

# **Temporomandibular Joint Dysfunction (TMD) Made Easy**

## **Course Manual**

**Mark Allan Padolsky, DDS, FACMS, FAOS, MAGD**

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## **Purposes of this TMD course**

This course is designed to help you **understand basic TMD anatomy** to assist you in making sense of what is happening with your patients. In order to know how to successfully treat TMD, you must be able to **recognize the signs and symptoms** of TMD. Your understanding will allow you to diagnose the origin of problems previously unrecognized by fellow health care practitioners and sometimes even by the patients themselves.

This is an introductory course that keeps things simple and easy. Only one appliance is presented and you will be taught to construct this TMD appliance. This TMD appliance will allow you to help at least ninety percent of the patients that present to you. However, it is not simply the TMD appliance that brings relief to patients. A more healthy lifestyle aimed specifically at controlling TMD is taught to patients. This information along with the use of the appliance is carefully explained to the TMD patient upon appliance delivery.

It is important that you be able to evaluate the patient post operatively, otherwise you will have no way of objectively evaluating your patient's success. Understand also, that TMD is related to many other problems that do not fall within the domain of Dentistry. It is important to be able to recognize the patients to refer to other specialists and make the appropriate referrals. This helps improve your patient's general health and assists in improving her sense of well-being.

Getting paid for TMD services is essential; otherwise you could not afford to care for these patients. You will be shown how to prepare dental and medical insurance claims and how to respond to insurance inquiries that inevitably show up after sending out claims.

This course is aimed at allowing you to better serve your patients by providing additional treatment that they need. The more you know, the greater you will enjoy your chosen profession. *Scientia est Potencia, Knowledge is Power.* Providing this care will also enrich your practice of Dentistry with additional knowledge in the area you work.

Providing these services also helps develop and add income to your dental practice. Remember, this is an introductory course and will not make you a TMD Expert. It introduces you to simple treatment and does not teach you how to treat all TMD cases. This would require much more study and time. However, it can serve as a beginning.

## Signs and Symptoms of TMD

occlusal wear facets  
facial asymmetry  
dished out profile  
abnormal lip posture  
facial edema

temporal headaches  
decreased hearing  
vertigo or dizziness  
TMJ noise  
clenching/bruxing  
cervical problems  
Bell's Palsy  
Occipital headache

abfractions  
speech abnormalities  
short lower facial third  
deep mentalis crease  
cervical torticollis

limited opening  
ear ache/pain  
insomnia  
multiple root canals  
exostosis/torii  
occipital headaches  
trigeminal neuralgia  
SCM spasm

mandibular opening deviation  
steep mandibular plane angle  
chelitis  
forward head posture  
mandibular torticollis

dental hot and cold sensitivity  
tinnitus  
TMJ pain  
dysphagia  
postural problems  
paresthesia of the finger tips  
deep dental bite  
step down occlusal plane

## **TMD Related Anatomy**

Referred Pain Patterns  
Occlusal Concepts

TMJ anatomy  
Cervical concepts

## **TMD Related Medical Conditions**

Hypothyroidism                      Nasorespiratory Allergies                      Mitral Valve Prolapse  
Postural Problems                      Nutritional deficiencies (subclinical)                      Hyperinsulinism  
Thoracic Outlet Syndrome                      Obstructive Sleep Apnea  
Collagen Deficiency Disorders

## **Initial TMD Consultation**

A TMD consultation is **not a TMD Examination**. The patient, the dentist, the staff, and the TMD Assistant must all clearly understand the difference between a TMD Consultation and a TMD Examination or problems with result.

The purpose of a TMD consultation is to **briefly screen** the patient to see if this patient has a TMD problem. Many patients and referring medical professionals do not understand TMD problems and sometimes want a patient to be seen to determine if this patient has a TMD problem.

Sometimes a patient will get very upset and feel cheated because she thought she was paying for an examination, not a consultation. The patient wanted her examination results! Because a TMD consultation is very brief and because there are no TMD records taken, the dentist can **not write a detailed plan** and give the patient test results.

If a referring professional, or the patient, knows that the patient has a TMD problem, then the correct appointment is for a TMD Work Up, not a TMD Consultation.

**No written results** are given to a consultation patient and **no diagnosis** is made for a consultation patient. Diagnosis can only be made after a TMD Work Up. No brain surgeon is going to tell you that you have a brain tumor without first doing tests! A dentist can not place his reputation on the line without first doing all the necessary tests.

## **Initial TMD Visit**

The Initial TMD Examination visit lasts about an hour. Most of the appointment is managed by a trained TMD assistant. The TMD assistant **seats** the patient and **welcomes** the patient to the office. The TMD assistant performs a **TMD patient interview** by asking a series of questions and records the answers on the **Initial TMD Examination Form**. The TMD patient is next shown a short **TMD video** from the Casey Patient Education DVD while the TMD assistant gets the dentist.

The TMD assistant **introduces** the dentist and the dentist **examines** the TMD patient while the TMD Assistant records the results of the TMD examination on the Initial TMD Examination Form. The dentist next briefly **informs** the TMD patient that she either can be helped or can not be helped and asks the TMD assistant to educate the patient about her TMD signs and symptoms.

“ Mrs. Jones, ( TMD assistant name ) is our TMJ educator and she’s going to spend some time with you reviewing the results of your examination and making sure that you understand your problem and what we can do to help you. “

The dentist then leaves the room.

## Initial TMD Interview

Mrs. Jones, I'll be asking you several questions to help the doctor identify what your problem is. Bear with me because I'll be filling out a form while I speak with you. Okay, first of all,

Have you been having headaches?

Where have your headaches been?

Do you have any pain over your cheeks?

How often do you have headaches?

Do you get headaches just before your period?

Are your headaches at night?

Are you having any pain in your face? Neck? Back?

Do you hear or feel any clicking or popping noises in your jaw joints?

Do you hear or feel any grinding noises in your jaw joints?

Has your jaw ever locked so you can't close it?

Has your jaw ever locked so you can't open it?

Do you have any ringing in one or both ears?

Can you hear well in both of your ears?

Do you ever get dizzy?

Can you open your mouth as far as you would like?

Are your teeth sensitive to hot and cold?

Do any teeth hurt?

Do you feel cold all the time?

Is your skin dry?

Is your hair brittle?

Do your finger tips ever go numb or tingle? Which ones?

Does your heart ever suddenly beat real fast for a short period of time?

Does your vision ever close in and get dark around the edges?

Is your mouth dry in the morning when you wake up?

Is your mouth dry often?

Have you had any serious accidents?

Car?

What medications are you taking?

Observe and ask yourself:

Are the patient's masseter muscles enlarged?

Has the patient's mouth remained open while you were interviewing her?

Does the patient have a large belly?

Does the patient have a forward head posture perhaps with a widow's hump?

Has the patient's tongue been thrusting forward during her speech?

What is bothering you the most?

Why did you decide to come here?

# Initial TMD Examination Form

**Patient Name:**

**Date:**

**TMD Assistant:**

## Patient Interview

- |                                |                             |                      |
|--------------------------------|-----------------------------|----------------------|
| " Temporal headaches           | " Occipital headaches       | " Cheek pain         |
| " Headaches - daily            | " Headaches - weekly        | " Pre-menstrual      |
| " Nocturnal headaches          | " Areas sensitive to touch  |                      |
| " Facial pain                  | " Neck pain                 | " Back pain          |
| " Clicking and popping (R) (L) | " Grinding/Crepitus (R) (L) | " History of locking |
| " Ringing in the ears (R) (L)  | " Decreased hearing (R) (L) | " Dizziness/vertigo  |
| " Aware of limited opening     | " Hot and cold sensitivity  | " Tooth pain         |
| " Cold all the time            | " Dry skin                  | " Brittle hair       |
| " Finger tips tingle (R) (L)   | " Panic attacks             | " Tunnel vision      |
| " Dry mouth                    | " Previous accidents        | " Medications        |
| " Masseter/facial hypertrophy  | " Open mouth breathing      | " Tongue Thrust      |
| " Forward Head Posture         | " Snore                     | " Sleep poorly       |
| " Abdominal fat storage        |                             |                      |

## Chief Complaint:

## Radiographic

- |  |   |
|--|---|
| " Condylar flattening (R) (L)                | " Condylar bird beaking (R) (L)         |
| " Mandibular inferior board notching (R) (L) | " Mandibular angle irregularity (R) (L) |
| " Decreased Disc Space (R) (L)               | " Loss of Eminence (R) (L)              |
| " Nasal turbinate hypertrophy (R) (L)        | " Calcified Stylohyoid Ligament (R) (L) |
| " Sinus polyps (R) (L)                       | " Sinus turbidity (R) (L)               |
| " Multiple Root Canals (R) (L)               | " Occlusal wear - flattening            |
| " Mandibular torii                           |   |

## Screening Examination

- |  |   |
|--|---|
| " Limited opening                        | " Deviation on opening (R) (L)                      |
| " Masseter origin tenderness (R) (L)     | " Coronoid Temporalis attachment tenderness (R) (L) |
| " Anterior temporalis tenderness (R) (L) |   |
| " Clicking and popping (R) (L)           | " Crepitus (R) (L)                                  |
| " Open joint tenderness (R) (L)          | " Closed pack joint (R) (L)                         |
| " Mandibular torus (R) (L)               | " Mandibular exostosis (R) (L)                      |
| " Maxillary torus (R) (L)                | " Maxillary exostosis (R) (L)                       |
| " Abfraction                             | " Localized gingivitis                              |
| " Tooth wear facets                      | " Cuspid flattening                                 |
| " Masseter/facial hypertrophy            |   |

## Diagnosis

- |                          |                               |                         |
|--------------------------|-------------------------------|-------------------------|
| " Bruxism                | " TMJ local arthritis (R) (L) | " Local muscle soreness |
| " Secondary Hyperalgesia | " Internal derangement        | "                       |

## Referrals

- |                      |                     |                      |                 |
|----------------------|---------------------|----------------------|-----------------|
| " MD Allergist       | " MD ENT            | " MD Endocrinologist | " MD Generalist |
| " Physical Therapist | " Massage Therapist | " Chiropractor       | " Attorney      |

## Patient Education

- |                                   |   |
|-----------------------------------|---|
| " Soft Guard and Six Week Program | " Estimate of costs provided to the patient |
|-----------------------------------|---|

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## TMD Records Analysis

### Transcranial Radiographic Analysis

<b>Articular Eminence</b>	" Small	" Medium	" Large	
<b>Condylar position</b>	" Retro	" Centered	" Normal	" Forward
<b>Shape of Condylar head</b>	" Flattened	" Normal	" Bird Beaked	
<b>Disc Space</b>	" Inadequate	" Normal	" Excessive	

### Cephalometric Radiograph

<b>Adenoids</b>	" Normal	" Enlarged	" Obstructive
<b>Hyoid Position</b>	" Normal	" Elevated	" Depressed
<b>Cervical Spine</b>	" Normal	" Military	" kypotic
<b>Intervertebral space</b>	" Normal	"	"
<b>C1/Occiput Relationship</b>	" Normal	" Decreased	" Calcified
<b>Mandibular Plane Angle</b>	" Normal	" High	" Closed

### Model Analysis

<b>Wear Facets</b>	" Normal	"	"
<b>Overbite</b>	" Normal	" Deep	" Open
<b>Overjet</b>	" Normal	" Minimal	" Excessive
<b>Maxillary anterior angulation</b>	" Normal	"	"
<b>Torii</b>	" Normal	" Palatal	" Mandibular
<b>Exostosis</b>	" Normal	" Maxillary	" Mandibular
<b>Arch Form</b>	" Normal	" Narrow	" Broadened/Parabolic
<b>Abfractions</b> Teeth #			

### Photographic Analysis

<b>Facial height</b>	" Normal	" Short	" Long
<b>Lateral facial profile</b>	" Normal	" Concave	" Convex

### General Dental Problems

## Medication List

**Patient Name:**

**Date:**

**Prescription Name:**

Date of Prescription:

Reason for prescription:

Doctor Name:

Pharmacy Name and telephone:

**Prescription Name:**

Date of Prescription:

Reason for prescription:

Doctor Name:

Pharmacy Name and telephone:

**Prescription Name:**

Date of Prescription:

Reason for prescription:

Doctor Name:

Pharmacy Name and telephone:

**Prescription Name:**

Date of Prescription:

Reason for prescription:

Doctor Name:

Pharmacy Name and telephone:

**Prescription Name:**

Date of Prescription:

Reason for prescription:

Doctor Name:

Pharmacy Name and telephone:

## Initial TMD Examination

It is very important to **listen** to the TMD patient and attempt to determine the **cause** of each of the patient's problems.

Examine every patient in a logical **step by step order** so that you always remember to check all of the necessary areas during every examination.

Ask the patient to open her mouth.

Look to see if the opening is normal.

Is the opening limited?

Is there any deviation upon opening?

If there is deviation on opening, is the deviation to the right or left?

[ Always palpate the right side first in all examinations. This helps keep track of what you did last and eliminates confusion.]

Palpate the masseter origin.

Is the right masseter origin tender?

Is the left masseter origin tender?

Palpate the temporalis insertion.

Is the right temporalis insertion tender?

Is the left temporalis insertion tender?

Place your hands bilaterally on both temporalii origins.

Is the right temporalis origin tender?

Is the left temporalis origin tender?

[ Show the patient the relationship between the temporalis and the bite. Ask if her headaches are here. ]

Place your hands bilaterally over the patient's TMJs. Ask the patient to open and close.

Is there any clicking or popping in the right TM joint?

Is there any clicking or popping in the left TM joint?

Is there any crepitus in the right TM joint?

Is there any crepitus in the left TM joint?

Ask the patient to stay open and compress the right tmj.

Is there any tenderness in the right TMJ?

Next compress the left TMJ.

Is there any tenderness in the left TMJ?

Explain to the patient the relationship between the TMJ and the ear. Ask the patient to open wide and place your pinky finger forward onto the anterior wall of the external auditory meatus. Ask the patient to close while applying gentle pressure forward.

Is there any pressure on the right TMJ?

Is there any pressure on the left TMJ?

**continued on reverse**

Ask the patient to open her mouth. Inspect the oral environment.

Are there any torii or exostosis?

Is there any abfraction?

Is there localized gingivitis below the crowns of any teeth?

Are there any wear facets on the patient's teeth?

Are the tips of one or both cuspids flattened?

Is the patient's masseters overly large?

**Temporomandibular Disorder Consent Form**  
**Atlanta Dental Group, PC**

Date:

TMD Patient Name:

I understand that Temporomandibular Disorders are not cured and that they are managed. The goal of my TMD therapy is to reduce my pain and to allow me to become more comfortable with my disorder.

I understand that Dr. Padolsky offers no guarantees of success. He and his staff promise to do their best in assisting me to manage my Temporomandibular Disorder problem.

My initial TMD program involves a **six weeks** evaluation period and includes **four** visits. I agree to **comply** with Dr. Padolsky's instructions and if I can not comply, I will inform Dr. Padolsky, or his assistant, of any problem.

I am aware that additional treatment may be needed after my soft guard therapy and that all TMD treatment after this six week TMD program is at an additional cost to me.

I am aware that I have the option of changing my bite after initial therapy.

I understand that it is my responsibility to arrange, pay for and receive any additional necessary care, such as medical evaluation, chiropractic evaluation, physical therapy, and/or massage therapy.

I understand that I may later choose to have additional dental therapy including ( but not limited to ) orthodontics and/or dental reconstruction.

Patient Signature:

Date:

Witness:

## Soft Guard Impression Appointment

The objective of the soft guard impression appointment is to get an **excellent impression** of the patient's **teeth**. The soft guard attaches to the patient's teeth and does not touch the gums. The impression of the teeth must be excellent, and everything else doesn't count. If the border of the impression comes out with a huge bubble and the teeth are nice, the impression is okay.

Wax border molding is **not necessary** because the die stone model border is cut off of the model when the soft guard is being made. Drying the teeth with air and two by twos and then buttering the occlusal and interproximal surfaces of the mandibular teeth is very helpful. It is very important to understand that your impression can be really bad compared to a normal diagnostic impression, but if the impression of the teeth is nice, this impression is okay.

The soft guard impression must be **poured up immediately** after being taken! Alginates distort with time. This distortion is not a big deal if the final models are just for study, but if you are going to make a dental appliance on a model, the model should be poured up immediately and removed from the alginate in an hour.

Much of the die stone model is trimmed away from below the teeth in the laboratory construction of the soft guard.

The die stone model should be an accurate duplication of the patient's actual teeth. Teeth do not have bubbles on their occlusal surfaces or in the interproximal areas between the teeth. Bubbles can get in these areas and form little balls of stone after the pour up. These little balls must be carefully carved out before making the soft guard.

Voids on the final model must be filled in with heat resistant putty.

## Soft Guard Construction

### Preparing the U Shaped Die stone Model

The alginate impression for the soft guard should be **poured up immediately**. The shape of an alginate impression distorts with time. Use die stone, not dentstone. Die stone is much stronger than dentstone and with some care, the die stone model can be used again.

Gently **air dry** the alginate before placing the die stone mix in the impression. The air removes the saliva and helps make the surface of the teeth on the model more accurate. A well made soft guard will often show the occlusal grooves in the teeth.

It takes a **full hour** for the die stone to harden completely. It is very important that the die stone model is strong because you will later be trimming away a lot of the model. The trimming leaves a thin arch of teeth that can easily break.

The die stone model is trimmed to a **horseshoe shape** which allows the vacuform suction machine to suck the soft guard material tightly down onto the teeth. The better the soft guard fits, the easier it will be to wear. A sleeping TMD patient will remove a loose fitting softguard.

Carefully remove the stone model from the alginate. Do not use force or the front teeth will break. The usual reason that the front teeth break is when a model has been left overnight and the alginate hardens. This hard alginate can break the lower front teeth. If you remove the die stone model in one hour, this problem can usually be avoided. If the front teeth break, they can be carefully superglued back onto the model.

The next step is to **rough trim** the model using a **dental model trimmer**. Do not forcefully push the stone model into the dental model trimmer. Let the model trimmer do the work, not your muscles.

Hold the model so that the occlusal plane of the teeth is parallel to the trimmer. Gently push the bottom of the die stone model into the trimmer until the bottom of the model is flat. As you cut more of the base off, the U shape will start to show. You will attempt to get the occlusal-apical height to be as short as possible. This will allow for better suction and pull down so that the soft guard will fit better. However, the thinner the model the greater the possibility that it will break.

The next step is to trim the edges around the outside of the teeth. You do not want to cut any of the teeth off. Be careful. It is very common for assistants to cut the facial of the lower anteriors off because the facial surfaces of the lower anteriors lean forward. **Look at the teeth** when you are trimming the stone model. Trim the edges as close to the teeth as you can without touching the teeth. It is a good idea to trim the stone model an hour after pouring up the alginate impression because if a tooth is cut away, the alginate can be poured up a second time.

Using a large handled laboratory knife, carve the edges of the cast so that they are smooth and remove any small plaster balls that may be clinging to the teeth or in between the teeth. If there are any voids, carefully place putty into each void. You can next sharpen the outlines of the teeth by carefully carving the gingival lines, their interproximal areas, and their occlusal areas.

**Thermo** means “heat” and **plastic** means “to change shape”. The soft guard material is **thermoplastic**. When it’s hot it gets soft and changes shape.

Let the thermoplastic material heat up until it droops downward an inch. If you allow the soft guard material to droop more than an inch, bubbles will form on the incisal edges of the lower anterior teeth. If you pull the material down too early, the material will not suction onto the model well.

Because the soft guard material is soft and can change shape when it’s hot, it is very important to let the soft guard material **completely cool** on the die stone model for several hours. As the plastic material cools, it tightens and grips onto the teeth. If you attempt to pull the warm soft guard material off of the model too early, it will change shape and not fit as well as if you left it.

Once the soft guard has cooled, the next step is to trim and polish it. Be careful and try to preserve the die stone model so that it can be used again if necessary. With a large scissors, trim away all the plastic from around the model and inside the arch.

Gently remove the trimmed soft guard from the die stone model. The soft guard grips onto the teeth. Do not trim any plastic away from the tooth forms. The final soft guard should not touch the gums.

### **Finishing the soft guard**

The soft guard will be worn 24 hours a day for seven days ( 24/7 ) so it must be comfortable. There should be no sharp edges where the plastic was cut. The patient’s tongue will cut into any sharp areas and the patient will not wear the soft guard.

After cutting the soft guard material off of the gums, the edges of the plastic material are smoothed. The first step in the smoothing process is to use a **flame shaped acrylic bur** in a **dental lathe**. The flutes of the bur must be clean and free of material. The edges of the plastic are gently and quickly drawn over the moving flame shaped acrylic bur.

The rounded edges are next smoothed using a **muslin polishing buff** with **wet pumice**. Do not push hard into the moving muslin buff.

When you believe that you are done, run your fingers over the edges of the soft guard to be sure the edges are smooth. They should feel soft. Gently clean the soft guard using room temperature water to be sure that all of the pumice is removed. **Air dry** the soft guard and place it in a retainer box.

## Soft Guard Delivery Appointment

The soft guard delivery appointment only requires a **half hour**. Much of the appointment time can be managed by a **trained TMD assistant**.

1. The patient is **seated**.
2. The patient is given a Six Week TMD Program **brochure**.
3. The trained TMD assistant **reviews** the Six Week Program with the patient.
4. The dentist delivers the soft guard and briefly answers **questions**.
5. The **limitations** of the TMD program are explained.
6. The one week ( POT1 ) TMD post operative **appointment** is made.
7. Give the patient the die stone **model**.

**The trained TMD assistant reviews the Six Week Program with the patient.**

The TMD assistant **reviews** the six week TMD program with the patient and provides the patient with a **TMD Six Week Program Brochure**. The brochure will help the patient remember the instructions.

A well trained TMD assistant can answer most of the patient's questions. In most cases, an excellently educated patient will accept dental care and comply with instructions. However, educating a patient is **time intensive**. To be able to provide this important TMD care and make a profit, the task of educating TMD patients must be delegated to an interested and caring assistant.

**The patient is given a Six Week TMD Program brochure.**

The written brochure assists the patient in remembering the instructions that you gave her. It is very important that you also write in the patient's chart,

“Patient given detailed TMD instructions and a TMD Program brochure” .

Some patients fail to comply with instructions and later insist that they were never told what to do. In fact, this patient just did not want to do what was necessary to improve her TMD condition. In many cases, patients have this behavior in many other areas of their lives.

**The dentist delivers the soft guard and briefly answers questions.**

The dentist checks the soft guard fit and makes sure that the soft guard isn't pinching the gums. The TMD assistant must learn to diplomatically **cut into the doctor-patient conversation** and take over giving the patient the answers. The dentist quietly slips out of the room to take care of another patient.

**The one week ( POT1 ) TMD post operative appointment is made.**

A TMD patient must not leave the office without a one week appointment. The one week follow up visit is probably the most important visit that the TMD patient will make. Give the patient the stone model on which her soft guard was made. This helps avoid a storage problem in our office and for two years we remake a new soft guards for half price when the patient drops her model off. Patients sometimes do lose their guards and sometimes their dogs and cats chew the guards up. When a soft guard is not being worn, it should be stored in a closed orthodontic retainer box.

**Dr. Mark Allan Padolsky**

Atlanta Dental Group, PC  
1624 Piedmont Avenue, NE  
Atlanta, Georgia 30324  
(404) 874-7428  
www.atlantadentist.com

**TEMPOROMANDIBULAR JOINT DISEASE ( TMJ )**

**INITIAL TMJ DECOMPRESSION GUARD PROGRAM**

This brochure describes your SIX WEEK PROGRAM in which you must follow all the instructions in this brochure without changing anything. At the end of the six weeks you and Dr. Padolsky will customize how you can approach your TMJ Dysfunction problem in the future.

**Wear your soft guard 24 hours a day without taking it out**

Your chewing muscles have been protecting and supporting your injured jaw joints and these muscles have gone into spasm by being overworked. The soft guard protects your joints so that your muscles no longer need to continually tighten to hold your joints in place. So your muscles should begin to relax within a week. Remove the guard only when you are eating and place it in the plastic box provided to you

At the end of your first week you will return to see Dr. Padolsky so he may monitor your progress and determine if you need to wear the soft guard full time for an additional week.

**Drink six (6) to eight (8) glasses of water  
throughout each day while on this program**

Muscles have a lot of water in them. If you are not drinking enough water or you're drinking things that dehydrate you, your muscles will dry out and hurt. Drinking lots and lots of water will also cause you to start going to the bathroom more often to get rid of body wastes. This is normal.

A glass of herbal tea or fruit juice each can count as one glass of water. Do not drink distilled water because it lacks vital minerals and can cause serious problems.

### **No caffeine**

Caffeine makes you jittery and makes muscles twitch and get tight. Your muscles will not relax if you are drinking lots of Coke or coffee. The coffee will also remove water from your body

### **No nicotine**

Nicotine acts very much like caffeine. Do not smoke cigarettes, pipes or cigars

### **No alcohol**

Alcohol dries out your muscles. Have you ever noticed how thirsty you are the day after getting drunk? Dry muscles hurt.

### **Calcium Magnesium Zinc**

Buy tablets that have calcium, magnesium, and zinc all in one tablet and take one tablet with **each meal** for the next 6 weeks. It must be taken with a meal because these minerals will not be absorbed well unless your stomach has stomach acid in it. A chronic lack of calcium causes muscle cramps and osteoporosis.

### **Vitamin C 2000-4000 mg**

Vitamin C probably prevents cancer. It is also necessary to make collagen which supports muscles and is a big part of your jaw joints. Start with 1000 mg with each meal and if you get diarrhea then call the office and we will explain what to do. Increase the amount of C you take each day until you get to a minimum of 4000 mg daily. Ester C is expensive but can be taken in large doses with less problems than traditional Vitamin C. Calcium Ascorbate is another alternative.

### **Vitamin E 1000 IUs**

Vitamin E makes up a good part of the lubricant that is in your jaw joints. In order to heal completely it will be needed. Take only one Vitamin E capsule each day in the morning, not one with every meal.

### **Eat three (3) or more meals a day**

Never skip meals since fasting starves muscles which already have problems. It's much better to slowly feed your body rather than asking your major organs to give up their reserves

## **Exercise one (1) hour per day**

When you exercise your face turns red because there's a lot of blood pumped to it. Your biting muscles also get a lot of blood which cleans out and nourishes your hurting muscles. Check with your physician before beginning your exercise.

Only aerobic exercise helps. This means walking, jogging, aerobics and swimming. The workouts can be done a half hour in the morning and a half hour in the evening but they must total one hour each day.

## **Sleep 8 hours each night**

Your body needs time to rejuvenate, heal and recover, especially during the time that you are wearing the guard. Keep a regular bedtime and even consider a warm soaking bath before going to bed.

## **Problems & Questions**

Please report any problems that you might have by calling 404-874-7428 and asking for our TMJ assistant or you can make a postoperative appointment and come in. It is not unusual to have more headaches and problems when you start this program because of withdrawal and detoxification symptoms. Keep wearing your guard because this is the only way to get through the difficulty

Dr. Padolsky has been treating TMJ Dysfunction since 1982. At the time of his graduation from Emory Dental School there was no course on the curriculum in TMD care. However, because he has this problem himself and because he has seen many patients with this dysfunction, he has studied extensively and developed an expertise in this area of Dentistry.

Patients are each treated individually since TMD can have many different types of presentations. Allergies, nasal obstructions, swollen adenoids, neck problems, ear problems, and many more things can contribute to TMD problems. Each patient is different. There is no cure for TMD but good results can often be obtained. Our primary objective is to get patients out of pain. However, because of the many contributing factors associated with TMD, you may relapse and have both good and bad times. Regardless, we will do our very best to help you.

For most patients this program alone will do the trick. In some cases, treatment must progress to a hard three dimensional positioning guard and for others, orthodontic care. You must wear your guard for one week full time and afterwards, at night for the rest of your life. There are times when the guard must be worn for two weeks. The nutritional program lasts for 6 weeks and nothing can be changed. Afterwards you may add items back to your diet while you closely monitor how you feel. This helps you create an awareness of what is harming you.

## **Patient Objections at Soft Guard Delivery**

I'm not going to be able to give up coffee  
I can't eat three meals a day  
I don't have time to exercise  
This is causing me to salivate!  
There's no way I have time to sleep 8 hours  
I can't wear the soft guard at work  
I can't wear the soft guard at work because I talk at work  
The guard makes me look like I have snuff  
Why can't I just wear a football ( athletic ) guard?

### **I'm not going to be able to give up coffee**

Well, you won't have to give up coffee forever, just for a week to six weeks depending on how well you do with the program. Why not consider changing to decaffeinated coffee until your headaches stop?

### **I can't eat three meals a day**

When you skip meals it puts a strain on your entire body. Your liver has to give up and release stored sugars and one part of the body has to rob the other. It is much better for your stomach to feed your body slowly and evenly over time.

### **I don't have time to exercise**

Your body is your most precious possession and it needs exercise to clean out the waste products in the muscles and bring blood to all your tissues. Ultimately, you work better and faster after exercise and the feed up time also gives your mind a rest.

### **This is causing me to salivate!**

This should not happen. The patient is not wearing the soft guard enough for her body to get used to it.

### **There's no way I have time to sleep 8 hours**

Sleep is the time that your body heals and rejuvenates. Eventually you will pay a big price is you continue to deny your body the sleep it needs. You have to rest to heal and you have to heal to reduce your pain. Just go to bed at a predetermined time and lie there. Eventually your body will learn to fall asleep at this time.

Even if you don't sleep, the quiet time will be good.

### **I can't wear the soft guard at work**

You just have to wear it full time for this one week after that it's just at night. What would you do if you broke a leg, take the cast out at night. It's really important that you give your jaw muscles a break so they can relax or you won't get better.

If you have to, take it out when you talk but put it right back in when you are finished talking. It may take two weeks to relax your jaw if we do this.

### **I can't wear the soft guard at work because I talk at work**

As you wear the soft guard your muscles will relax and lengthen your mouth. It should be easier to wear the soft guard then. Many patients who wear the soft guard become comfortable talking with it in their mouths after a few days of wear. You just have to get used to it.

### **The guard makes me look like I'm chewing snuff**

You only have to wear it full time for one week. Be patient. If you are really concerned, I can cut the front of the soft guard off so that it won't push your lower lip out but this weakens the soft guard and it may not last as long as if the front piece was left on.

### **Why can't I just wear a football ( athletic ) guard?**

A soft guard is just too thick and it doesn't fit as well as a soft guard. An athletic guard is okay for emergencies but it is not as well made as a soft guard.

## **First TMD Follow Up Telephone Call**

The TMD assistant makes a follow up telephone call two days after the soft guard is delivered. The purpose of the follow up call is to support the patient and **show the patient that you and your doctor care**. Most of the questions that patients ask involve understanding the six week program. The TMD assistant must **read** and **re-read** and understand the Six Week TMD program.

I'm doing fine.

Why do I have to take the calcium, it's in my regular vitamins?

I can't seem to get enough water.

The soft guard is cutting into my gums.

I don't have time to exercise.

My job is stressing me out.

I can't sleep.

I want some pain killers.

I get diarrhea from the Vitamin C.

I am really hurting!

### **I'm doing fine.**

Well, Dr. Padolsky asked me to call and I'm sure he'll be pleased. I'll see you ( next appointment day, date, and time. ).

### **Why do I have to take the calcium, it's in my regular vitamins?**

Many regular vitamins do not have minerals in them and when they do, there is not enough for this program. We are trying to build you up with large doses of minerals. More than what your regularly need every day. Your regular vitamin and mineral pill doesn't have enough.

### **I can't seem to get enough water.**

Well, it's really important to drink a lot of water because that's what carries the toxins out of your body. Why not try herbal tea, a sports drink or just sucking on some ice.

### **The soft guard is cutting into my gums.**

Well that's not supposed to happen. Did it hurt when Dr. Padolsky delivered it? Can you come in today to have it adjusted? There's no charge for this.

### **I don't have time to exercise.**

Well, ( patient's first name ), it's your body and it needs exercise. There's just no excuse to not take care of yourself. Most people who exercise are more productive and get a lot more done because they feel better and are a lot more alert.

If you don't take care of your body it will have problems and that's why you came to see Dr. Padolsky. Your body is your most precious possession and there's nothing more valuable. Just try exercising this week to help you get through the program. It's just for an hour. Can you split the time up into two half hour sessions?

Is there a place at work that you can exercise during part of your lunch?

### **My job is stressing me out.**

I'm really sorry to hear that. Can you take some time out during the day to exercise? Maybe you could reduce your work load just for this week? If your job is that stressful, it's not very good for your health. The money you make just won't be worth it when you start to have serious problems later in your life.

### **I can't sleep.**

It's not unusual for patient who have just got their soft guards to have problems the first few days. You are going through withdrawal. Just stick with it for a few more days. You can try taking a hot bath right before going to bed. Exercising a few hours before going to bed helps some patients.

### **I want some pain killers.**

Dr. Padolsky doesn't believe in pain killers. He wants your body to heal itself. If you really need to try taking two Advil tablets every six hours for the next day or two and see if this helps.

### **I get diarrhea from the Vitamin C.**

Vitamin C is an acid and can upset your stomach. This causes the diarrhea. You should switch to Ester C or buffered C instead of the regular Vitamin C. They cost more but the diarrhea usually stops.

### **I am really hurting!**

I'm really sorry to hear that. Just hand tight and try and get through these first few days. Most patients get better on the third or fourth day on this program. Try exercising a bit more.

## **Soft Guard Post Operative Appointment - One Week - POSG1**

The purpose of the first week follow up appointment is to see if the patient has improved. Almost always, when the patient has not improved, this patient is not fully complying with the requirements in the program. The soft guard post operative one week appointment only requires a **half hour**. Much of the appointment time is managed by a **trained TMD assistant**.

### **One Week Interview**

Almost all of the patients who do not get better, **did not follow the 6 week program** as instructed. They didn't do something. However, very few walk in and confess. It takes a very careful and non threatening interview approach to make the patient feel safe enough to confess her sins.

Don't tell the patient what she has been doing wrong. Let the patient confess. Ask questions and reserve comments until the end of the interview. If the patient sees that you are getting upset, the patient may not continue to admit wrongdoing.

Sometimes the failure to comply was simply due to a misunderstanding. It is your job to clear up the misunderstanding and get the patient back onto track.

### **How are you doing?**

Let the patient talk while you listen to see if she has improved since last week. Most patients will sing praises. Some patients improve but forget how horrible they were feeling last week. These patients have to be reminded and shown their improvements.

### **Were you able to wear the soft guard?**

Make it sound like it's hard to wear the soft guard so it will be okay for the patient to confess. The patient should have worn the soft guard 24/7, except for eating. If the patient confesses to not wearing the soft guard, then ask:

### **Why was it difficult to wear the soft guard?**

It is your job to find way to help the patient wear her soft guard. You may have to be creative. With some patients, we allow the patient to remove the guard when doing presentations or sales calls, but the guard must be put by in her mouth immediately after.

### **Have your headaches decreased?**

Most patients say yes. Some patients are amazed because they didn't notice that their headaches have reduced.

### **Are you sleeping well?**

Most patients begin sleeping better. However, this is not a direct treatment objective of the soft guard. It is a pleasant side effect.

### **What vitamins were you able to take?**

Just for your information, vitamins are not minerals. This question involves vitamin C and E. Many patients will say that they took a multivitamin. This is not correct. A multivitamin has much less C and E than this program requires.

The Vitamin E and C both have to be separate pills at the doses needed.

### **Did you take any minerals?**

Calcium, Magnesium and Zinc in one tablet.

### **When did you take them?**

I took a calcium, magnesium, zinc tablet with every meal, three times a day.

### **Were you able to drink much water?**

The correct answer is six to eight glasses of water each day. The water should be taken throughout the whole day and not at once. Herbal tea counts as water.

### **Were you able to exercise?**

The correct answer is one hour each day of aerobic exercise, not walking around at work. This exercise can be broken up into two one half hours each day. Many patients hate exercising but our bodies need it. Lack of exercise can result in poor circulation and osteoporosis.

### **What type of exercise were you able to do?**

This answer varies because there are many different ways to exercise. What we want is for the patient to exercise enough for her face to turn red. This redness comes from blood pumping into the skin and muscles underneath the skin.

### **How much coffee were you able to limit yourself to?**

Notice that you begin this question with the word “able”. The word able makes it sound like it is difficult to refrain from drinking coffee.

**Did you get an appointment with your physician?**

This question is asked if the dentist suspected that there may be an underlying medical problem or if the dentist asked this patient to get permission from her doctor to exercise.

## One Week TMD Examination Form

Patient Name:

Date:

TMD Assistant:

**How are you doing?**

" Much better " Better " Same " Worse " Much Worse

Patient Comment: " \_\_\_\_\_ "

**Were you able to wear the soft guard?**

" Yes " No

**Why was it difficult to wear the soft guard?**

" Yes " No

**Have your headaches decreased?**

" Yes " No

**Are you sleeping well?**

" Yes " No

**What vitamins were you able to take?**

" Vitamin C 2000 mg

" Vitamin E 800-1000 IU

**What minerals were you able to take?**

" Calcium/Magnesium/Zinc

**When did you take them?**

" One with every meal

**How much water were you able to drink?**

" Six to eight glasses a day

**What type of exercise were you able to do?**

" Aerobic ( walking, bicycling, running, swimming )

**How long were you able to exercise?**

" One hour each day

**Were you able to stay off coffee?**

" Yes

**Patient complied with all instructions? " Yes " No**

**Patient failed to comply with the following program instructions:**

" 24/7 wear " exercise " minerals " vitamins " 8 hours sleep " 3 meals

" water " coffee elimination "

**Patient instructed to continue full time wear for one more week. " Yes " No**

**Progress to nighttime wear: " Yes " No**

**Professionals visited:**

" MD Allergist

" MD ENT

" MD Endocrinologist

" MD Generalist

" Physical Therapist

" Massage Therapist

" Chiropractor

## Patient evaluation of treatment progress

**Patient Name:**

**Date:**

**Appointment:**       " One Week Follow Up       " Two Week Follow Up  
                              " Six Week Follow Up

**How are you doing?**

" Much better       " Better       " Same       " Worse       " Much Worse

**Are you happy with your progress so far?**

- " Yes, very much
- " Yes
- " Yes, pretty much
- " I'm not sure
- " No, I don't feel better
- " No, I feel worse

**Please describe how you feel?**

## **Common Patient Comments and Complaints**

My bite feels different.  
My teeth have moved.  
It's cutting into my gums.  
I keep finding it on the floor when I wake up.  
I salivate with the soft guard in my mouth.  
I hurt more with it in.  
I can't work and wear this thing.  
I'm having more pain than I had before I came to you.  
My lip feels fat.  
My joints are clicking and popping more.  
I feel great!

### **My bite feels different.**

When a patient has a bad bite, the jaw muscles are trained to keep the teeth right below the bad bite. The mouth opens and closes into the bite that the teeth have. A bad dental bite forces the Temporomandibular joints into abnormal positions and this can cause a lot of pain.

During the first week of soft guard wear, the teeth no longer bite. The brain then learns to open and close the mouth using the information that the temporomandibular joints give the brain. The mouth learns to open and close in a position that is good for the joints. When the soft guard is taken out, the teeth open and close in an arc that is based upon the jaw joint positions and not the teeth. So when the jaw closes and touches the teeth, it hits in a different position on the teeth than it did before the patient wore the soft guard.

The patient senses that her bite has changed but the teeth are still in the same positions that they were in the week before. A properly made soft guard acts like a retainer and holds the dental arch in the same place it started.

### **My teeth have moved.**

What the patient is feeling is the same thing as before, the mandible is opening and closing it a different arc than the week before. The teeth have not moved.

### **The soft guard is cutting into my gums.**

This shouldn't happen but dental staff are human. When the soft guard is delivered, the first thing that is checked is to see if the plastic is cutting into the patient's gums. The most common area for this to happen is on the gums in back of the lower molars. This is called the retromolar area.

### **I keep finding the soft guard on the floor when I wake up.**

Loose fitting, poorly made soft guards can be easily taken out of the mouth. At first, before the patient's chewing muscles relax, the soft guard irritates the TM joints. The sleeping patient will often take the soft guard out of her mouth without even realizing it. If the guard is made well and fits tightly, it will be harder to remove.

This behavior often stops as the patient wears the soft guard more. A problem does result when the patient sleeps with a cat or dog. The soft guard smells like food and an animal may chew it up if the patient takes it out during the night.

### **I salivate with the soft guard in my mouth.**

When a human body thinks it is going to be eating soon, it makes saliva. Whenever someone puts something in their mouth, their body thinks it's food. The first day or so, when a TMD patient puts her soft guard in her mouth, her body makes saliva. After a day or so, the body learns that the soft guard is not food and stops making saliva.

If a patient has not continually worn her soft guard, the body never has time to learn that the soft guard is not food. So when a patient complains that she is making excessive saliva, it means that she has not been continually wearing her soft guard. You caught her!

This saliva should be gently spit out because if it has time to go into the stomach, the saliva causes the stomach to release stomach acids. However, there is no food and this can cause nausea.

### **I hurt more with the soft guard in.**

In the beginning a TMD patient can actually hurt more and it sometimes takes three days to get over the adjustment. The patient's muscles are sore and the soft guard stretches them. It's much like renovating a house, the demolition phase makes every one regret that they started, but in most cases, everyone is very happy in the end.

Up to four Motrin 200 milligram tablets can be taken during this period of time, although I prefer not to use any medications when possible.

### **I can't work and wear this thing.**

If a patient breaks her leg and tells the doctor that she is only going to wear the cast when she wants, the doctor will then insist that she wears the cast all the time. The soft guard does not work if it is worn sometimes; it has to be worn all the time.

The previous joint compression pinched the tissue behind the TMJ and it takes some time for the damaged tissue to recover. The patient has to wear the guard all the time for at least a week before going to night time wear.

You must insist that the patient wears the guard and if she hasn't, then the patient must be re-educated and asked to wear the guard properly for another week full time. Anytime that the muscles have not improved, the patient is asked to wear the guard another week full time.

### **I'm having more pain than I had before I came to you.**

This is a complaint that should raise some concern. The patient may not be complying with the TMD program as requested. A careful non threatening interview should be conducted to determine if the patient is not complying. Taking the soft guard in and out can really aggravate a TMD patient's case.

If it has only been three days, have the patient continue to wear the appliance and offer encouragement. If it is the end of the first week and try wearing the appliance one more week full time. If this does not work, a hard guard may need to be constructed. There is a small faction of patients who only do well with hard appliances.

### **My lip feels fat.**

Many patients are aware of the plumping of their lips from the soft guard material. They often do not like the look and it feels weird. Ask the patient to bear with it for a week to see if she can get used to it. If the patient is unable to get used to the thickness of soft guard material, then you can cut away the facial plastic from the distal of one cuspid to the distal of the other cuspid. This eliminates the material pushing on the lip.

### **My joints are clicking and popping more.**

Before wearing the soft guard there was very little space between the patient's condyles and the bone of the mandibular fossa. This small space was not enough for the **TMJ disc** to fit into so the disc usually was forced forward. Discs that are stuck forward do not move backward easily because there is very little space to move back into place.

When a patient wears a soft guard for a few days to a week, it opens up more space for the **anteriorly displaced disc** to move backward into place. This movement backwards can cause a clicking and/or popping sound when the patient opens and the disc moves backward into place. Another sound may also be heard when the correctly positioned loose disc moves forward out of place when the patient bites. There may be two distinct clicks. This is called a **reciprocal click**.

The noise is sometimes aggravating but rarely painful and the sound often reduces with some time. It actually is a good sign.

### **I feel great!**

This is wonderful and this is what we are trying to achieve. If the patient feels great after one week, the patient can now begin wearing the soft guard at night, every night, for the next five weeks. The patient also returns six weeks after delivery for a final evaluation.

### **My multivitamin has the minerals in it.**

Many patients do not listen well and do not fully understand what you are saying. Many patients believe that because there is calcium, magnesium and zinc in their everyday vitamin pill, then there is no need to take a separate calcium magnesium zinc mineral pill.

It is important to fully explain that the amounts of the minerals are very small in a regular vitamin pill and not adequate for people who are having problems.

### **My multivitamin has the vitamins in it.**

A patient may believe that all vitamins are the same and all vitamin doses are the same. Many patients believe that because there is vitamins C and E in their everyday vitamin pill, then there is no need to take separate Vitamin C and Vitamin E pills.

It is important to fully explain that the amounts of the vitamins are very small in a regular vitamin pill and not adequate for people who are having problems.

### **I have been getting nauseous after taking my vitamins.**

Many patients have allergies to the fillers in vitamin pills. Vitamins are necessary for life and the body needs them. It is extremely rare and perhaps fatal to have allergies to vitamins. The reason patients have problems with vitamin pills is due to the filler that holds the pill together. Have the patient go to a vitamin store and get a hypoallergenic brand of vitamin. It is more expensive but certainly worth it.

## **Soft Guard Post Operative Appointment - Six Weeks - POSG6**

Fortunately, in almost all cases, this is a wonderful appointment. It should be celebration! Most patients improve significantly. However, some have to be reminded how bad they were when they first started.

A rare patient will still be having problems. This is where the dentist must use his diagnostic skills intensely. Is there a cervical problem? Is there a systemic problem? Patients often have more problems than just a TMD problem. However, it is rare for a patient not to have significant improvements. In one actual case, a patient failed to improve and was referred to a neurologist who found an occipital brain tumor. It was then successfully removed. If there had not been a six week follow up, this patient could have died.

## **Alternative TMD treatment**

### **Chiropractic**

The cervical spine effects the mandibular opening and closing trajectory. There are times when soft guard therapy can not relieve all the symptoms that a patient is experiencing. This could be due to a cervical spine problem which is usually located at C5/C6. When a patient has a cervical spine problem, the patient's body has tightened the neck muscles to hold the temporomandibular joints steady. With time this splinting action causes pain and changes the mandibular trajectory.

A good chiropractor can mobilize the joints and provide some physical therapy to relax the muscles. This can significantly improve the patients TMD problem.

If a patient has a cervical problem, the chiropractor can help. However, if the TMD problem has no significant cervical component, the chiropractor can not help. Many chiropractors believe that chiropractic treatment can cure everything and I have had the unfortunate experience of losing patients because of chiropractors telling dental patients that they don't need dentists to treat TMD. So it is very important to speak with the Chiropractor before referring patients.

### **Medical Allergy**

Allergies are a primary source of TMD problems. Food and respiratory allergies cause the nasal turbinates to swell and make nasal breathing difficult or impossible. This blockage leads to mouth breathing and the need to use the masticatory muscles to do things they were not designed to do. Because the teeth do not touch they tend to extrude and the patient develops a long face among other significant problems. The masticatory muscles then go into spasm and eventually become painful ( myalgia ).

With mouth breathing, the cervical muscles go into spasm in an attempt to reposition the patient's head in a CPR type pose to open the oral airway. The head is also thrown forward to level the visual plane displacement resulting from this repositioning.

Airway obstruction may cause hypo-oxygenation which can lead to a number of other chronic complications. The complications resulting from hypo-oxygenation are well known in diabetic patients.

## **Medical Endocrine**

**Hypothyroidism**, or low thyroid hormone, is very common with facial pain patients. Hypothyroid patients are:

always cold

brittle hair

are often very light skinned

overweight

do not sleep well

have dry skin

have cold hands

## **Medical Airway**

Airway obstruction from hypertrophied nasal turbinates, adenoids, and/or tonsils is due to allergies but allergy care does not often shrink these tissues enough to allow normal unburdened breathing. An Ear, Nose, and Throat Physician, also called an Otolaryngologist, is skilled in reducing and recontouring these tissues to allow better respiration.

Laser technology has revolutionized this process because the possibility of serious complications is reduced due to the reduced trauma to the surrounding tissues and elimination of bleeding afforded by this procedure.

## **Medical Other**

There are many medical problems that can aggravate TMD. A number of TMD patients present with literally dozens of medications that each have numerous side effects. Sometimes one medication was prescribed to control the side effects of another. Reducing or eliminating these medication is the physician's job even though the dental practitioner may have knowledge of these problems.

## **Massage Therapy**

Not all Massage Therapists are familiar with TMD problems. Not all Massage Therapists are used to intraoral massage. However, there are many Massage Therapists who teach TMD massage. It is important to talk with a candidate massage therapist to see if she has been trained in intraoral massage.

## **Physical Therapy**

A physical therapist has a university degree ( BS ) and is a trained professional. The physical therapist's primary responsibilities are related to rehabilitating medical patients after surgery.

Physical Therapy started in hospitals where many patients needed rehabilitation after orthopedic surgery. As time went on it became a profession.

Some Physical Therapists have their own practices and occasionally, one is trained in TMD treatment. However, the medical insurance industry has placed a great deal of pressure on physical therapists to form large groups that provide cheap physical therapy. This has put many independent physical therapists out of business and these were the physical therapists most interested in TMD therapy. This has hurt the dental profession by eliminating the incentive to learn TMD therapy.

## **Homeopathy**

## **Acupuncture**

## **The Dental Hygienist's Role in TMD**

A dental hygienist cares for many patients each day and usually sees each patient more often than the dentist. The dental hygienist is an important member of the dental treatment team.

The dental hygienist can **screen patients** for TMD and **recommend soft guard therapy** to a patient while cleaning the patient's teeth.

### **Sign # 1 - Limited Opening**

Some of the problems that TMD patients have can make a dental hygienist's work difficult. First of all, TMD patient's often have limited opening which makes it difficult to get into the patient's mouth. The TMD patient's muscles are sore and can not stay open long. These patients often need short rests throughout their cleaning appointments.

### **Sign # 2 - Mandibular or maxillary torii and/or exostosis**

These torii come from stressing the jaw bones with constant grinding and clenching. Wolff's Law of bone explains that the architecture of bone responds to the forces applied to it. Abnormal forces create abnormal architecture. These growths of bone are the body's attempt at firming up the bone to better be able to deal with the biting forces.

### **Symptom # 1 - Sensitive Teeth**

Many TMD patients grind their teeth ( bruxism ). This results in abfractions and sensitive teeth. A TMD patient may have some pain when the dental hygienist polishes the teeth or squirts cold water over the patient's teeth. The water is just too cold.

### **Symptom # 2 - Headache/Migraine History**

## **The TMD Assistant**

Your job can be very rewarding because you are **helping patients** one on one. It is very important that you **study** and become **very knowledgeable** in this program. You must act like a caring parent and you must be able to **say no** when a patient doesn't want to do the program exactly as you requested and the doctor ordered.

You are an **educator**. You are in charge of educating the patient so that the patient understands the six week program. The patient must understand the program well enough to successfully do it. You can ask the patient questions about the program after you review it to be sure the patient understands everything. The better the patient understands the program, the more chance she will be successful.

You are also the dental practice's **legal assistant**. The TMD Assistant **collects information** about the patient and **documents** when the patient **fails** to do what was requested. The doctor can not be responsible for failures when the doctor and you have done everything correctly. Some patients do not really want to get better. Although this sounds crazy, it's true.

You are a **coach**. You **support** the patient when she is having problems. This support is most needed in the beginning of the Six Week TMD Program when the patient is getting used to wearing the soft guard. Your **encouragement** is very important.

This program is limited to six weeks, not a lifetime, not a year, not several months. It's for six weeks. You get paid for every hour you work and so does everyone else in the office. After the six week program, a patient must return to the dental office for treatment and advice. Some patients and TMD assistants believe that the TMD assistant and dentist advice is worthless. The advice is worthless because the patient does not have to pay for it. Physicians get paid for their medical advice about what is bothering patients, so should dentists and TMD assistants.

## **TMD and Insurance**

Insurance can inflict worse pain upon the patient and dental practitioner than the patient's affliction. It is important to organize your routine insurance procedures to reduce the problems associated with refusals, alternate benefits and endless reviews. It is very important to add several specific ADA codes to your regular insurance confirmation process. These TMD codes are:

0330 Panorex  
0310 Cephalometric  
0310 Transcranials  
9940 Bruxism Appliance

It is important to determine if your patient has had a previous TMD appliance made and to determine the exclusion period from the original date of placement. This is also true for panoramic films and examinations. When patients are referred from other doctors, the previous doctors may have already used up this patient's insurance benefits. Depending entirely on insurance payment may end up a disaster.

Many insurance companies specifically exclude TMJ treatment. However, they will pay for a bruxism appliance because they differentiate dental grinding from TMJ problems. In fact, most TMD patients grind so that the appliance is very often paid.

Legal Reports for personal injury cases

**D7820** Closed reduction of dislocation  
Joint manipulated into place; no surgical exposure

**D7880** occlusal orthotic device, by report  
Presently includes splints provided for treatment of temporomandibular joint dysfunction.

**D7899** Unspecified TMD therapy, by report  
Used for procedure that is not adequately described by a code. Describe the procedure.

**D9940** Occlusal guard, by report  
Removable dental appliances, which are designed to minimize the effects of bruxism ( grinding ) and other occlusal factors.

## **Website References**

**Dr. Mark Allan Padolsky**

[www.tmjinformation.com](http://www.tmjinformation.com)

**American Academy of Orofacial Pain ( short tutorial )**

[www.aaop.org/TMD/tmd\\_tutorial.htm](http://www.aaop.org/TMD/tmd_tutorial.htm)

**ivillagehealth.com**

[www.ivillagehealth.com/library/onemed/content/0,7064,241012\\_245890,00.html](http://www.ivillagehealth.com/library/onemed/content/0,7064,241012_245890,00.html)

**University of Washington Radiology Department**

<http://www.rad.washington.edu/anatomy/modules/TMJ/TMJ.html>

**TMD/Medical/Dental History**

Date:                      Patient Name:

Who referred/recommended you to Dr. Padolsky?

What is bothering you the most?

What doctors have you seen about this problem? Please list them all below ( include medical )

List all the treatment you have had for this problem.

## TMD Appointment Sequences

Appointment Description	Appointment Abbreviation	Cost
TMJ Consultation	CNT	\$ 125.00
TMJ Work Up	TWU	
Soft Guard Impression	SG	
Deliver Soft Guard	DSG	
TMJ Post Operative 1 Week	POSG1	
TMJ Post Operative 6 Weeks	POSG6	
Second Opinion TMJ	SOT	
TMD Legal Report	RTMD	\$ 150.00

### TMJ Consultation ( CNT )

A new patient who comes to our office for a consultation **may not become a permanent patient**. This person may refuse treatment or go to another office for treatment. Some patients want their insurance to pay for everything and when they find out that they have to pay a portion of the bill, they leave.

The consultation is for a half hour but involves about **10 to 15 minutes** of the doctor's time. The TMD assistant follows up with patient education, not the doctor. **No written treatment plan** is given to the patient because this is a consultation appointment, not an examination. It's a consultation, not a second opinion.

### TMJ Work Up ( TWU )

This appointment involves collecting information about patients. It starts with taking x-rays. A **panoramic** and **bite-wing** x-rays are taken. When necessary, a set of **transcranial** x-rays should also be taken. The dentist will help you make the decision if transcranials are necessary.

Panoramic X-ray	\$ 95.00
Transcranial X-rays	\$ 165.00
Cephalometric X-ray	\$ 99.00
Diagnostic Casts	\$ 95.00
Comprehensive Examination	\$ 95.00
OSHA	\$ 7.00
Total	\$

### **Soft Guard Impression ( SG )**

This is a half hour appointment scheduled in an assistant appointment book.

In some states, a dental assistant can not take impressions when an appliance is going to be made on a model. Some states require a special certification for an assistant to take this impression. Check with your state laws to be certain you are complying. Georgia requires advanced certification.

### **Deliver Soft Guard ( DSG )**

This is a half hour appointment scheduled in an assistant appointment book.

### **TMJ Post Operative 1 Week ( POSG1 )**

This is a half hour appointment. Most patients improve significantly. The temporalis and masseter are palpated and the TMD assistant takes a 1 Week Post Operative follow up TMD history.

The patient is questioned to determine if the patient complied with the program as requested. The TMD Assistant identifies and documents problems. The most common problem is the patient's failure to comply. Sometimes a patient will blatantly lie and sometimes the patient just didn't understand the program rules. However, the patient agreed to follow the program when she first began.

### **TMJ Post Operative 6 Weeks ( POSG6 )**

This is almost always a quick check appointment. Most patients improve significantly. The temporalis and masseter are palpated and the TMD assistant takes a follow up TMD history.

### **Second Opinion TMJ ( SOT )**

The patient who seeks a second opinion may not become a permanent patient. It is very possible that this patient is looking for an expert witness to **sue** another dentist. Inexperienced front desk staff do not always carefully question callers to determine why the patient is coming in and often mistakenly make a consultation appointment rather than a Second Opinion appointment.

Written reports are not part of a Second Opinion appointment. Lawyers want written reports to use strengthen their case and prove their claims. Many patients do not want to pay for these reports and want the dentist to provide written documentation for free and without a comprehensive examination. A dentist who provides written documentation for free and without a comprehensive examination is not a good business man and certainly legally naive.

## **Car/Accident Insurance Procedures**

People who have automobile accidents sometimes develop Acute TMD problems. Car insurance is NOT dental insurance. They are handled differently. When a patient calls into the office after a car accident, the first thing that must be done is to get her automobile insurance information. Then call the automobile insurance company to get permission to see the patient. Automobile insurance companies, workman's compensation insurance companies, and property insurance companies often say one thing and then do another. We have got permission to treat a patient and then received only half of the fee. To avoid this problem, you must get written permission for specific procedures directly from an insurance company representative.

1. Written permission to do a TMD Consultation or brief examination.
2. Written permission to do a TMD Work Up.
3. Written permission to do a Soft Guard.

## **Follow Up Letters**

Follow up letters to other health care professionals helps you better care for your TMD patient. Physicians commonly send letters to one and other, however, dentists are not as familiar with sending written communications. This reluctance should be overcome for your patient's sake. The letters also help build your practice and make you more recognized in the healthcare community. This can only help you.

TMD Patient - Post Consultation - Refused Treatment  
TMD Patient - Post TWU  
TMD Patient - Four Weeks  
TMD Patient - Soft Guard Completion ( Final Treatment )  
Physician - General  
Physician - Ear, Nose, and Throat ( ENT )  
Physician - Allergist  
Chiropractor  
Physical Therapist  
Massage Therapist  
Naturopath  
Dentist - Post Consultation  
Dentist - Soft Guard Completion ( Final Treatment )  
Dentist - Phase II

Mark Allan Padolsky, DDS  
Atlanta Dental Group, PC  
1624 Piedmont Avenue, NE  
Atlanta, Georgia 30324  
404-874-7428  
[www.tmj-atlanta.com](http://www.tmj-atlanta.com)

Date

Patient Full Name  
Patient Street Address  
Patient City, State, Zip

Dear Patient First Name,

Thank you for visiting my office and allowing me to meet you. As you know from your visit, you have a Temporomandibular ( TMJ ) Disorder and I am concerned that you did not reschedule for treatment.

A healthy body is your most important possession. As a healer, it is my wish that you become happy and healthy.

If you have a disagreement with my office, please do not allow this to prevent you from seeking needed treatment elsewhere.

In the interest of better dental health,

I remain yours,

Mark Allan Padolsky, DDS

**Fellow**, Atlanta Craniomandibular Society  
**Fellow**, American Orthodontic Society  
**Master**, American Academy of General Dentistry

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Date

Physician ( general ) Name  
Physician ( general ) Street Address  
Physician ( general ) City, State, Zip  
Physician ( general ) Telephone Number

Dear Physician ( general ) First Name,

I had the pleasure of examining your patient, Patient Name, on Date of Examination. A panoramic radiography was taken and ( radiographic findings ).

Based on the above findings, I constructed a mandibular Temporomandibular Dysfunction appliance and instructed the patient in our six week program.

Mark Allan Padolsky, DDS

**Fellow**, Atlanta Craniomandibular Society  
**Fellow**, American Orthodontic Society  
**Master**, American Academy of General Dentistry

cc: Patient Name

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Date

Patient Name  
Patient Street Address  
Patient City, State, Zip

Dear Patient First Name,

Thank you for allowing me to examine you and take Temporomandibular Joint Dysfunction records. Study of these records will assist me and my staff in better understanding your case. It is my goal to help you as best I can.

In the interest of better dental health,

I remain yours,

Mark Allan Padolsky, DDS

**Fellow**, Atlanta Craniomandibular Society  
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Date

Chiropractor Name  
Chiropractor Street Address  
Chiropractor City, State, Zip  
Chiropractor Telephone Number

Dear Chiropractor First Name,

I had the pleasure of examining your patient, Patient Name, on Date of Examination. A panoramic radiography was taken and ( radiographic findings ).

Based on the above findings, I constructed a mandibular Temporomandibular Dysfunction appliance and instructed the patient in our six week program.

In the interest of better health,

I remain sincerely yours

Mark Allan Padolsky, DDS, FACMS, FAOS, MAGD

**Fellow**, Atlanta Craniomandibular Society  
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Date

Physical Therapist Name  
Physical Therapist Street Address  
Physical Therapist City, State, Zip  
Physical Therapist Telephone Number

Dear Physical Therapist First Name,

I had the pleasure of examining your patient, Patient Name, on Date of Examination. A panoramic radiography was taken and ( radiographic findings ).

Based on the above findings, I constructed a mandibular Temporomandibular Dysfunction appliance and instructed the patient in our six week program.

In the interest of better health,

I remain sincerely yours

Mark Allan Padolsky, DDS, FACMS, FAOS, MAGD

**Fellow**, Atlanta Craniomandibular Society

**Fellow**, American Orthodontic Society

**Master**, American Academy of General Dentistry

cc: Patient Name

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Atlanta Dental Group, PC  
1624 Piedmont Avenue, NE  
Atlanta, Georgia 30324  
404-874-7428  
[www.tmj-atlanta.com](http://www.tmj-atlanta.com)

Date

Massage Therapist Name  
Massage Therapist Street Address  
Massage Therapist City, State, Zip  
Massage Therapist Telephone Number

Dear Massage Therapist First Name,

I had the pleasure of examining your patient, Patient Name, on Date of Examination. A panoramic radiography was taken and ( radiographic findings ).

Based on the above findings, I constructed a mandibular Temporomandibular Dysfunction appliance and instructed the patient in our six week program.

In the interest of better health,

I remain sincerely yours

Mark Allan Padolsky, DDS, FACMS, FAOS, MAGD

**Fellow**, Atlanta Craniomandibular Society

**Fellow**, American Orthodontic Society

**Master**, American Academy of General Dentistry

cc: Patient Name

Mark Allan Padolsky, DDS, FACMS, FAOS, MAGD  
1624 Piedmont Avenue, NE  
Atlanta, Georgia 30324  
404-874-7428

Date

Insurance Company Name  
Insurance Company Street Address  
Insurance Company City, State, Zip  
Insurance Company Telephone Number

**RE: [Patient First Name] [Patient Last Name]**

Dear Insurance Company Representative,

I am responding to your letter requesting more information about [Patient First Name] [Patient Last Name]. [Patient First Name] patient grinds her teeth, which I am sure you know is a condition called **Bruxism**.

The grinding is causing **hot** and **cold sensitivity** and the muscular effort from the grinding is also causes tightening of the facial muscles. With time, the grinding may **harm** [her/his] teeth so it is clear that this appliance is very necessary.

I have proposed making her/her a **soft mandibular bruxism appliance** and I **do not** plan on changing [her/her] vertical dimension of occlusion. This appliance protects the teeth and relaxes the masticatory muscles.

In the interest of better health,

I remain sincerely yours

Mark Allan Padolsky, DDS

**Fellow**, Atlanta Craniomandibular Society  
**Fellow**, American Orthodontic Society  
**Master**, American Academy of General Dentistry

cc: Patient Name

Mark Allan Padolsky, DDS

Atlanta Dental Group, PC  
1624 Piedmont Avenue, NE  
Atlanta, Georgia 30324  
404-874-7428  
[www.dentalexpert.com](http://www.dentalexpert.com)

Date

Attorney Name  
Attorney Street Address  
Attorney City, State, Zip  
Attorney Telephone Number

Dear Attorney First Name,

I had the pleasure of examining your patient, Patient Name, on Date of Examination. A panoramic radiography was taken and ( radiographic findings ).

Based on the above findings, I constructed a mandibular Temporomandibular Dysfunction appliance and instructed the patient in our six week program.

In the interest of better health,

I remain sincerely yours

Mark Allan Padolsky, DDS, FACMS, FAOS, MAGD

**Fellow**, Atlanta Craniomandibular Society  
**Fellow**, American Orthodontic Society  
**Master**, American Academy of General Dentistry

cc: Patient Name

## **TMJ Exercises Jaw**

### **Deviation Correction**

A **deviation** is an unwanted shifting of the jaw to one side. When many TMJ patients open their mouths, their jaws deviate to one side. Almost always the jaw shifts towards the jaw joint that is damaged. Over time the good side of the mouth becomes overused and develops problems. This TMJ exercise is used to help **reeducate** the jaw to open and close correctly. It must be done in front of a mirror so that you can actually see your jaw open and close.

Stand in front of a mirror ( a bathroom mirror will do ) and be sure the room is very well lighted. First take some time to watch what is happening to your jaw. Slowly open and close your mouth while keeping your head straight. Notice that your jaw is opening to one side.

Now try and open your mouth straight. This will take some effort because the weak muscles on the bad side will not want to function correctly when you ask them. Open and close correctly for ten openings and take a rest. Repeat another ten openings again and take a rest. Finally repeat ten more. This is called three sets of ten. Do three sets of ten three or four times each day.

If you are having problems noticing your jaw shifting, place a piece of tape, or a colored dot on your chin. These dots can be purchased at Office Depot and come in packs of 100 or more. They are normally used to mark files. You can also hold a piece of dental floss in front of your face and mouth. Open and close while keeping the floss perfectly vertical. An abnormal jaw will go to one side of the floss. That is what this TMJ exercise is attempting to correct.

### **Jaw Opening Correction**

## **Muscle Relaxation/Stretching**

Much of the TMJ related pain that most patients have comes from muscle pain. The primary purpose of the six week TMJ program is to reduce muscle problems but a motivated patient can do more than the minimum requirements of the program. **TMJ exercises** can also be done to help reduce your TMJ pain.

TMJ muscle pain often occurs when a jaw muscle can not clean out its waste or receive its food to renew itself. This happens when a muscle tightens and stays tight. The tightness cuts off the blood vessels going into and out of the muscle. One way to loosen and relax a muscle is to use TMJ exercises to gently stretch it.

Stretching can be done by slowly opening your mouth as wide and you comfortably can and then slowly closing. Then slowly opening to the left side as wide as you comfortably can and then slowly closing. Then slowly opening to the right side as wide as you comfortably can and then slowly closing. Repeat these movements until your muscles feel better. You can do this stretching exercise while driving, watching TV, before bed, at work, and during a lot of other times.

The next step is to assist your jaw in doing these stretches by using your hand to gently go a bit further than just by opening your mouth yourself. Do not use a lot of force! Do each of the stretching movements as previously described above but use your hand to open a little bit more than you could only with your mouth. If this causes a lot of pain, don't do it.

You can increase the blood flow to your muscles by placing **moist hot towels** on the sides of your face while you do this exercise. Run a sink with hot water until it fills up about half way. Adjust the hot water so that you can touch it with your hands and it doesn't burn. Place two hand towels in the hot water and then wring the two towels out. Quickly fold the towels up neatly and place one on each side of your face. Do your stretching exercise until the towels become cold. You can continue to reheat the towels and repeat the exercise until your muscles feel better.

## **Cervical Mobilization**

## **Professional TMJ Massage**

### **Purpose**

TMD Massage can be used to **assist a patient in opening her mouth**. It is not uncommon for TMD patients to present to the dental office without being able to open very much. When the TMD assistant tries to get an alginate impression for a soft guard, the TMD patient can not open wide enough to get the impression trays in the patient's mouth.

TMD massage can be used as a treatment procedure to **reduce TMD pain**.

### **Types**

TMD massage is done carefully and gently. There are three different types of muscle relaxation finger techniques used. First, a gentle kneading and pinching movement between your forefinger and thumb. This technique is used primarily to relax the masseter muscle and temporalis insertion. Second, a rotary rubbing that also compresses the muscle. This is used for the temporal portion of the temporalis muscle. Finally,

### **Technique**

#### **Masseter Attachment**

Insert your finger into the patient's mouth as far back as the last mandibular molar. Gently place your fore finger on the inside of the patient's cheek midway between the upper and lower teeth and slowly move your forefinger upward as far as it will go in the vestibule. This is the masseter muscle attachment to the zygomatic process ( cheekbone ).

The masseter muscle attachment often feels tight with TMD patients and may have a hard knot anteriorly. The tight area and knot should be gently massaged until they relax. You can occasionally remove your fingers from the inside of the patient's mouth and simply rub the outside of the cheekbone above the area of the tightness.

It is very important to always massage bilaterally. If you only treat the affected side, it will get better and the other side will later become symptomatic. The patient should demonstrably be able to open her mouth much better. A very nice touch it to follow up the massage with bilateral moist heat over the massaged areas for five to ten minutes.

#### **Temporalis Insertion**

## **Prescription Drug Effects**

### **Prozac (Fluoxetine)**

Prozac is an antidepressant that can cause headache, joint pain, muscle pain, dizziness, and insomnia. It sometimes causes tinnitus, buccoglossal syndrome, neck rigidity, vertigo, dry mouth, stomatitis, dysphagia, gingivitis glossitis and thirst. These can be accompanied by tongue edema, facial edema, twitching and bone pain. Ear pain, neck pain, jaw pain and malaise.

### **Elavil (Amitriptyline hydrochloride)**

Can cause blurry vision, dry mouth, fatigue, sensitivity to light and temperature sensitivity. Elavil can cause headache, dental cavities, dizziness, shaking, swollen face or tongue, unsteadiness, and/or weakness. change in sense of taste or hearing, irritated tongue or mouth, nightmare,

### **Paxil (Paroxetine)**

Neck pain, bruxism, painful joints, buccal cavity disorders, difficulty swallowing, glossitis, mouth ulceration, arthritis, temporary paralysis of a muscles, malaise, ataxia, hyperkinesia, hypertonia, sinusitis, and tinnitus.

### **Zoloft**

Jaw, neck, and back muscle spasms, weakness or tiredness; insomnia or nightmares; dry mouth. blurred vision; slow or difficult speech; shuffling walk; persistent fine tremor or inability to sit still; fever, sore throat symptoms; difficulty swallowing

Ambien

Lorazapan

trazadone

Fentanyl

## **Resistant Cases**

A dentist practices dentistry. Practice makes perfect but very few achieve perfection. Part of treating TMD is understanding that you will not be able to successfully treat all cases. Sometimes there are obvious or hidden external factors that will prevent your success.

## **Example notations**

Doing very well.

Headaches decreased.

Failed to wear soft guard as instructed.

Delivered soft guard with written and oral instructions about six week TMD program.

Patient taking soft guard out during the day.

Patient stated there was less pain.

Called patient at home, doing fine.

Advised patient to take Motrin 200 mg q6h.

Reviewed and demonstrated TMD exercises.

TMD Interview, examination, and consultation.

TMD Records.

PAN

TMD Exam

Patient requested narcotic drugs

Patient failed to exercise daily

Patient failed to schedule medical consult

Collected patient drug list from medication bottles

Casey TMD educational video shown

ADG TMD brochure given to the patient

Demonstrated hot towel TMD technique

Reviewed three dimensional jaw positioning theory

## **Constructing a Hard Guard**

A hard repositioning guard is based on a different treatment philosophy than a soft guard. Using the hard guard requires that you to think differently than before. First of all, the hard guard is hard and this hardness mimics the occlusal surfaces of natural teeth. The hard guard creates a new bite for the patient by forcing the jaws into the bite represented on the surface of the hard acrylic. The hard guard repositions the patient's entire jaw including both temporomandibular joints.

We always precede hard guard construction with a soft guard. The soft guard relaxes the masticatory muscles so that the patient's jaws can easily be guided into a desired position. No matter what technique a dental practitioner uses to determine jaw position, shortened, tight and painful muscles will interfere with this.

Some patients need a new jaw position to feel better. There are many ways to guesstimate the ideal jaw position for a patient. However, the best jaw position for a patient is ultimately the jaw position in which that patient feels and functions best. The patient's health is the monitor that determines success, not the dogma that the treating dentist has been indoctrinated in.

For decades, perhaps centuries, the techniques for determining a patient's bite were developed for making complete dentures. The rules for placement of an edentulous patient's teeth are not generally a subject of debate. These rules can be applied to patients with teeth by imagining that the patient has no teeth and lining up all of the landmarks that normally would be aligned for making a set of dentures. In general the patient's face should look pleasant and not overclosed with the lips full but not excessive.

## **Myomonitor**

**Myo** means muscles and **monitor** means to watch something. The myomonitor uses electrical stimulation to relax the masticatory muscles. The idea is that when the masticatory muscles are at rest, the joints must be in the correct place. This draws upon the ideal that form and function are closely integrated.

## **TMJ Orthodontics**

Ortho means straight and dontics means teeth. Orthodontics means straight teeth. However, a patient can have straight teeth with a bite that is in the wrong place.

TMJ orthodontics is different from normal orthodontics. TMJ orthodontics is done only after a patient has undergone hard guard therapy to find an acrylic against natural teeth bite in which this patient is comfortable and pain free.

The new comfortable jaw position may be at an increased vertical position or either to the right or left of the current natural bite. The patient's teeth are moved into this three dimensional jaw position.

## **Moist Heat Therapy**

Moist Heat Therapy can be used by the TMD patient at home and it can be combined with TMD exercises. The goal of moist heat therapy is to bring blood to the masticatory muscles. The increased blood flow relaxes the masticatory muscles and removes waste products that may have built up inside the muscles.

Allow hot water to run into a closed off sink until the water fills about a third to a half of the sink. Place two hand towels into the hot water. Remove the towels and wring them out. Place one on each of the sides of your face above your cheeks. Gently open and close your mouth while pressing the hot towels onto your face. When the towels cool, remove them and place them back into the warm water in the sink. Remove, wring and replace the towels again. The hot towels can be moved around the face at each placement.

Above the TMJs, over the masseters and above the temporal areas.

## **Iontophoresis**

Iontophoresis is a physical therapy technique that gets medicines into areas of the body without the use of needles. Medicines are made up of chemicals that can either be positively charged, negatively charged, or neutral.

An electric field has a positively charged pole on one side and a negatively charged pole on the other. Molecules that are negatively charged move towards the positive pole. Likes repel and opposites attract. Molecules that are positively charged move towards the negative pole. With iontophoresis a magnetic field is created between two points on a patient's body using electrode patches much like the EKG patches that are used to take your EKG. Medicines are then placed in this field and move into the patient's body in the direction of the field created by the assistant.

## **Temporomandibular Disorder (TMD) Terminology**

**Abfraction** - Notching of the gingival facial of a tooth. It is due to excessive flexing of a tooth due to constant high force grinding. Many dentists used to believe it was from excessive brushing with hard bristle brushes.

**Acute** - Something that happens all of a sudden and often goes away soon. An acute period can be followed by a longer term chronic period or the problem may just go away.

Allergy

Anterior Scalene Muscle

**Arthritis** - arthro- is the word beginning that means joint and -itis is the word ending meaning inflammation. Arthritis is an inflamed joint.

Atlas

Axis

**Bruxism** - Bruxism is the dental term for when a patient grinds her teeth.

**Calcium** - Calcium is an essential mineral. Bone serves as a reservoir of calcium and this essential mineral is necessary for good muscle function.

Cephalometric Radiograph

**Cervical Spine** - This is the neck area of the spine. It holds the head up and connects the head to the chest area. It's also called the C Spine and is often involved with TMD patients.

Chronic

Closed Pack Position

Collagen Vascular Disease

**Collagen** - Collagen is a building material that the body uses. It holds muscles together, forms the early skeleton before bone matures, and is the primary component of tendons, ligaments, and joints.

Condyle

Condylod Process

Coronoid Process

**Dehydration**- When a patient's body has a reduced water content either from not drinking enough fluids or urinating too much.

**Diabetes** - Diabetes is an endocrine ( hormone ) disorder of insulin and cause an elevation of blood sugar ( glucose ) .

Equilibration

**Exostosis** - This is the bulging out of bone from the facial alveolar plate. It is a response to grinding.

**External Auditory Meatus** - This is the bony ear hole located on the side of the skull. The ear leads into the External Auditory Meatus.

**Facet** - A facet is a flat area that can be caused by constant grinding of one surface against another surface. Wear facets occur when teeth constantly grind against other teeth.

Fossa

**Galleti Articulator** - This is a special instrument that holds a patient's upper and lower casts without using plaster. The Galleti articulator helps the dentist study the two casts in different three-dimensional positions.

**Hyperglycemia** - This is when there is too much glucose ( sugar ) in the blood.

**Hyperinsulinism** - When too much insulin is produced by the pancreas. It is often caused by an excessive carbohydrate loaded diet and results in weight gain in the stomach.

**Hyperthyroidism** - This is when there is too much thyroid hormone.

**Hypertrophy**- This is the overgrowth of something. Body builders want muscle hypertrophy.

**Hypoglycemia** - This is when there is too little glucose in the blood and it leads to a number of problems such as dizziness, light headedness, tunnel vision and possibly unconsciousness.

**Hypothyroidism** - This is when there is too little thyroid hormone and leads to dry hair, constant coldness, muscle dysfunction and weight gain.

**Inferior Boarder of the Mandible** - This is the bottom edge or boarder of the lower jaw. A number of muscles attach to the lower boarder of the mandible.

**Joint** - A joint is where two bones join and acts as a hinge so that one or both of the bones can move.

**Lateral Pterygoid** - One of the four masticatory ( chewing ) muscles. It attached to the neck of the condyle and pulls the condyle forward and in.

**Limited Opening** - When a patient can not open her mouth well.

**Lumbar Spine** - The spine is usually divided up into three areas, the neck, the upper back and the lower back. The lower back portion of the spine is also called the lumbar spine.

**Magnesium** - Magnesium is an essential mineral. When it's deficient, the deficiency cause many unwanted signs and symptoms.

**Mandible** - This is the dental name for the whole lower jaw bone from one condyle all the way around to the other.

Mandibular fossa

**Masseter Origin** - The masseter origin is where the masseter muscle attaches to the zygomatic process ( cheek bone ) on the skull.

**Masseter** - the masseter is a crushing muscle. There is one on each side of the mouth running from the lower jaw to the cheek bone.

**Maxillary Sinus** - There are two maxillary sinuses that are each located about the roots of the posterior maxillary teeth. The roots of these teeth sometimes extend into the maxillary sinuses. They are located inside the skull below the cheeks.

Maximum Intercuspatation

**Medial Pterygoid** - This is one of the chewing muscles ( muscles of mastication ) that closes the jaw and mirrors the masseter from the inside of the mouth.

Middle Scalene Muscle

Mitral Valve Prolapse

**Muscle Spasm** - Muscle spasm is when a muscle shakes uncontrollably. It usually happens when the muscle is asked to do something for a long time or something too difficult.

Muscle Splinting

**Myositis** - itis means inflammation and myo means muscle. Myositis means an inflamed muscle. There may or may not be pain. Pain usually occurs with long term myositis.

**Myospasm** - Myo means muscle and spasm means to shake uncontrollably. Myospasm is when a muscle shakes uncontrollably.

Nasal Aperature

**Nasal Allergy** - This is when something in the air causes the tissues in the nose to swell up.

**Nash** - This is an ancient term for grinding your teeth.

**Nocturnal** - Something that occurs at night when human beings are usually sleeping.

Occipital

**Occlusal Adjustment** - This is when a patient's bite is adjusted.

Occlusal Equilibration

Occlusal Plane

**Open joint**- This is the position of the jaw joint when the patient's mouth is open.

**Oxygenation** - Oxygenation is putting oxygen into something. Tissues need oxygen to live.

Panoramic Radiograph

Polyp

Posterior Scalene Muscle

**Retrodiscal tissue** - the soft tissue located at the back of the TM joint.

Retrodiscal space

**Root Canal** - A root canal is when the nerve and surrounding tissue in a dental pulp inside a tooth are removed and filled with a synthetic material.

**Sign** - A sign is a problem that a patient has but does not know about. A sign suggests that there is an underlying problem.

Sternocleidomastoid Muscle

**Symptom** - A symptom is a problem that patient has and the patient is aware of the problem. Patients often report symptoms to you.

Temporalis Tendon

**Temporalis** - One of the masticatory ( chewing ) muscles that fans out on the side of the head. The temporalis helps close the mouth and guide the jaw.

**Tendonitis** - This is when a tendon become inflamed and often painful.

Thoracic Outlet Syndrome

Thyroid Dysfunction

**Tinnitus** - ringing in the ears.

Tomograph

**Torus ( Torii )** - This is a bone bump on the inside of the mandible and/or in the middle or the palate. Torii is the term used for more than one torus. Torii develop from placing stress on the bone such as with constant grinding.

**Transcranial Radiograph** - Trans- means across and -cranial comes from the Latin word cranium, meaning head or skull. A transcranial looks at the TM joint by angling the x-ray beam across the patient's head. It takes six separate radiographs on the same x-ray film. Three of each TMJ. One with the patient at rest, one slightly open and one all the way open.

**Tunnel Vision** - When a patient can only see through the center of her eyes and the surrounding areas black out. A patient with tunnel vision may feel like she is going to faint. Tunnel vision is usually due to hypoglycemia.

Turbidity

Turbinates

Vitamin E

**Vitamin C** - Vitamin C is an essential vitamin involved with collagen formation. Collagen is used in forming ligaments, tendons, and bone.

Wear Facet

Zinc

## **Temporomandibular Disorders Reading List**

### **Management of Temporomandibular Disorders and Occlusion**

Jeffrey P. Okeson, DMD

Mosby 5<sup>th</sup> Edition 2002/2003

### **Orofacial Pain: Guidelines for Assessment, Diagnosis, and Management**

The American Academy of Orofacial Pain/ Jeffrey P. Okeson, DMD

Quintessence Books 1996

### **Temporomandibular Disorders : Guidelines for Classification, Assessment, and Management**

The American Academy of Orofacial Pain/ Charles McNeill, DDS

Quintessence Books 2<sup>nd</sup> Edition 1993

### **TMJ Disorders Management of the Craniomandibular Complex**

Steven L. Kraus, P.T.

Churchill Livingstone 1988

### **Electrognathographics: Atlas of Diagnostic Procedures and Interpretation**

Arthur Lewin, BDS

Quintessence Books 1985

### **Abnormal Jaw Mechanics: Diagnosis and Treatment**

William K. Solberg, DDS, MSD Glenn T. Clark, DDS, MS

Jeffrey P. Okeson, DMD

### **Diagnosis and Management of Facial Pain**

Oral and Maxillofacial Surgery Clinics of North America

Harry Dym, DDS Guest Editor

W.B. Saunders Company Volume 12 Number 2 May 2000

### **Bell's Orofacial Pains**

Jeffrey P. Okeson, DMD

Quintessence Books 5<sup>th</sup> Edition 1995

### **Low Voltage Technique**

Joseph Kahn, M.S., P.T.

31 Underhill Avenue, Syosset, New York 11791

4<sup>th</sup> Edition 1983

### **Craniomandibular and TMJ Orthopedics**

Franco Mongini, MD, DDS

Wilhelmine Schmid, MD, DDS

Quintessence Books 1989

**The President's Conference on the Examination, Diagnosis and Management of Temporomandibular Disorders**

American Dental Association

1983

**New Concepts in Craniomandibular and Chronic Pain Management**

Harold Gelb DMD

Mosby-Wolfe 1994

**Facial Pain**

Parker E. Mahan, DDS, PhD, FACD

Charles C. Alling, III, DDS, MS, Dsc, FACD

Lea & Febinger 3<sup>rd</sup> Edition 1991

**Temporomandibular Disorders: Diagnosis and Treatment**

Andrew S. Kaplan, DMD,FACD,FICD

Leon A. Assael, DMD

W.B. Saunders Company 1991

**A Clinical Outline of Temporomandibular Joint Diagnosis and Treatment**

William B. Farrar, DMD

William L. McCarty, Jr. DMD

Normandie Study Group for TMJ Dysfunction

7<sup>th</sup> Edition 1983

**Diagnosis of the Temporomandibular Joint**

Richard W. Katzberg, MD

Per-Lennart Westesson DDS, PhD

W.B. Saunders Company

1993

**Clinical Management of Temporomandibular Disorders and Orofacial Pain**

Richard A. Pertes, DDS

Sheldon G. Gross, DDS

Quintessence Books 1995

**Neuromuscular Dental Diagnosis and Treatment**

Robert R. Jankelson, FICD,FICCMO

Ishiyaku EuroAmerica, Inc.

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