

Ergo, Posture & Pain, Oh My!

A Physical Therapy Perspective

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Research Findings

- Prevalence of musculoskeletal injuries
- Ergonomics
- Tools for Better Posturing
- Therapeutic Exercises/Stretches

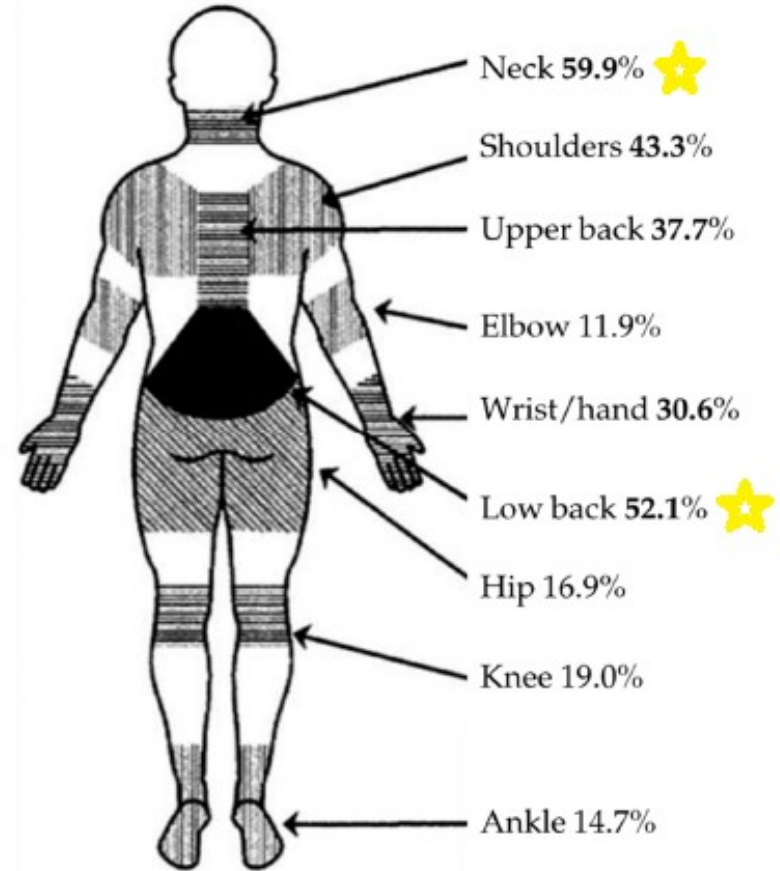


Figure 4. Frequency of WMSD and distribution according

Musculoskeletal Disorder in Dentists and Students



Neck Pain



Shoulder Pain



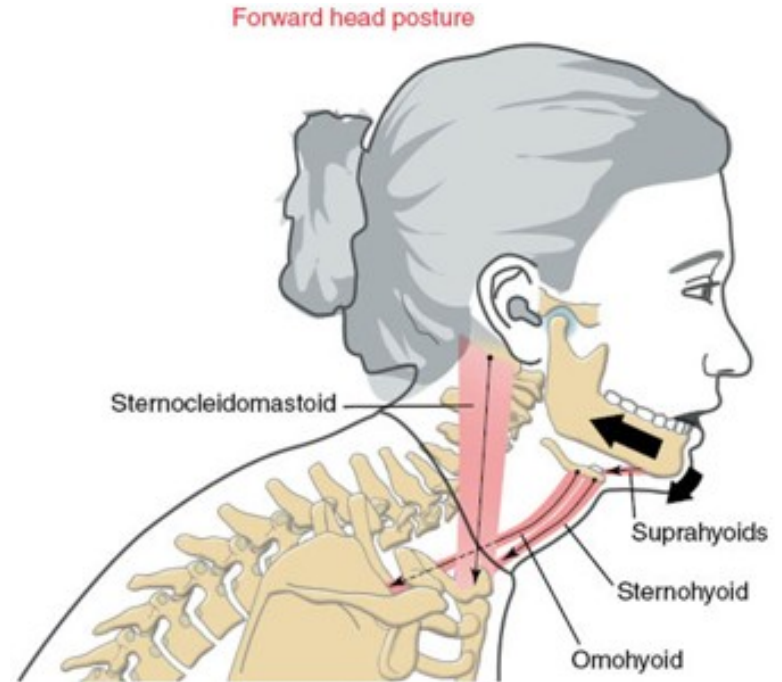
Low Back Pain



- **Dentists**
 - 64-93% of dentists suffering from chronic back pains (lower, upper or neck pain)
 - Women reported more intense and frequent back pain
 - Chronic pain significantly associated with years of practice
- **Dental Students**
 - 46-71 % of dental students experience MSD
 - Increased with number of years in school
 - Male students had more low to mid back pain
 - Female students had more neck and shoulder pain

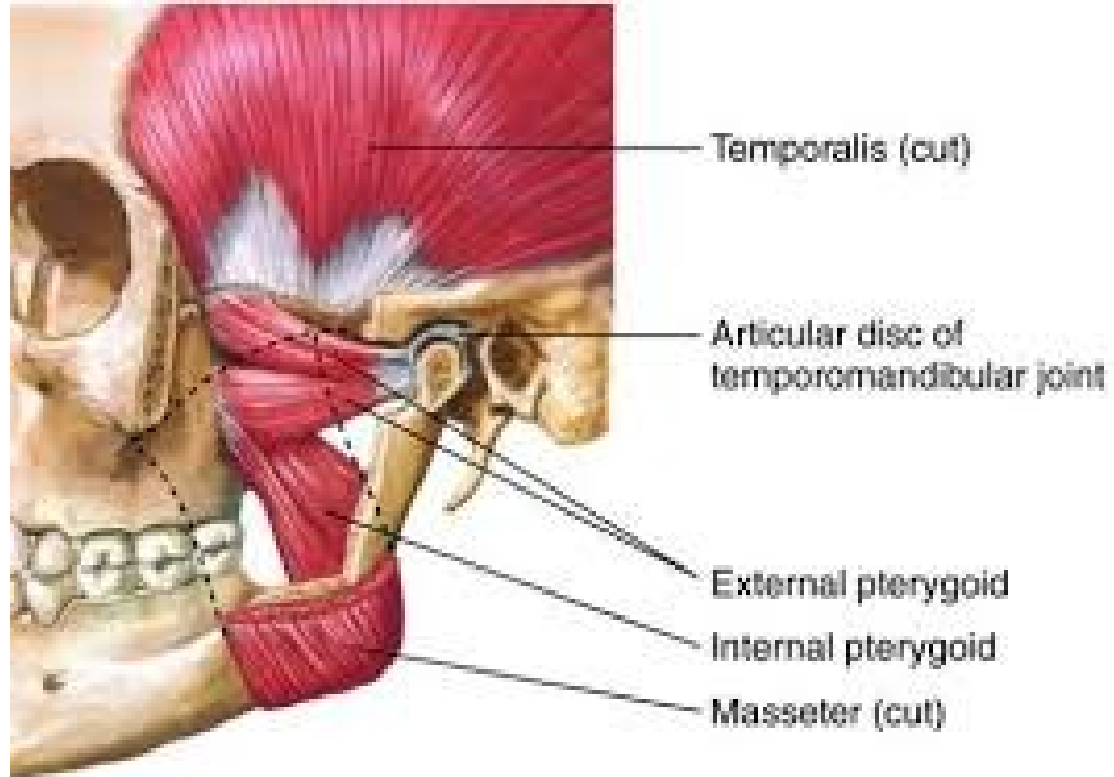
TMD and the neck

- Forward head posture **positions the TMJ posterior inferior**
- Thoracic mobility affects neck
- Creates upper cervical hypomobility
- Clicking is not normal



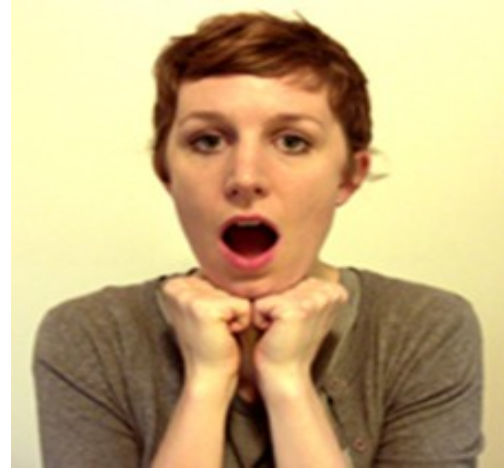
TMJ Treatments; Manual Work & Beyond

- **Elevators:** Masseter, temporalis
 - Fight against forward head
 - Isometric opening
 - Often *overworked, shortened & tight*



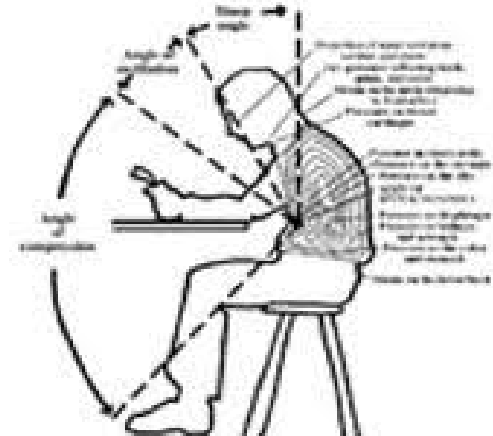
TMJ Treatments: Exercises

- Rocabado 6 x 6 exercises
- Mindfulness
- Posture
- Lifestyle Changes
- Mirror
- Posture
 - Neck
 - Shoulders
 - Back



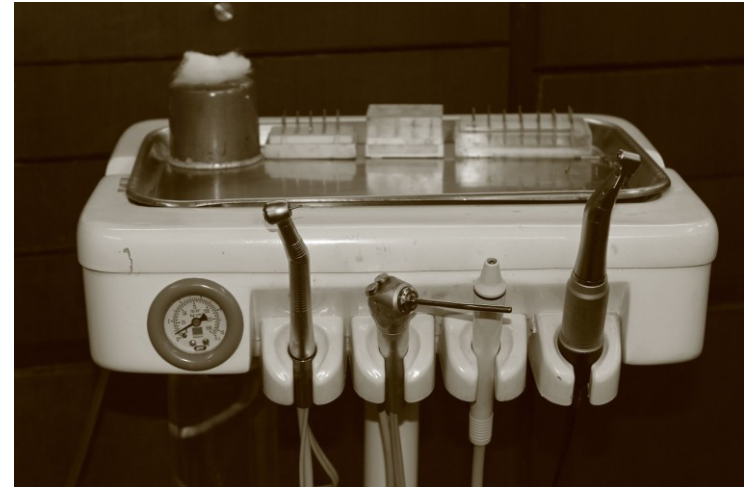
What to Avoid

- Not a weight-bearing joint
- Chewing gum & more
- Stogies
- Sustained head position
- Bad Postures
 - Resting chin on fist
- Clenching
 - At rest teeth are apart, tongue sits roof of mouth
 - Mouth guards



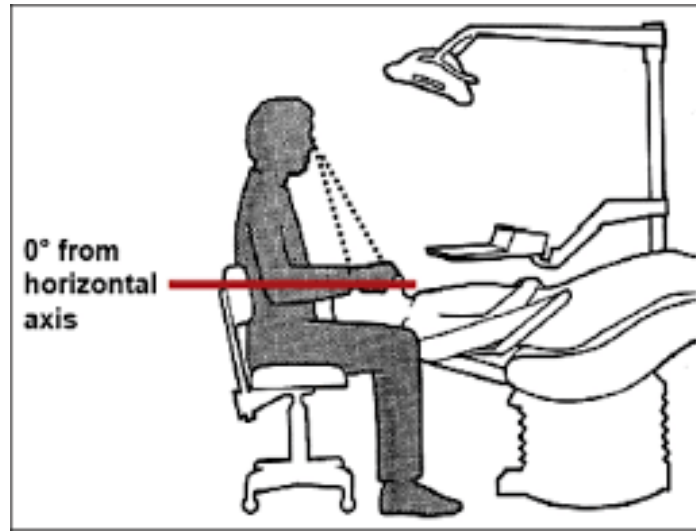
Basics Work Ergonomics

- Screen/Work in front of you
- Mouse or tools close to you
- A workspace without clutter



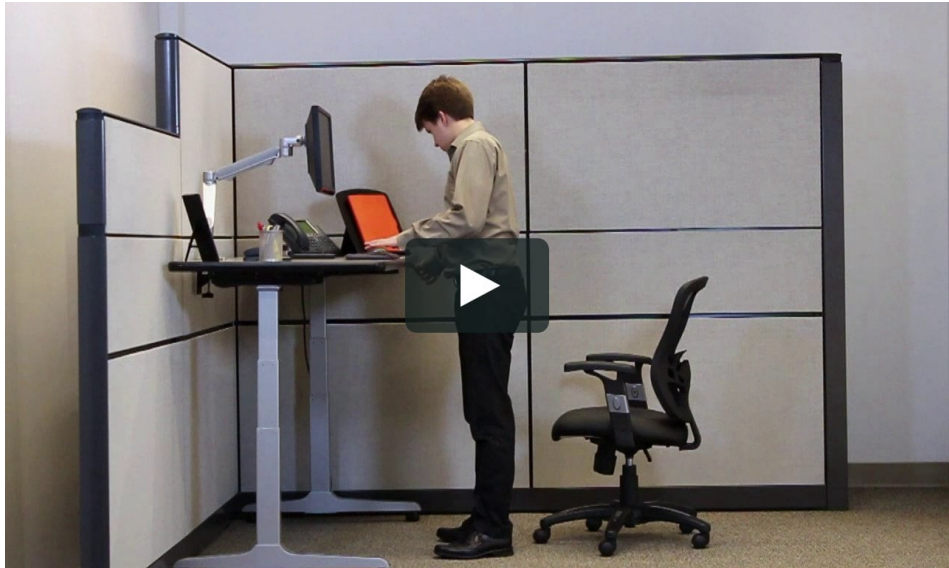
Considerations in the Dental Office

- Improving ergonomics can increase productivity, improve moral, decrease sick days and improve overall quality of life.
- Some positions may be unavoidable
- If we can't protect our own body, we are no good to anyone else.

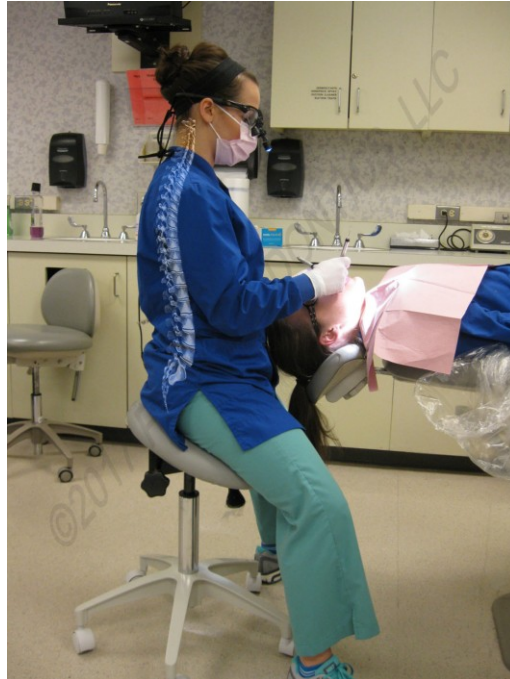


What You Can Control

- Your chair is adjustable. Hips higher than knees
- Sit to stand desks
- If lumbar is not in a good position, rest of the spine does not have a chance



Tools To Encourage Better Ergonomics



- Saddle Seats AND Loupes



Keep Your Joints in Midrange

It is **sustained positions** and **repetitive** use that cause the breakdown



Get up and move!

- Change position frequently
- Find an exercise room in the office
- Walk at lunch time: Cardiovascular exercise is the #1 priority
- No eating at your desk
- Hydrate frequently (forces you to take a break)



Exercises for the Lumbar Spine

- Knees, hips, even shoulders are “replaceable” Your spine is NOT.
- Surgical options are a LAST resort
- “My back goes out on me once a year” is not acceptable



The Bird Dog



Exercises for the Lumbar Stabilization

- First things first: Stretch shortened muscles
 - Good posture has to be available in order to maintain it
- No one can keep perfect posture all day
- If you slump forward all day, we need to reverse the forces



Exercises for the Lumbar Spine

- Strengthen Glutes, Abs, Back Extensors
- These muscles act to hold you in place and need endurance vs. power
- We choose exercises that **UNLOAD** the spine.

Hips and knees at 90 degrees, squeeze ball with arms.
Same side arm/leg release, return to ball, opposite arm/leg release.



Exercises That Can Be Done At The Office



Trigger
Point



Deep Neck Flexors



Scapular Squeezes



Stretches At The Office



Wrist Extension



Neck Sidebending



Anterior Shoulders



Thoracic Extension



Lumbar Flexion



Journal References

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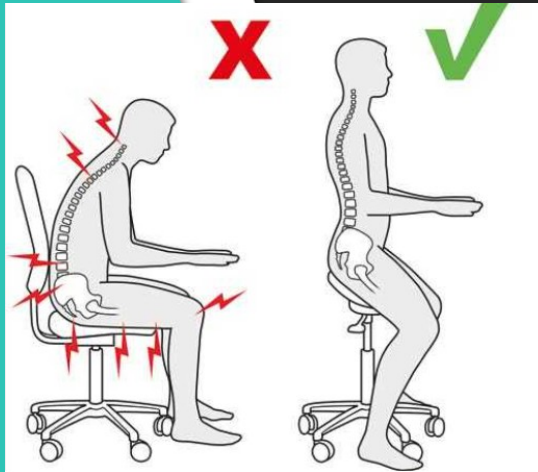
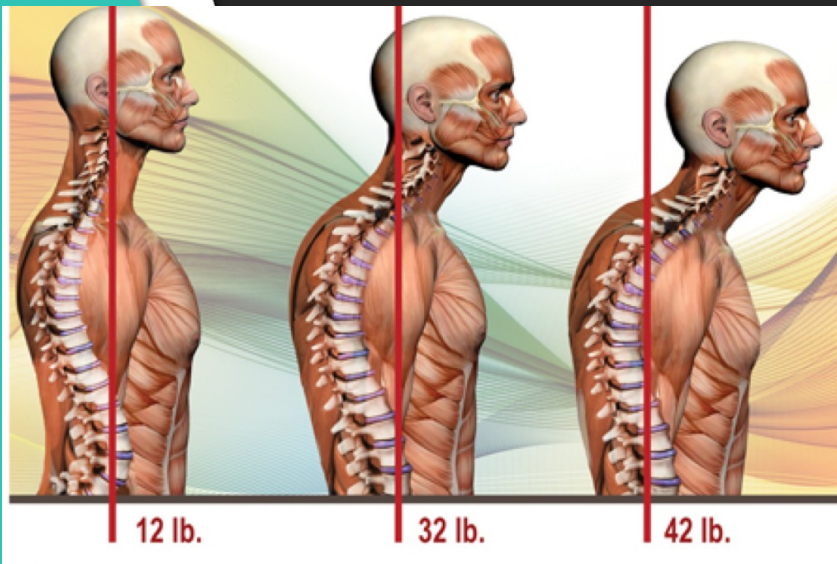
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THANK YOU

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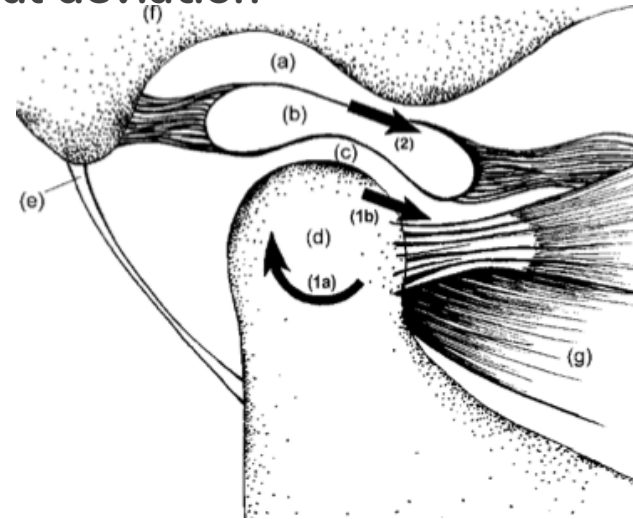
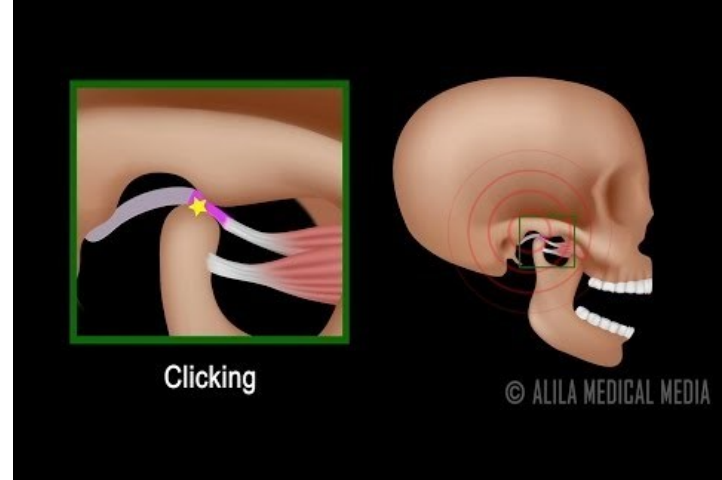
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TMJ Anatomy

- Temporal bone
- Mandible
- Muscles: Opening, Closing, Protrusion, Lateral deviation
- Articular Disc: Attached to lateral pterygoid



PT Evaluation

- History
 - Subjective measures
- Objective measures
 - ROM: AROM
 - Pain free
 - Painful
 - Asymmetry of neck or shoulder
 - Opening: palpation
 - Posture

