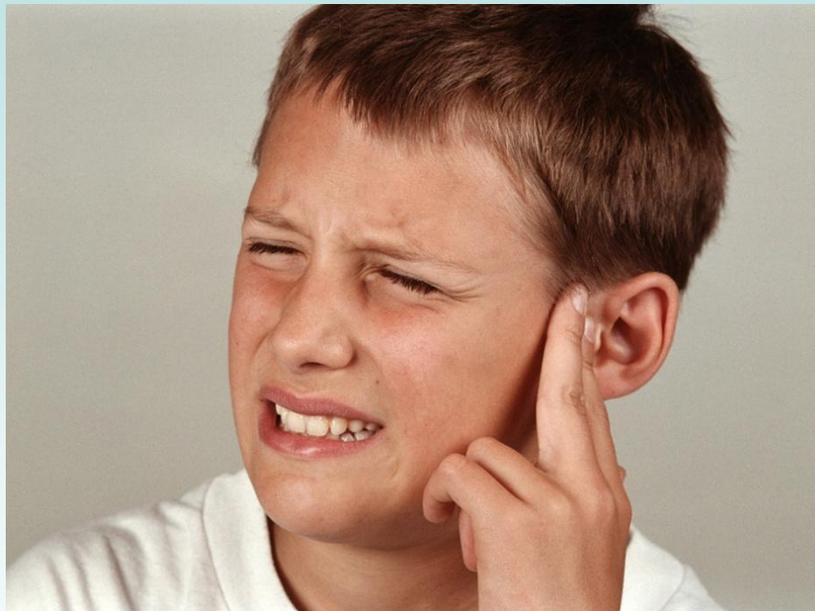




Title	Demonstration of RDC/TMD assessment and clinical examination
Author(s)	List, Thomas
Description	当日配布された資料や映像資料は、以下のページからダウンロードすることができます。 <a href="http://www.rdc-tmdinternational.org/Default.aspx?tabid=52">http://www.rdc-tmdinternational.org/Default.aspx?tabid=52</a>
Relation	国際講演・実習：顎関節症診断法の国際基準 = The Instruction on Research Diagnostic Criteria for Temporomandibular Disorders). 11月3日（祝・水）。北海道大学学術交流会館，札幌市。
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File Information	3. Demonstration RDCTMD.pdf, 講演スライド



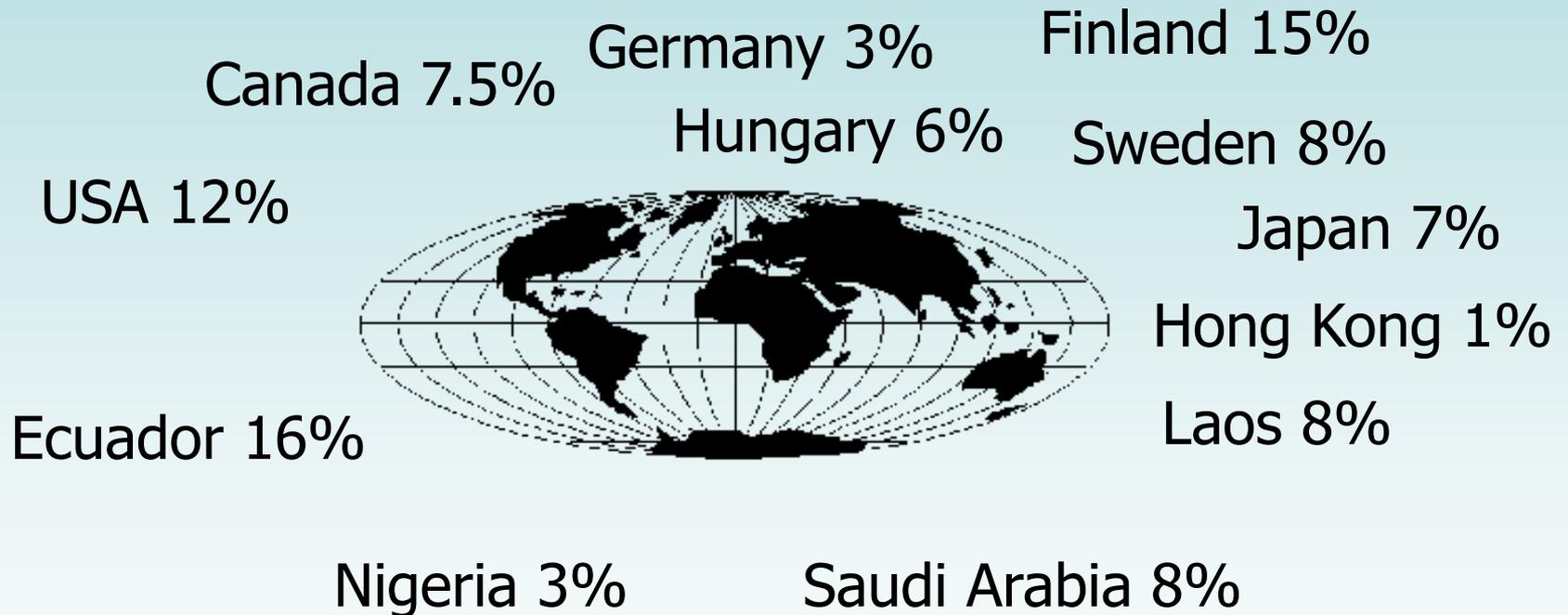
# Demonstration of RDC/TMD assessment and clinical examination



Thomas List  
Professor  
Malmö University

Sapporo 2010

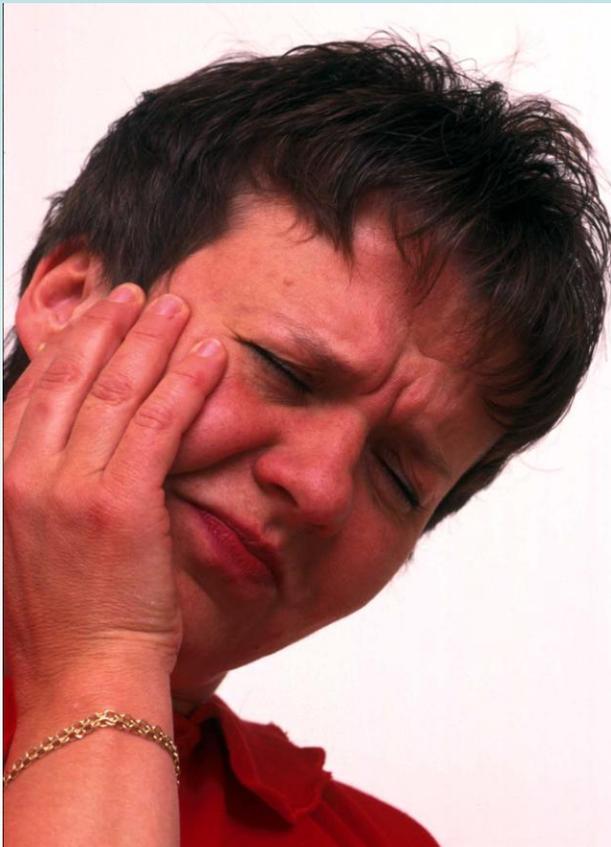
# Prevalence of TMD pain around the world in adults



# Detection of TMD pain

- In the past 30 days, have you had pain in the face, jaw, temple, in front of the ear, or in the ear?

# Biobehavioral pain model





# Case history



# Assessment

- Main complaint
- Pain
- Function
- Other medical conditions
- Psychosocial history

# TMD Pain Screener (DC/TMD)

- **In the last 30 days, did the following activities change any pain in your jaws or temple region on either side?**
- Chewing hard food?
- Opening your mouth or moving your jaw forward or to the side?
- Jaw habits such as holding your teeth together, clenching/grinding, or chewing gum?
- Other activities such as talking, kissing, or yawning?

# Pain characteristics

- **Onset**
- Duration
- Frequency
- Localization
- Quality
- Intensity
- Periodicity
- Aggravating and relieving factors

When did the pain start?

What do you believe is the cause of the pain?



# Pain characteristics

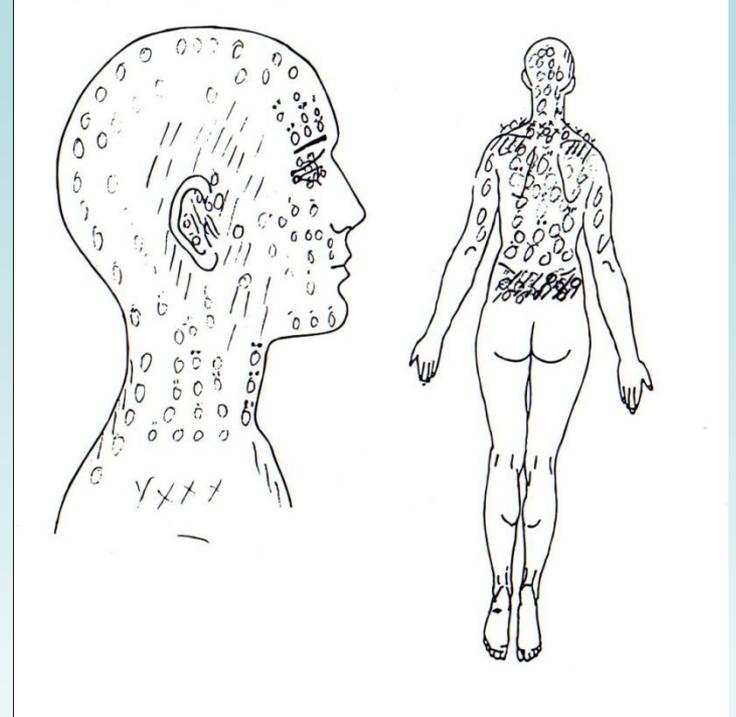
- Onset
- **Duration**                      Seconds?  
Minutes?  
Hours?  
Weeks? Years?
- Frequency
- Localization
- Quality
- Intensity
- Periodicity
- Aggravating and relieving factors

# Pain characteristics

- Onset
- Duration
- **Frequency**      How often do you have the pain?  
Continuously, recurrent, one-time?
- Localization
- Quality
- Intensity
- Periodicity
- Aggravating and relieving factors

# Pain characteristics

- Onset
- Duration
- Frequency
- **Localization**
- Quality
- Intensity
- Periodicity
- Aggravating and relieving factors



# Pain characteristics

- Onset
- Duration
- Frequency
- Localization
- **Quality**
- Intensity
- Periodicity
- Aggravating and relieving factors

Aching, pressing,  
stabbing, burning ?

# Characteristic pain intensity (DC/TMD)

1. How would you rate your facial pain on a 0 to 10 scale at the present time, that is right now, where 0 is “no pain” and 10 is “pain as bad as could be”?

No pain

0 1 2 3 4 5 6 7 8 9 10

Pain as bad as  
could be

2. In the past six months, how intense was your worst pain, rated on a 0 to 10 scale where 0 is “no pain” and 10 is “pain as bad as could be”?

No pain

0 1 2 3 4 5 6 7 8 9 10

Pain as bad as  
could be

3. In the past six months, on the average, how intense was your pain rated on a 0-10 scale where 0 is “no pain” and 10 is “pain as bad as could be”? (That is your usual pain at times you were experiencing pain.)

No pain

0 1 2 3 4 5 6 7 8 9 10

Pain as bad as  
could be

# Pain characteristics

- Onset
- Duration
- Frequency
- Localization
- Quality
- Intensity
- **Periodicity**
- Aggravating and relieving factors

Migraine

ETTH

CTTH

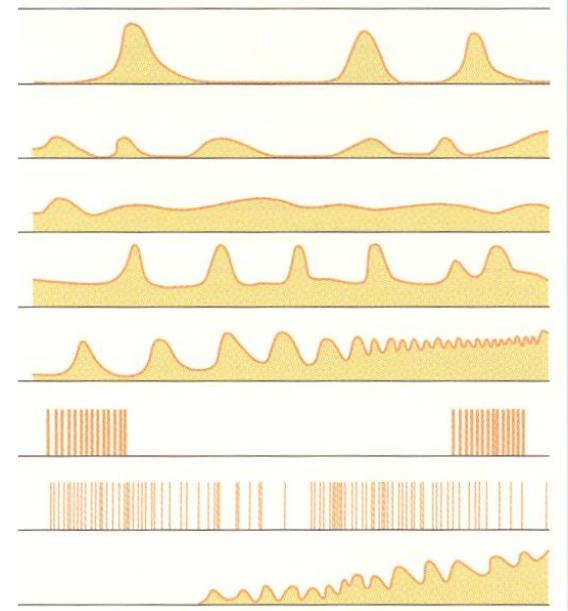
Transformed headache

Medication induced HD

Horton

Trigeminal N.

Tumor



Weekends, menstrual cycle,  
vacation?

# Pain characteristics

- Onset
- Duration
- Frequency
- Localization
- Quality
- Intensity
- Periodicity
- **Aggravating and relieving factors**

**Aggravation:** e.g., jaw movements, stress, cold weather, physical activity, pressing/clenching teeth, parafunctions, red wine

**Relief:** massage, heat, NSAID?

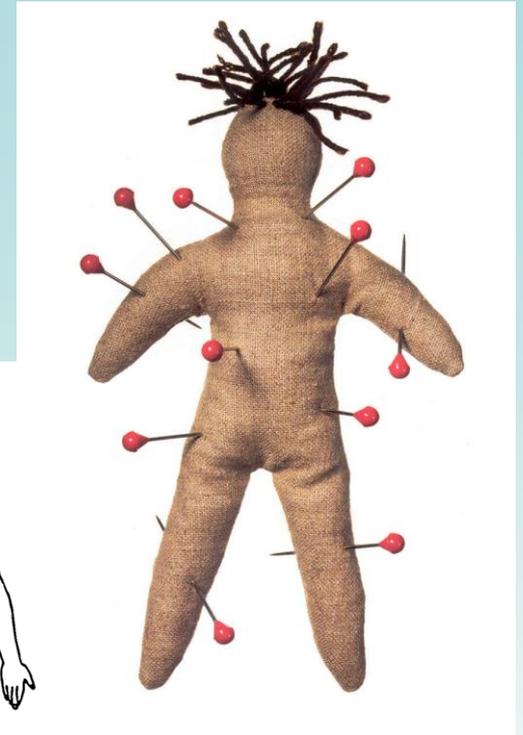
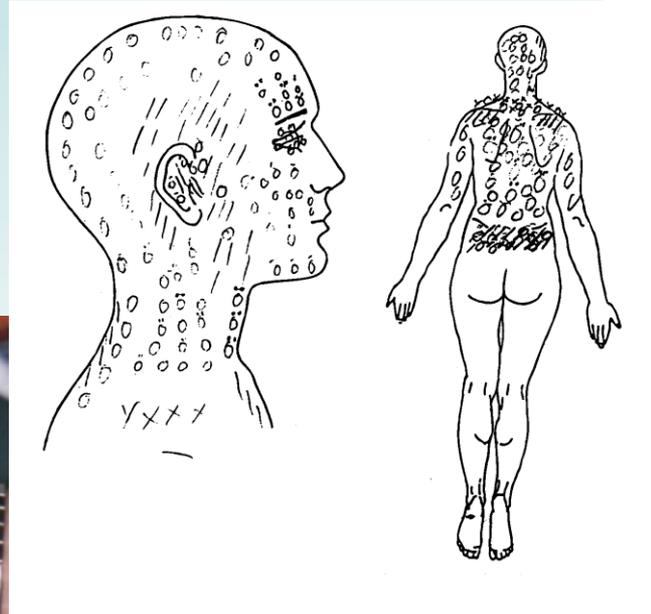
# Jaw noises and jaw locking

- In the last month, did you have any jaw joint noise(s) when you moved your jaws?
- In the past 30 days, have you ever had your jaw lock or catch so that it wouldn't open all the way?

# Headaches

- In the last year, have you had headache(s) that include the temple region?
- How many times in the last year did you have these headaches in the temple region?
  - a) At least 10 times in the past year, on average  $<1$  day per month ( $<12$  days/year).
  - b) At least 10 time in past year,  $\geq 1$  but  $<15$  days/month lasting for at least 3 months ( $\geq 12$  and  $<180$  days/year).
  - c)  $\geq 15$  days/ month on average for  $>3$  months ( $\geq 180$  days per year).

# Medical history



# Daily living

In the past 6 months, how much has facial pain interfered with your daily activities rated on a 0 to 10 scale where 0 is “no interference” and 10 is “unable to carry on any activities”?

No interference

Unable to  
carry on any activities

0 1 2 3 4 5 6 7 8 9 10

# Patient Health Questionnaire-2 (PHQ-2)

8. Over the past 2 weeks, how often have you been bothered by little interest or pleasure in doing things?

Not at

all

0      1

9. Over the past 2 weeks, how often have you been bothered by feeling down, depressed or hopeless?

Not at

all

0      1

# DC/TMD flow diagram

## Clinical praxis (short form)

- TMD pain screener
- Joint symptoms
- GCPS
- PHQ-2
- Clinical examination

**Stop here**

## Research (long form)

- Parafunctions
- Jaw function limitation scale (JFLS)
- Non-specific physical symptoms (SCL-90R)
- Depressive symptoms (SCL-90R)
- Anxiety (SCL-90R)

# Recommended Axis II Assessment Protocol

**Psychological Distress:** Patient Health Questionnaire

**Pain:** Graded Chronic Pain Scale

**Physical Functioning:** Masticatory system – Jaw Functional Limitations Scale; General – Graded Chronic Pain Scale

**Overuse behaviors:** (parafunction) Oral Behaviors Checklist

**Co-morbid physical symptoms:** Non-specific Physical Symptoms(SCL-90R)

**Emotional Functioning:** Depressive symptoms, Anxiety symptoms, Anxiety (SCL-90R)

# Jaw function limitation scale



## Jaw Functional Limitation Scale

For each of the items below, please indicate the level of limitation **during the last month**.

**No limitation**

**Severe  
Limitation**

Chew tough food	0	1	2	3	4	5	6	7	8	9	10
Chew hard bread	0	1	2	3	4	5	6	7	8	9	10
Chew soft food	0	1	2	3	4	5	6	7	8	9	10
Open wide enough to bite from a whole apple	0	1	2	3	4	5	6	7	8	9	10
Laugh	0	1	2	3	4	5	6	7	8	9	10

# Oral behavioral checklist DC/TMD



**How often do you do each of the following activities, based on the last month?**

	None of the time	A little bit the time	Some of the time	Most of the time	All of the time
1. Clench or grind teeth when asleep	0	1	2	3	4
2. Clench or press teeth together during waking hours	0	1	2	3	4
3. Press tongue between teeth	0	1	2	3	4
4. Hold, tighten, or tense muscles without clenching or bringing teeth together	0	1	2	3	4
4. Use chewing gums	0	1	2	3	4

# Somatization SCL-90R

**23. In the last month, how much have you been distressed by:**

	<b>Not at all</b>	<b>A little bit</b>	<b>Moder- ately</b>	<b>Quite a bit</b>	<b>Extre- mely</b>
a. Headache	0	1	2	3	4
c. Faintness or dizziness	0	1	2	3	4
u. A lump in your throat	0	1	2	3	4
w. Feeling weak in parts of your body	0	1	2	3	4

# Depression SCL-90R



**23. In the last month, how much have you been distressed by:**

f. Thought of death or dying

i. Blaming yourself for things

n. Feeling no interest in things

q. Trouble falling asleep

	Not at all	A little bit	Moderately	Quite a bit	Extremely
f. Thought of death or dying	0	1	2	3	4
i. Blaming yourself for things	0	1	2	3	4
n. Feeling no interest in things	0	1	2	3	4
q. Trouble falling asleep	0	1	2	3	4

# Clinical examination RDC/TMD

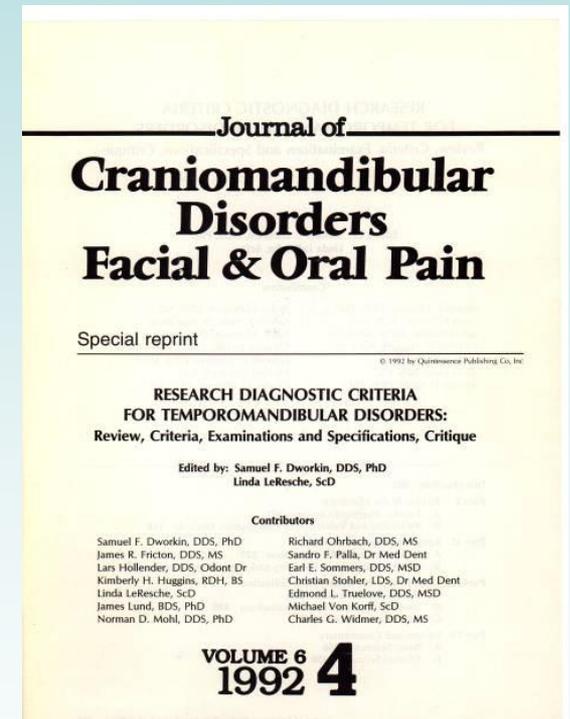
## Comprises:

A dual axis approach.

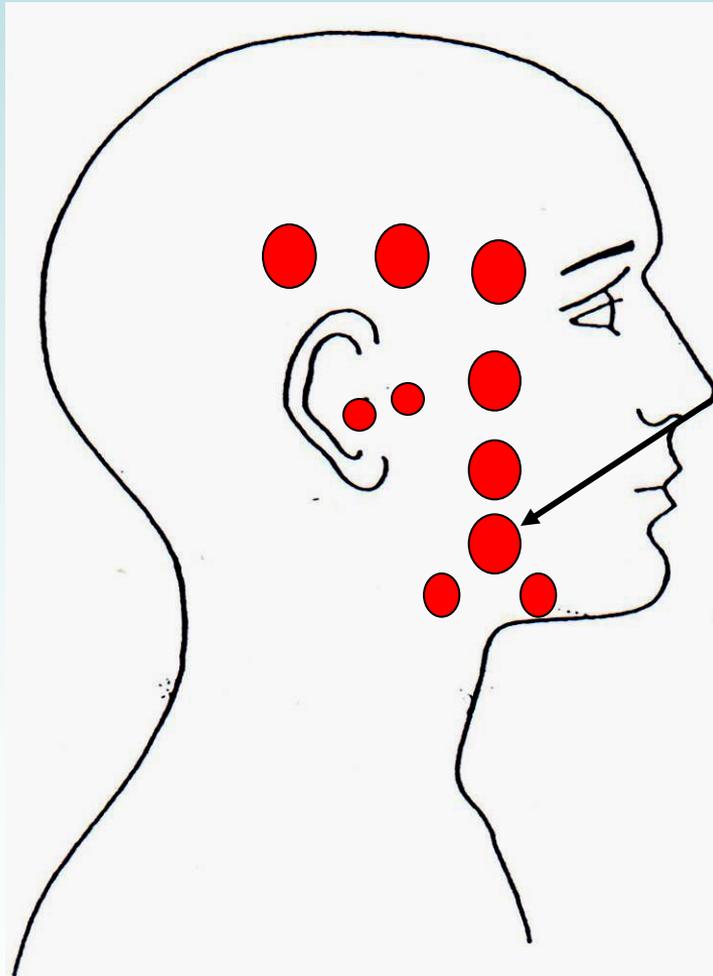
- Physical diagnosis (Axis I)
- Psychological disorders and psychosocial dysfunction (Axis II)

Clearly operationalized data collection procedures.

Strict diagnostic criteria.



# SPECIFICATIONS FOR TMD EXAMINATION



Insertion of the masseter: palpate the area 1 cm superior and anterior to the angle of the mandible (2 lbs digital pressure)

# www.rdc-tmdinternational.org



## International RDC-TMD Consortium

A Designated Network of the International Association for Dental Research

[Home](#) | [TMD Assessment/Diagnosis](#) | [Other Instruments](#) | [Meetings](#) | [Other Resources](#) | [Organization](#)

Home October 18, 2010

[International RDC/TMD Consortium](#)  
A Designated Network of the [International Association for Dental Research](#)

### Mission Statement

Our goal is to advance the scientific knowledge of temporomandibular disorders and related pain conditions through international consensus workshops and multi-site research based on the use of a common set of tools applicable to both research and clinical settings. The core tool that established the Consortium, the Research Diagnostic Criteria for Temporomandibular Disorders (RDC/TMD), remains a model tool for pain research; we are actively engaged in the further development of that tool. Our methods include population studies, clinical epidemiology and clinical trials, and experimental human studies. Please contact us if you are interested in participating in our activities; our past meetings will give you an idea of what we do.

This page has had 56427 hits since 11/1/2004.

### Announcements

#### Symposium at IADR 2010 - Barcelona, Spain

Diagnostic Criteria for TMD (DC/TMD): A new version of the RDC/TMD ( [details](#) )

### Website Update

Major topics and minutes are now [available](#) for all Annual meetings of the Consortium.

If you wish to discuss the content of this site, contact Richard Ohrbach ([ohrbach@buffalo.edu](mailto:ohrbach@buffalo.edu)).  
If you have any technical problems with this site, please contact our **Webmaster** ([emmer@buffalo.edu](mailto:emmer@buffalo.edu)).

# Examiner Training



Home RDC-TMD Translations Membership Meetings

Thursday, 1

**Protocol**  
**Examiner Training**  
**Interview Training**  
**Reliability Studies**

International RDC/TMD Co  
A designated network of the International Ass

Mission Statement

Our goal is to advance the scientific knowledge of temporomandibular joint related pain conditions through international multi-site studies using a common set of tools applicable to both research and clinical practice. Research Diagnostic Criteria for Temporomandibular Disorders (RDC/TMD) methods include population studies, clinical epidemic studies, and experimental human studies.

Home RDC-TMD Translations Membership Meetings Links  Search

Thursday, March 12, 2009 ...: RDC-TMD » Examiner Training ... Login

### The Temporomandibular Examination (TMD)

The video entitled, "The Temporomandibular Examination (TMD)" is designed to provide training in the examination protocol for evaluating a patient for temporomandibular disorder. You may view the entire video or select segments to review individually. The entire video is 23:50 minutes long.

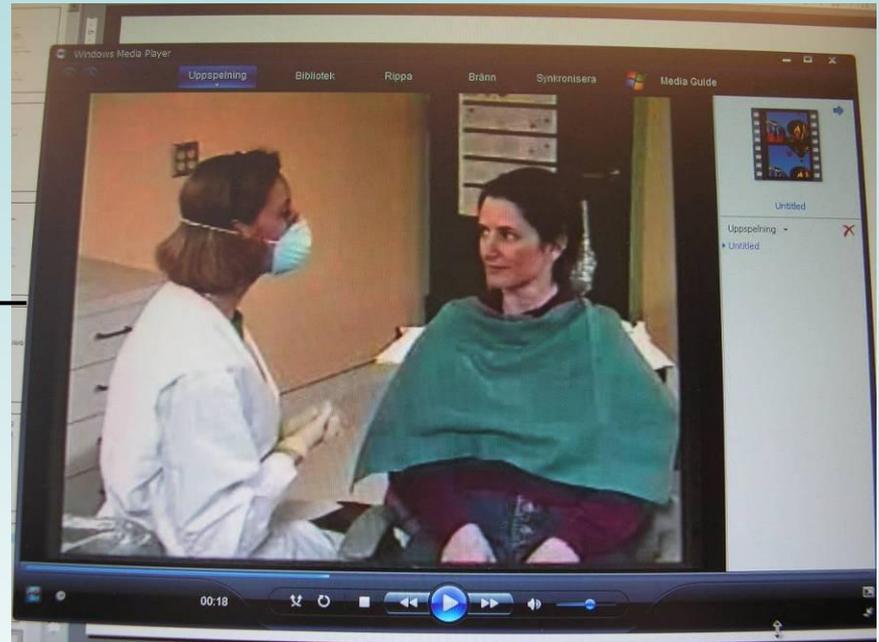
[Click here to view the entire video.](#)

Each segment of the video is also available for your convenience in reviewing the material. The segments are listed below. Click on a topic to launch the video.

Segment	Length
Introduction to the Examination	2:06 min
Assessment of Pain Location	:54 min
Mandibular Range of Motion: Opening Pattern	2:12 min
Mandibular Range of Motion: Vertical Range of Movement	1:53 min
Joint Sounds on Vertical Opening	3:34 min
Jaw Excursions	1:44 min
Muscle & Joint Palpation: Extraoral Muscles	7:13 min
Muscle & Joint Palpation: Temporomandibular Joint	1:13 min
Muscle & Joint Palpation: Intraoral Muscles	1:56 min

**\*NOTE:** The videos are designed to play on Windows Media Player 9.0.

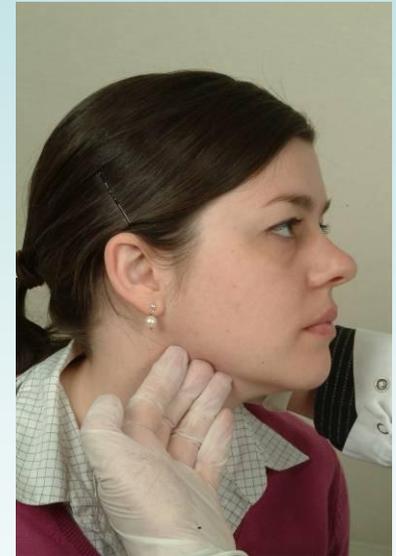
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# RDC/TMD – DC/TMD



**Have you had pain in these areas that I touched in the past 30 days?**



**Could you point with one finger tip to the area you have felt pain in the last 30 days?**



# Pain free opening:

”Open as wide as you can, without feeling any pain”



# Maximum unassisted opening:

I would like you to open your mouth as wide as you can, even if it is painful”



Pain

Familiar pain



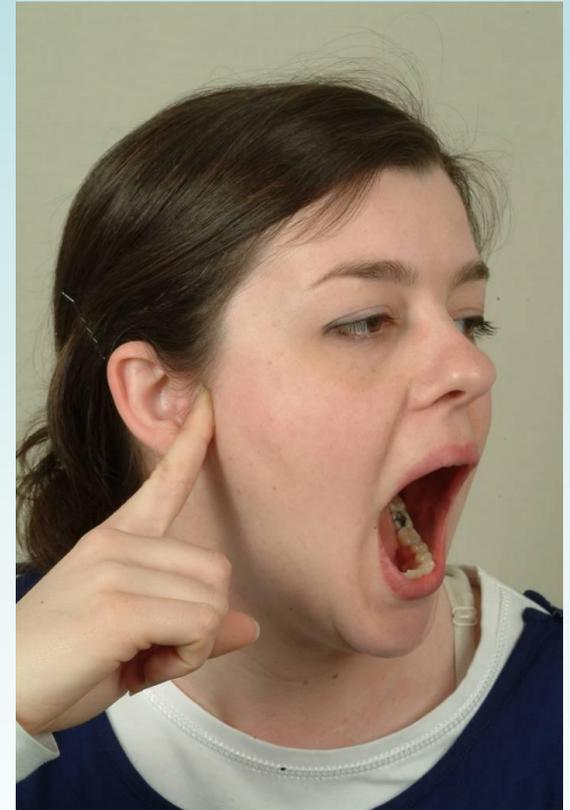
# Maximum assisted opening:

”In a moment I will try, if possible, to open your mouth wider with my fingers”



Pain

Familiar pain



# Excursive movements



- Pain
- Familiar pain



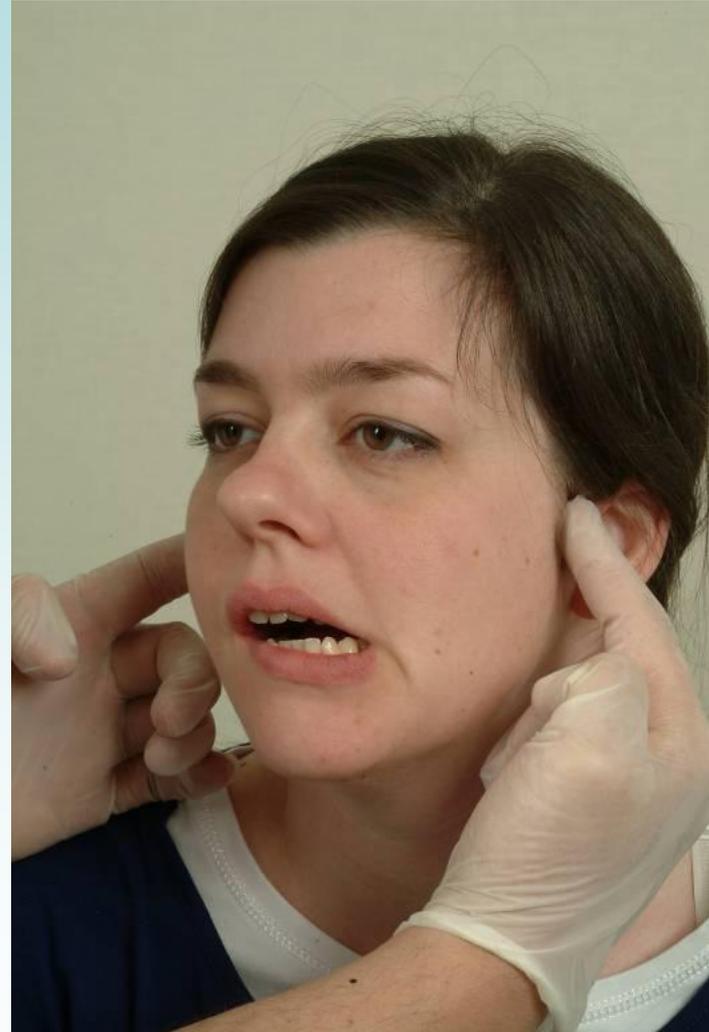
# TMJ sounds on opening and closing

- Click 1 of 3
- Coarse crepitus/fine crepitus
- Painful click



# TMJ sounds on excursive movements

- Did you notice any sounds?
- Did you have any pain with that click?



# TMJ palpation

- TMJ lat pole 1 lb
- TMJ around the lateral pole 2 lb
- Pain
- Familiar pain



# Excluded from the RDC/TMD

## **Extraoral palpation**

- Posterior mandibular region
- Submandibular region
- Posterior attachment "inside ear"

## **Intraoral muscle palpation**

- Lateral pterygoid area
- Tendon of temporalis

## **Pain on palpation**

- No, mild, moderate, severe pain

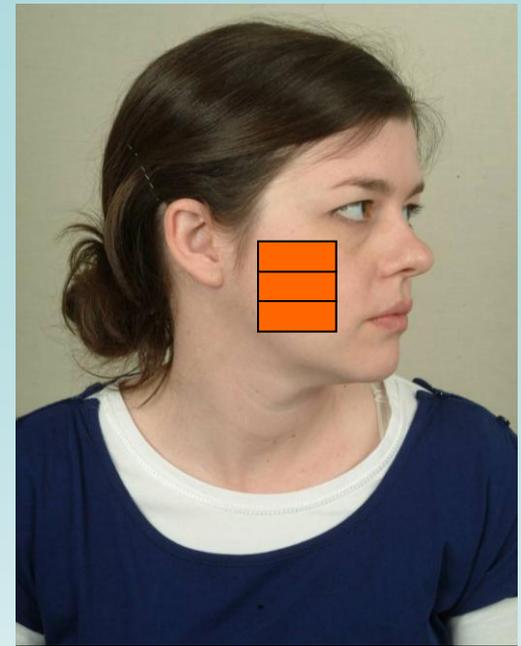
# Extraoral muscle pain palpation: M. Temporalis

- Pain
- Familiar pain
- Familiar headache
- Expanded pain location



# M. Masseter

- Pain
- Familiar pain
- Expanded pain location
- 1 of 12 sites (temporalis and masseter)



# Additional examinations

- Oral and dental examination
- Provocation test
- Radiographic examination
- Neck examination
- Somatosensory examination
- Pharmacological tests



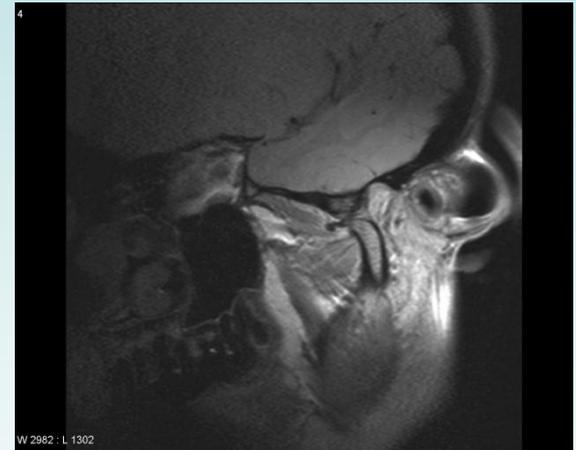
# Additional examinations

- Occlusion
- **Provocation test**
- Radiographic examination
- Neck examination
- Somatosensory examination
- Pharmacological tests



# Additional examinations

- Occlusion
- Provocation test
- **Radiographic examination**
- Neck examination
- Somatosensory examination
- Pharmacological tests



# Additional examinations

- Occlusion
- Provocation test
- Radiographic examination
- **Neck examination**
- Somatosensory examination
- Pharmacological tests



# Additional examinations

- Occlusion
- Provocation test
- Radiographic examination
- Neck examination
- **Somatosensory examination**
- Pharmacological tests



# Additional examinations

- Occlusion
- Provocation test
- Radiographic examination
- Neck examination
- Somatosensory examination
- **Pharmacological tests**



# From RDC/TMD to DC/TMD

Journal of

---

## **Craniomandibular Disorders Facial & Oral Pain**

Special reprint

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### **RESEARCH DIAGNOSTIC CRITERIA FOR TEMPOROMANDIBULAR DISORDERS: Review, Criteria, Examinations and Specifications, Critique**

Edited by: **Samuel F. Dworkin, DDS, PhD**  
**Linda LeResche, ScD**

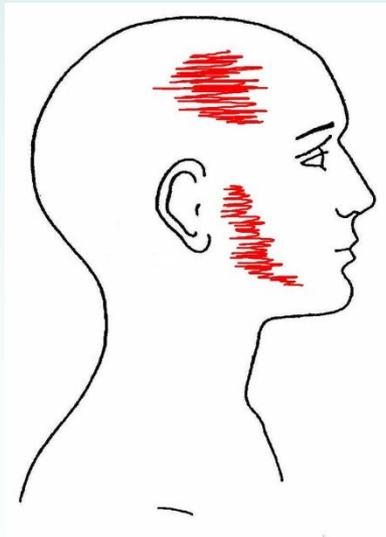
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**VOLUME 6**  
**1992 4**

# Case 1

A 19-year-old girl with frequent headaches and pain in the jaw and ear region. The pain is recurrent and higher in the morning. ENT status is OK. She can eat without any problems. Her physician refers her to your clinic to investigate dental causes of the pain.



# RDC/TMD examination

## RESEARCH DIAGNOSTIC CRITERIA EXAMINATION

ROUND \_\_\_\_\_  
 SUBJECT \_\_\_\_\_  
 EXAMINER \_\_\_\_\_

1. Do you have pain on the right side of your face, the left side or both sides?

None	0
Right	1
Left	2
Both	3

2. Could you point to the areas where you feel pain?

	Right		Left
None	0	None	0
Jaw Joint	1	Jaw Joint	1
Muscles	2	Muscles	2
Both	3	Both	3

[Examiner feels area subject points to, if it is unclear whether it is joint or muscle pain]

3. Opening Pattern

Straight	0
Right Lateral Deviation (uncorrected)	1
Right Corrected ("S") Deviation	2
Left Lateral Deviation (uncorrected)	3
Left Corrected ("S") Deviation	4
Other	5

Type \_\_\_\_\_  
 (specify)

4. Vertical Range of Motion

Maxillary incisor used	8
	9

	None	Right	Left	Both	None	Right	Left	Both
a. Unassisted opening without pain								
b. Maximum unassisted opening	0	1	2	3	0	1	2	3
c. Maximum assisted opening	0	1	2	3	0	1	2	3

5. Joint Sounds (palpation)

a. Opening

	RIGHT	LEFT
None	0	0
Click	1	1
Coarse Crepitus	2	2
Fine Crepitus	3	3

Measurement of Opening Click \_\_\_\_\_ mm \_\_\_\_\_ mm

b. Closing

	RIGHT	LEFT
None	0	0
Click	1	1
Coarse Crepitus	2	2
Fine Crepitus	3	3

Measurement of Closing Click \_\_\_\_\_ mm \_\_\_\_\_ mm

c. Reciprocal click eliminated on protrusive opening

No	0	0
Yes	1	1
NA	8	8

6. Excursions

		MUSCLE PAIN				JOINT PAIN			
		None	Right	Left	Both	None	Right	Left	Both
a. Right Lateral Excursion	___ 7 mm	0	1	2	3	0	1	2	3
b. Left Lateral Excursion	___ 8 mm	0	1	2	3	0	1	2	3
c. Protrusion	___ 6 mm	0	1	2	3	0	1	2	3
			RIGHT			LEFT			
d. Midline Deviation	___ 0 mm		1			2			8

# RDC/TMD examination

## 7. Joint Sounds on Excursions

### Right Sounds:

	None	Click	Coarse Crepitus	Fine Crepitus
Excursion Right	0	1	2	3
Excursion Left	0	1	2	3
Protrusion	0	1	2	3

### Left Sounds:

	None	Click	Coarse Crepitus	Fine Crepitus
Excursion Right	0	1	2	3
Excursion Left	0	1	2	3
Protrusion	0	1	2	3

## DIRECTIONS, ITEMS 8-10

The examiner will be palpating (touching) different areas of your face, head and neck. We would like you to indicate if you do not feel pain or just feel pressure (0), or pain (1-3). Please rate how much pain you feel for each of the palpations according to the scale below. Circle the number that corresponds to the amount of pain you feel. We would like you to make a separate rating for both the right and left palpations.

0 = No Pain/Pressure Only

1 = Mild Pain

2 = Moderate Pain

3 = Severe Pain

## 8. Extraoral muscle pain with palpation:

	RIGHT	LEFT
a. Temporalis (posterior) "Back of temple"	0 1 2 3	0 1 2 3
b. Temporalis (middle) "Middle of temple"	0 1 2 3	0 1 2 3
c. Temporalis (anterior) "Front of temple"	0 1 2 3	0 1 2 3
d. Masseter (superior) "Cheek/under cheekbone"	0 1 2 3	0 1 2 3
e. Masseter (middle) "Cheek/side of face"	0 1 2 3	0 1 2 3
f. Masseter (inferior) "Cheek/jawline"	0 1 2 3	0 1 2 3
g. Posterior mandibular region (Stylohyoid/posterior digastric region) "Jaw/throat region"	0 1 2 3	0 1 2 3
h. Submandibular region (Medial pterygoid/Suprahyoid/anterior digastric region) "Under chin"	0 1 2 3	0 1 2 3

## 9. Joint pain with palpation:

	RIGHT	LEFT
a. Lateral pole "outside"	0 1 2 3	0 1 2 3
b. Posterior attachment "inside ear"	0 1 2 3	0 1 2 3

## 10. Intraoral muscle pain with palpation:

	RIGHT	LEFT
a. Lateral pterygoid area "Behind upper molars"	0 1 2 3	0 1 2 3
b. Tendon of temporalis "Tendon"	0 1 2 3	0 1 2 3

# Graded Chronic Pain Scale (GCPS) (Questions 1-7)

1. How would you rate your facial pain on a 0 to 10 scale at the present time, that is right now, where 0 is "no pain" and 10 is "pain as bad as could be"?

No pain

0 1 2 3 4 5 6 7 8

Pain as bad as  
could be  
9 10

2. In the past six months, how intense was your worst pain, rated on a 0 to 10 scale where 0 is "no pain" and 10 is "pain as bad as could be"?

No pain

0 1 2 3 4 5 6 7 8

Pain as bad as  
could be  
9 10

3. In the past six months, on the average, how intense was your pain rated on a 0-10 scale where 0 is "no pain" and 10 is "pain as bad as could be"?

No pain

0 1 2 3 4 5 6 7 8

Pain as bad as  
could be  
9 10

4. In the past six months, how much has facial pain interfered with your daily activities rated on a 0 to 10 scale where 0 is "no interference" and 10 is "unable to carry on any activities"?

No interference

0 1 2 3 4 5 6 7 8

Unable to carry  
on any activities  
9 10

5. In the past six months, how much has facial pain changed your ability to take part in recreational, social and family activities where 0 is "no change" and 10 is "extreme change"?

No change

0 1 2 3 4 5 6 7 8

Extreme change  
9 10

6. In the past six months, how much has facial pain changed your ability to work (including housework) where 0 is "no change" and 10 is "extreme change"?

No change

0 1 2 3 4 5 6 7 8

Extreme change  
9 10

7. About how many days in the last six months have you been kept from your usual activities (work, school or housework) because of facial pain?

0  
Days

# Myofascial pain:

## RDC/TMD

1. Report of pain or ache in the jaw, temples, face, preauricular area, or inside the ear at rest or during function; plus
2. Pain reported by the subjects in response to palpation of three or more of the following 20 sites. At least one of the sites must be on the same side as the complaint of pain.

# Myofascial Pain

## DC/TMD



### I.a. Myofascial Pain (Sensitivity 0.84; Specificity 0.95).

I. History is positive for both of the following:

1. In the past 30 days, ongoing pain in the jaw, temple, in front of the ear, or in the ear with examiner confirmation of pain location in a masticatory structure AND

2. Pain modification with jaw movement, function or parafunction.

**AND**

II. Examination of the temporalis or masseter muscles elicits a report of **familiar pain** with at least 1 of the following tests:

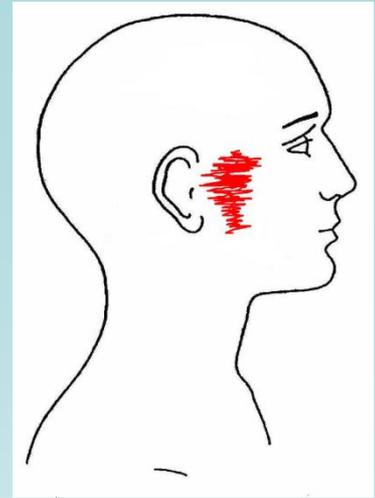
1. Palpation; OR

2. Maximum unassisted or assisted opening.

- Note: The pain is not better accounted for by another pain diagnosis



## Case 2



Johanna, 17 years old, calls the dental clinic because of acute pain. She is upset because she has not been able to open her jaw wide the last few days. She is unable to take a bite of an apple because it is painful. TMJ sounds have occurred at the TMJ before but not now. The pain has affected her sleep. NSAIDs have relieved the pain somewhat.

# Disc displacement without reduction



# RDC/TMD examination

1. Do you have pain on the right side of your face, the left side or both sides?

None	0
Right	1
Left	2
Both	3

2. Could you point to the areas where you feel pain?

	<u>Right</u>		<u>Left</u>
None	0	None	0
Jaw Joint	1	Jaw Joint	1
Muscles	2	Muscles	2
Both	3	Both	3

[Examiner feels area subject points to, if it is unclear whether it is joint or muscle pain]

3. Opening Pattern

Straight	0
Right Lateral Deviation (uncorrected)	1
Right Corrected ("S") Deviation	2
Left Lateral Deviation (uncorrected)	3
Left Corrected ("S") Deviation	4
Other	5

Type \_\_\_\_\_ (specify)

4. Vertical Range of Motion

Maxillary incisor used	8
	9

a. Unassisted opening without pain 33 mm

MUSCLE PAIN				JOINT PAIN			
None	Right	Left	Both	None	Right	Left	Both
0	1	2	3	0	1	2	3

b. Maximum unassisted opening 34 mm

None	Right	Left	Both	None	Right	Left	Both
0	1	2	3	0	1	2	3

c. Maximum assisted opening 35 mm

None	Right	Left	Both	None	Right	Left	Both
0	1	2	3	0	1	2	3

d. Vertical incisal overlap 2 mm

5. Joint Sounds (palpation)

a. Opening

None	<u>0</u>	<u>0</u>
Click	1	1
Coarse Crepitus	2	2
Fine Crepitus	3	3

Measurement of Opening Click \_\_\_\_\_mm \_\_\_\_\_mm

b. Closing

None	<u>0</u>	<u>0</u>
Click	1	1
Coarse Crepitus	2	2
Fine Crepitus	3	3

Measurement of Closing Click \_\_\_\_\_mm \_\_\_\_\_mm

c. Reciprocal click eliminated on protrusive opening

No	0	0
Yes	1	1
NA	<u>8</u>	<u>8</u>

6. Excursions

		MUSCLE PAIN				JOINT PAIN			
		None	Right	Left	Both	None	Right	Left	Both
a. Right Lateral Excursion	<u>6</u> mm	0	1	2	3	0	1	2	3
b. Left Lateral Excursion	<u>4</u> mm	0	1	2	3	0	1	2	3
c. Protrusion	<u>4</u> mm	0	1	2	3	0	1	2	3
			RIGHT				LEFT		NA
d. Midline Deviation	<u>0</u> mm		1				2		8

# RDC/TMD examination

## 7. Joint Sounds on Excursions

### Right Sounds:

	None	Click	Coarse Crepitus	Fine Crepitus
Excursion Right	0	1	2	3
Excursion Left	0	1	2	3
Protrusion	0	1	2	3

### Left Sounds:

	None	Click	Coarse Crepitus	Fine Crepitus
Excursion Right	0	1	2	3
Excursion Left	0	1	2	3
Protrusion	0	1	2	3

## DIRECTIONS, ITEMS 8-10

The examiner will be palpating (touching) different areas of your face, head and neck. We would like you to indicate if you do not feel pain or just feel pressure (0), or pain (1-3). Please rate how much pain you feel for each of the palpations according to the scale below. Circle the number that corresponds to the amount of pain you feel. We would like you to make a separate rating for both the right and left palpations.

0 = No Pain/Pressure Only

1 = Mild Pain

2 = Moderate Pain

3 = Severe Pain

## 8. Extraoral muscle pain with palpation:

	RIGHT	LEFT
a. Temporalis (posterior) "Back of temple"	0 1 2 3	0 1 2 3
b. Temporalis (middle) "Middle of temple"	0 1 2 3	0 1 2 3
c. Temporalis (anterior) "Front of temple"	0 1 2 3	0 1 2 3
d. Masseter (superior) "Cheek/under cheekbone"	0 1 2 3	0 1 2 3
e. Masseter (middle) "Cheek/side of face"	0 1 2 3	0 1 2 3
f. Masseter (inferior) "Cheek/jawline"	0 1 2 3	0 1 2 3
g. Posterior mandibular region (Stylohyoid/posterior digastric region) "Jaw/throat region"	0 1 2 3	0 1 2 3
h. Submandibular region (Medial pterygoid/Suprahyoid/anterior digastric region) "Under chin"	0 1 2 3	0 1 2 3

## 9. Joint pain with palpation:

	RIGHT	LEFT
a. Lateral pole "outside"	0 1 2 3	0 1 2 3
b. Posterior attachment "inside ear"	0 1 2 3	0 1 2 3

## 10. Intraoral muscle pain with palpation:

	RIGHT	LEFT
a. Lateral pterygoid area "Behind upper molars"	0 1 2 3	0 1 2 3
b. Tendon of temporalis "Tendon"	0 1 2 3	0 1 2 3

# Disc displacement without reduction with limited opening (RDC/TMD)

1. History of significant limitation in opening; plus
2. Maximum unassisted opening  $\leq 35\text{mm}$ ; plus
3. Passive stretch increases opening by 4 mm or less over maximum unassisted opening; plus
4. Contralateral excursions  $< 7\text{ mm}$  and/or uncorrected deviation to the ipsilateral side on opening; plus
5. Either (a) absence of joint sounds, or (b) presence of joint sounds not meeting criteria for disc displacement with reduction.

# Disc Displacement without Reduction with Limited Opening (DC/TMD)

(Sensitivity 0.80; specificity 0.97 without imaging)

- I. History is positive for both of the following:
  1. Jaw lock or catch so that it would not open all the way; AND
  2. Limitation in jaw opening severe enough to interfere with ability to eat.

**AND**

- II. Examination is positive for the following:
  1. Maximum assisted opening (passive stretch) < 40mm. Including vertical incisal overlap.



Note: When this diagnosis needs to be confirmed, then imaging analyses criteria, using TMJ MRI, is positive for both of the following:

1. In the maximum intercuspal position, the posterior band of the disc is located anterior to the 11:30 position and the condyle is not seated in the intermediate zone of the disc; AND
2. On full opening, the condylar head is not positioned in the intermediate zone of the disc. 3. Presence of absence of limitation with opening is determined clinically.

# Arthralgia (RDC/TMD)

1. Pain in one or both joint sites (lateral pole and/or posterior attachment) during palpation; plus
2. One or more of the following self-reports of pain: pain in the region of the joint, pain in the joint during maximum unassisted opening, pain in the joint during assisted opening, pain in the joint during lateral excursion.
3. For a diagnosis of simple arthralgia, coarse crepitus must be absent.

## II.a. Arthralgia. (DC/TMD) (Sensitivity 0.91; Specificity 0.96).

I. History is positive for both of the following:

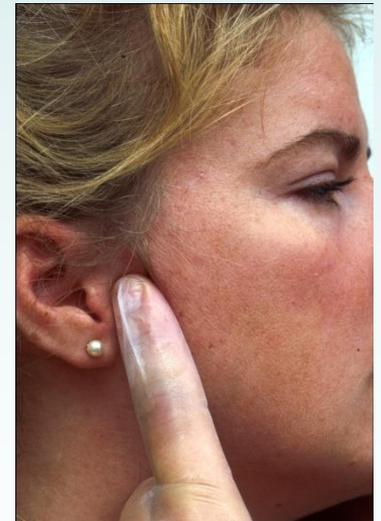
1. In the past 30 days, ongoing pain in the jaw, temple, in front of the ear, or in the ear with examiner confirmation of pain location in a masticatory structure AND
2. Pain modification with jaw movement, function or parafunction.

**AND**

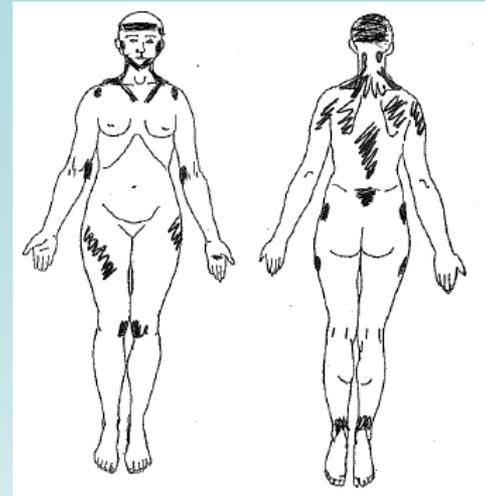
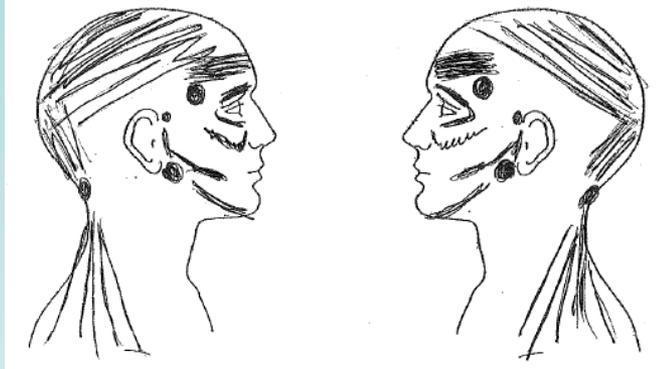
II. Examination of the temporomandibular joint elicits a report of **familiar pain** with at least 1 of the following tests:

1. Palpation of the lateral pole or around the lateral pole; OR
2. Maximum unassisted or assisted opening, right or left lateral movements, or protrusive movements

Note: The pain of is not better accounted for by another pain diagnosis



## Case 3



Woman, aged 55, has chronic pain in the face but also in other regions of the body. The pain began 10 years ago but has now spread throughout her body. She avoids certain foods because the pain increases when she is chewing. The pain affects her life, and she is 50% on sick leave. She is listless - appears to be depressed.

# RDC/TMD examination

1.	Do you have pain on the right side of your face, the left side or both sides?	None	0
		Right	1
		Left	2
		Both	3

2.	Could you point to the areas where you feel pain?	<u>Right</u>		<u>Left</u>	
		None	0	None	0
		Jaw Joint	1	Jaw Joint	1
		Muscles	2	Muscles	2
		Both	3	Both	3

[Examiner feels area subject points to, if it is unclear whether it is joint or muscle pain]

3.	Opening Pattern	Straight	0
		Right Lateral Deviation (uncorrected)	1
		Right Corrected ("S") Deviation	2
		Left Lateral Deviation (uncorrected)	3
		Left Corrected ("S") Deviation	4
		Other	5
		Type _____	
		(specify)	

4.	Vertical Range of Motion	Maxillary incisor used	8
			9

a.	Unassisted opening without pain	<u>42</u> mm	MUSCLE PAIN				JOINT PAIN			
			None	Right	Left	Both	None	Right	Left	Both
b.	Maximum unassisted opening	<u>44</u> mm	0	1	2	3	0	1	2	3
c.	Maximum assisted opening	<u>46</u> mm	0	1	2	3	0	1	2	3
d.	Vertical incisal overlap	<u>3</u> mm								

5.	Joint Sounds (palpation)		<u>RIGHT</u>	<u>LEFT</u>
a.	Opening	None	0	0
		Click	1	1
		Coarse Crepitus	2	2
		Fine Crepitus	3	3

Measurement of Opening Click \_\_\_\_\_ mm \_\_\_\_\_ mm

b.	Closing	None	0	0
		Click	1	1
		Coarse Crepitus	2	2
		Fine Crepitus	3	3

Measurement of Closing Click \_\_\_\_\_ mm \_\_\_\_\_ mm

c.	Reciprocal click eliminated on protrusive opening	No	0	0
		Yes	1	1
		NA	8	8

## 6. Excursions

		MUSCLE PAIN				JOINT PAIN			
		None	Right	Left	Both	None	Right	Left	Both
a.	Right Lateral Excursion	0	1	2	3	0	1	2	3
b.	Left Lateral Excursion	0	1	2	3	0	1	2	3
c.	Protrusion	0	1	2	3	0	1	2	3
			RIGHT	LEFT	NA				
d.	Midline Deviation	1	2	8					

# RDC/TMD examination

## Report of referred pain

### 7. Joint Sounds on Excursions

#### Right Sounds:

	None	Click	Coarse Crepitus	Fine Crepitus
Excursion Right	0	1	2	3
Excursion Left	0	1	2	3
Protrusion	0	1	2	3

#### Left Sounds:

	None	Click	Coarse Crepitus	Fine Crepitus
Excursion Right	0	1	2	3
Excursion Left	0	1	2	3
Protrusion	0	1	2	3

### DIRECTIONS, ITEMS 8-10

The examiner will be palpating (touching) different areas of your face, head and neck. We would like you to indicate if you do not feel pain or just feel pressure (0), or pain (1-3). Please rate how much pain you feel for each of the palpations according to the scale below. Circle the number that corresponds to the amount of pain you feel. We would like you to make a separate rating for both the right and left palpations.

0 = No Pain/Pressure Only

1 = Mild Pain

2 = Moderate Pain

3 = Severe Pain

### 8. Extraoral muscle pain with palpation:

	RIGHT	LEFT
a. Temporalis (posterior) "Back of temple"	0 1 2 3	0 1 2 3
b. Temporalis (middle) "Middle of temple"	0 1 2 3	0 1 2 3
c. Temporalis (anterior) "Front of temple"	0 1 2 3	0 1 2 3
d. Masseter (superior) "Cheek/under cheekbone"	0 1 2 3	0 1 2 3
e. Masseter (middle) "Cheek/side of face"	0 1 2 3	0 1 2 3
f. Masseter (inferior) "Cheek/jawline"	0 1 2 3	0 1 2 3
g. Posterior mandibular region (Stylohyoid/posterior digastric region) "Jaw/throat region"	0 1 2 3	0 1 2 3
h. Submandibular region (Medial pterygoid/Suprahyoid/anterior digastric region) "Under chin"	0 1 2 3	0 1 2 3

### 9. Joint pain with palpation:

	RIGHT	LEFT
a. Lateral pole "outside"	0 1 2 3	0 1 2 3
b. Posterior attachment "inside ear"	0 1 2 3	0 1 2 3

### 10. Intraoral muscle pain with palpation:

	RIGHT	LEFT
a. Lateral pterygoid area "Behind upper molars"	0 1 2 3	0 1 2 3
b. Tendon of temporalis "Tendon"	0 1 2 3	0 1 2 3

# Graded Chronic Pain Scale (GCPS) (Questions 1-7)

1. How would you rate your facial pain on a 0 to 10 scale at the present time, that is right now, where 0 is "no pain" and 10 is "pain as bad as could be"?

No pain  
0 1 2 3 4 5 **6** 7 8 9 10  
Pain as bad as could be

2. In the past six months, how intense was your worst pain, rated on a 0 to 10 scale where 0 is "no pain" and 10 is "pain as bad as could be"?

No pain  
0 1 2 3 4 5 6 7 8 **9** 10  
Pain as bad as could be

3. In the past six months, on the average, how intense was your pain rated on a 0-10 scale where 0 is "no pain" and 10 is "pain as bad as could be"?

No pain  
0 1 2 3 4 5 6 **7** 8 9 10  
Pain as bad as could be

4. In the past six months, how much has facial pain interfered with your daily activities rated on a 0 to 10 scale where 0 is "no interference" and 10 is "unable to carry on any activities"?

No interference  
0 1 2 3 4 5 6 **7** 8 9 10  
Unable to carry on any activities

5. In the past six months, how much has facial pain changed your ability to take part in recreational, social and family activities where 0 is "no change" and 10 is "extreme change"?

No change  
0 1 2 3 4 5 **6** 7 8 9 10  
Extreme change

6. In the past six months, how much has facial pain changed your ability to work (including housework) where 0 is "no change" and 10 is "extreme change"?

No change  
0 1 2 3 4 5 **6** 7 8 9 10  
Extreme change

7. About how many days in the last six months have you been kept from your usual activities (work, school or housework) because of facial pain?

10  
Days

# Depression SCL-90R

**23. In the last month, how much have you been distressed by:**

	Not at all	A little bit	Moderately	Quite a bit	Extremely
Crying easily	0	1	2	3	4
Blaming yourself for things	0	1	2	3	4
Feeling no interest in things	0	1	2	3	4
Trouble falling asleep	0	1	2	3	4

# Axis II

- Pain intensity 8
- Graded Chronic Pain III
- Depression score 1.5
- Somatisation score 1.8

# Myofascial pain:

## RDC/TMD

1. Report of pain or ache in the jaw, temples, face, preauricular area, or inside the ear at rest or during function; plus
2. Pain reported by the subjects in response to palpation of three or more of the following 20 sites. At least one of the sites must be on the same side as the complaint of pain.

# Myofascial Pain with Referral (DC/TMD)

(Sensitivity 0.85; Specificity 0.98).

Pain of muscle origin with referral of pain beyond the boundary of the masticatory muscle being examined. I. History is positive for both of the following:

I. History is positive for both of the following:

1. In the past 30 days, ongoing pain in the jaw, temple, in front of the ear, or in the ear with examiner confirmation of pain location in a masticatory structure AND
2. Pain modification with jaw movement, function or parafunction.

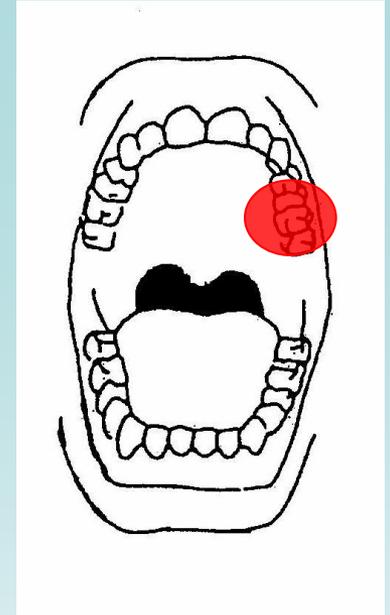
**AND**

II. Examination of the temporalis or masseter is positive for both of the following tests:

1. Myofascial pain as defined in I.a; **AND**
2. The patient reports referred pain with at least one of the provocation tests of palpation, or maximum unassisted or assisted opening, and this referred pain is felt at a site beyond the boundary of the muscle being palpated such as the ear, tooth or eye.

Note: The pain is not better accounted for by another pain diagnosis

## Case 4



For 2 years, Arne has pain in the first molar in his upper left jaw. Tooth 27 was extracted by another dentist because of a crack. Since the pain did not go away, tooth 26 was then endodontically treated several times, but the pain is unchanged. He also reports pain on the left side of his face, but this pain is minor compared with the pain in his upper jaw.

# Dental examination

- Percussion
- Periapical tenderness
- Periodontal probing
- Fracfinder/cracks
- Radiographic examination
- Somatosensory examination



# Somatosensory examination

Hyperestesi

Hyperalgesi





# Axis II

- Pain intensity 7
- Graded Chronic Pain II
- Depression score 1.5
- Somatisation score 1.0

**Thank you for your attention!**



5. Joint Sounds (palpation)

		<u>RIGHT</u>	<u>LEFT</u>
a.	Opening	None 0	0
		Click 1	1
		Coarse Crepitus 2	2
		Fine Crepitus 3	3

Measurement of Opening Click \_\_\_\_\_mm \_\_\_\_\_mm

b.	Closing	None 0	0
		Click 1	1
		Coarse Crepitus 2	2
		Fine Crepitus 3	3

Measurement of Closing Click \_\_\_\_\_mm \_\_\_\_\_mm

c.	Reciprocal click eliminated on protrusive opening	No 0	0
		Yes 1	1
		NA 8	8

6. Excursions

		<u>MUSCLE PAIN</u>				<u>JOINT PAIN</u>					
		<u>None</u>	<u>Right</u>	<u>Left</u>	<u>Both</u>	<u>None</u>	<u>Right</u>	<u>Left</u>	<u>Both</u>		
a.	Right Lateral Excursion _____mm	0	1	2	3	0	1	2	3		
b.	Left Lateral Excursion _____mm	0	1	2	3	0	1	2	3		
c.	Protrusion _____mm	0	1	2	3	0	1	2	3		
		RIGHT				LEFT					
d.	Midline Deviation _____mm					NA					
						1		2		8	

7. Joint Sounds on Excursions

Right Sounds:

	<u>None</u>	<u>Click</u>	<u>Coarse Crepitus</u>	<u>Fine Crepitus</u>
Excursion Right	0	1	2	3
Excursion Left	0	1	2	3
Protrusion	0	1	2	3

Left Sounds:

	<u>None</u>	<u>Click</u>	<u>Coarse Crepitus</u>	<u>Fine Crepitus</u>
Excursion Right	0	1	2	3
Excursion Left	0	1	2	3
Protrusion	0	1	2	3

DIRECTIONS, ITEMS 8-10

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0 = No Pain/Pressure Only

1 = Mild Pain

2 = Moderate Pain

3 = Severe Pain

8.	Extraoral muscle pain with palpation:		
		<u>RIGHT</u>	<u>LEFT</u>
a.	Temporalis (posterior) "Back of temple"	0 1 2 3	0 1 2 3
b.	Temporalis (middle) "Middle of temple"	0 1 2 3	0 1 2 3
c.	Temporalis (anterior) "Front of temple"	0 1 2 3	0 1 2 3
d.	Masseter (superior) "Cheek/under cheekbone"	0 1 2 3	0 1 2 3
e.	Masseter (middle) "Cheek/side of face"	0 1 2 3	0 1 2 3
f.	Masseter (inferior) "Cheek/jawline"	0 1 2 3	0 1 2 3
g.	Posterior mandibular region (Stylohyoid/posterior digastric region) "Jaw/throat region"	0 1 2 3	0 1 2 3
h.	Submandibular region (Medial pterygoid/Suprahyoid/anterior digastric region) "Under chin"	0 1 2 3	0 1 2 3
9.	Joint pain with palpation:		
		<u>RIGHT</u>	<u>LEFT</u>
a.	Lateral pole "outside"	0 1 2 3	0 1 2 3
b.	Posterior attachment "inside ear"	0 1 2 3	0 1 2 3
10.	Intraoral muscle pain with palpation:		
		<u>RIGHT</u>	<u>LEFT</u>
a.	Lateral pterygoid area "Behind upper molars"	0 1 2 3	0 1 2 3
b.	Tendon of temporalis "Tendon"	0 1 2 3	0 1 2 3