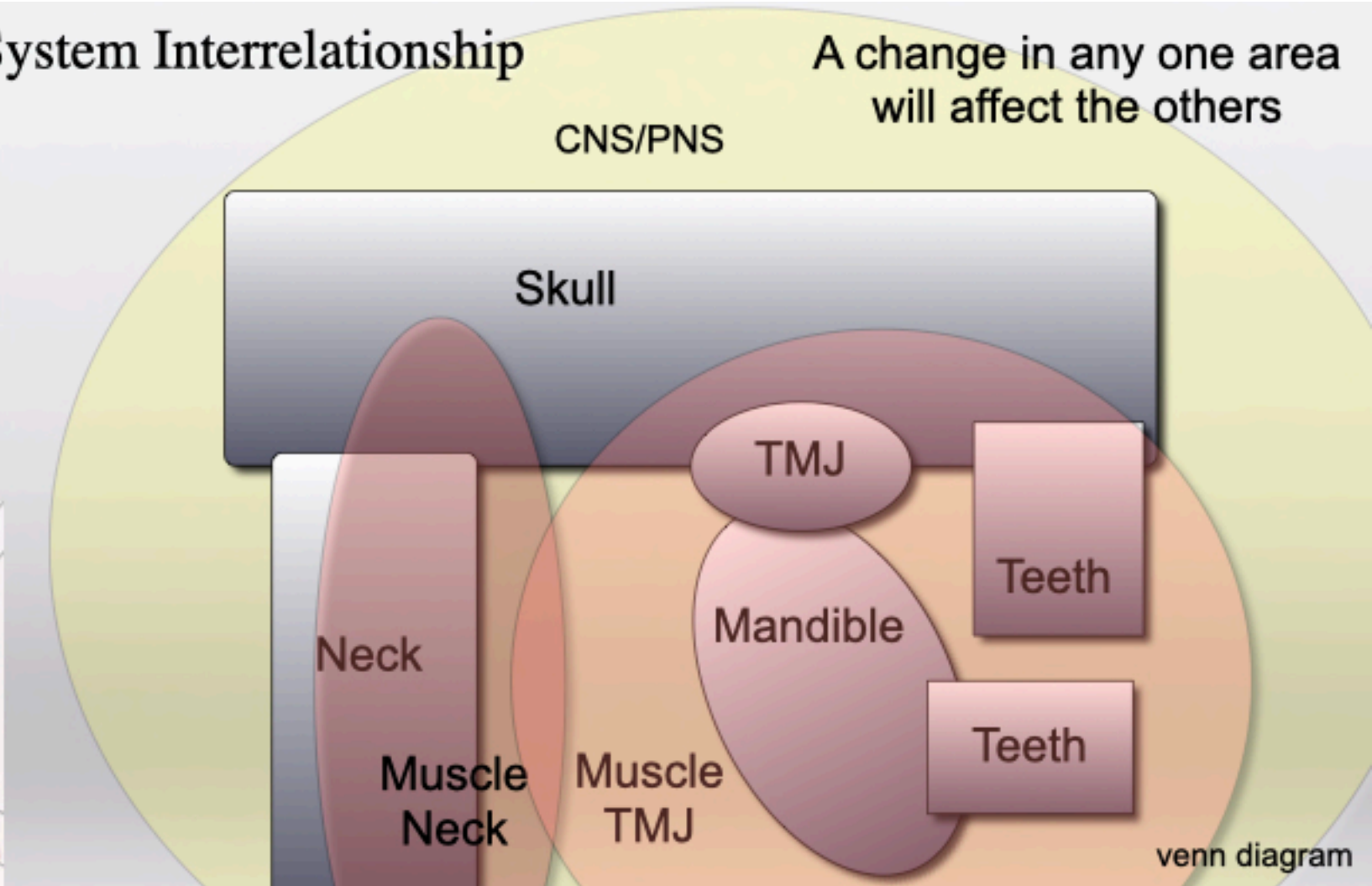
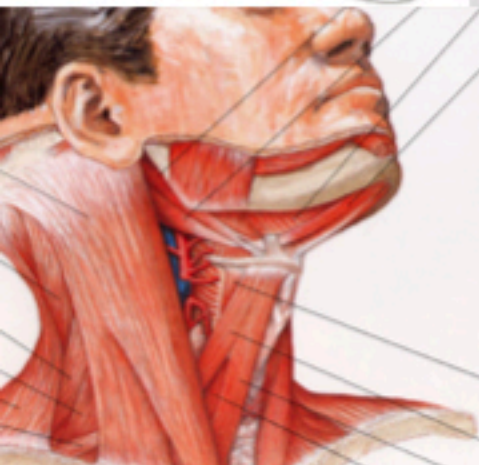
APS D-PAS



APS Lat-Brux

Stomatognathic System Interrelationship

A change in any one area will affect the others



TMD Therapies

John R Droter DDS
Annapolis, Maryland

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John R Droter DDS

TMDs- What are the choices? (190 Diagnoses, 7 Categories)

1. TMJ Damage

Adhesions and ankylosis of temporomandibular joint
Avascular Necrosis Mandibular Condyle
Cartilage Fibrillation, Mandibular Condyle, Fossa
Closed Lock, Jaw Cartilage, Acute
Closed Lock, Jaw Cartilage, Chronic
Closed Lock, Jaw Cartilage, Intermittent, Mechanically dysfunctional
Crush Injury Mandibular Condyle
Crystal arthropathy, unspecified, TMJ
Dislocation jaw cartilage due to injury, Sequela
Dislocation jaw cartilage with reduction, favorable adaptation, TMJ
Dislocation jaw cartilage without reduction, favorable adaptation, TMJ
Effusion, TMJ

Impingement Retrodiscal Tissue
Inflammatory Tissue Bone Resorption, TMJ Condyle
Loose Body (Joint Mice), TMJ
Malignant neoplasms of bones of skull and face
Open Lock TMJ, Recurring
Osteoarthritis TMJ, active degeneration
Osteoarthritis- inactive
Osteochondritis Dissecans TMJ
Osteolysis Mandibular Condyle, Active
Perforation Meniscus, TMJ
Perforation Pseudodisc, TMJ
Psoriatic Arthritis TMJ
Rheumatoid Arthritis Sero Negative TMJ

2. Muscles of the TMJ

Dystonia
Habitual posture forward mandible
Hemifacial Muscle spasm
Inhibitory Reflex Dysfunction, Periodontal Ligament Masseter Muscle
Muscle Atrophy, TMJ
Muscle Bracing Neck Stabilization
Muscle Bracing Pain Avoidance
Muscle Bracing TMJ stabilization
Muscle Bracing Airway **Patency** (with Tongue)
Muscle Contracture Fibrosis Lateral Pterygoid
Muscle Contracture Fibrosis Masseter, Medial Pterygoid, Temporalis
Muscle Fatigue Overuse
Muscle Hypertrophy TMJ Muscles

3. Cranial Alignment/Occlusion

Cranial Distortion / Misalignment
Hemifacial Hypoplasia
Hyper Occlusal Awareness
Idiopathic Orthotic Damage
Malocclusion Anterior Open Bite
Malocclusion Centric occlusion Max/C discrepancy
Malocclusion Deep Bite
Malocclusion due to mouth breathing
Malocclusion due to TMJ bone loss
Malocclusion due to tongue, lip or finger habits
Malocclusion Insufficient anterior occlusal guidance
Malocclusion lack of posterior occlusal support
Malocclusion Posterior Openbite Bilateral
Malocclusion Posterior Openbite Unilateral
Malocclusion unspecified

Malposition / Misalignment: Maxilla, Temporal Bone, Mandible
Mandibular asymmetry
Mandibular hyperplasia
Mandibular hypoplasia
Mandibular Retrognathia
Maxillary asymmetry
Maxillary hyperplasia
Maxillary hypoplasia
Maxillary Retrognathia
Occlusal Adaptation, Favorable
Occlusal Dependency for Joint Stabilization/ Proprioception
Tooth Intrusion
Tooth Supereruption

4. Cervical Damage

Cervical Vertebrae Alignment Dysfunction
Cervicocranial Syndrome
Muscle Guarding due Neck Instability
Trigger Point Neck Muscle with Referred Pain
Trigger Point Neck Muscle, Localized Pain

5. Parafunction

Excessive Tooth Wear, Damage
Hypereruptive Occlusion
Parafunctional Clenching Teeth, Awake
Parafunctional Clenching Teeth, Sleep
Parafunctional Grinding Teeth, Awake
Parafunctional Grinding Teeth, Sleep
Parafunctional Clench/Grind Wiggle
Parafunctional Tongue Bracing avoiding uncomfortable tooth contact
Parafunctional Tongue Bracing Neck stabilization
Parafunctional Tongue Bracing to maintain Airway
Parafunctional Tongue Bracing unknown cause

6. Whole Body / Systemic

Lyme Disease Arthritis
Magnesium Deficiency
Obstructive Sleep Apnea
Osteoporosis without current pathological fracture
Pathological Habitual Movement Pattern
Postural Disharmony Standing
Postural Disharmony Walking
Postural Forward Head Position
Upper Airway Resistance, UARS

7. Other

Nerve Entrapment Masseteric Nerve due to Masseteric hypertonicity
Neurona Trigeminal Nerve
Obsessive-Compulsive Personality Disorder
Other
Otitis Ear Infection
Pain disorder exclusively related to psychological factors, Somatosform pain disorder
Pain disorder with related psychological factors
Peripheral Sensitization

TMD Therapies: (60+ therapies)

Physical

Ice
Hot Cold Hot
Range of motion exercises
Active Stretching: Manual, Tongue Blades, Dynasplint
Cold Laser
TENS in office
TENS home use
Refer to Physical Therapy: Rocabado mobilization
Refer to Physical Therapy: Postural Restoration Therapy
Refer to Physical Therapy: Various Muscle Therapies
Refer to Chiropractic: Atlas Orthogonist
Refer to Osteopathic MD: Body alignment

Medicinal

Anti Inflammatory:
NSAIDs,
Doxycycline low dose
CBD Topical
Glucosamine/Chondroitin MSM
Vitamins: Vitamin D, Vitamin B12
Minerals: Magnesium, Electrolytes
Minerals: Iron
Refer to MD for Lyme therapies
Refer to MD Rheumatoid Arthritis therapies
Refer Botox Masseter injections
Refer Botox Lateral Pterygoid Injections

Occlusal Orthopedic

Lingual Light Wire
Lower soft sectional orthotic
Condylar distraction
Sectional orthodontics
Expansion orthopedics/ orthodontics
Restorative Dentistry
Occlusal Adjustment with DTR, TekScan

Tongue Parafunction

Refer for Cervical Alignment/ Stabilization
Myobrace
Upper Lingual light wire
Clear Brux Checker
Frenectomy
Myofunctional therapy

Dental Orthotics

In Office Trial Anterior Stop
Palatal anterior stop
Lower posterior deprogrammer
Lower postured indexed
Lower CR Indexed
Lower TMJ Rehab flat plane
Lower full coverage CR
Lower Soft Sectional

Brux PAS with lower Essix
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Lateral Bruxing Device guided planes
Lateral Bruxing Device Elastomeric
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Temporary home use anterior stop
Aqualizer

Sleep/ Fatigue

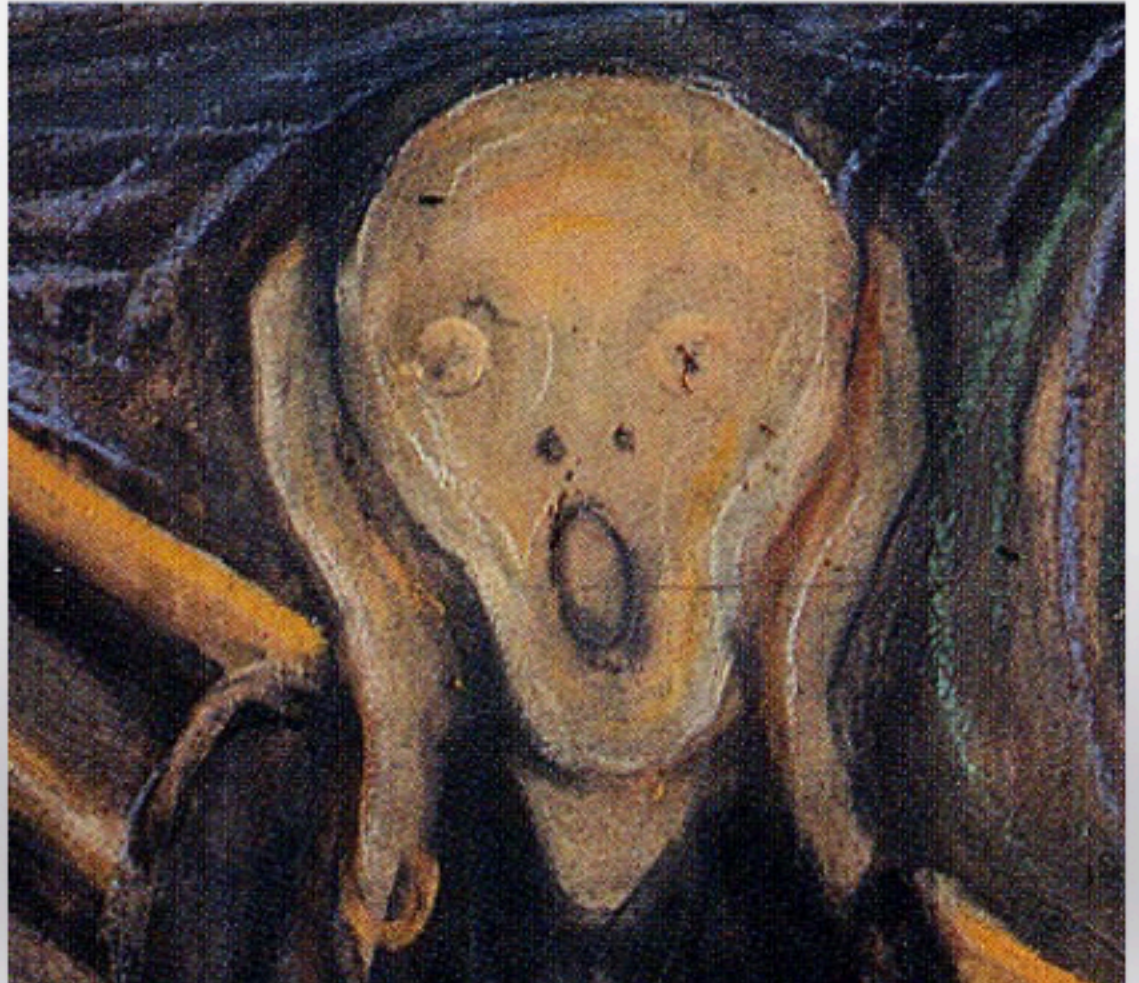
Mouth taping
Diet Modification
Positional Therapy
Vitamins: Vitamin D, Vitamin B12
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CPAP

Surgical

Refer: Arthrocentesis w/ PRP
Refer: Discectomy w/ Fat Graft
Refer: Total Joint Replacement
Refer: Orthognathic Surgery

TMD Symptoms

- Sore TMJ muscles
- TMJ clicking
- TMJ pain
- Jaw locking
- Limited opening
- Difficulty open jaw
- Difficulty closing jaw
- Difficulty chewing
- Headaches
- Eye pain
- Ear pain
- Facial Pain



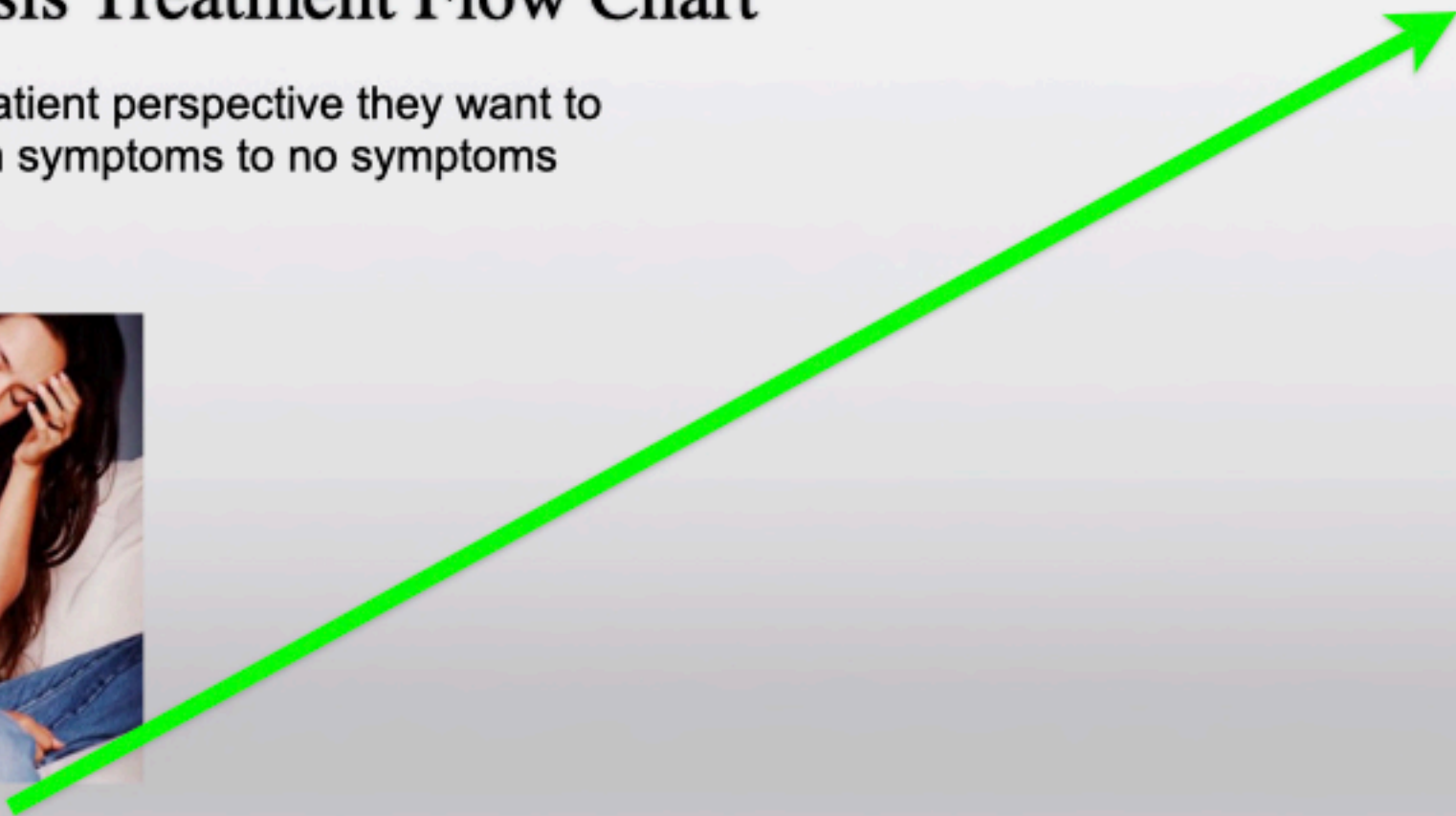
Diagnosis Treatment Flow Chart

From a patient perspective they want to go from symptoms to no symptoms



Symptoms

No Symptoms

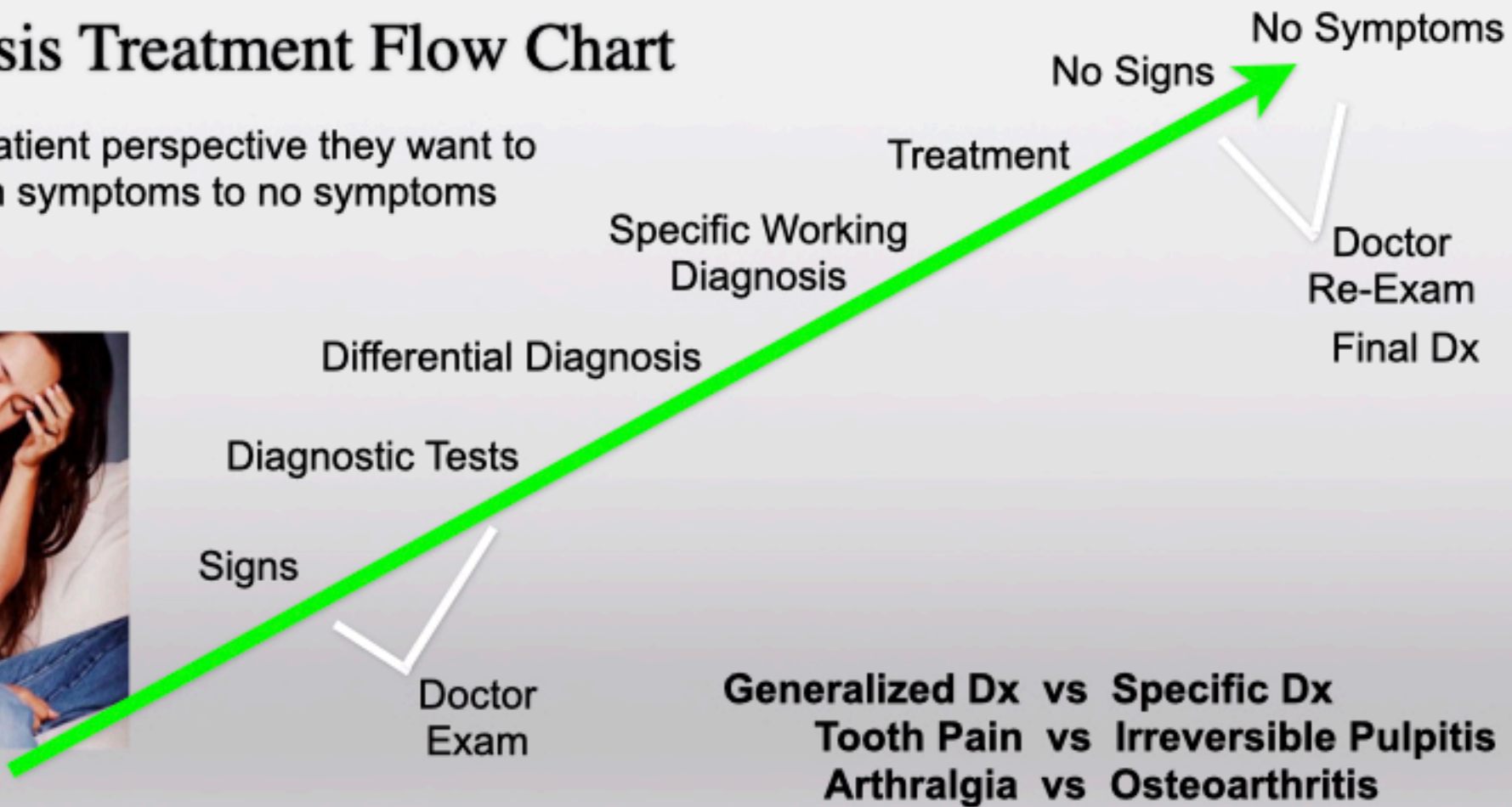


Diagnosis Treatment Flow Chart

From a patient perspective they want to go from symptoms to no symptoms



Symptoms



Diagnosis Treatment Flow Chart

From a patient perspective they want to go from symptoms to no symptoms

No Symptoms

Less Symptoms

If you skip the exam, diagnostic tests, and diagnosis, you can give a therapy directed at symptoms. If you dull the symptoms the patient will perceive a benefit.



Symptoms



**TMD: If only one Diagnosis,
only need one Treatment**

**If only one Treatment,
only need one Diagnosis**



TMD is a symptom based (generalized) diagnosis

TMD Therapies: (60+ therapies)

Physical

Ice
Hot Cold Hot
Range of motion exercises
Active Stretching: Manual, Tongue Blades, Dynasplint
Cold Laser
TENS in office
TENS home use
Refer to Physical Therapy: Rocabado mobilization
Refer to Physical Therapy: Postural Restoration Therapy
Refer to Physical Therapy: Various Muscle Therapies
Refer to Chiropractic: Atlas Orthogonist
Refer to Osteopathic MD: Body alignment

Medicinal

Anti Inflammatory:
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Lingual Light Wire
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Condylar distraction
Sectional orthodontics
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Surgical

Refer: Arthrocentesis w/ PRP
Refer: Discectomy w/ Fat Graft
Refer: Total Joint Replacement
Refer: Orthognathic Surgery

TMD Therapies: (60+ therapies)

Physical

Ice

Hot Cold Hot

Range of motion exercises

Active Stretching: Manual, Tongue Blades, Dynasplint

Cold Laser

TENS in office

TENS home use

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TMD Therapies: (60+ therapies)

Physical

Ice Hot Cold Hot

- Range of motion exercises
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Wet Towel in Microwave
3 Min Hot
3 Min Hot



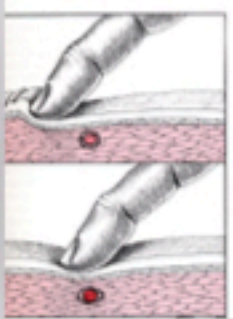
3 Min Cold

Ice Pack
 15 min 3-5x a day



ThermoSafe
 U-Tek Cold Pack
 -23° C

Triggerpoint
 in muscle



TMD Therapies: (60+ therapies)

Physical

20 reps, 5x a day, non painful
Open close, side to side, front to back



Ice
Hot Cold Hot

Range of motion exercises

Active Stretching: Manual, Tongue Blades, Dynasplint

Cold Laser
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Danger,
Danger,
Danger.



Manual Stretch



Tongue Blade



DynaSplint

Must have MRI for all active stretches. You will be irreversibly tearing/stretching ligaments.

TMD Therapies: (60+ therapies)

Physical

- Ice
- Hot Cold Hot
- Range of motion exercises
- Active Stretching: Manual, Tongue Blades, Dynasplint

- Cold Laser**
- TENS in office**
- TENS home use**

- Refer to Physical Therapy: Rocabado mobilization
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Cold laser for sore joints, inflammation, muscle triggerpoints

3x week for 3 weeks



BioResearch MLS Laser 808, 905 pulsed Diode



Handheld TENS Acupuncture Pen



BioResearch QuadraTENS

TMD Therapies: (60+ therapies)

Physical

- Ice
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- Cold Laser
- TENS in office
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Postural Restoration Therapy

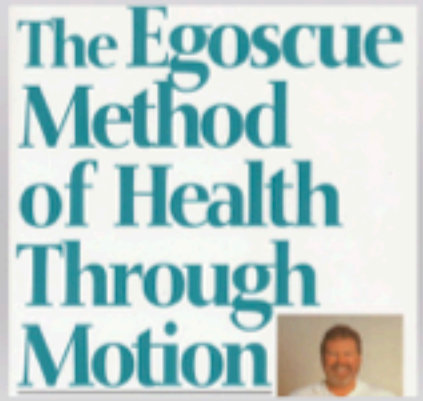


Dr Mariano Rocabado

- Refer to Physical Therapy: Postural Restoration Therapy**
- Refer to Physical Therapy: Various Muscle Therapies**
- Refer to Physical Therapy: Rocabado mobilization**

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If no access to professionals.
 Do it yourself PT.
 Strengthen weak opposing muscles



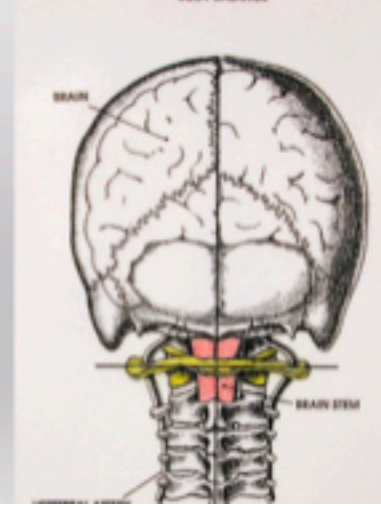
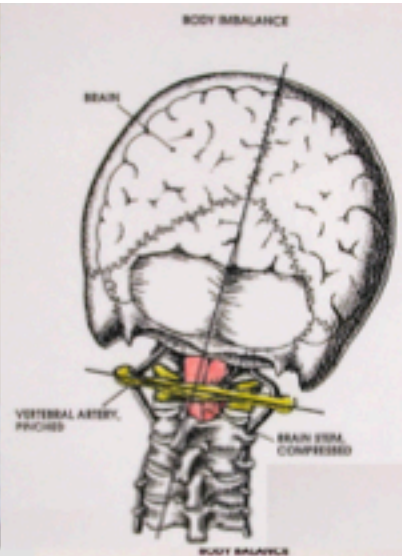
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Atlas Alignment



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Medicinal

Anti Inflammatory:
NSAIDs,
Doxycycline low dose
CBD Topical
Glucosamine/Chondroitin MSM
Vitamins: Vitamin D, Vitamin B12
Minerals: Magnesium, Electrolytes
Minerals: Iron
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Refer Botox Masseter injections
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Occlusal Orthopedic

Lingual Light Wire
Lower soft sectional orthotic
Condylar distraction
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Surgical

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TMD Therapies: (60+ therapies)

Medicinal

Anti Inflammatory:

NSAIDs,

Doxycycline low dose

CBD Topical

Glucosamine/Chondroitin MSM

Vitamins: Vitamin D, Vitamin B12

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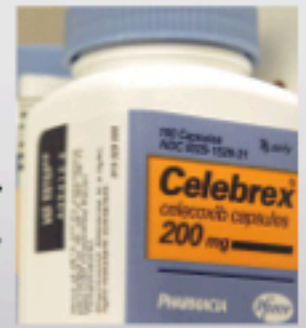
TMD Therapies: (60+ therapies)

Medicinal

Anti Inflammatory: NSAIDs, Doxycycline low dose

- CBD Topical
- Glucosamine/Chondroitin MSM
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Meloxicam 15mg qd
 Doxycycline 20mg bid
 Need Blood work CMP



No Sulfur Allergy



No women pre-menopause

TMD Therapies: (60+ therapies)

Medicinal

Anti Inflammatory:
NSAIDs,
Doxycycline low dose

CBD Topical **Glucosamine/Chondroitin MSM**

Vitamins: Vitamin D, Vitamin B12
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Shea Brand CBD



No Shellfish allergy



Vegan

TMD Therapies: (60+ therapies)

Medicinal

Anti Inflammatory:

NSAIDs,

Doxycycline low dose

CBD Topical

Glucosamine/Chondroitin MSM

Vitamins: Vitamin D, Vitamin B12

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Botox for Hypertrophic Masseters
from chronic clenching



TMD Therapies: (60+ therapies)

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TMD Therapies: (60+ therapies)

Surgical

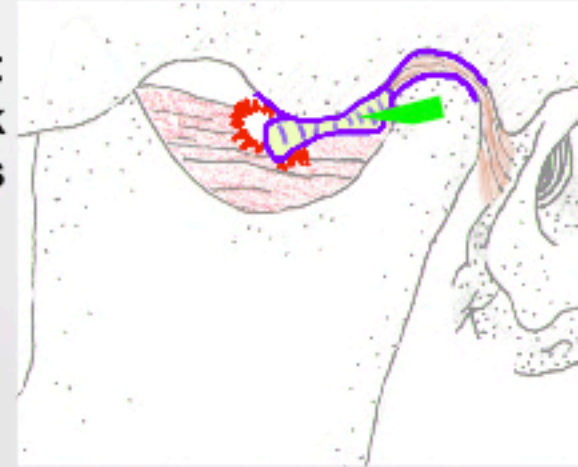
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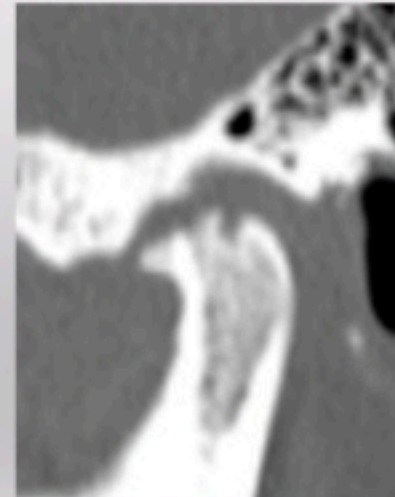


Needle into superior joint space
Flush out debris
Inject Platelet Rich Plasma

Indications:
Acute Closed Lock
Less than 6 weeks



Joint inflammation not
responding to NSAIDs



TMD Therapies: (60+ therapies)

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Lower postured indexed
Lower CR Indexed
Lower TMJ Rehab flat plane
Lower full coverage CR
Lower Soft Sectional

Brux PAS with lower Essix
Myobrace
Clear Brux checker
Lateral Bruxing Device guided planes
Lateral Bruxing Device Elastomeric
Upper full coverage CR guard
Temporary home use anterior stop
Aqualizer

Sleep/ Fatigue

Mouth taping
Diet Modification
Positional Therapy
Vitamins: Vitamin D, Vitamin B12
Minerals: Magnesium, Iron
Lateral Bruxing Device guided plane
Lateral Bruxing Device Elastomeric
Mandibular Advancement Device
CPAP

Surgical

Refer: Arthrocentesis w/ PRP
Refer: Discectomy w/ Fat Graft
Refer: Total Joint Replacement
Refer: Orthognathic Surgery

TMD Therapies: (60+ therapies)

Occlusal Orthopedic

Lingual Light Wire

- Lower soft sectional orthotic
- Condylar distraction
- Sectional orthodontics
- Expansion orthopedics/ orthodontics
- Restorative Dentistry
- Occlusal Adjustment with DTR, TekScan



TMD Therapies: (60+ therapies)

Occlusal Orthopedic

Orthopedically move the Maxilla

- Lingual Light Wire
- Lower soft sectional orthotic
- Condylar distraction**
- Sectional orthodontics
- Expansion orthopedics/ orthodontics
- Restorative Dentistry
- Occlusal Adjustment with DTR, TekScan



Anterior Openbite Non Surgical Treatment: Moving the Maxilla



Anterior Openbite with Active TMJ Bone Loss

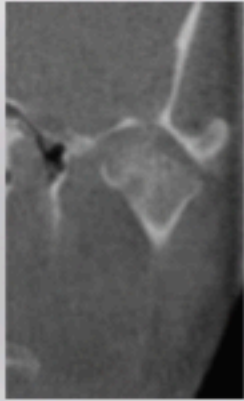
Non Surgical Therapies



Condylar Distraction



Meloxicam and Doxycycline



TMD Therapies: (60+ therapies)

Occlusal Orthopedic

- Lingual Light Wire
- Lower soft sectional orthotic
- Condylar distraction

Sectional orthodontics

- Expansion orthopedics/ orthodontics
- Restorative Dentistry
- Occlusal Adjustment with DTR, TekScan



Start

Age 50



Lingual Light Wire w/ Sectional Ortho



Post Occlusal Reshaping



TMD Therapies: (60+ therapies)

Occlusal Orthopedic

- Lingual Light Wire
- Lower soft sectional orthotic
- Condylar distraction
- Sectional orthodontics
- Expansion orthopedics/ orthodontics
- Restorative Dentistry
- Occlusal Adjustment with DTR, TekScan

TMD Therapies: (60+ therapies)

Occlusal Orthopedic

- Lingual Light Wire
- Lower soft sectional orthotic
- Condylar distraction
- Sectional orthodontics

Expansion orthopedics/ orthodontics

- Restorative Dentistry
- Occlusal Adjustment with DTR, TekScan



Lower 1st molar tube

Stop Lock



TMD Therapies: (60+ therapies)

Occlusal Orthopedic

- Lingual Light Wire
- Lower soft sectional orthotic
- Condylar distraction
- Sectional orthodontics
- Expansion orthopedics/ orthodontics

Restorative Dentistry

Occlusal Adjustment with DTR, TekScan



Restorative Dentistry

Pathological Occlusion

??Airway Related Bruxing?



Restore Function

Composite Trial Occlusion

AHI + 26 CPAP



Anterior guidance
or group function?



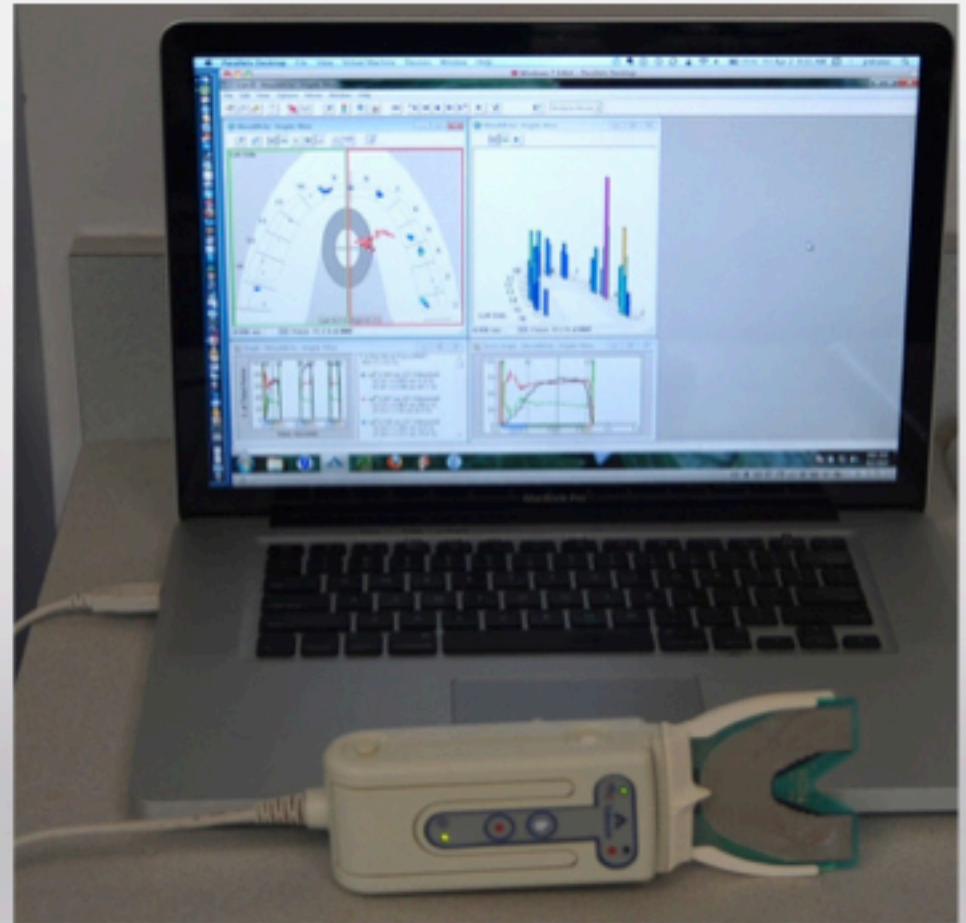
TMD Therapies: (60+ therapies)

Occlusal Orthopedic

- Lingual Light Wire
- Lower soft sectional orthotic
- Condylar distraction
- Sectional orthodontics
- Expansion orthopedics/ orthodontics
- Restorative Dentistry

Occlusal Adjustment with DTR, TekScan

Disclusion Time Reduction with TekScan is more precise and more objective than occlusal adjusting with articulating paper/ribbon/film alone.



Occlusal Sculpting Tools, including Zirconia



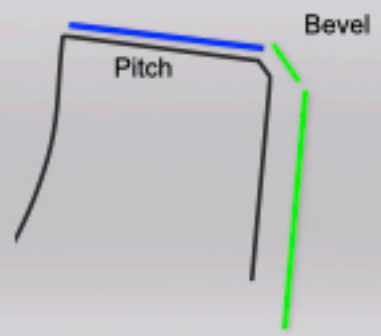
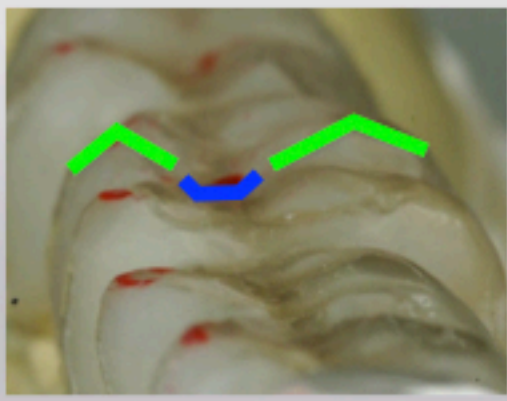
Wheel
 Create Cusp Landing Zone
 Flatten Incisal edges
 Bulk reduction of inclines



Move and Shape Cusps,
 Inclines, Facial Surfaces



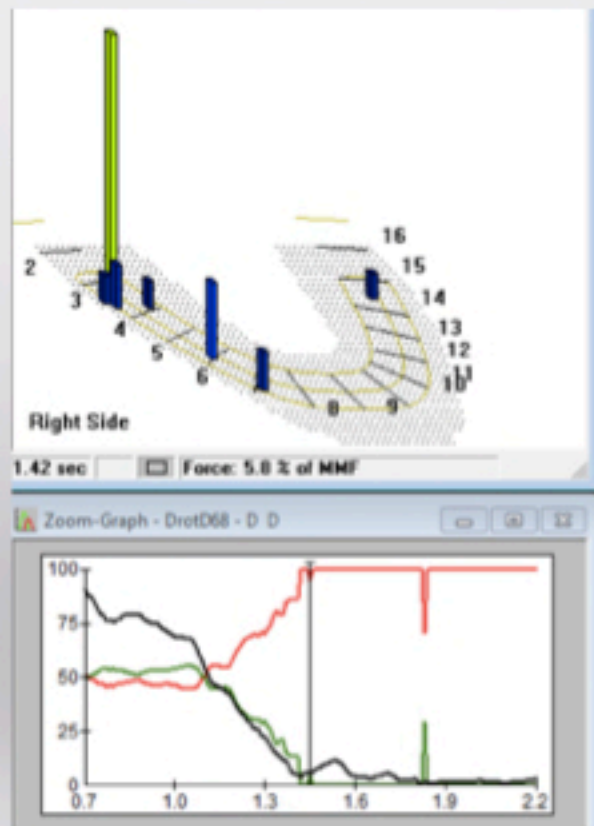
Brassler Brio Shine
 FLBCER-1
 FLBF-2



Premier 860.9 F Wheel Diamond
 Premier 230 F Barrel Diamond
 Neodiamond 1118.7F Roundend taper
 Dedco Green Stone
 White Arkansas stone
 Filtek Supreme- B1B

The indispensable value of T-Scan is not in finding heavy CR contacts, but working and nonworking interferences.

Is that a smudge or a muscle activating interference?



Remove too much and you decrease the ability to chew, especially lettuce. Chewing lettuce requires posterior inclines coming close enough to chew, but far enough apart to not touch and activate muscle.

TMD Therapies: (60+ therapies)

Physical

Ice
Hot Cold Hot
Range of motion exercises
Active Stretching: Manual, Tongue Blades, Dynasplint
Cold Laser
TENS in office
TENS home use
Refer to Physical Therapy: Rocabado mobilization
Refer to Physical Therapy: Postural Restoration Therapy
Refer to Physical Therapy: Various Muscle Therapies
Refer to Chiropractic: Atlas Orthogonist
Refer to Osteopathic MD: Body alignment

Dental Orthotics

In Office Trial Anterior Stop
Palatal anterior stop
Lower posterior deprogrammer
Lower postured indexed
Lower CR Indexed
Lower TMJ Rehab flat plane
Lower full coverage CR
Lower Soft Sectional

Brux PAS with lower Essix
Myobrace
Clear Brux checker
Lateral Bruxing Device guided planes
Lateral Bruxing Device Elastomeric
Upper full coverage CR guard
Temporary home use anterior stop
Aqualizer

Medicinal

Anti Inflammatory:
NSAIDs,
Doxycycline low dose
CBD Topical
Glucosamine/Chondroitin MSM
Vitamins: Vitamin D, Vitamin B12
Minerals: Magnesium, Electrolytes
Minerals: Iron
Refer to MD for Lyme therapies
Refer to MD Rheumatoid Arthritis therapies
Refer Botox Masseter injections
Refer Botox Lateral Pterygoid Injections

Sleep/ Fatigue

Mouth taping
Diet Modification
Positional Therapy
Vitamins: Vitamin D, Vitamin B12
Minerals: Magnesium, Iron
Lateral Bruxing Device guided plane
Lateral Bruxing Device Elastomeric
Mandibular Advancement Device
CPAP

Occlusal Orthopedic

Lingual Light Wire
Lower soft sectional orthotic
Condylar distraction
Sectional orthodontics
Expansion orthopedics/ orthodontics
Restorative Dentistry
Occlusal Adjustment with DTR, TekScan

Tongue Parafunction

Refer for Cervical Alignment/ Stabilization
Myobrace
Upper Lingual light wire
Clear Brux Checker
Frenectomy
Myofunctional therapy

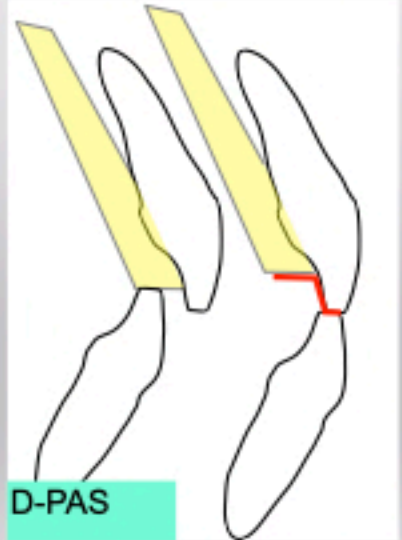
Surgical

Refer: Arthrocentesis w/ PRP
Refer: Discectomy w/ Fat Graft
Refer: Total Joint Replacement
Refer: Orthognathic Surgery

TMD Therapies: (60+ therapies)

Dental Orthotics

- In Office Trial Anterior Stop
- Palatal Anterior Stop**
- Lower posterior deprogrammer
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- Lower TMJ Rehab flat plane
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- Lateral Bruxing Device Elastomeric
- Upper full coverage CR guard
- Temporary home use anterior stop
- Aqualizer



D-PAS

Diagnostic Palatal Anterior Stop

D-PAS Test: Wear 3 nights, then 2 days

Better- Decrease Symptoms

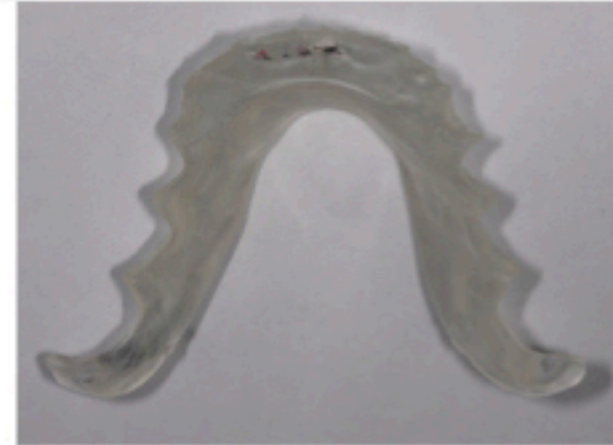
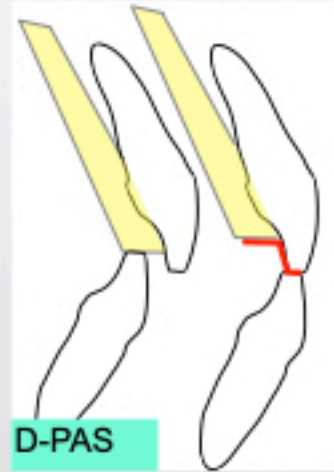
Sleep Clenching: Wear D-PAS as night guard
Occlusal Muscle Disharmony: Occlusal Adjust

Worse- Increase Symptoms

Mechanically Unstable TMJ, joint subluxation
Intracapsular Problem TMJ

Stays the Same- No Change in Symptoms

Damaged TMJ are mechanically stable
Pain not related to occlusion



Choosing the Correct Night Guard



Narval CC Nylon MAD

EMG Muscle Test: Forces on Front Teeth

<u>Sleep Heart Rate and Oxygen</u>	Low Forces	Moderate Forces	Severe Forces
Low Sympathetic Arousals Good Blood Oxygenation	D-PAS	2nd bi	2nd bi
Moderate Sympathetic Arousals RDI less than 5	Lat Brux Anterior Stop	Lat Brux Posterior Stop	Lat Brux Posterior Stop
Obstructive Sleep Apnea AHI 5+	MAD Anterior Stop	MAD Posterior Stop	CPAP + Upper Protective Night Guard

TMD Symptoms

- Sore TMJ muscles
- TMJ clicking
- TMJ pain
- Jaw locking
- Limited opening
- Difficulty open jaw
- Difficulty closing jaw
- Difficulty chewing
- Headaches
- Eye pain
- Ear pain
- Facial Pain



TMD Symptoms

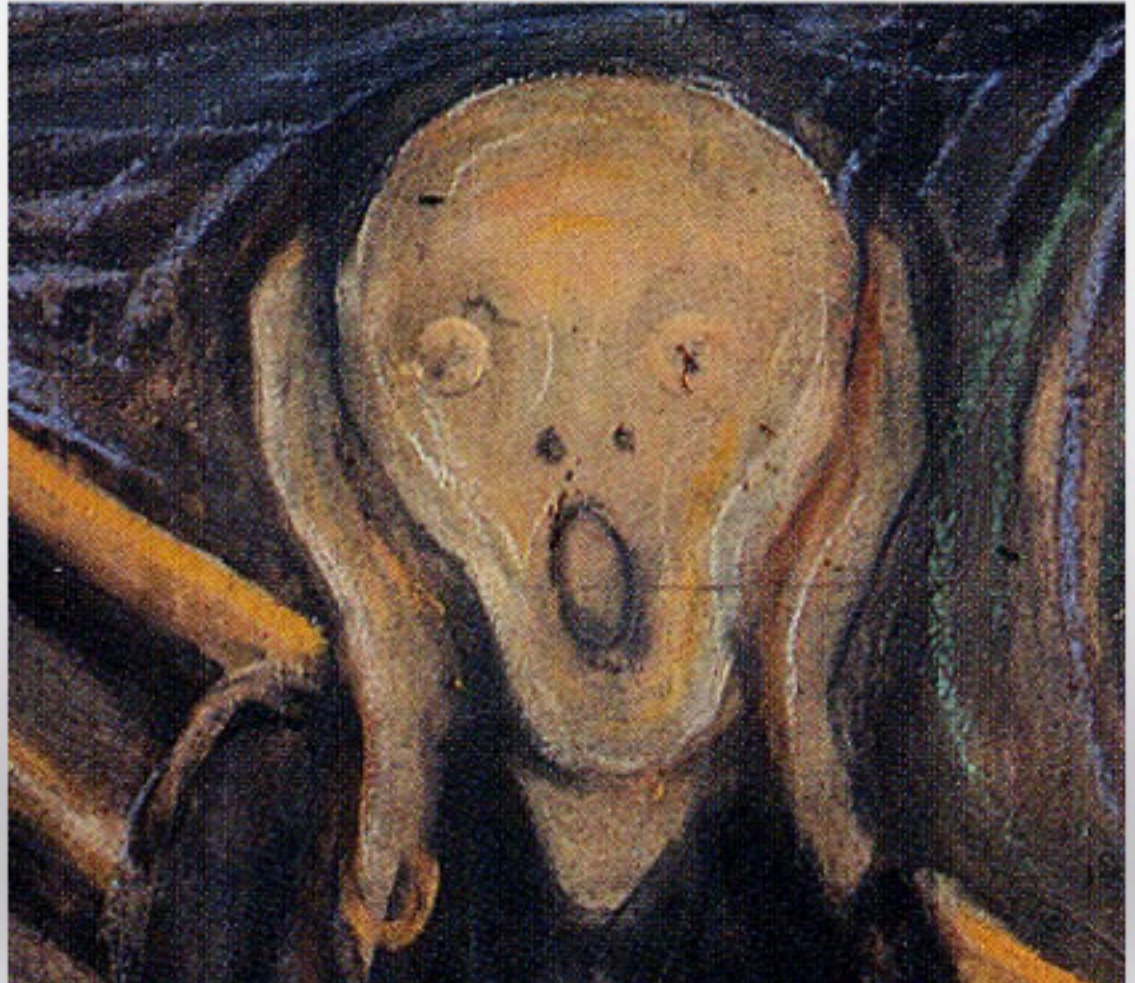
Difficulty chewing

Pattern:

Jaw gets tired when chewing
chewy foods

Diseases to consider and rule out:

Occlusal Muscle Dysfunction
Painful TMJ
Other

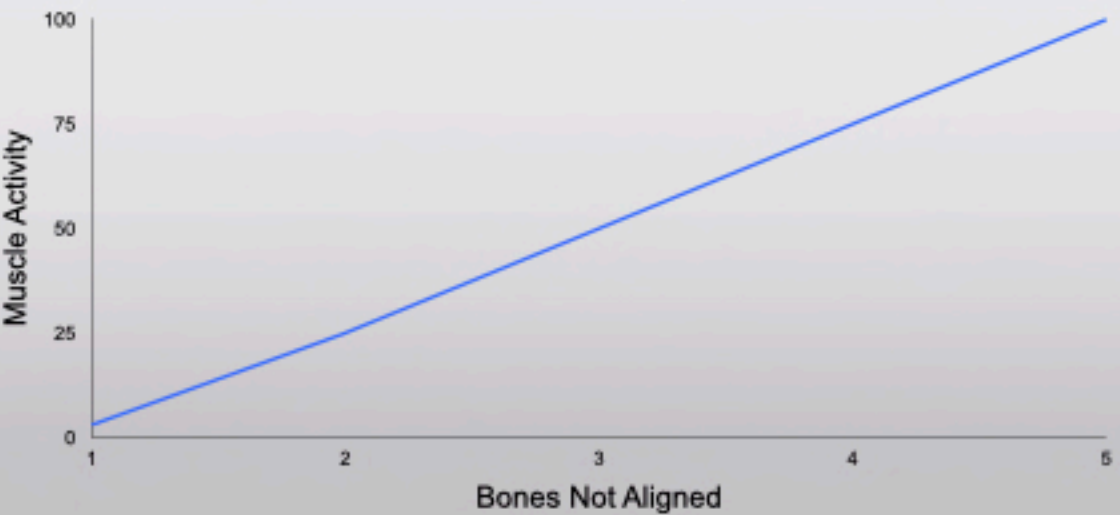


Acute vs Chronic

Orthopedic Medicine- Optimal Load Bearing Position

Every joint has an optimal load bearing position-
Most Bone Support/ Least Muscle Bracing when Loaded

Centric Relation- Optimal Load bearing position of the TMJ-
Most Bone Support/ Least Muscle Bracing when Loaded



Which position can you hold the longest?



Nemeth G, On hip and lumbar biomechanics. A study of joint load and muscular activity, Scand J Rehabil Med Suppl. 1984;10:1-35.

Occlusal Muscle Disharmony

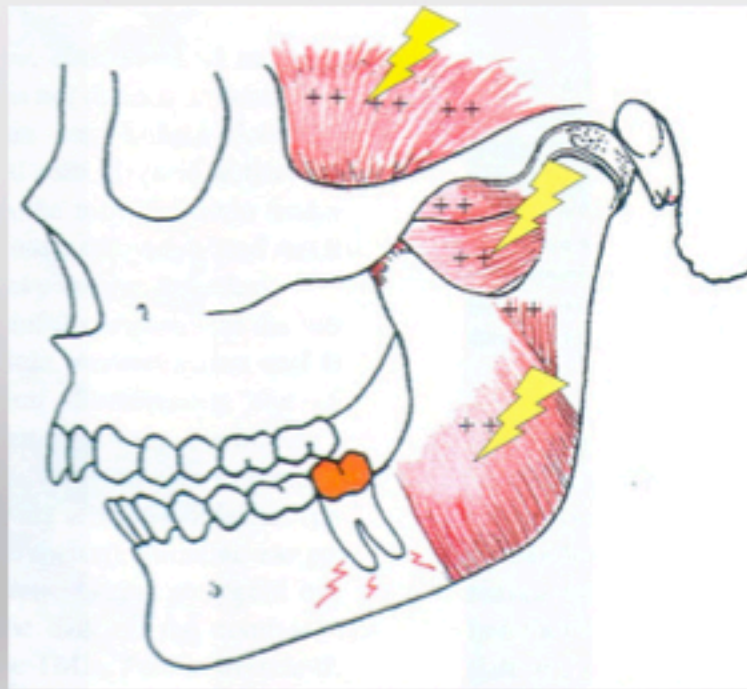
Uneven tooth contact with condyles fully seated triggers muscle activity

Lateral pterygoid fires out of sequence to create even tooth contact on closure

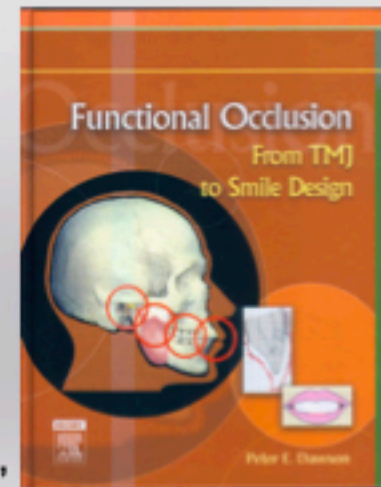
Disharmony in all muscles: Splinting/Bracing

Muscles sore from overuse

Muscles do not think- CNS input



from Dawson's Textbook, "Functional Occlusion"



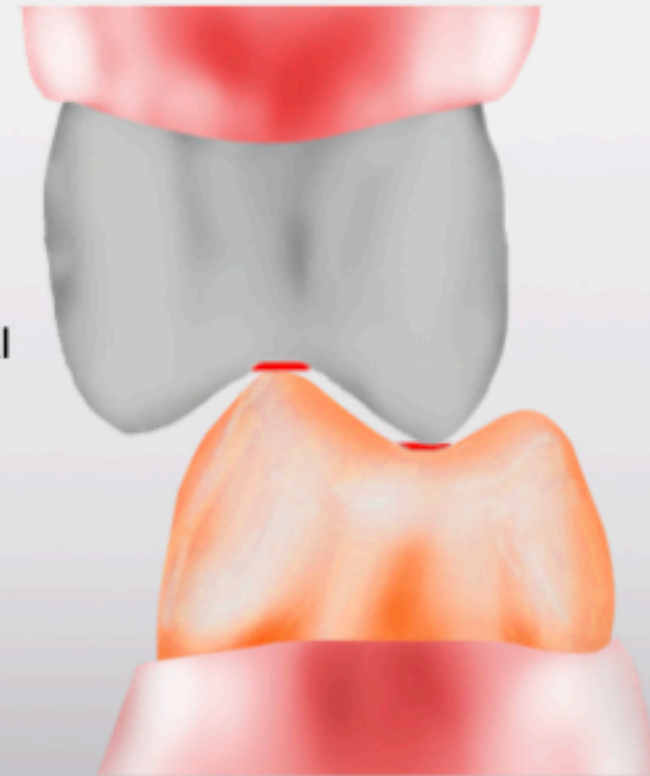
LD Pankey's 3 Rules of Occlusion

(Clyde Schuyler)

1. With the condyles fully seated in the fossa, all the posterior teeth touch simultaneously and even, with the anterior teeth lightly touching.
2. When you squeeze, neither a tooth nor the mandible moves (in a lateral direction).
3. When you move the mandible in any excursion, no back tooth hits before, harder than, or after a front tooth.

Bonus Rule- Harmonious Anterior Guidance. Cuspid guidance directs the mandible slightly forward, not backward, with smooth cross over from cuspid to anterior teeth. Protrusive contact even on both central incisors.

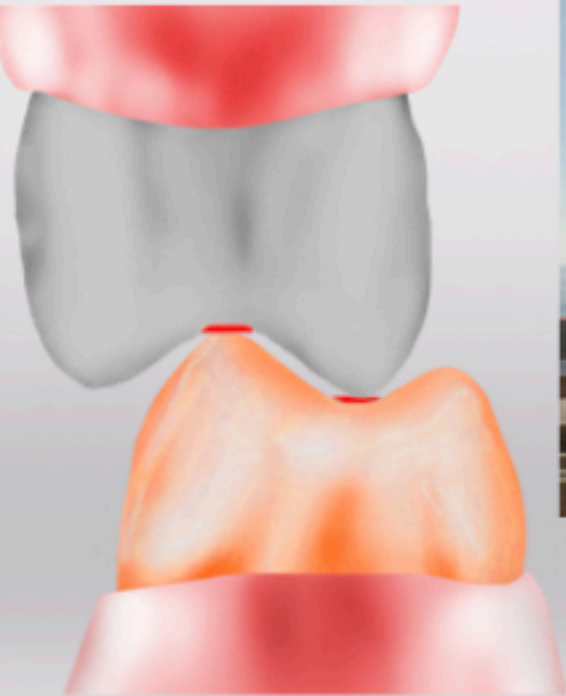
Bonus Observation- All the above work much better the closer the teeth are to being on the Curve of Spee and Curve of Wilson



Drawing by Dr Jim Kessler

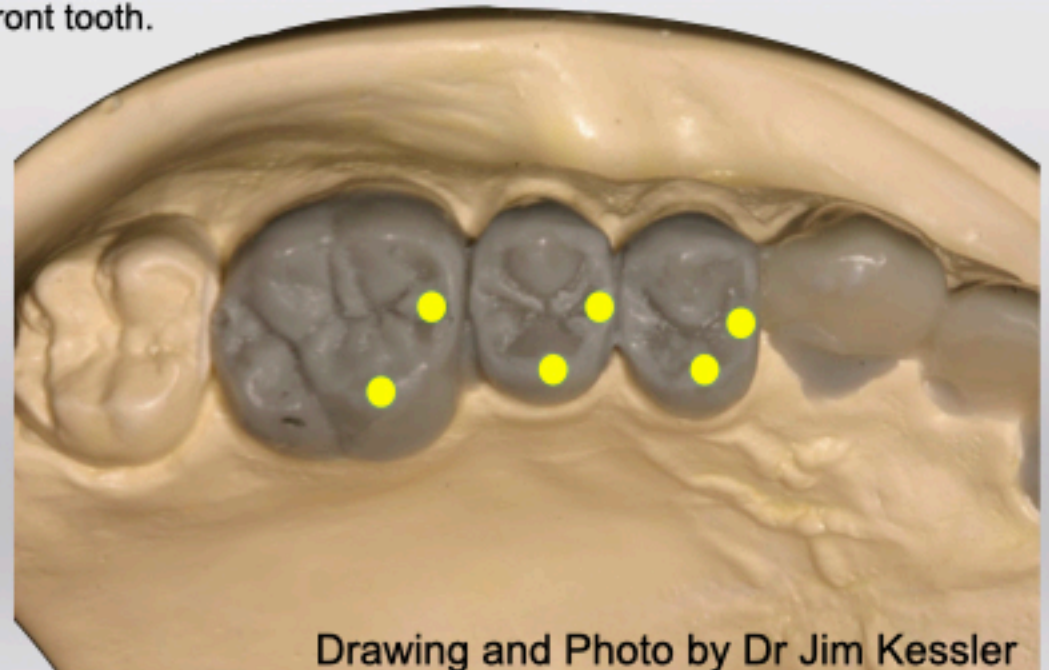
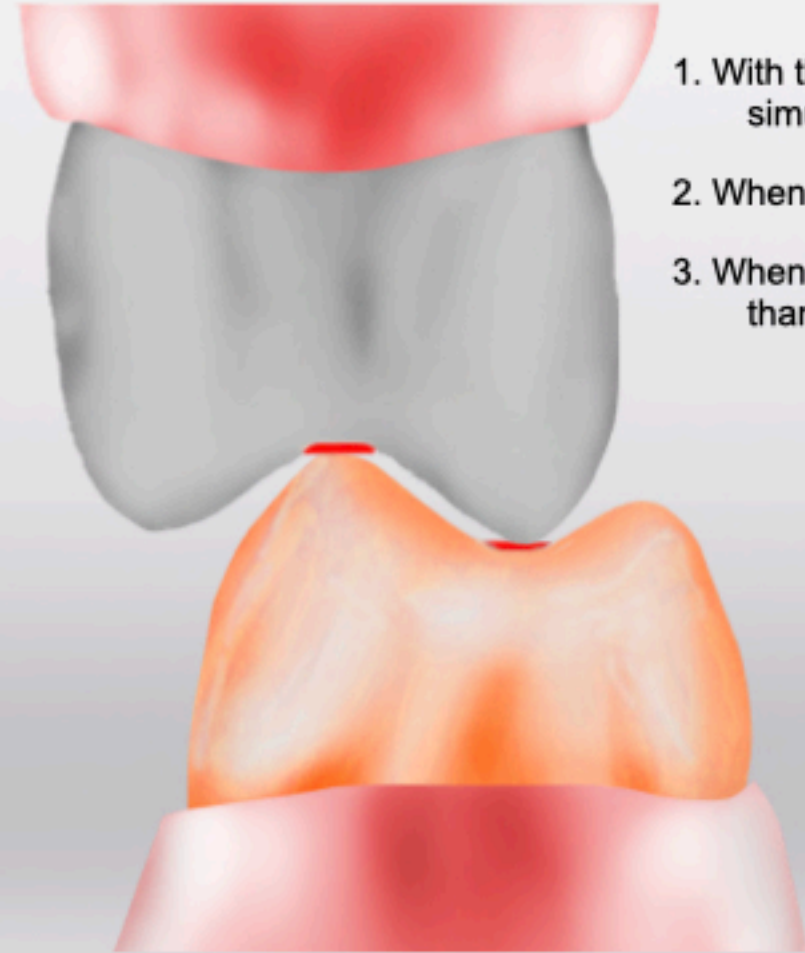
2. When you squeeze, neither a tooth nor the mandible moves (in a lateral direction).

Rule #2 = Flat Landing Area



LD Pankey's 3 Rules of Occlusion (Clyde Schuyler)

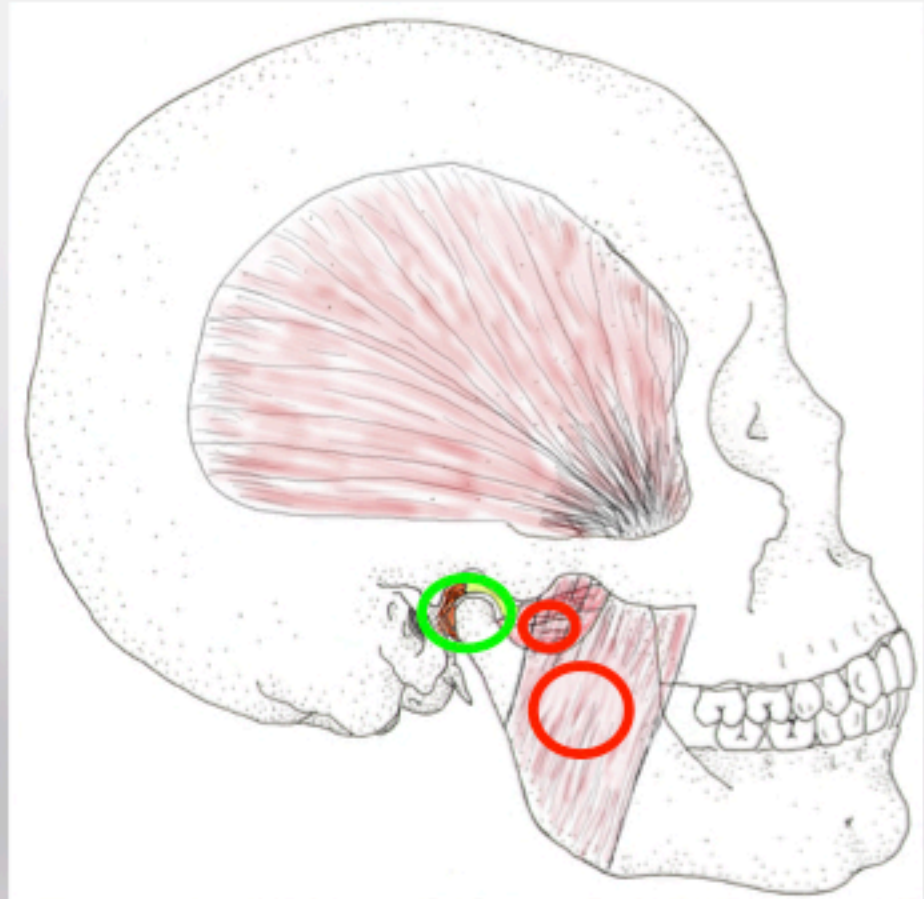
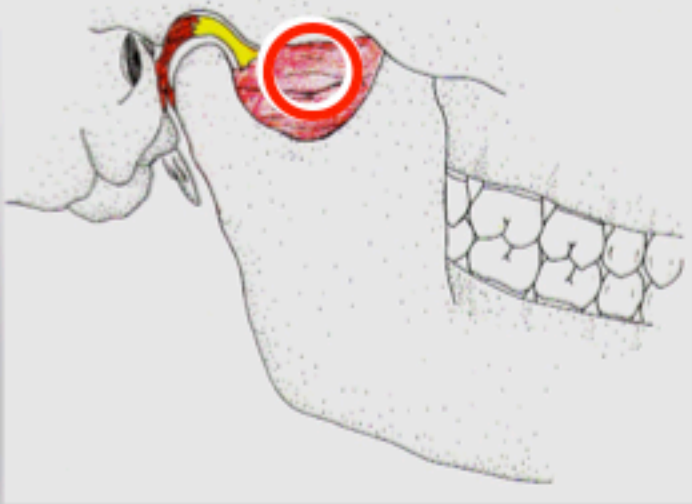
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Drawing and Photo by Dr Jim Kessler

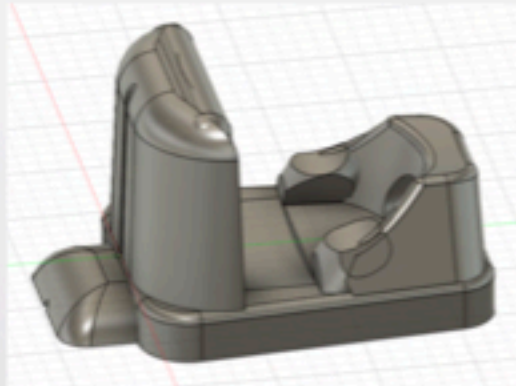
Occlusal Muscle Dysfunction Pattern

Sore muscles when chewing
Sore Lateral Pterygoid
TMJ is not sore
Day orthotic relieves symptoms



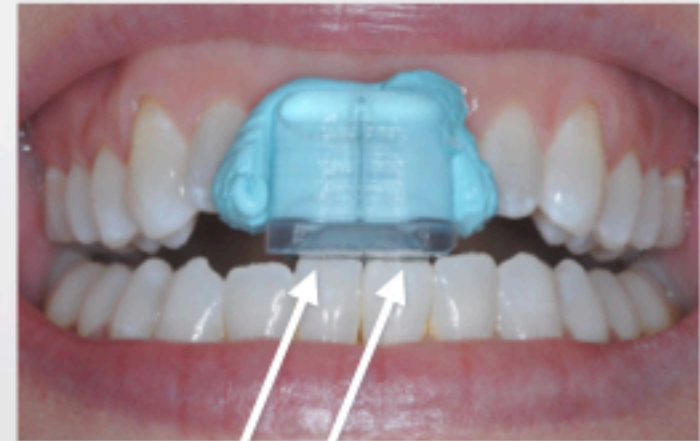
Drawings by Gretta Tomb DDS and John Droter DDS

Anterior Stop Orthotic In Office Diagnostic Test

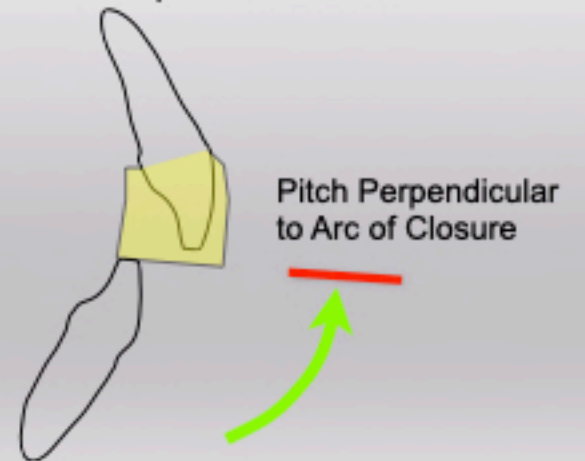


APS Anterior Stop 2.5mm

- Easy to hold and align
- Built in undercuts
- Long enough for class 2 and class 3
- Is bondable to composite



2 points of contact



Pitch Perpendicular
to Arc of Closure

Reline with Parkell Blu-Mousse Super Fast



Can do 2nd reline over
top of the first if needed

Anterior Stop Orthotic In Office Diagnostic Test



ArrowPath Sleep
Anterior Stop



Deprogram Muscle Engrams

If pain reduces, Occlusion/ Cranial Alignment and/or Muscle Engrams are part of the problem

With anterior stop in place:

5-10x wide open solid tap, open tap far left, open tap far right

2nd round same except Dr unexpectedly accelerates closing a few times

Occipital Lift with 3 deep breaths. Posterior neck opening muscle massage.

3rd round same as first except less taps each position

Office USE ONLY Do not send home with patient

Anterior Stop Orthotic In Office Diagnostic Test

Can do 2nd mix to
overlay 1st if needed



Anterior Stop Orthotic In Office Diagnostic Test

Does the occlusion, cranial alignment, and/or muscle bracing have anything to do with the dysfunction or pain?

Are the TMJ muscles inhibited from full contraction with anterior only tooth contact?



ArrowPath Sleep
Anterior stop 2.5 mm

>30% of headaches have an occlusal component

Occlusal adjustment in patients with craniomandibular disorders including headaches. A 3- and 6-month follow-up. Vallon D, Ekberg E, Nilner M. Acta Odontol Scand. 1995

Response to occlusal treatment in headache patients previously treated by mock occlusal adjustment. Forssell H, Kirveskari P, Kangasniemi P. Acta Odontol Scand. 1987

Centric Relation Orthotic

Trial of Harmonious Occlusion 24/7

LD Pankey Rules of Occlusion

Condyles fully seated

Dots in the Back

Lines in the Front

OMD is a daytime problem. Wear 24/7.

Patient gets to experience a full, solid, harmonious bite 24/7.

Doctor gains experience in setting up a harmonious bite in this particular patient

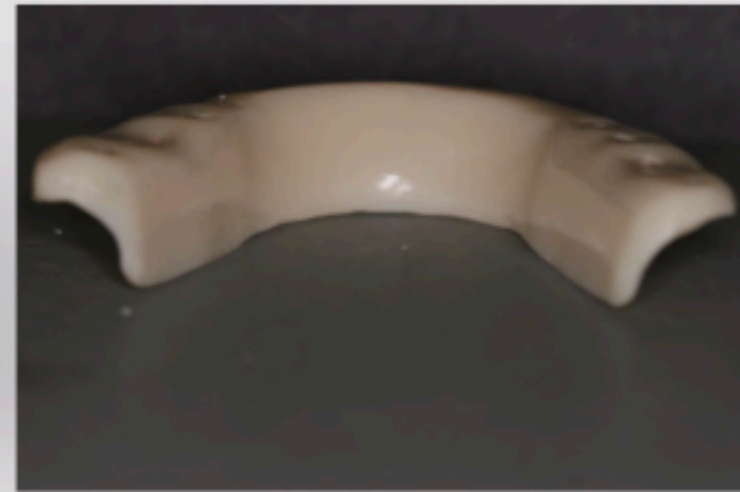
See patient at week # 1, 2, 4. Done in 3- 6 weeks.



Must not rock or be squishy



Anatomic Orthotic by Dr. Buzz Raymond



Pankey Study Clubs
Tanner Study Clubs



Lower Flat Plane
Centric Relation
Orthotic by
Glenn Kidder



Occlusal Adjusting is an Esthetic Procedure Form Follows Function



Before

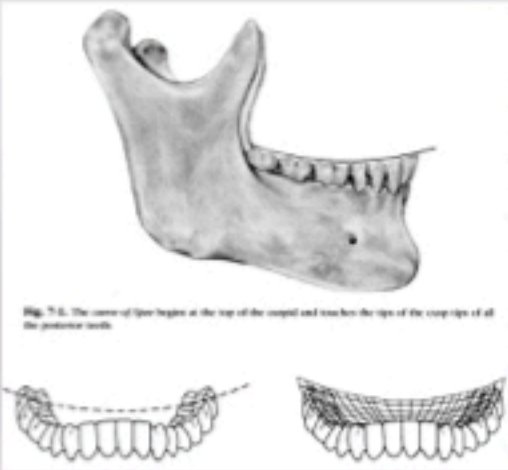
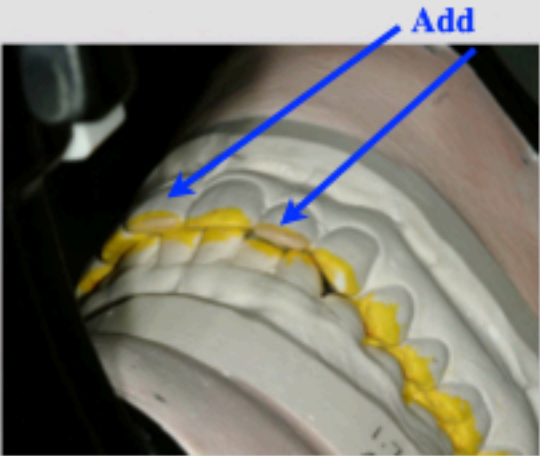


Fig. 7-6. The curve of Speer begins at the top of the cuspal and reaches the tips of the cusps of all the posterior teeth.



After

Occlusal Sculpting Tools, including Zirconia



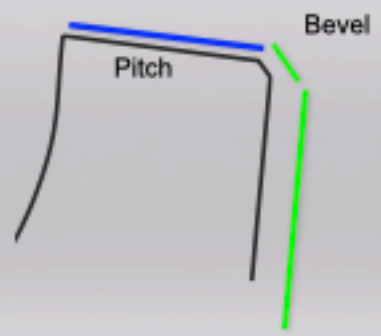
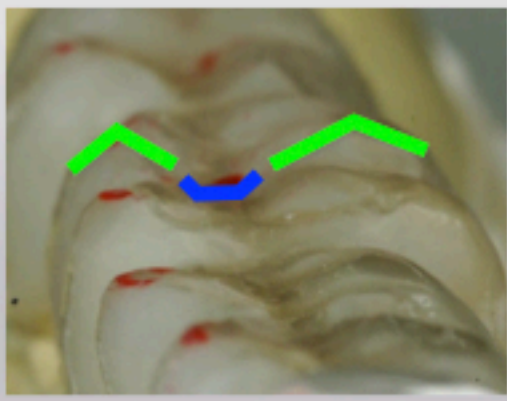
Wheel
 Create Cusp Landing Zone
 Flatten Incisal edges
 Bulk reduction of inclines



Move and Shape Cusps,
 Inclines, Facial Surfaces



Brassler Brio Shine
 FLBCER-1
 FLBF-2



Premier 860.9 F Wheel Diamond
 Premier 230 F Barrel Diamond
 Neodiamond 1118.7F Roundend taper
 Dedco Green Stone
 White Arkansas stone
 Filtek Supreme- B1B

Start

Age 50



Lingual Light Wire w/ Sectional Ortho

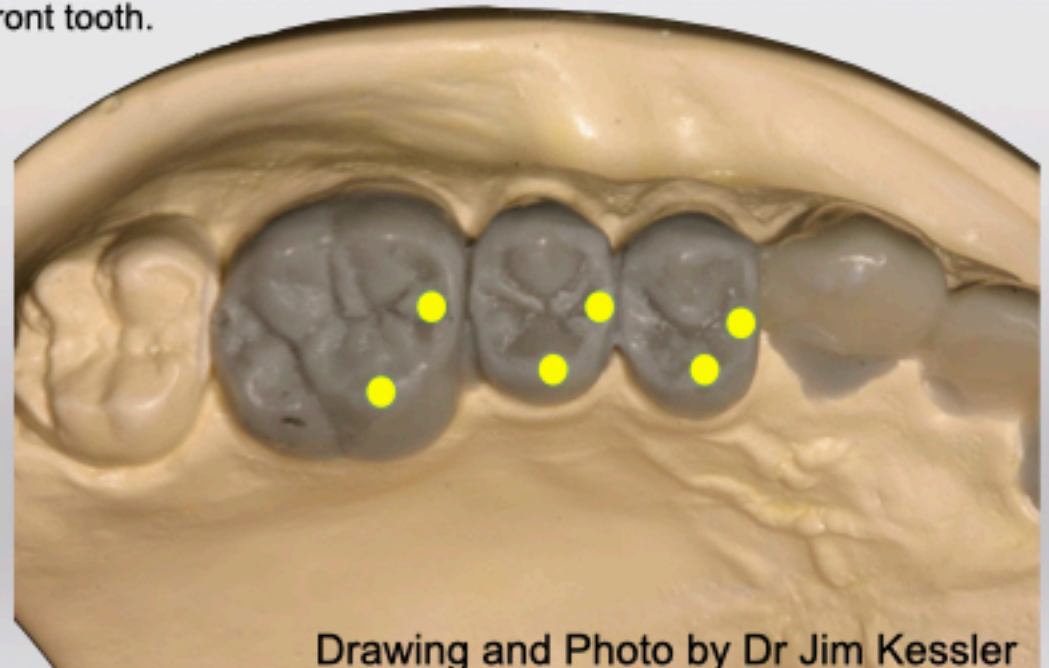
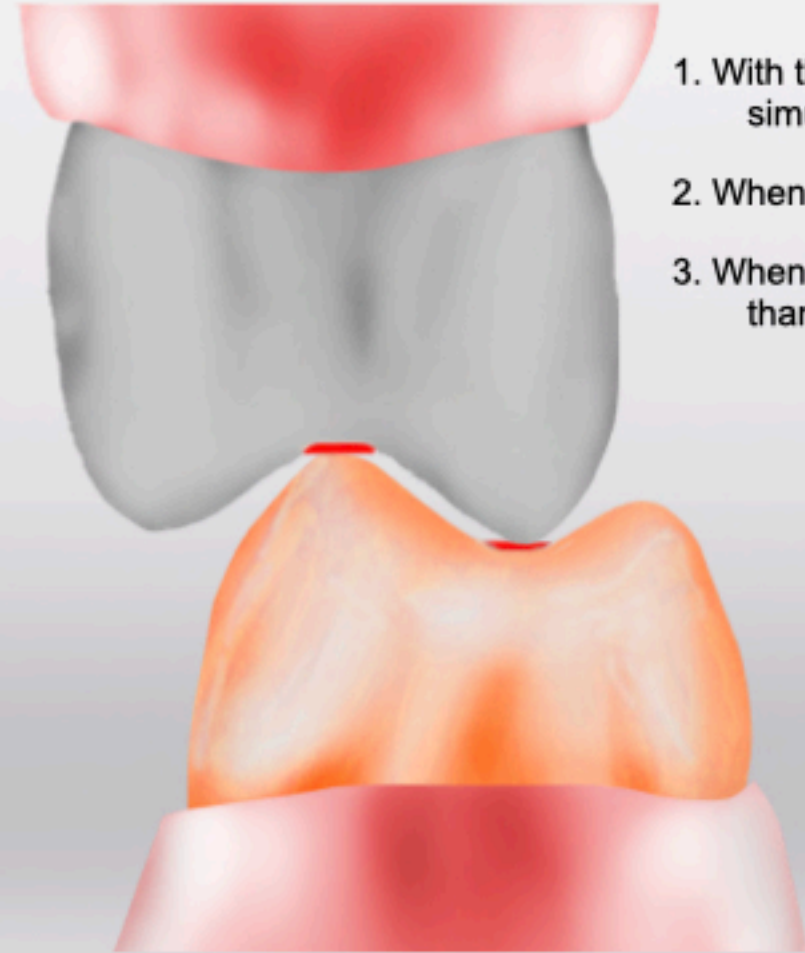


Post Occlusal Reshaping



LD Pankey's 3 Rules of Occlusion (Clyde Schuyler)

1. With the condyles fully seated in the fossa, all the posterior teeth touch simultaneously and even, with the anterior teeth lightly touching.
2. When you squeeze, neither a tooth nor the mandible moves (in a lateral direction).
3. When you move the mandible in any excursion, no back tooth hits before, harder than, or after a front tooth.



Drawing and Photo by Dr Jim Kessler

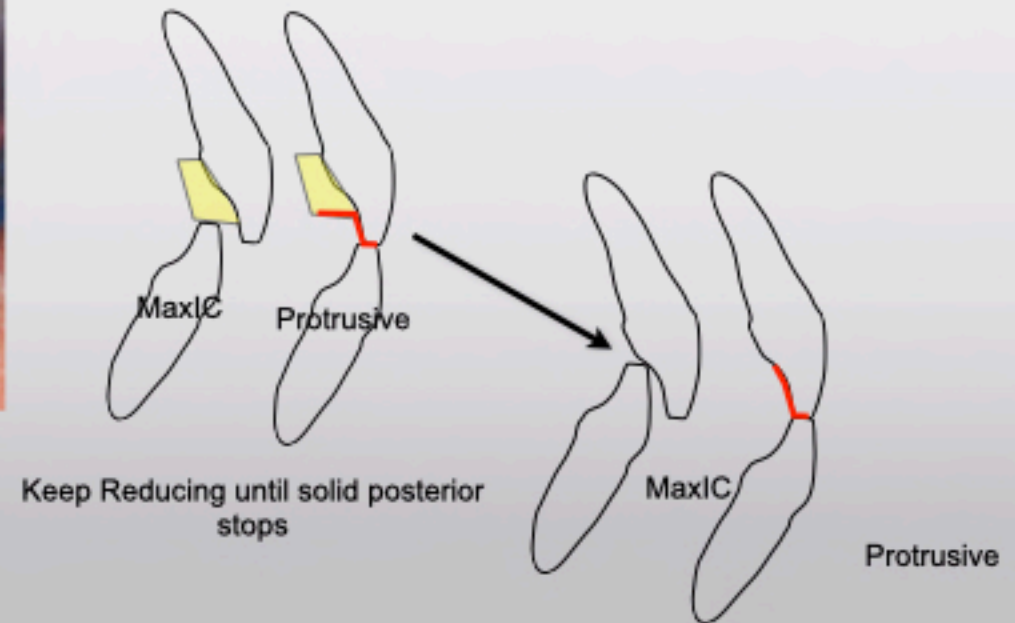
Occlusal Adjustment Treatment Assist Orthotic Deprograms throughout the occlusal adjustment



Triad Light Shade
Remove and refine
Solid flat anterior stop
Glue in with Triad clear gel
Adjust in with teeth
Remove once solid posterior stops



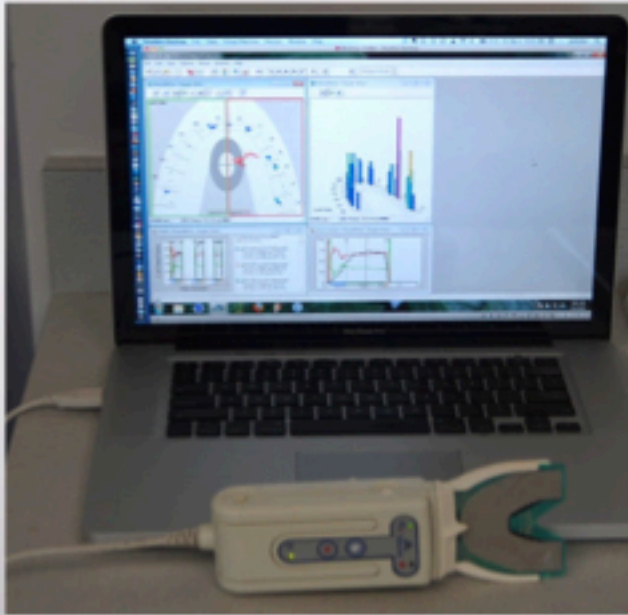
Learning the skill of occlusal adjusting to treat occlusal pathology is the doorway into a world of dentistry most do not even imagine. Creating a more harmonious occlusion is a wonderful service to provide for your patients.



More Harmonious Occlusion \neq Perfect

T-Scan Computerized Occlusion

Occlusion Live and in Slow Motion



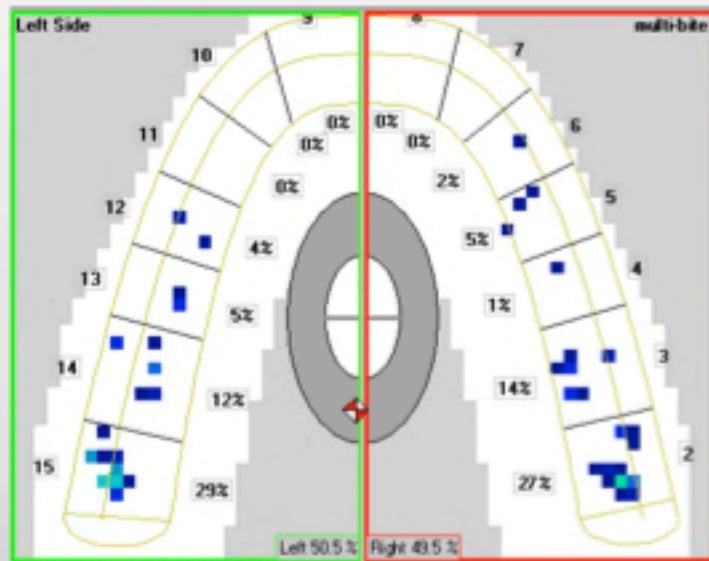
Articulating Paper leaves evidence after the events
Not Live
All events lumped together

Using Since 1999

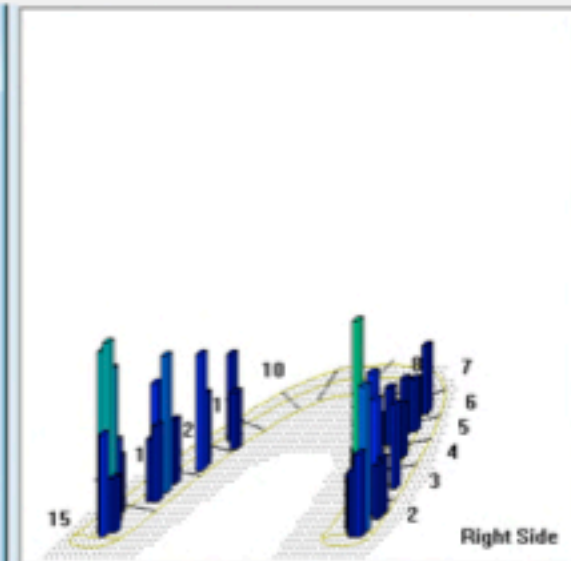


Time Force Graphic Representation of the Occlusion

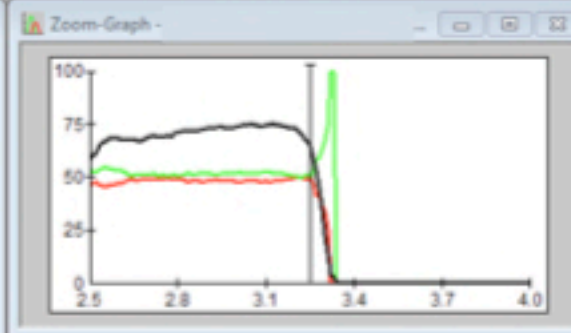
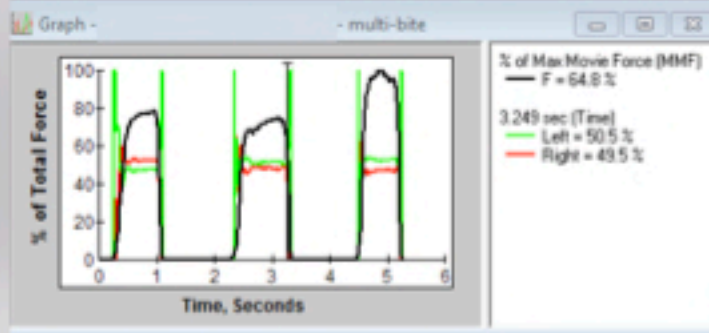
T-Scan Gives you:
 Timing
 Intensity
 Location
 Distribution



3.249 sec Force: 64.8 % of MMF

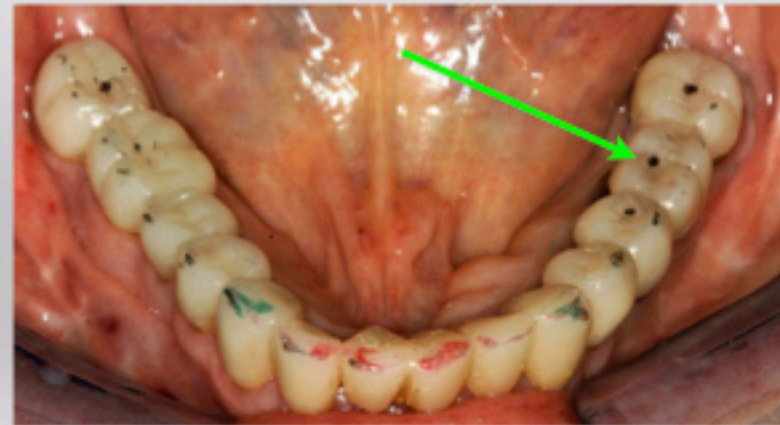
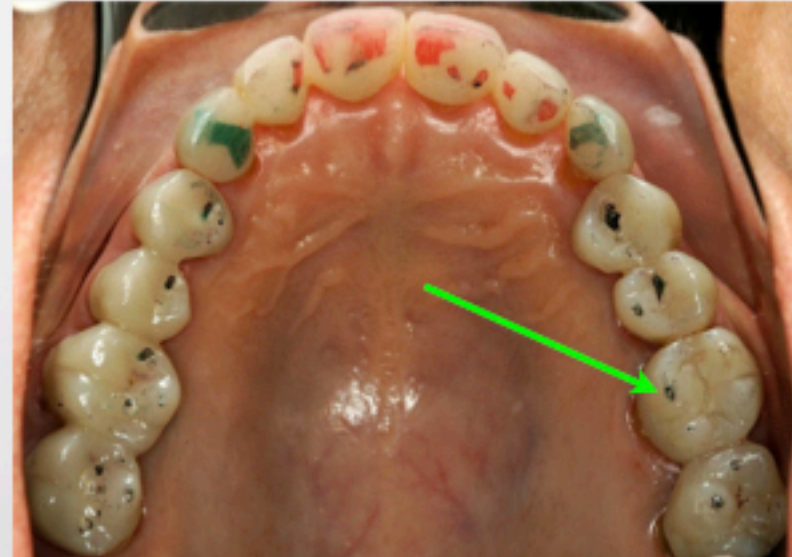
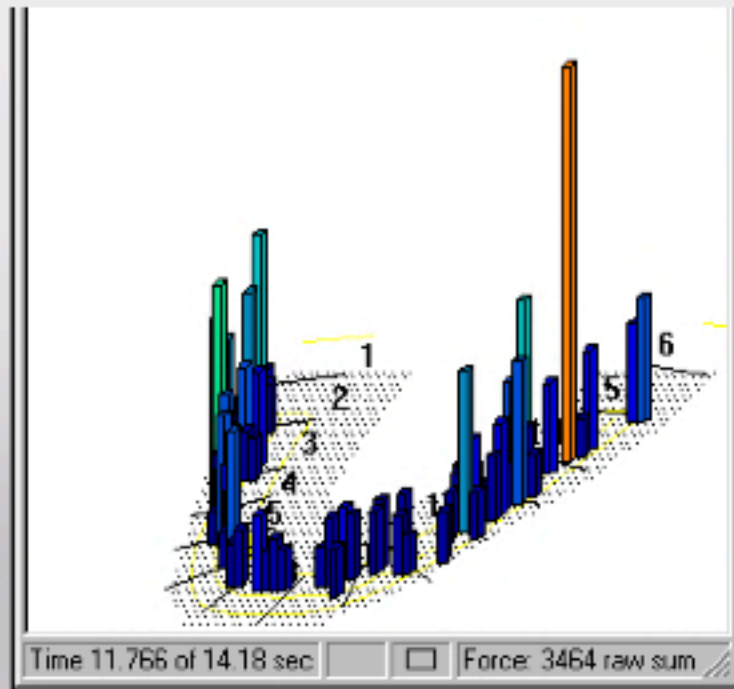


3.249 sec Force: 64.8 % of MMF



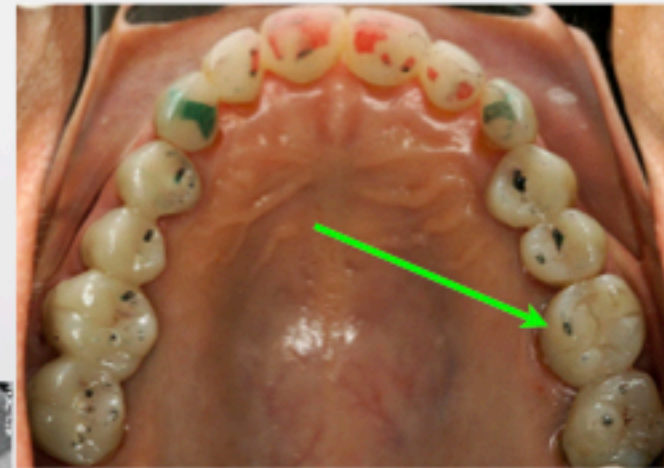
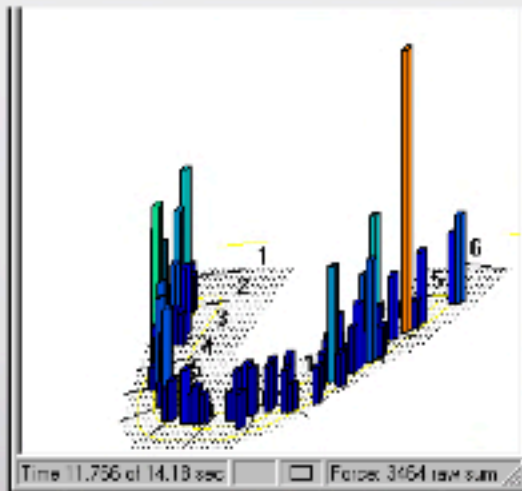
“Occlusion in Slow Motion”
 Regular 10 msec intervals
 Turbo 2.5 msec

Which dot on temps is heavy?



Implant Occlusion

Implants not moving in occlusion is incorrect

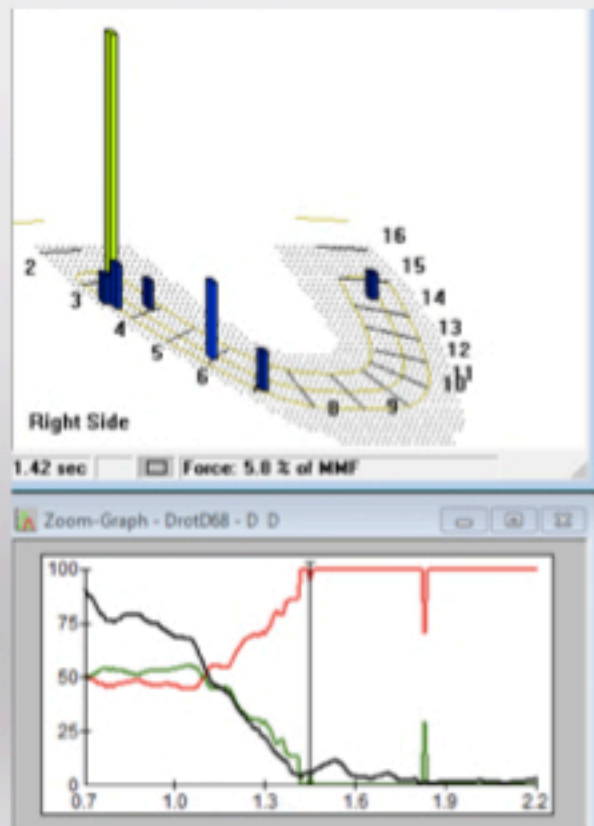


Implants and teeth will both compress bone.

Implants need to come into contact after the PDL compression phase and then they will behave the same as teeth in the bone compression phase.


The indispensable value of T-Scan is not in finding heavy CR contacts, but working and nonworking interferences.

Is that a smudge or a muscle activating interference?



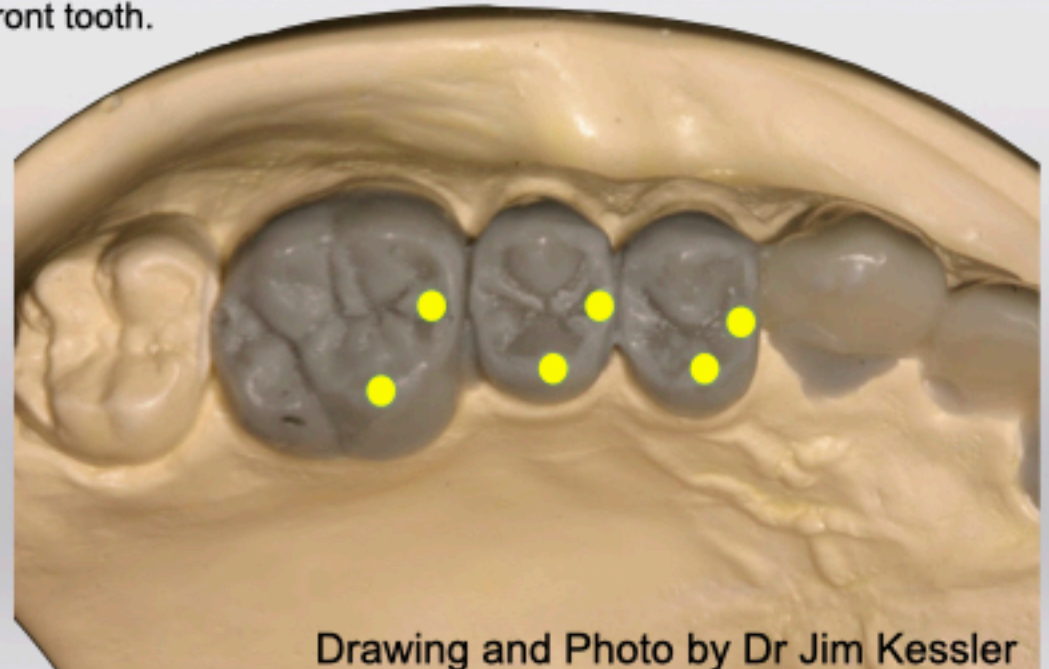
Remove too much and you decrease the ability to chew, especially lettuce. Chewing lettuce requires posterior inclines coming close enough to chew, but far enough apart to not touch and activate muscle.

LD Pankey's 3 Rules of Occlusion (Clyde Schuyler)



Most Crowns are not made like this

1. With the condyles fully seated in the fossa, all the posterior teeth touch simultaneously and even, with the anterior teeth lightly touching.
2. When you squeeze, neither a tooth nor the mandible moves (in a lateral direction).
3. When you move the mandible in any excursion, no back tooth hits before, harder than, or after a front tooth.

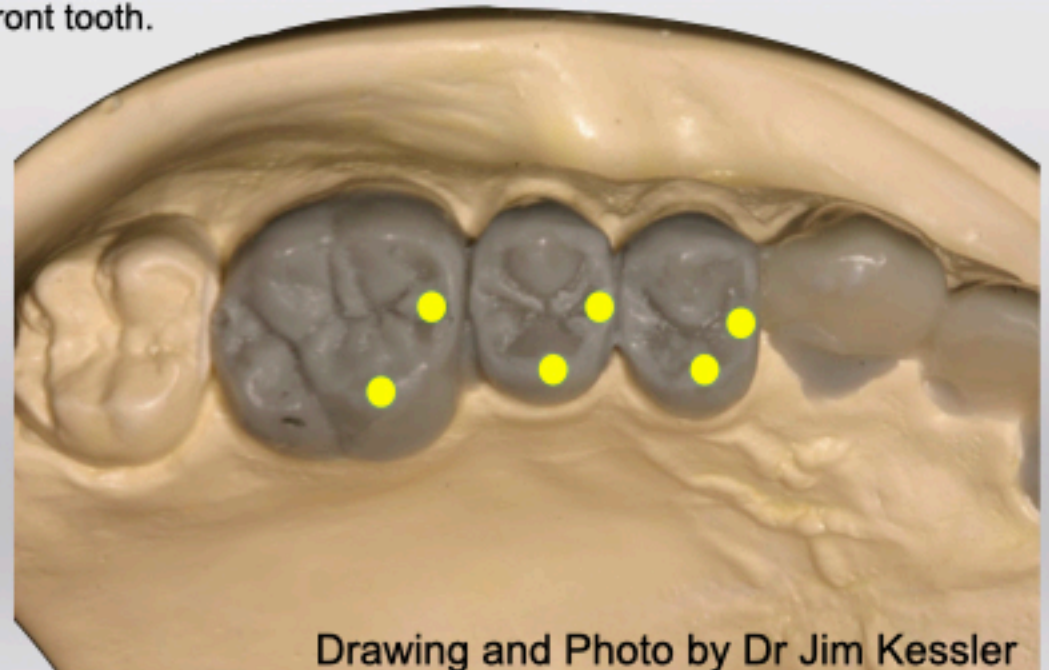


Drawing and Photo by Dr Jim Kessler

LD Pankey's 3 Rules of Occlusion (Clyde Schuyler)

Most Crowns are either like this

1. With the condyles fully seated in the fossa, all the posterior teeth touch simultaneously and even, with the anterior teeth lightly touching.
2. When you squeeze, neither a tooth nor the mandible moves (in a lateral direction).
3. When you move the mandible in any excursion, no back tooth hits before, harder than, or after a front tooth.

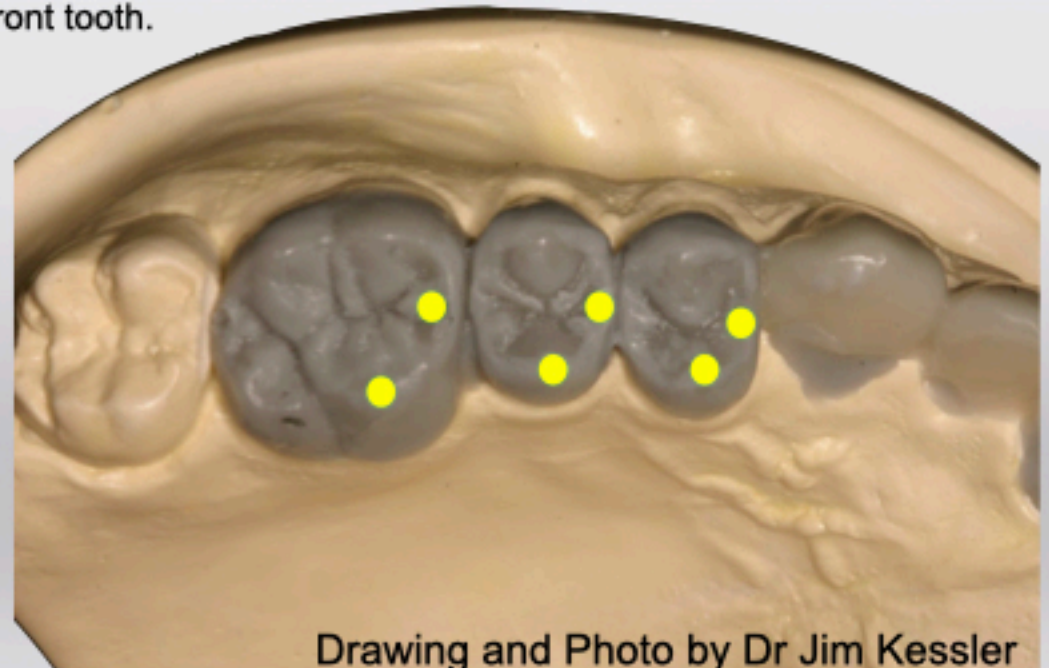


Drawing and Photo by Dr Jim Kessler

LD Pankey's 3 Rules of Occlusion (Clyde Schuyler)

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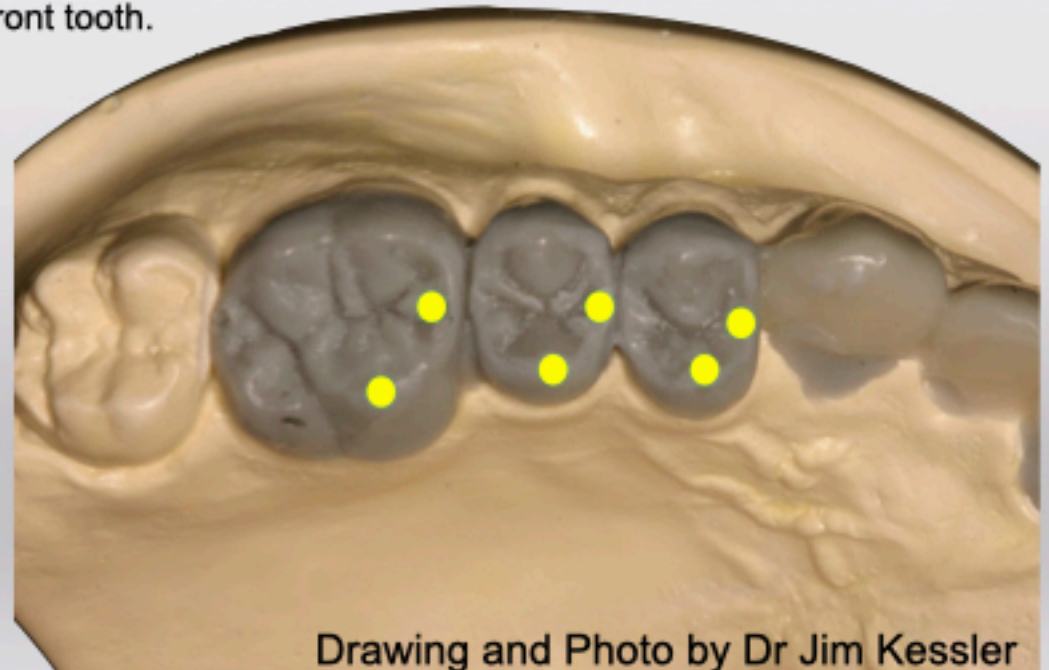
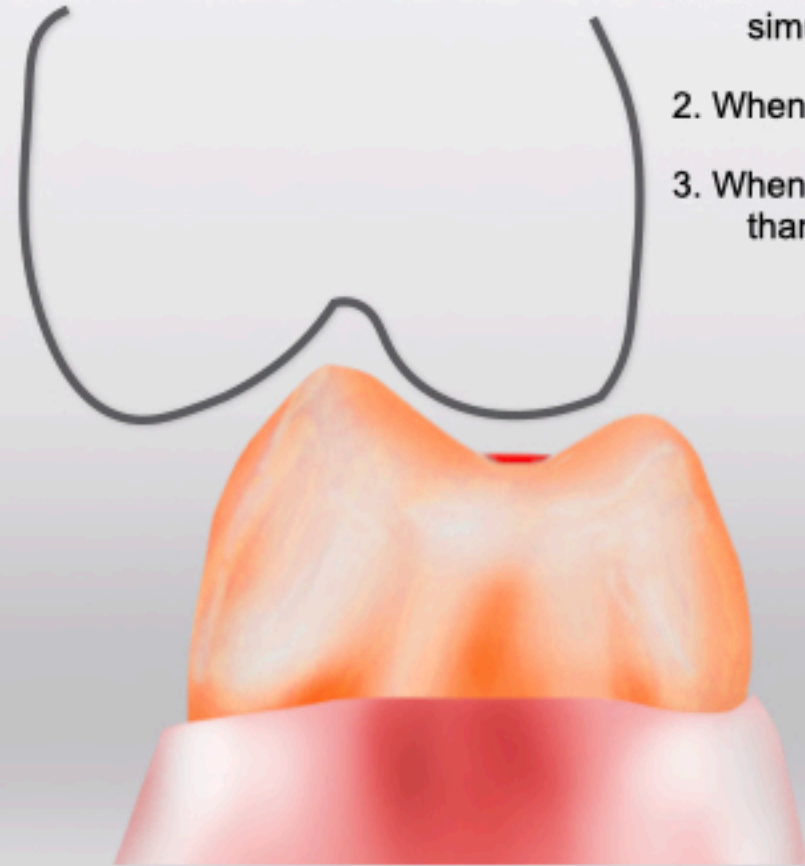
or this



Drawing and Photo by Dr Jim Kessler

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Drawing and Photo by Dr Jim Kessler



www.Despair.com

MEDIOCRITY

IT TAKES A LOT LESS TIME
AND MOST PEOPLE WON'T NOTICE THE DIFFERENCE
UNTIL IT'S TOO LATE.



Dr. Glenn Kidder 2015

90 Consecutive New Patients

84 / 100 crowns done in past year
were out of occlusion, did not hold
12 μ shim stock

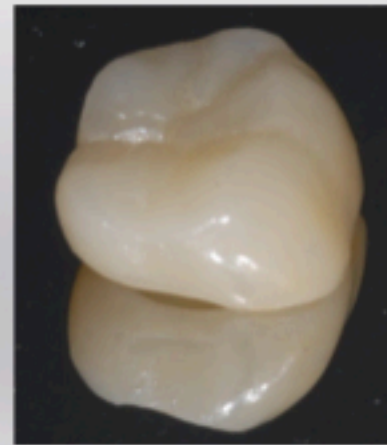


Which tooth is a crown?



Which tooth is a crown?

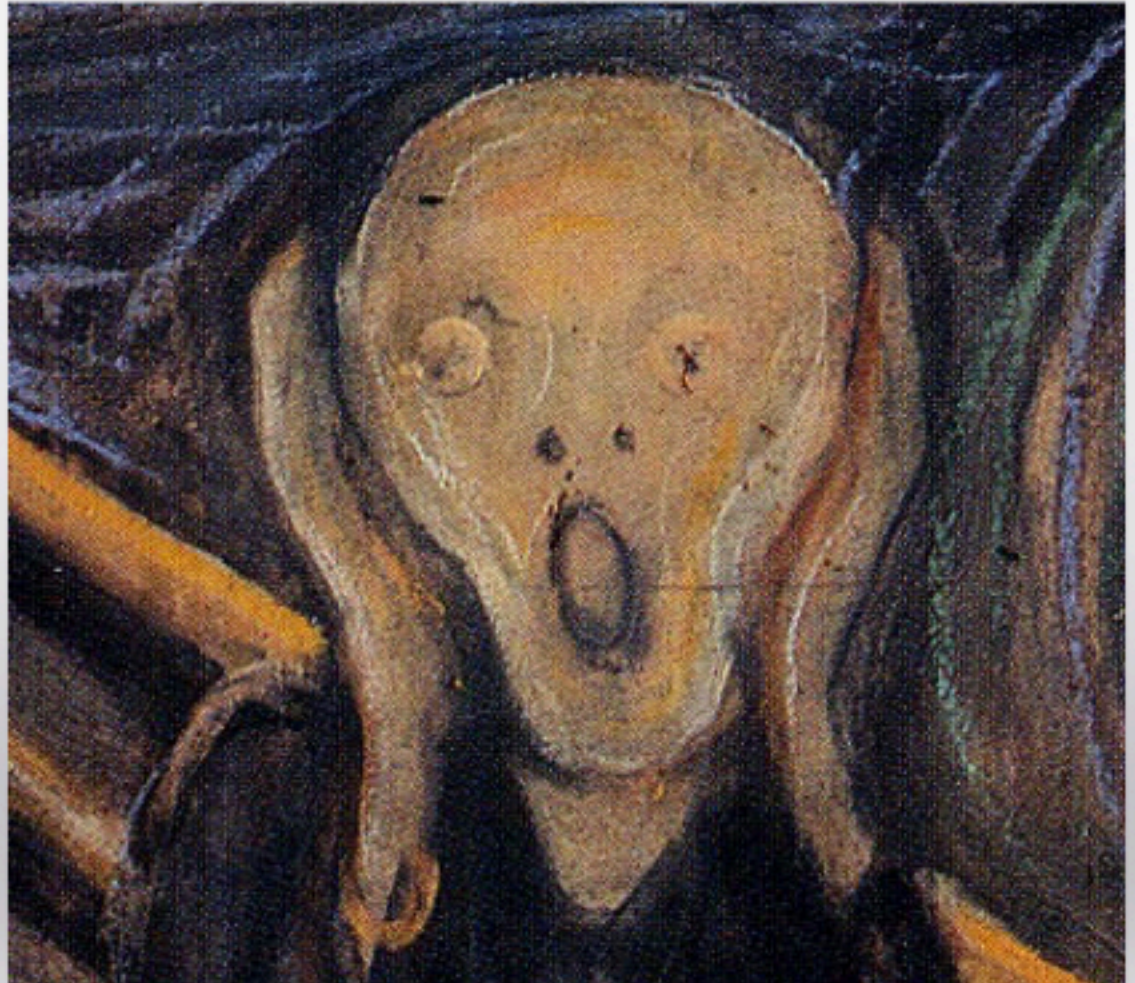
Challenge yourself to create perfect form and function on a single tooth.
Occlusal contact holds 12 μ m Almore shimstock.



Case CC

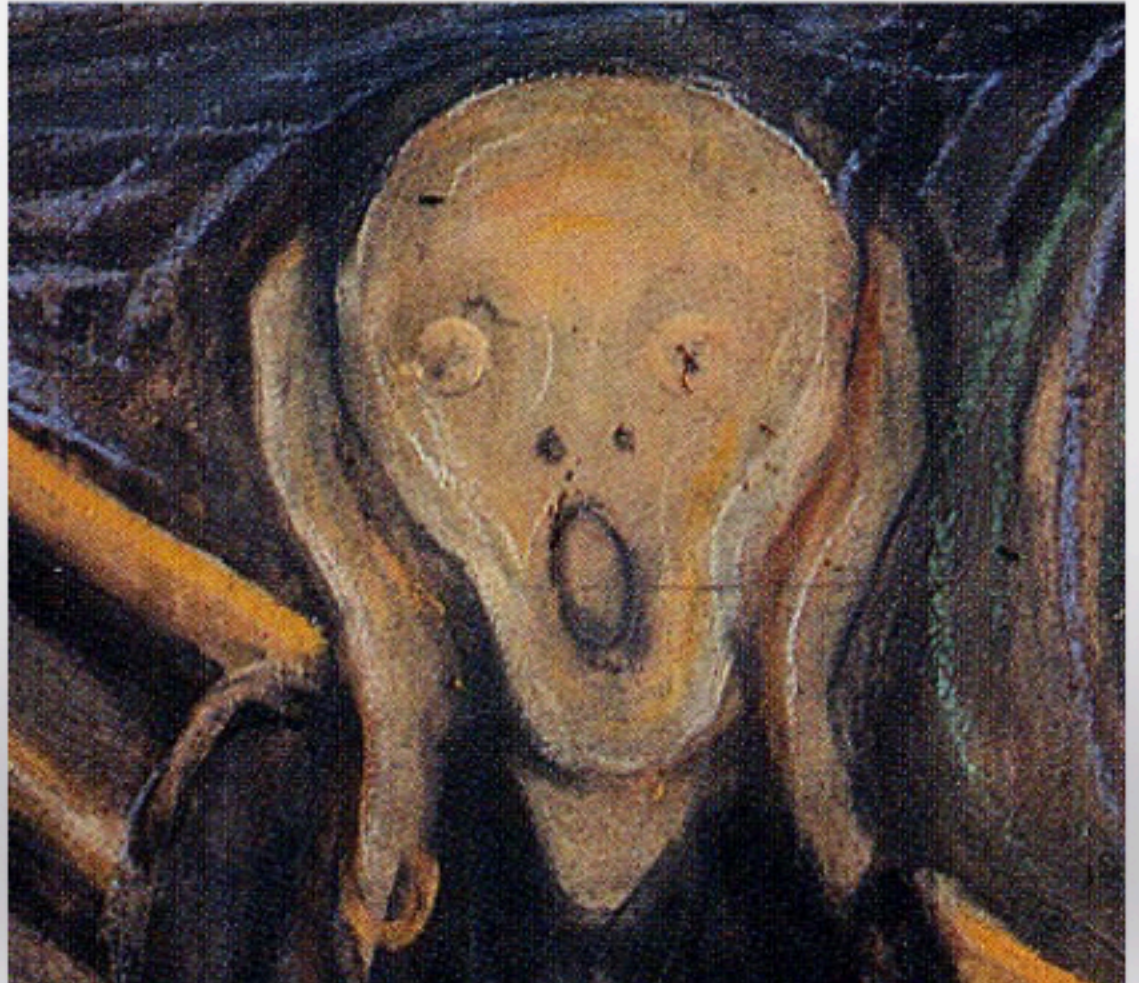
TMD Symptoms

- Sore TMJ muscles
- TMJ clicking
- TMJ pain
- Jaw locking
- Limited opening
- Difficulty open jaw
- Difficulty closing jaw
- Difficulty chewing
- Headaches
- Eye pain
- Ear pain
- Facial Pain



TMD Symptoms

Limited Opening

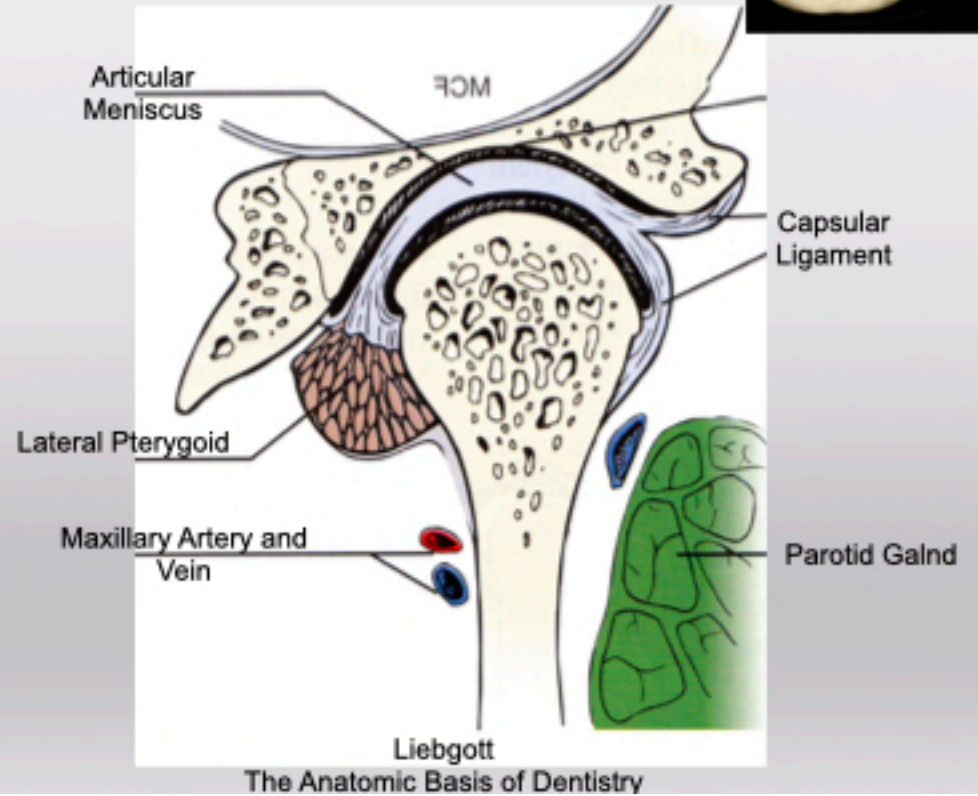
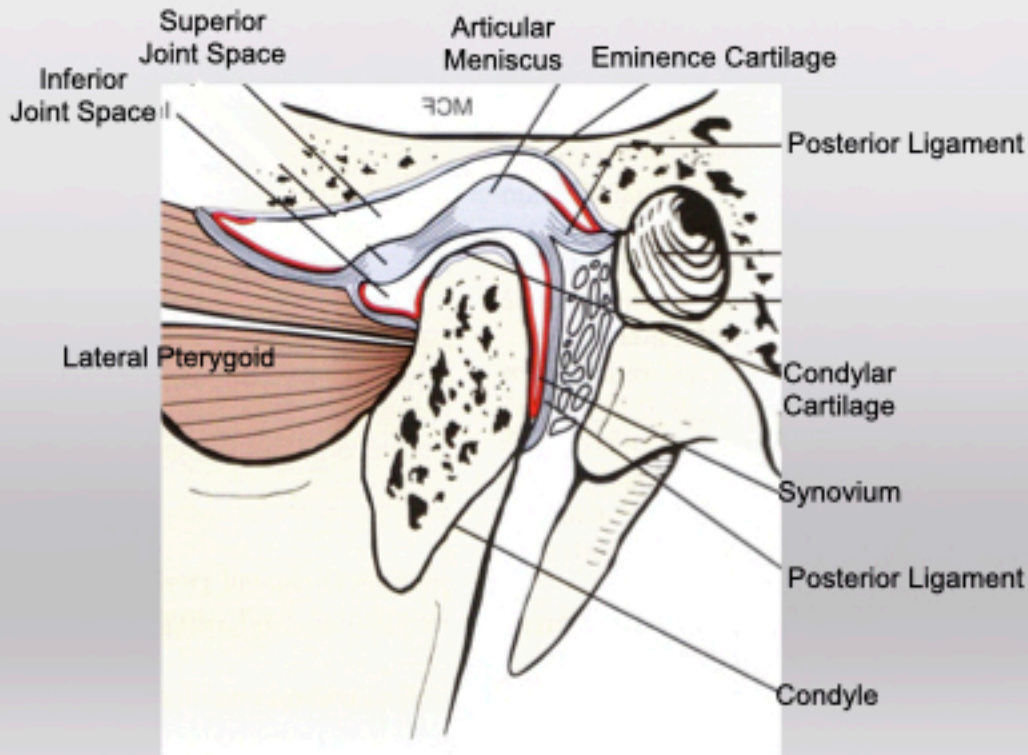




Left TMJ Sagittal View



Left TMJ Coronal View



The Anatomic Basis of Dentistry

Differential Diagnosis: Limited Joint Motion

Muscle Spasm

Painful to Move
Joint Pain
Muscle Pain

Mechanically Blocked
4b Acute
Adhesion

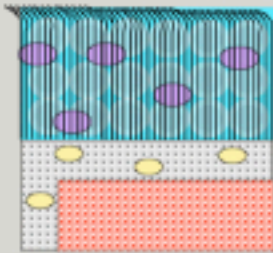
Masseteric Space
Infection
Hematoma

Lose 50% height of cartilage
Proteoglycans not being produced by Chondrocytes
Loss of 50% proteoglycans and water
Collagen still intact
Process is reversible
Move joint with light force/repetitive motion next 30 days

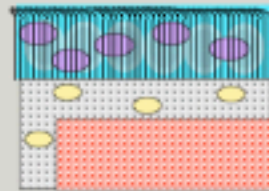
You have 6-8 weeks to get jaw moving
before cartilage is irreversibly damaged,
independent of the cause of the
immobilization



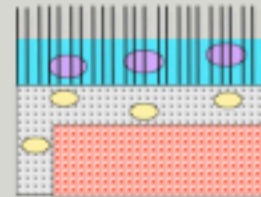
Healthy Cartilage



4 Weeks

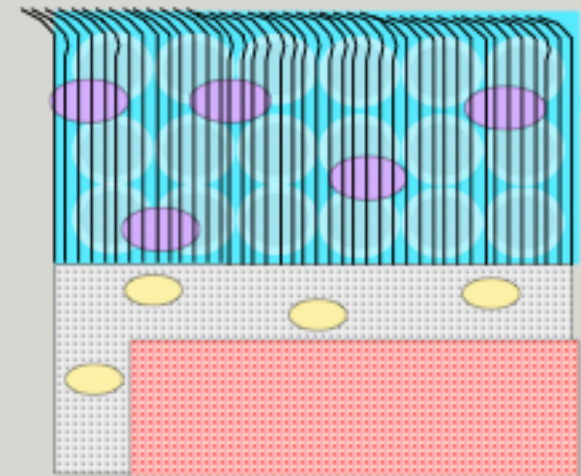
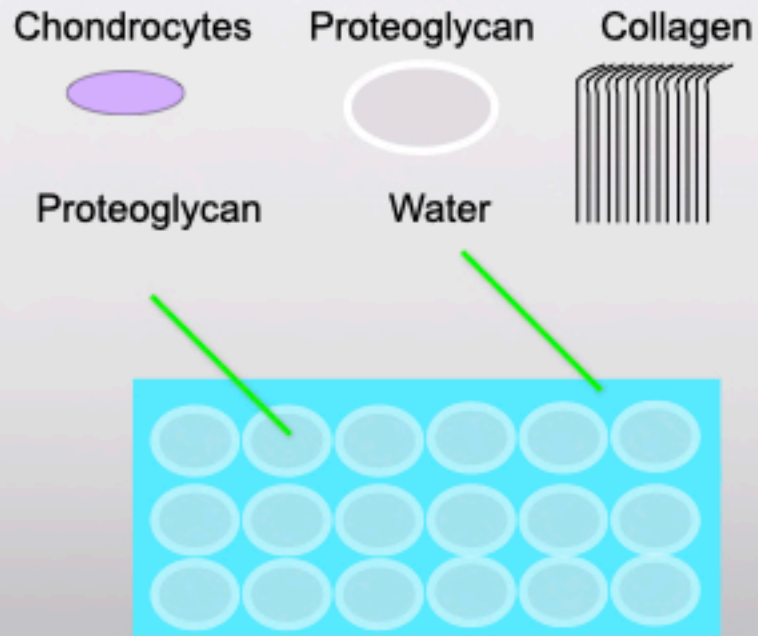


8 Weeks



E.B. Evans, GWN Eggers, J.K. Butler, and J. Blumel, Experimental immobilization and remobilization of rat knee joints, J Bone Joint Surg Am, 1960 vol. 42 (5) pp. 737-758
Enneking WF, Horowitz M. The intra-articular effects of immobilization on the human knee. J Bone Joint Surg Am. 1972 Jul;54(5):973-85. PMID: 5068717

Healthy Cartilage



Enneking WF, Horowitz M. The intra-articular effects of immobilization on the human knee. *J Bone Joint Surg Am.* 1972 Jul;54(5):973-85. PMID: 5068717

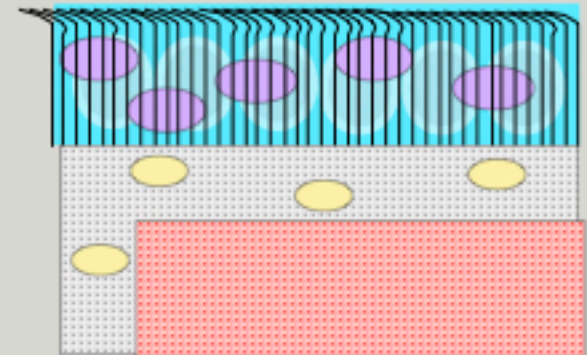
Immobilization 4 weeks

Proteoglycans not being produced by Chondrocytes
Collagen still intact
Process is reversible at 4 weeks

Move joint with light force/repetitive motion next 30 days

Half as many "Balloons"
Still have "Ropes"

Half as many proteoglycans so
half as much water so
half as much cartilage height



Enneking WF, Horowitz M. The intra-articular effects of immobilization on the human knee. J Bone Joint Surg Am. 1972 Jul;54(5):973-85. PMID: 5068717

Immobilization 8 weeks

“Ropes” Degenerate

Permanent joint damage in previous healthy joints

The cartilage is irreversible damaged

Collagen is irreversible damaged.

The proteoglycans have no way to attach in the cartilage matrix

Adhesions form between the joint surfaces

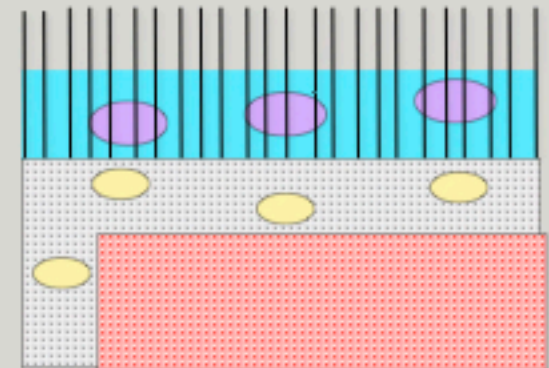
Connective tissue proliferates into the joint

Fibrous contracture of the muscles and joint capsule

Key Point:

In a patient with limited opening, you have
4 weeks to get the jaw moving.

At 8 weeks, there is permanent damage to
the TMJ, even if it was not the original
cause of the limited opening



Differential Diagnosis: Limited Joint Motion

Muscle Spasm

Painful to Move
Joint Pain
Muscle Pain

Mechanically Blocked
4b Acute
Adhesion

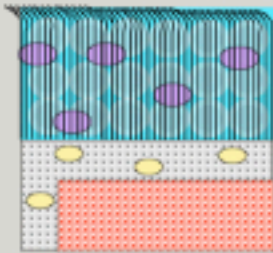
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Lose 50% height of cartilage
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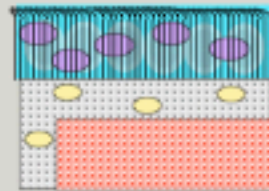
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immobilization



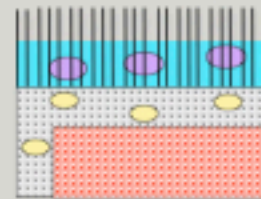
Healthy Cartilage



4 Weeks



8 Weeks

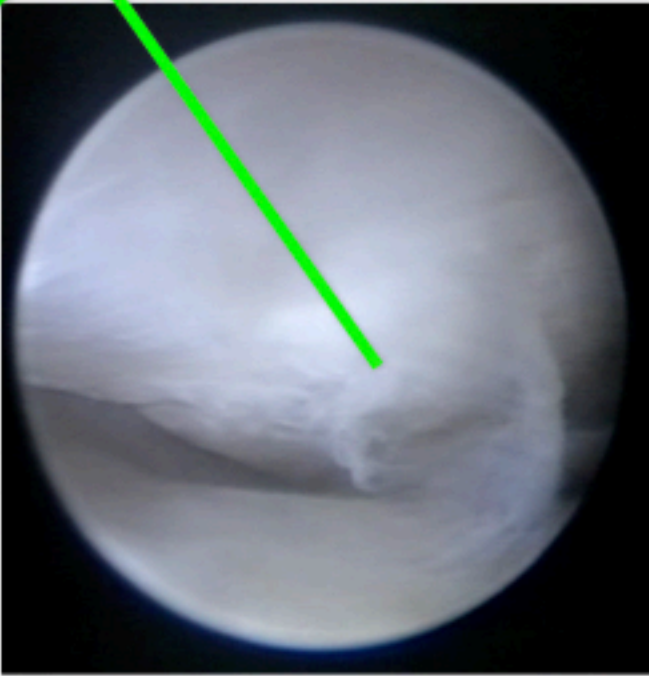
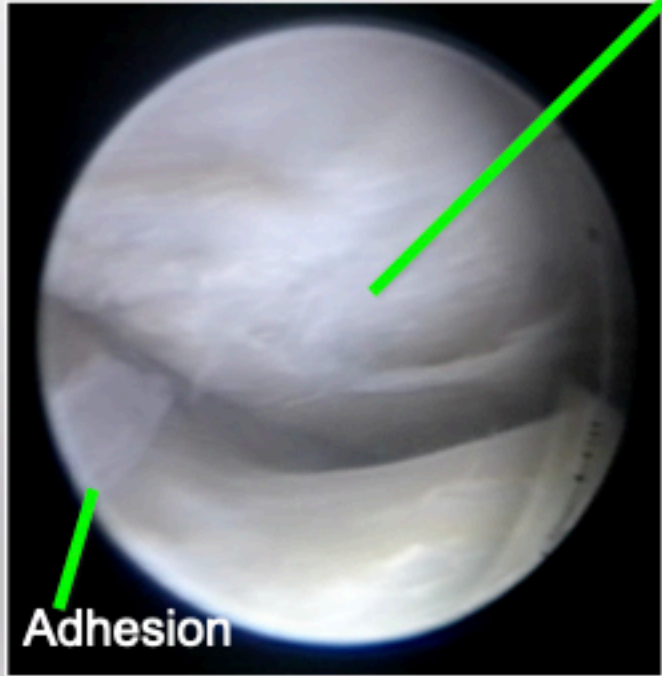
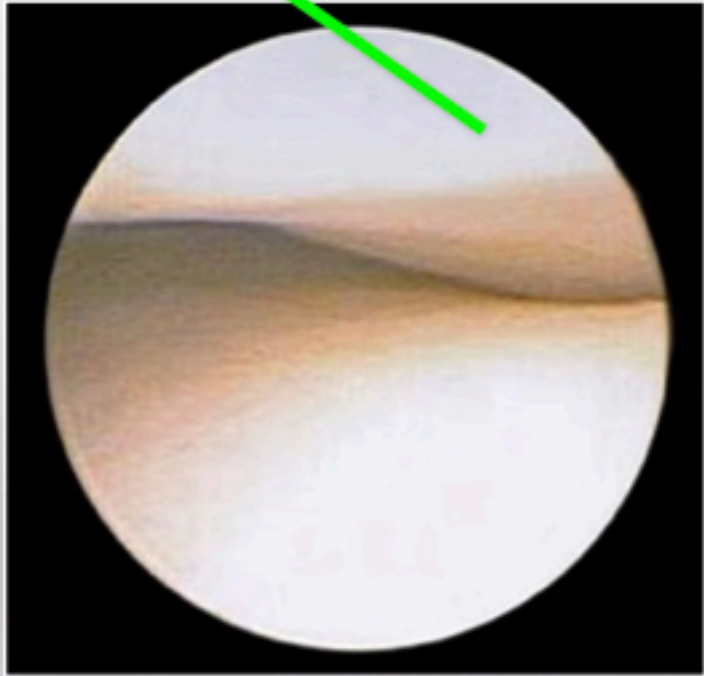


E.B. Evans, GWN Eggers, J.K. Butler, and J. Blumel, Experimental immobilization and remobilization of rat knee joints, J Bone Joint Surg Am, 1960 vol. 42 (5) pp. 737-758
Enneking WF, Horowitz M. The intra-articular effects of immobilization on the human knee. J Bone Joint Surg Am. 1972 Jul;54(5):973-85. PMID: 5068717

Arthroscopic View Left TMJ

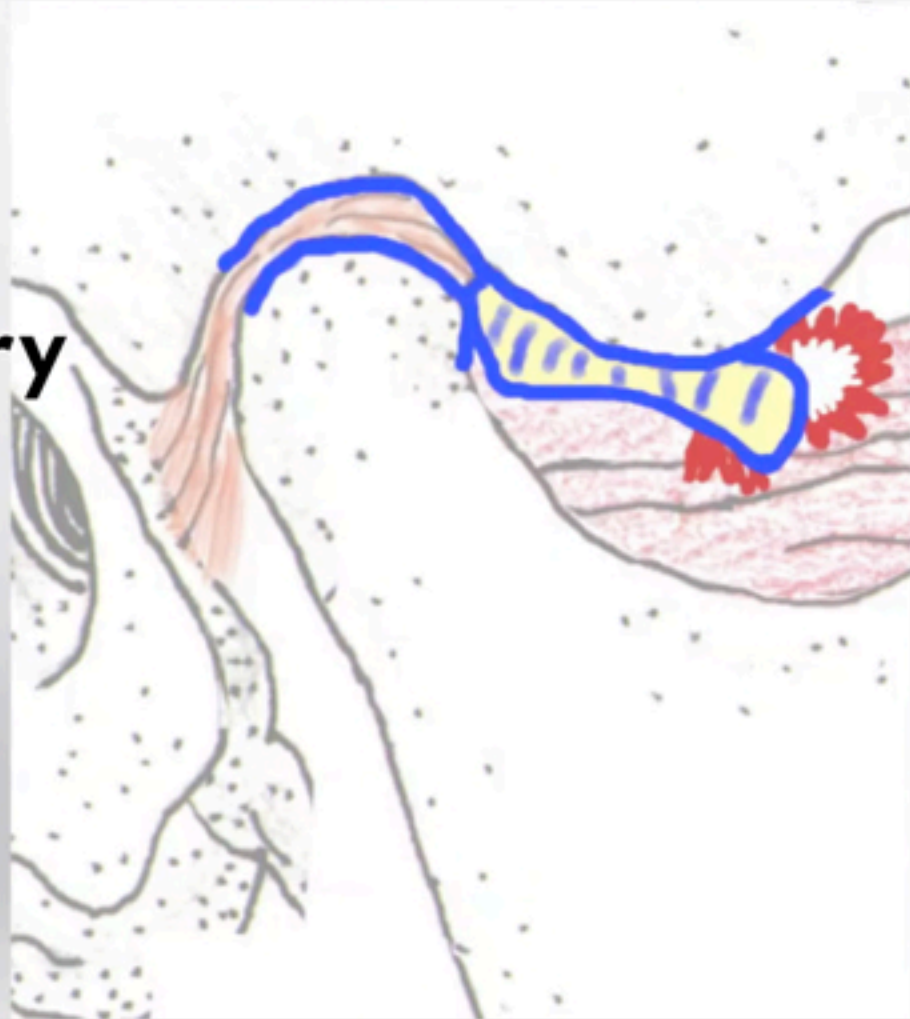
Eminence Healthy Cartilage

Eminence Necrotic Cartilage



Not Same Patient

Right TMJ Open Joint Surgery



Cartilage
Damage
Movie

Limited Opening Algorithm

Differential Diagnosis Limited Opening:

- Pain Avoidance Sore Joint
- Pain Avoidance Sore Muscle
- Hematoma
- Muscle Spasm
- Masseteric Space Infection
- Nonreducing Disc (4b,3b Acute)
- Joint Fibrosis, Muscle Fibrosis
- Other

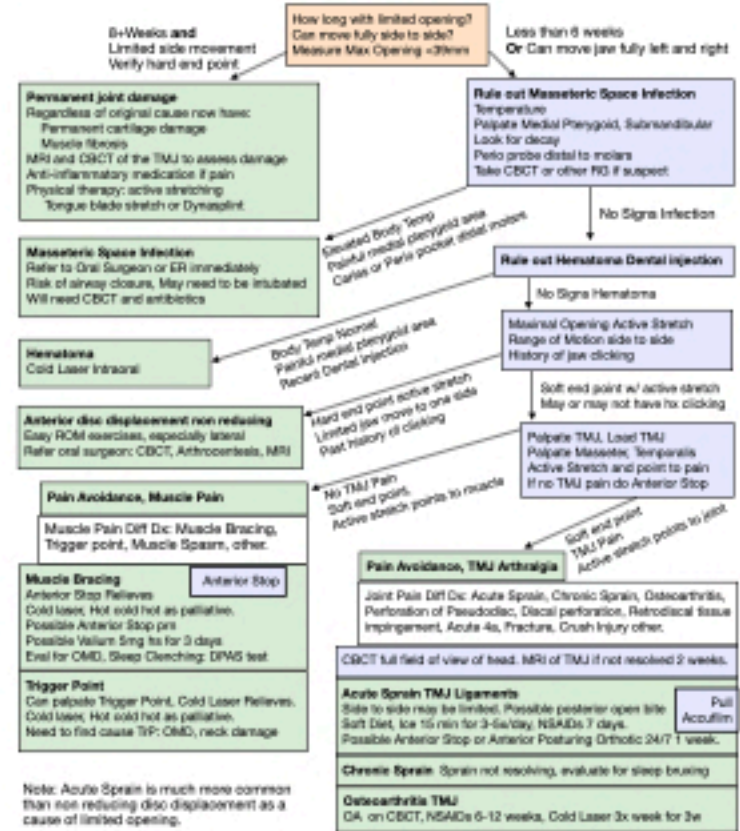
Diagnostic Tests:

- History: How long limited
- Body Temperature
- Caries Exam, Perio exam
- ROM open, side to side
- Gentle Active stretch
- Point to area of pain
- Anterior Stop
- If needed CBCT, MRI



Dr Droter's Limited Opening Algorithm

Differential Diagnosis Limited Opening (Less than 20mm): Pain Avoidance Sore Joint, Pain Avoidance Sore Muscle, Muscle Spasm, Masseteric Space Infection, Nonreducing Disc (4b,3b Acute), Joint Fibrosis, Muscle Fibrosis, other.



Note: Acute Sprain is much more common than non reducing disc displacement as a cause of limited opening.

Subjective:

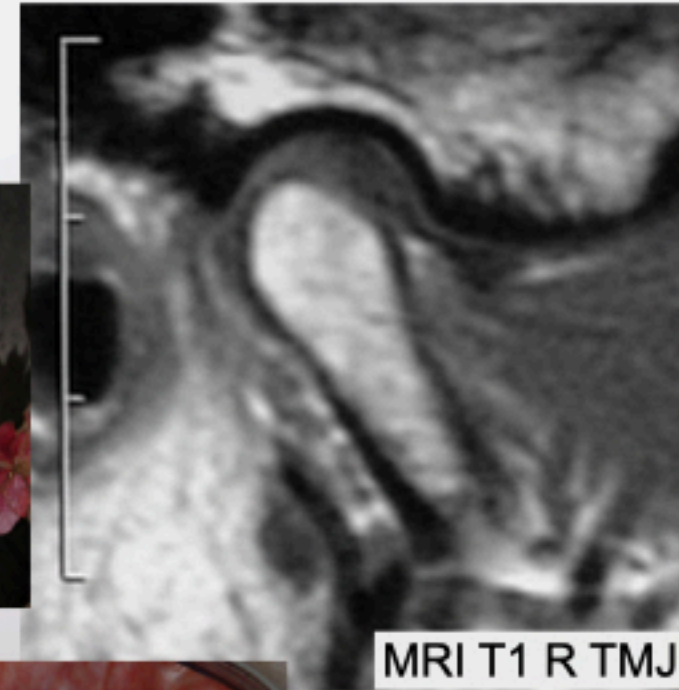
Dentist doing crown prep #30 1 week ago
Severe pain Right TMJ after moving jaw at end of appt
Constant deep pain Right TMJ
Limited opening

Objective:

Limited opening 32mm, Mandible shifts Left
Normal side to side motion
98 temp, normal perio probe 2nd molars, no caries
No pain palpation RL Medial Pterygoid
Soft end point on active stretch, 45mm, R TMJ pain
Right TMJ pain to palpation, Left TMJ normal
Posterior openbite Right, does not hold Accufilm

Assessment:

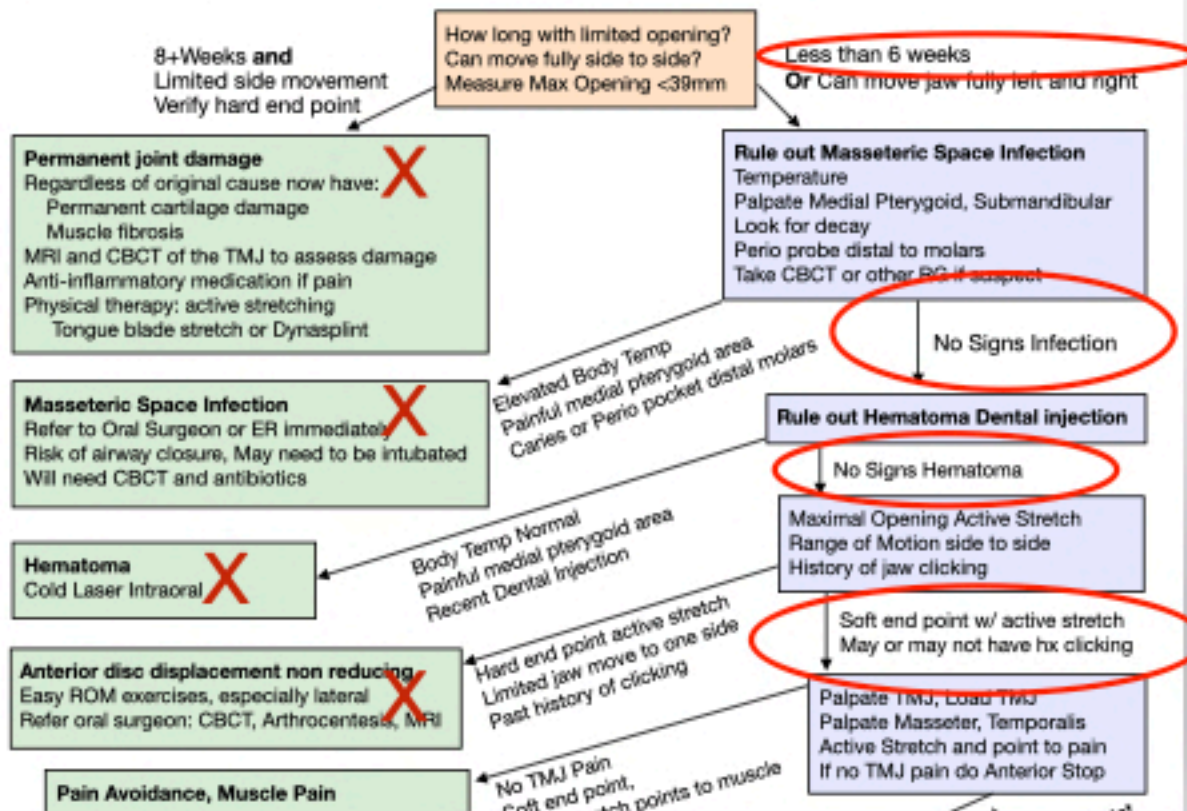
Limited opening due to Right TMJ pain avoidance
Acute Sprain Right TMJ Ligaments



Dr Droter's Limited Opening Algorithm

19.5

Differential Diagnosis Limited Opening (Less than 39mm): Pain Avoidance Sore Joint, Pain Avoidance Sore Muscle, Muscle Spasm, Masseteric Space Infection, Nonreducing Disc (4b,3b Acute), Joint Fibrosis, Muscle Fibrosis, other.



Objective:

Limited opening 32mm, Mandible shifts Left

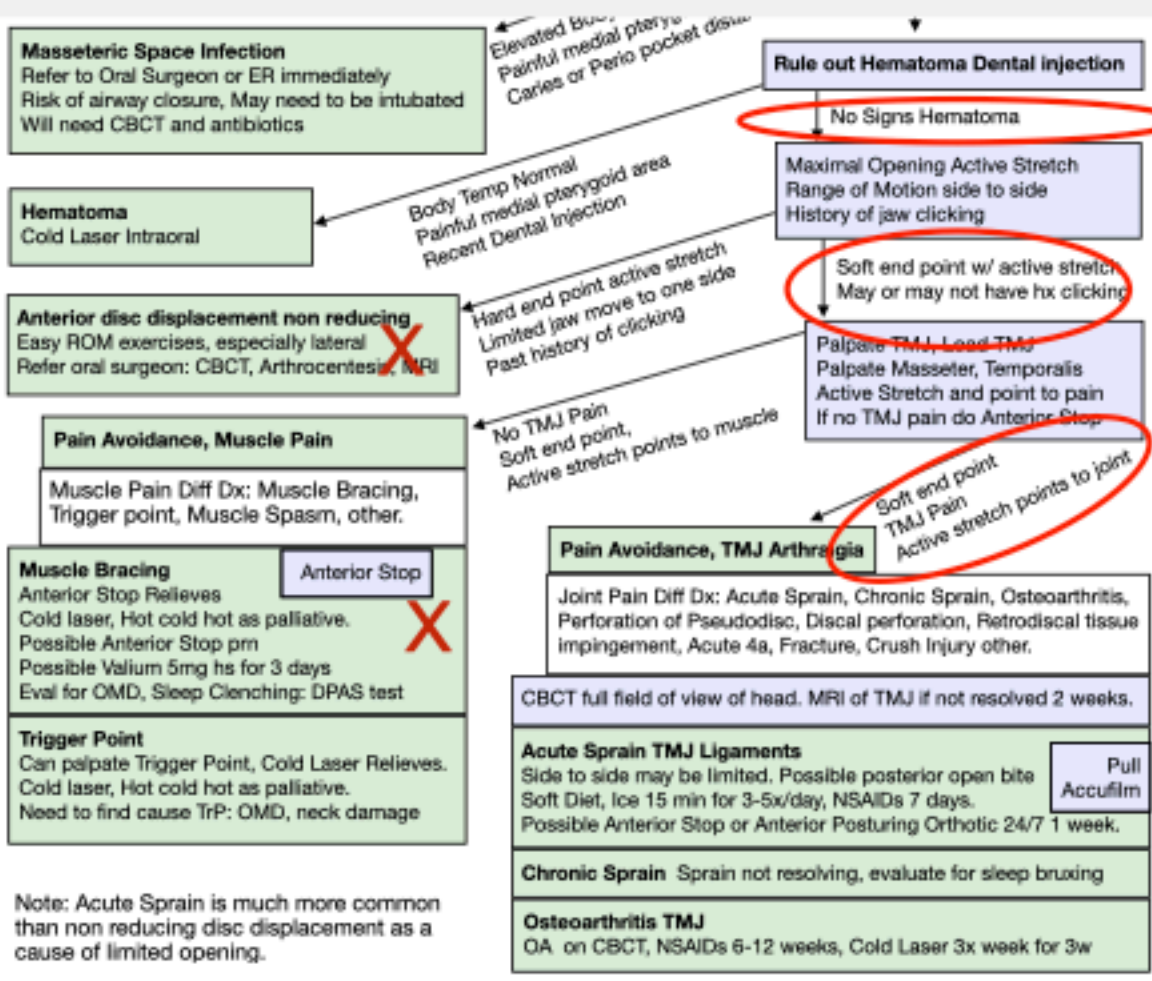
Normal side to side motion
98 temp, normal perio probe 2nd molars, no caries

No pain palpation RL Medial Pterygoid

Soft end point on active stretch, 45mm, R TMJ pain

Right TMJ pain to palpation, Left TMJ normal

Posterior openbite Right, does not hold Accufilm



Note: Acute Sprain is much more common than non reducing disc displacement as a cause of limited opening.

Objective:

- Limited opening 32mm, Mandible shifts Left
- Normal side to side motion
- 98 temp, normal perio probe 2nd molars, no caries
- No pain palpation RL Medial Pterygoid
- Soft end point on active stretch, 45mm, R TMJ pain
- Right TMJ pain to palpation, Left TMJ normal
- Posterior openbite Right, does not hold Accufilm

Pain Avoidance, TMJ Arthralgia

TMJ
Active streu...

Joint Pain Diff Dx: Acute Sprain, Chronic Sprain, Osteoarthritis, Perforation of Pseudodisc, Discal perforation, Retrodiscal tissue impingement, Acute 4a, Fracture, Crush Injury other.

CBCT full field of view of head. MRI of TMJ if not resolved 2 weeks.

Acute Sprain TMJ Ligaments

Side to side may be limited. Possible posterior open bite
Soft Diet, Ice 15 min for 3-5x/day, NSAIDs 7 days.
Possible Anterior Stop or Anterior Posturing Orthotic 24/7 1 week.

Pull
Accufilm

Chronic Sprain Sprain not resolving, evaluate for sleep bruxing

Osteoarthritis TMJ

OA on CBCT, NSAIDs 6-12 weeks, Cold Laser 3x week for 3w

Objective:

Limited opening 32mm, Mandible shifts Left

Normal side to side motion

98 temp, normal perio probe 2nd molars, no caries

No pain palpation RL Medial

Pterygoid

Soft end point on active stretch, 45mm, R TMJ pain

Right TMJ pain to palpation, Left TMJ normal

Posterior openbite Right, does not hold Accufilm

Treatment:

Ice 15-20 minutes for 3-5x 2 days only

Anterior repositioning orthotic 24/7 one week

NSAID for 5 days- 800mg Advil Liquid gel caps, q8h

Sleep with head elevated first week

Soft chew diet

At 1 week Anterior repositioning orthotic sleep only for second week

Week 3, no orthotic, reintroduce harder foods



Verify Orthotic does not rub
lingual tissue of mandible

At 4 weeks patient had full ROM
No clicking

New addition to protocol
Cold Laser (MLS Laser- 1500 hz 15
seconds, 10 hz 30 seconds)



MLS Laser

Multiwave Locked System Laser

808 nm Continuous, 905 nm Pulsed

Stimulates metabolic processes in cells
Decrease inflammation
Pain Reduction
Faster Healing

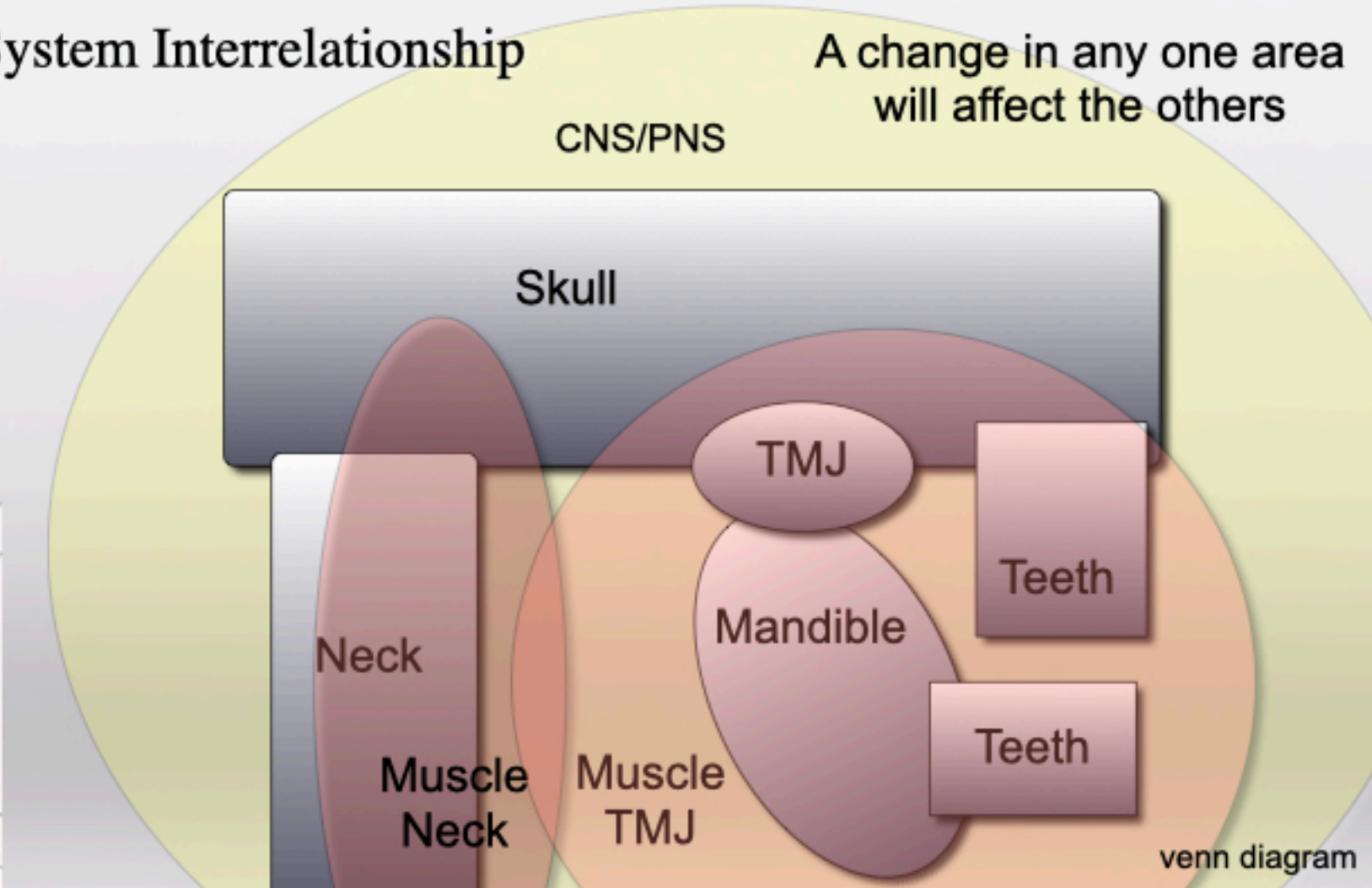
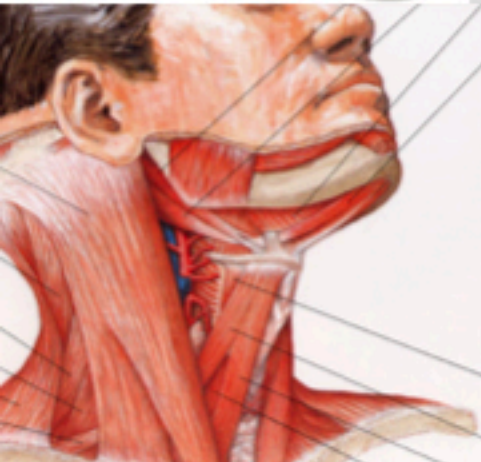


Diode Laser

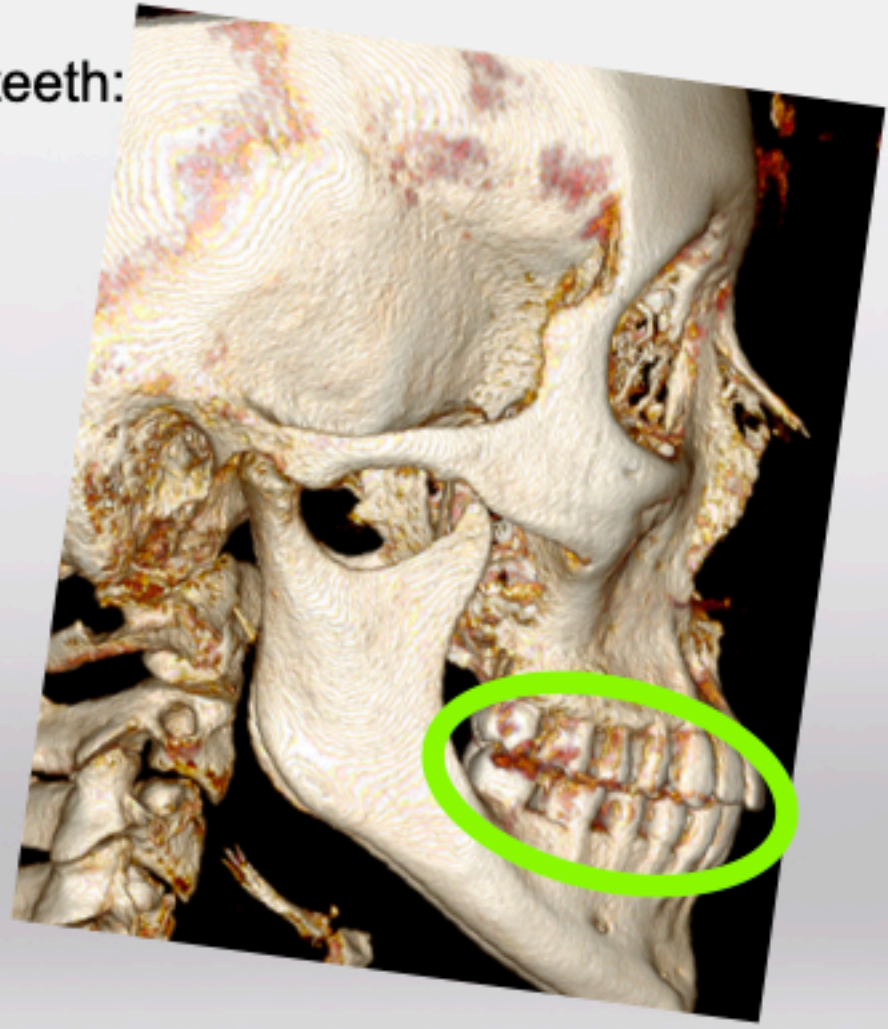
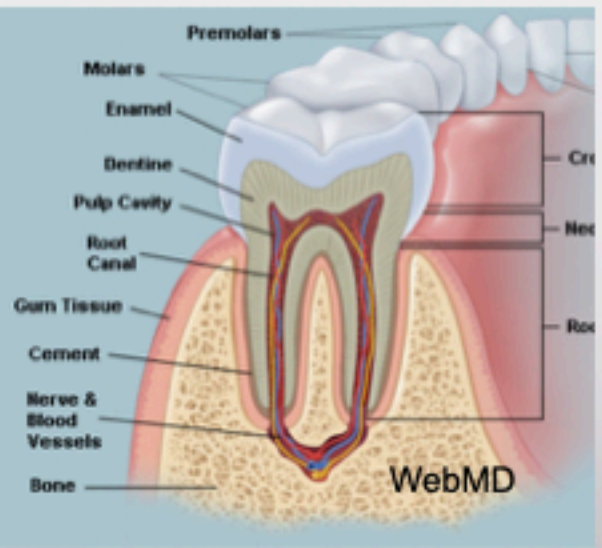
Ms MY

Stomatognathic System Interrelationship

A change in any one area will affect the others



Many dentists just treat teeth: 4 Top Diseases



Narrow Window



Stomatognathic System Interrelationship

A change in any one area will affect the others

CNS/PNS

Skull

TMJ

Teeth

Mandible

Teeth

Neck

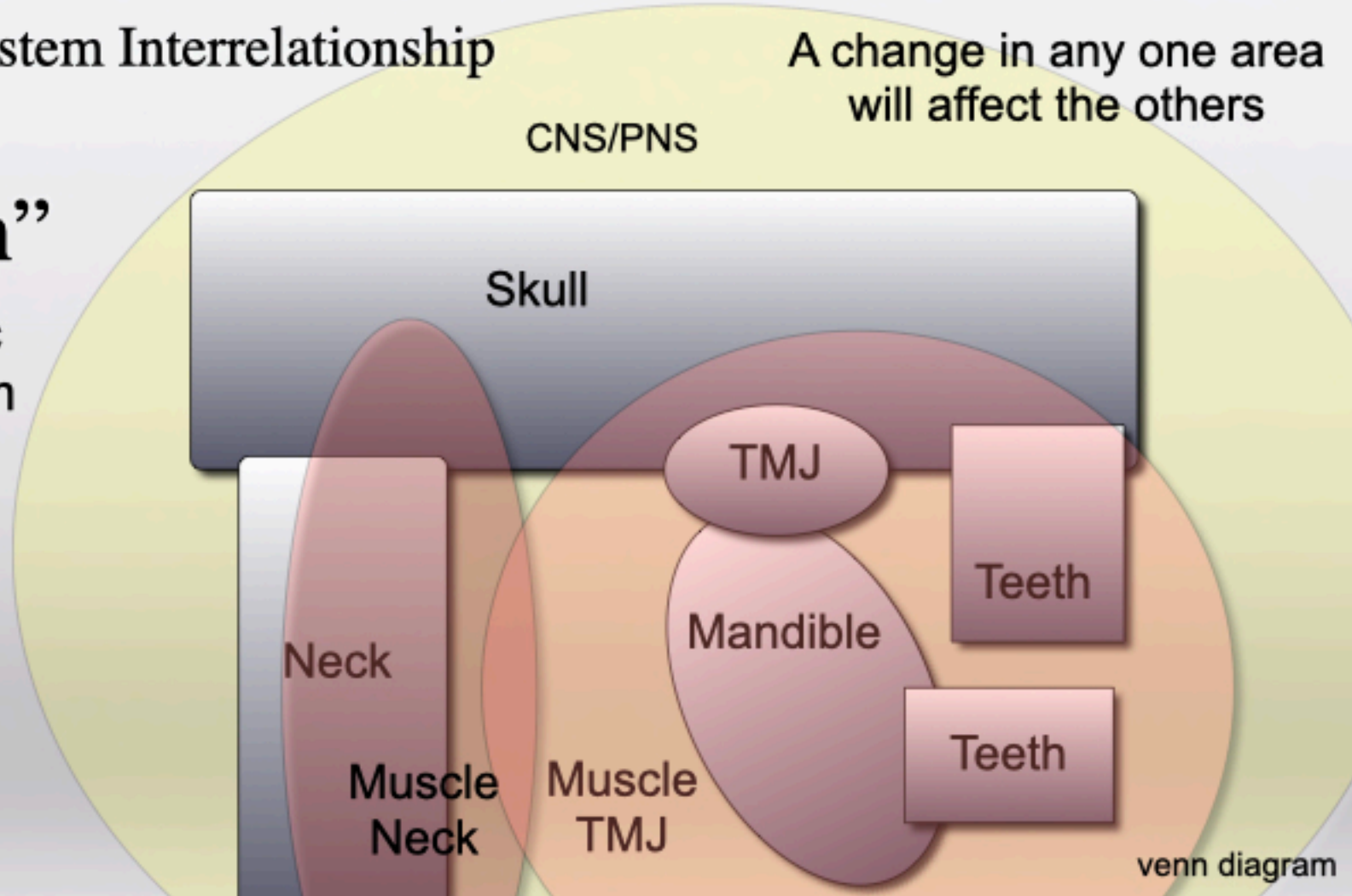
Muscle Neck

Muscle TMJ

venn diagram

“Adaptation”

This is a **dynamic** orthopedic System



Different Diagnoses have Different Therapies

Specific Diagnosis

TMDs- What are the choices? (190 Diagnoses, 7 Categories)

1. TMJ Damage

Arthritis and entrapment of temporomandibular joint
 Ankylosis/osteomyelitis/osteoporosis
 Condylar fracture
 Condylar hyperplasia
 Condylar hypoplasia
 Condylar resorption
 Condylar cyst
 Condylar dislocation
 Condylar displacement
 Condylar degeneration
 Condylar dysplasia
 Condylar erosion
 Condylar infection
 Condylar neoplasm
 Condylar osteoarthritis
 Condylar osteomyelitis
 Condylar osteoporosis
 Condylar osteosarcoma
 Condylar sarcoma
 Condylar synovitis
 Condylar trauma
 Condylar tumor
 Condylar cyst
 Condylar degeneration
 Condylar dysplasia
 Condylar erosion
 Condylar infection
 Condylar neoplasm
 Condylar osteoarthritis
 Condylar osteomyelitis
 Condylar osteoporosis
 Condylar osteosarcoma
 Condylar sarcoma
 Condylar synovitis
 Condylar trauma
 Condylar tumor
 Condylar cyst

Aggravation/functional Trauma
 Ankylosis
 Arthritis
 Condylar fracture
 Condylar hyperplasia
 Condylar hypoplasia
 Condylar resorption
 Condylar cyst
 Condylar dislocation
 Condylar displacement
 Condylar degeneration
 Condylar dysplasia
 Condylar erosion
 Condylar infection
 Condylar neoplasm
 Condylar osteoarthritis
 Condylar osteomyelitis
 Condylar osteoporosis
 Condylar osteosarcoma
 Condylar sarcoma
 Condylar synovitis
 Condylar trauma
 Condylar tumor
 Condylar cyst

2. Muscles of the TMJ

Myofascial pain
 Myofascial pain dysfunction
 Myofascial pain syndrome
 Myofascial pain with headache
 Myofascial pain with ear pain
 Myofascial pain with neck pain
 Myofascial pain with jaw pain
 Myofascial pain with facial pain
 Myofascial pain with throat pain
 Myofascial pain with chest pain
 Myofascial pain with abdominal pain
 Myofascial pain with pelvic pain
 Myofascial pain with genital pain
 Myofascial pain with urinary pain
 Myofascial pain with reproductive pain
 Myofascial pain with chronic pain
 Myofascial pain with fibromyalgia
 Myofascial pain with chronic fatigue syndrome
 Myofascial pain with irritable bowel syndrome
 Myofascial pain with chronic sinusitis
 Myofascial pain with allergic rhinitis
 Myofascial pain with asthma
 Myofascial pain with chronic cough
 Myofascial pain with chronic bronchitis
 Myofascial pain with chronic obstructive pulmonary disease
 Myofascial pain with emphysema
 Myofascial pain with chronic kidney disease
 Myofascial pain with chronic liver disease
 Myofascial pain with chronic pancreatitis
 Myofascial pain with chronic prostatitis
 Myofascial pain with chronic urethritis
 Myofascial pain with chronic vaginitis
 Myofascial pain with chronic cervicitis
 Myofascial pain with chronic endometritis
 Myofascial pain with chronic pelvic inflammatory disease
 Myofascial pain with chronic vulvovaginitis
 Myofascial pain with chronic bacterial vaginosis
 Myofascial pain with chronic candidiasis
 Myofascial pain with chronic herpes simplex virus infection
 Myofascial pain with chronic cytomegalovirus infection
 Myofascial pain with chronic toxoplasmosis
 Myofascial pain with chronic cryptosporidiosis
 Myofascial pain with chronic giardiasis
 Myofascial pain with chronic cryptosporidiosis
 Myofascial pain with chronic giardiasis

3. Cranial Alignment/Occlusion

Aggravation/functional Trauma
 Ankylosis
 Arthritis
 Condylar fracture
 Condylar hyperplasia
 Condylar hypoplasia
 Condylar resorption
 Condylar cyst
 Condylar dislocation
 Condylar displacement
 Condylar degeneration
 Condylar dysplasia
 Condylar erosion
 Condylar infection
 Condylar neoplasm
 Condylar osteoarthritis
 Condylar osteomyelitis
 Condylar osteoporosis
 Condylar osteosarcoma
 Condylar sarcoma
 Condylar synovitis
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Aggravation/functional Trauma
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 Condylar erosion
 Condylar infection
 Condylar neoplasm
 Condylar osteoarthritis
 Condylar osteomyelitis
 Condylar osteoporosis
 Condylar osteosarcoma
 Condylar sarcoma
 Condylar synovitis
 Condylar trauma
 Condylar tumor
 Condylar cyst

4. Cervical Damage

Cervical vertebrae alignment/dysfunction
 Cervicogenic headache
 Cervicogenic dizziness
 Cervicogenic vertigo
 Cervicogenic tinnitus
 Cervicogenic hearing loss
 Cervicogenic facial pain
 Cervicogenic jaw pain
 Cervicogenic ear pain
 Cervicogenic throat pain
 Cervicogenic chest pain
 Cervicogenic abdominal pain
 Cervicogenic pelvic pain
 Cervicogenic genital pain
 Cervicogenic urinary pain
 Cervicogenic reproductive pain
 Cervicogenic chronic pain
 Cervicogenic fibromyalgia
 Cervicogenic chronic fatigue syndrome
 Cervicogenic irritable bowel syndrome
 Cervicogenic chronic sinusitis
 Cervicogenic allergic rhinitis
 Cervicogenic asthma
 Cervicogenic chronic cough
 Cervicogenic chronic bronchitis
 Cervicogenic chronic obstructive pulmonary disease
 Cervicogenic emphysema
 Cervicogenic chronic kidney disease
 Cervicogenic chronic liver disease
 Cervicogenic chronic pancreatitis
 Cervicogenic chronic prostatitis
 Cervicogenic chronic urethritis
 Cervicogenic chronic vaginitis
 Cervicogenic chronic cervicitis
 Cervicogenic chronic endometritis
 Cervicogenic chronic pelvic inflammatory disease
 Cervicogenic chronic vulvovaginitis
 Cervicogenic chronic bacterial vaginosis
 Cervicogenic chronic candidiasis
 Cervicogenic chronic herpes simplex virus infection
 Cervicogenic chronic cytomegalovirus infection
 Cervicogenic chronic toxoplasmosis
 Cervicogenic chronic cryptosporidiosis
 Cervicogenic chronic giardiasis

5. Parafunction

Bruxism
 Bruxism with headache
 Bruxism with ear pain
 Bruxism with jaw pain
 Bruxism with facial pain
 Bruxism with throat pain
 Bruxism with chest pain
 Bruxism with abdominal pain
 Bruxism with pelvic pain
 Bruxism with genital pain
 Bruxism with urinary pain
 Bruxism with reproductive pain
 Bruxism with chronic pain
 Bruxism with fibromyalgia
 Bruxism with chronic fatigue syndrome
 Bruxism with irritable bowel syndrome
 Bruxism with chronic sinusitis
 Bruxism with allergic rhinitis
 Bruxism with asthma
 Bruxism with chronic cough
 Bruxism with chronic bronchitis
 Bruxism with chronic obstructive pulmonary disease
 Bruxism with emphysema
 Bruxism with chronic kidney disease
 Bruxism with chronic liver disease
 Bruxism with chronic pancreatitis
 Bruxism with chronic prostatitis
 Bruxism with chronic urethritis
 Bruxism with chronic vaginitis
 Bruxism with chronic cervicitis
 Bruxism with chronic endometritis
 Bruxism with chronic pelvic inflammatory disease
 Bruxism with chronic vulvovaginitis
 Bruxism with chronic bacterial vaginosis
 Bruxism with chronic candidiasis
 Bruxism with chronic herpes simplex virus infection
 Bruxism with chronic cytomegalovirus infection
 Bruxism with chronic toxoplasmosis
 Bruxism with chronic cryptosporidiosis
 Bruxism with chronic giardiasis

6. Whole Body / Systemic

Aggravation/functional Trauma
 Ankylosis
 Arthritis
 Condylar fracture
 Condylar hyperplasia
 Condylar hypoplasia
 Condylar resorption
 Condylar cyst
 Condylar dislocation
 Condylar displacement
 Condylar degeneration
 Condylar dysplasia
 Condylar erosion
 Condylar infection
 Condylar neoplasm
 Condylar osteoarthritis
 Condylar osteomyelitis
 Condylar osteoporosis
 Condylar osteosarcoma
 Condylar sarcoma
 Condylar synovitis
 Condylar trauma
 Condylar tumor
 Condylar cyst

7. Other

Aggravation/functional Trauma
 Ankylosis
 Arthritis
 Condylar fracture
 Condylar hyperplasia
 Condylar hypoplasia
 Condylar resorption
 Condylar cyst
 Condylar dislocation
 Condylar displacement
 Condylar degeneration
 Condylar dysplasia
 Condylar erosion
 Condylar infection
 Condylar neoplasm
 Condylar osteoarthritis
 Condylar osteomyelitis
 Condylar osteoporosis
 Condylar osteosarcoma
 Condylar sarcoma
 Condylar synovitis
 Condylar trauma
 Condylar tumor
 Condylar cyst

TMD Therapies: (60+ therapies)

Physical

Ice
 Hot/Cold/Hot
 Range of motion exercises
 Active Stretching: Manual, Tongue Blades, Dynasplint
 Cold Laser
 TENS in office
 TENS home use
 Refer to Physical Therapy: Rocabado mobilization
 Refer to Physical Therapy: Postural Restoration Therapy
 Refer to Physical Therapy: Triggerpoints
 Refer to Chiropractic: Atlas Orthogonalist
 Refer to Osteopathic MD: Body alignment

Medicinal

Anti-inflammatory:
 NSAIDs,
 Tetracycline low dose
 CBD salivary
 Glucosamine/Chondroitin MSM
 Vitamins: Vitamin D, Vitamin B12
 Minerals: Magnesium
 Minerals: Iron
 Refer to MD for Lyme therapies
 Refer to MD Rheumatoid Arthritis therapies
 Botox Masseter injections
 Botox Lateral Pterygoid injections

Dental Orthotics

In Office Trial Anterior Stop
 Palatal anterior stop
 Lower posterior deprogrammer
 Lower postured indexed
 Lower CR indexed
 Lower TMJ Rehab flat plane
 Lower full coverage CR
 Lower Soft Sectional

Brux PAS with lower Essix
 Myobrace
 Clear Brux checker
 Lateral Bracing Device guided planes
 Lateral Bracing Device Elastomeric
 Upper full coverage CR guard
 Temporary home use anterior stop
 Equalizer

Occlusal Orthopedic

Lingual Light Wire
 Lower soft sectional orthotic
 Condylar distraction
 Sectional orthodontics
 Expansion orthopedic/orthodontics
 Occlusal Adjustment

Tongue Parafunction

Refer for Cervical Alignment/ Stabilization
 Myobrace
 Upper Lingual light wire
 Clear Brux Checker
 Fraxectory
 Myofunctional therapy

Sleep/ Fatigue

Mouth taping
 Diet Modification
 Postural Therapy
 Vitamins: Vitamin D, Vitamin B12
 Minerals: Magnesium, Iron
 Lateral Bracing Device guided plane
 Lateral Bracing Device Elastomeric
 Mandibular Advancement Device
 CPAP

Specific Therapy

John R Droter, DDS

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Call Kim 301-805-9400

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October 23-27, 2016
October 22-26, 2017
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