

RDH UnderOneRoof



Gaylord Opryland Resort &  
Convention Center



TUNE INTO YOUR PROFESSION

# General Session

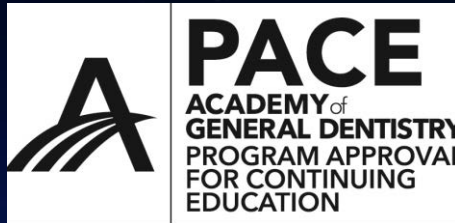
Dying to Breathe: Hygienists' role in identifying orofacial and airway components which are driving chronic inflammation!

Kriston Reishour, RDH, BSDH, CCSH, CSOM,  
HIAOMT, COSE, FAAOSH





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Thank you



INTERNATIONAL ACADEMY OF SLEEP

For providing the unrestricted educational grant  
for the continuing dental education activity.



# LEARNING OBJECTIVES

- Understand the critical role dental healthcare providers, hygienists play in identifying and assessing underlying inflammation as it relates to airway-breathing, sleep issues, and the orofacial component in patient care.
- Use physical exam skills to recognize anatomy and conditions in the oral cavity causing issues with function, growth, and lead to the breakdown of multiple body systems over time.
- Discuss how to recommend individualized treatment to achieve optimal health and wellbeing of the patients.



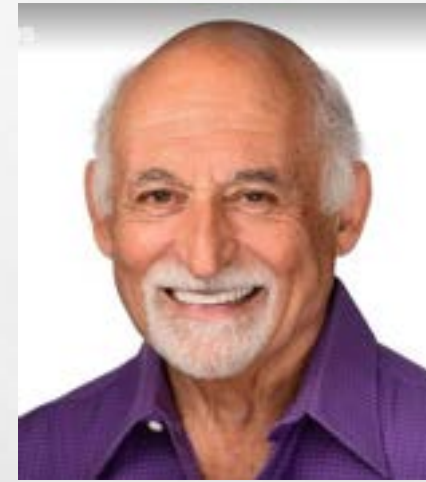
# AIRWAY /OSA/ BREATHING & MYOFUNCTIONAL THERAPY CONTRIBUTORS



**Sandra R. Coulson, MS, ST, ED, COM**

“The Thumb Whisperer”

<https://www.sandracoulson.com/coulson-institute>



**Roger Price**

Functional Medicine and Integrative Health  
Educator.

‘The Father of Airway in Dentistry’

<https://breathing-well.com/>



# AIRWAY /OSA/ BREATHING & MYOFUNCTIONAL THERAPY CONTRIBUTORS



**Kevin Boyd MS DDS**

Pioneering pediatric dentist and international lecturer. Leading clinician for diagnosing and treating improper development of teeth, jaws, face and airway  
<https://dentalsleeppractice.com/dont-call-early-orthodontics/>



**Steve Lamberg DDS, DABDSM**

Lamberg's questionnaire  
Author: Treat the Cause ...Treat the Airway  
<https://drlamberg.com/Meet-Dr-Steven-Lamberg/>



Advanced  
Cosmetic  
& Laser  
Dentistry

Suite 600

THOMAS  
ANDREA  
BARNEY  
CHAD MELL  
LIZA KIPCH  
KEVIN B  
ANGIE KANG  
MICHELLE

LifeGuard Approach

Childrens Airway First Foundation

# SAVVY'S STORY





# INFLAMMATION!



**INFLAMMATION IS THE ROOT OF ALL DENTAL AND MEDICAL EVIL  
WE HAVE TO WORK HAND IN HAND TO EXTINGUISH IT!**



*"Optimal sleep, and I'm not referring to how many hours, but more about the quality of your sleep, will enhance your immune system and reduce inflammation. That alone is your best defense strategy in preventing oral disease."*

**- Mark Burhenne**

*Family Dentist & advisor for Bristle, Co-Founder, Ask The Dentist*

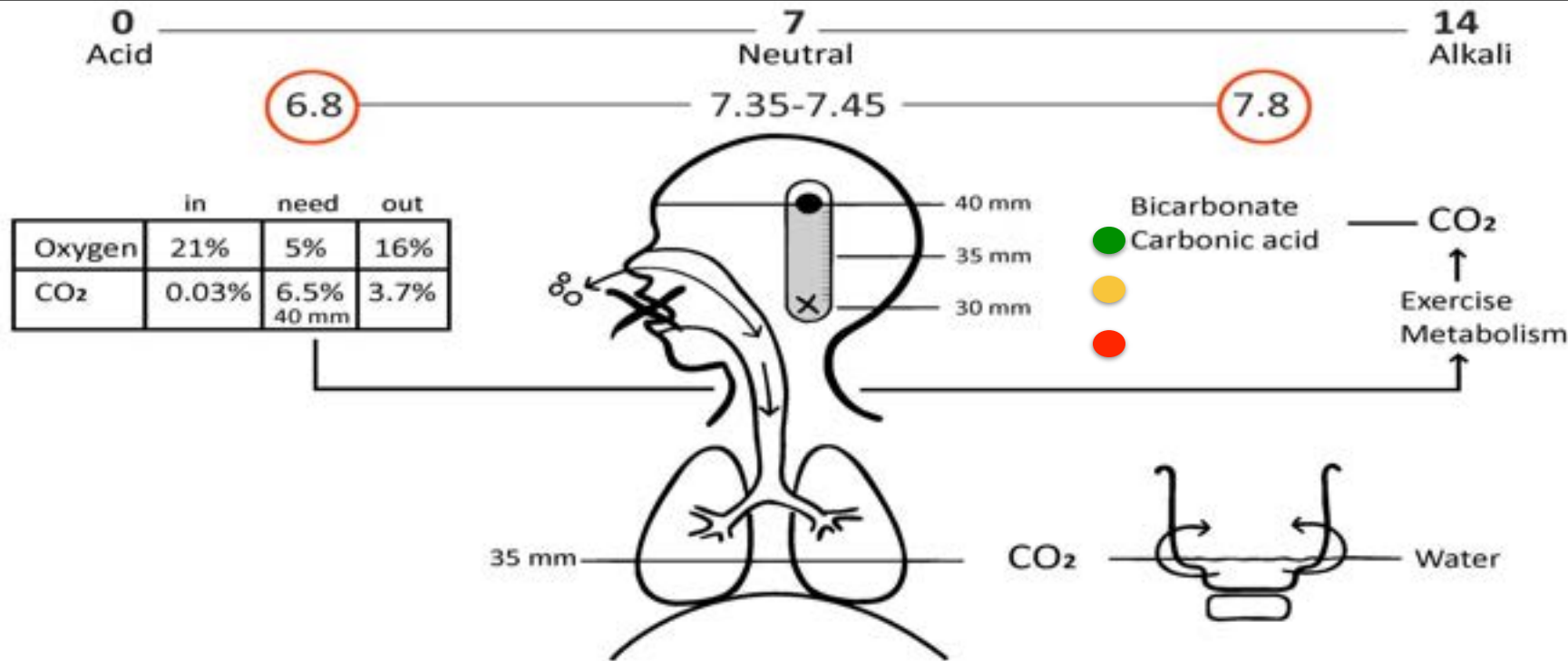
# LET'S TALK ABOUT THE AIRWAY!



- Breathing is #1!!!!
- Your body will do WHATEVER it takes to ensure it gets the next breath
- Open the airway however necessary
  - Forward head posture
  - Protrusion of lower jaw
  - Mouth breathing
  - Low forward tongue posture



# PROPER BREATHING



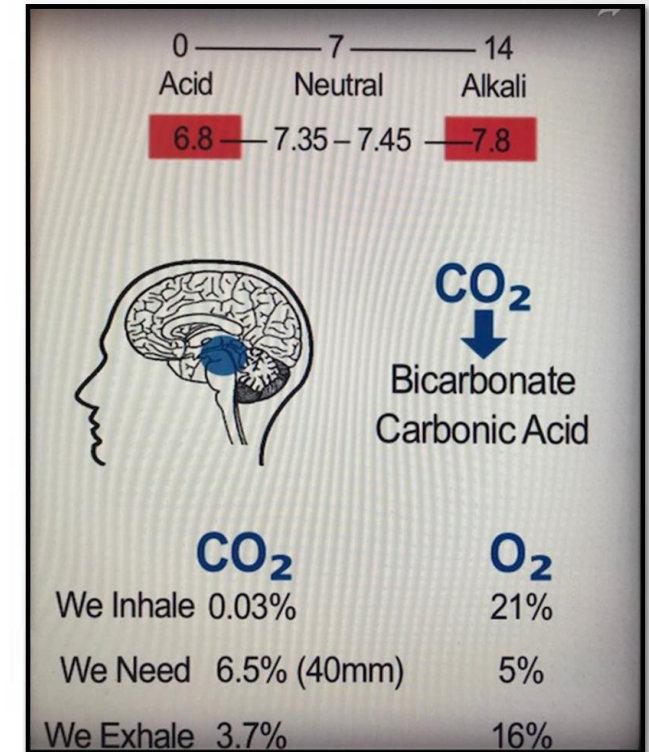
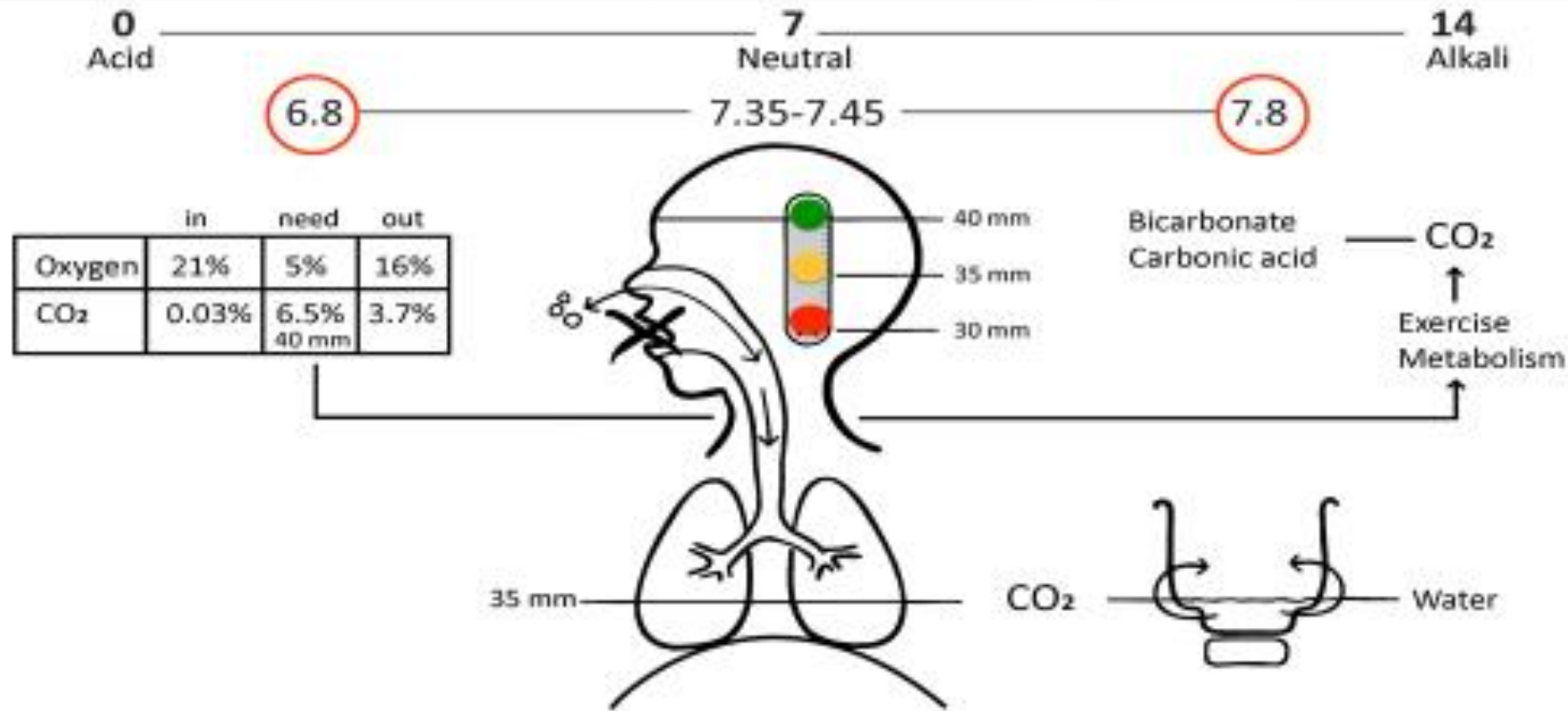
NOSES ARE MADE FOR BREATHING

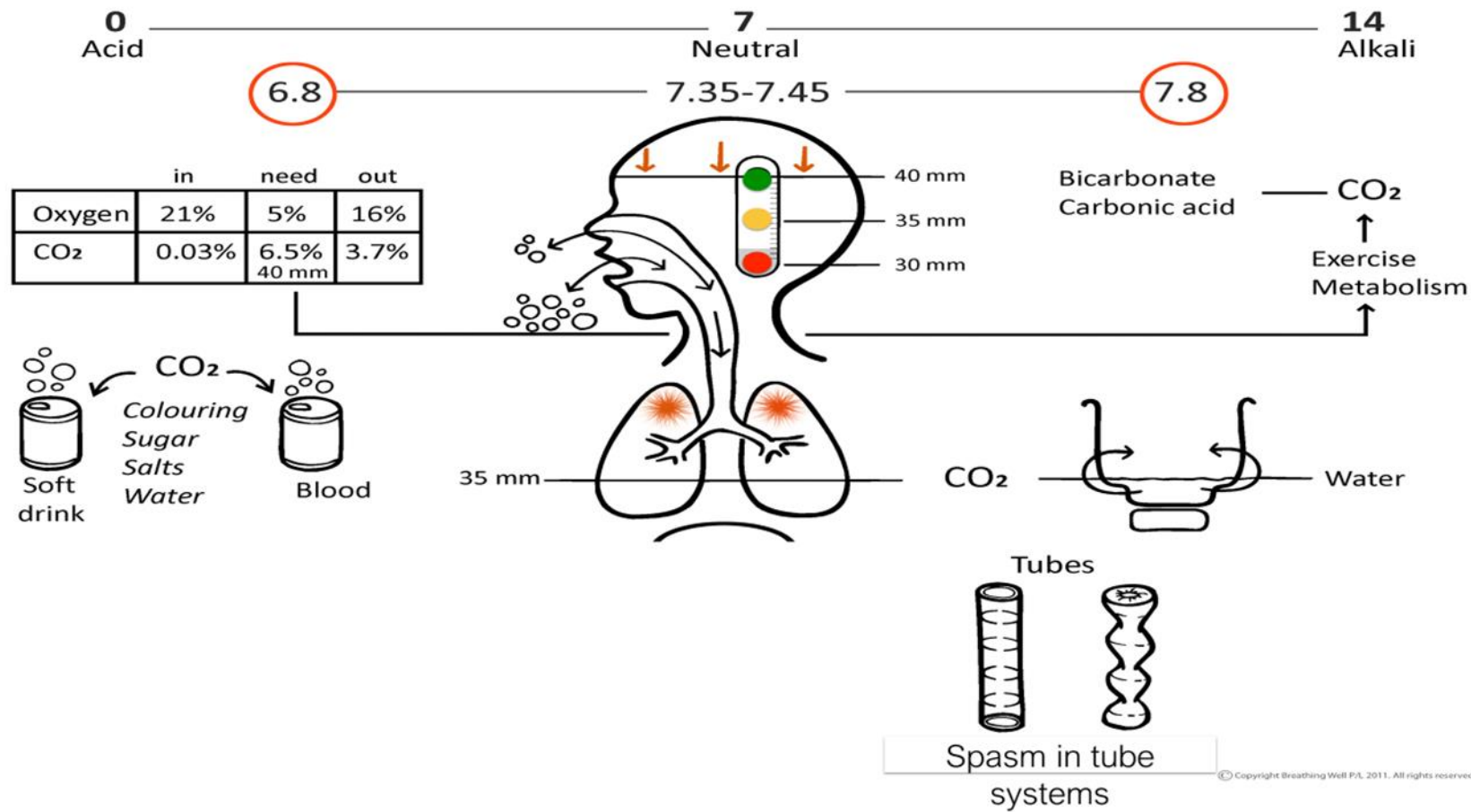
- Functional breathing at rest
- 8-10 breaths per minute
- 5-6 liters of air per minute
- In and Out through the nose
- Driven by the diaphragm
- Silent

© Copyright Breathing With PC, 2011. All rights reserved.

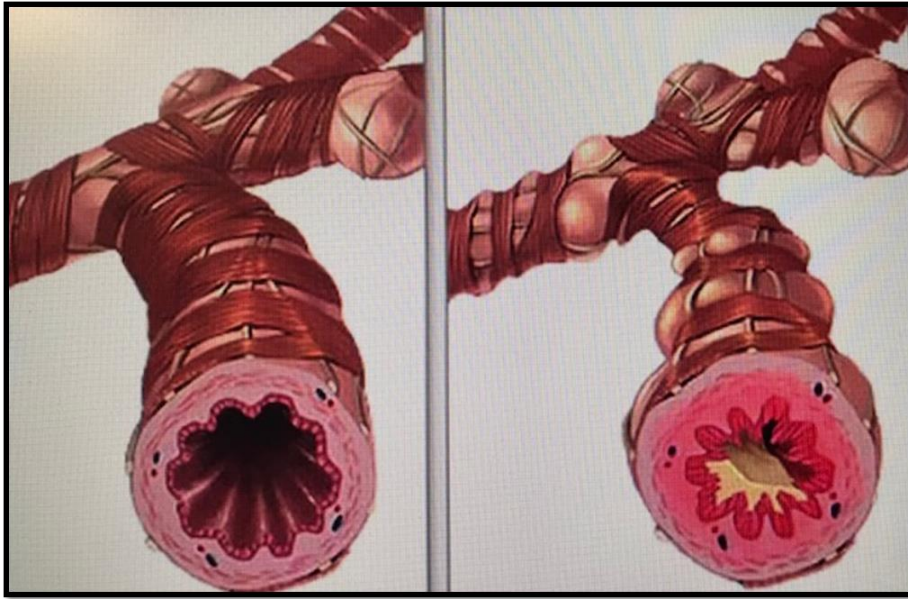
Illustration provided by Roger Price

# NOSES ARE MADE FOR BREATHING

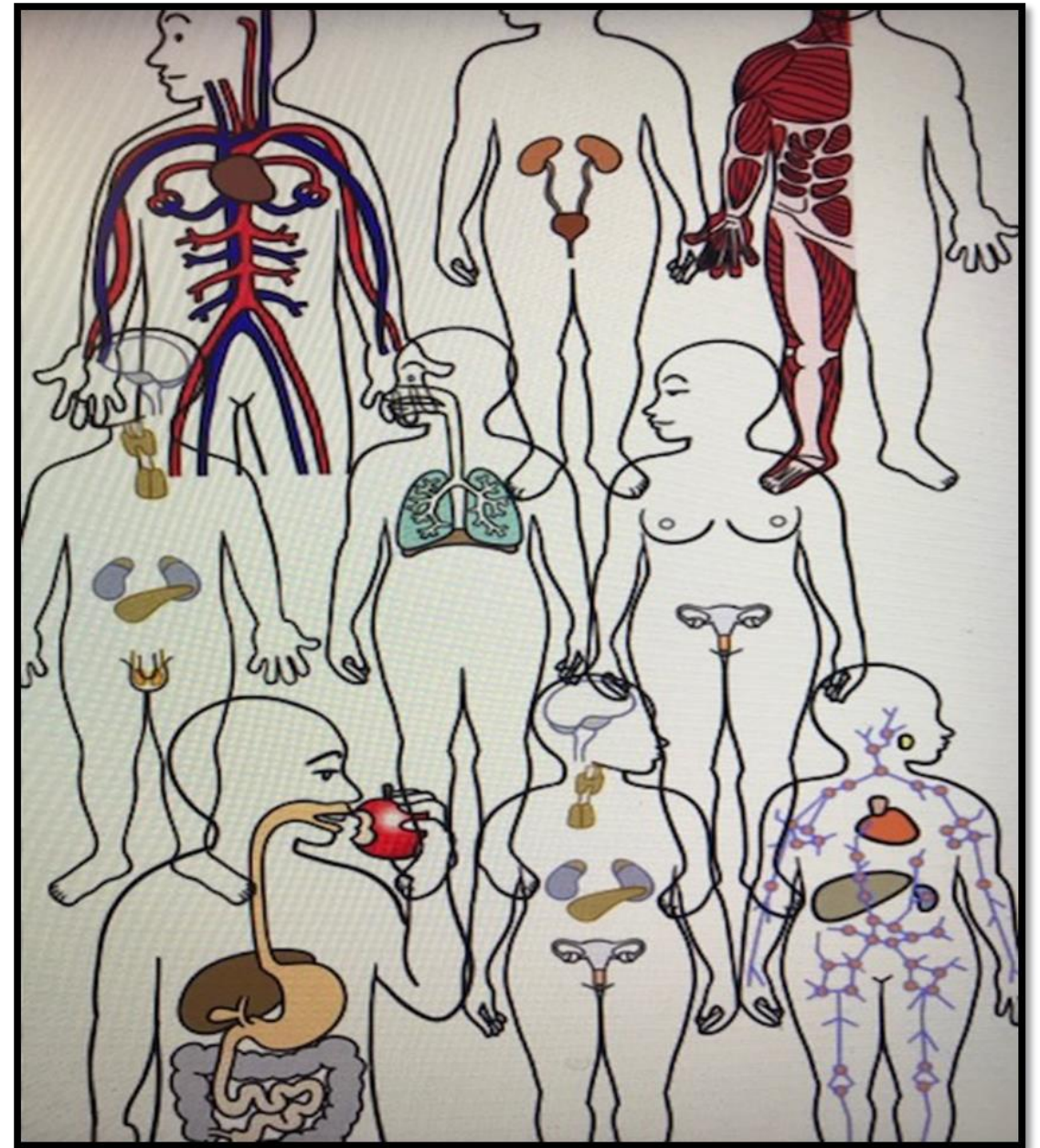
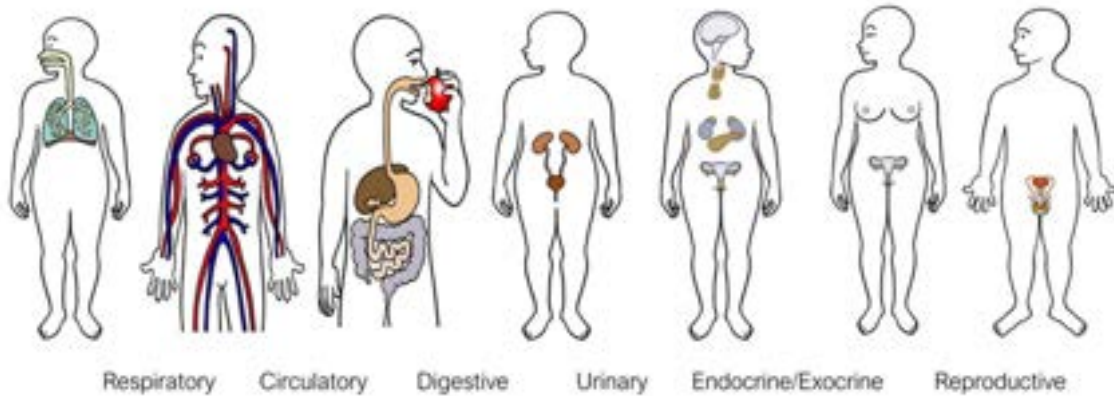








**Every one of the following systems is affected by tubes going into spasm**



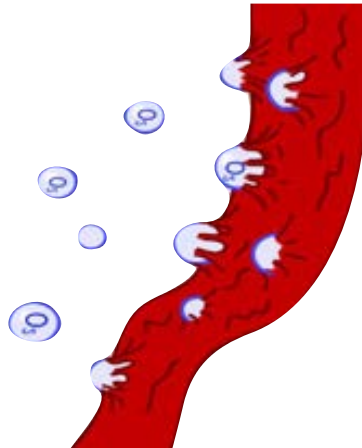
# OVERBREATHERS



Suffer from:

Uncontrolled spasm in smooth muscle systems

Reduced release of oxygen from the hemoglobin in their blood



These dysfunctions cause long term chronic health issues.

## INFLAMMATION!

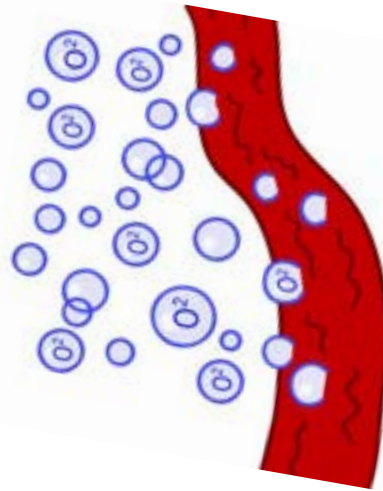
# NASAL BREATHERS



## Consequence

Chemical Axis is in balance, they:

- sleep well
- breathe well
- have straight teeth
- have well developed jaws
- have excellent posture
- can exercise efficiently
- will not get sick as many times as those who breathe through their mouths

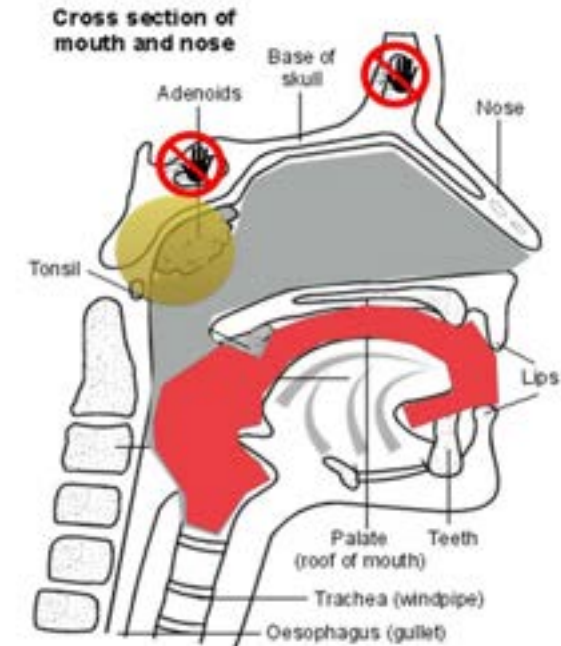
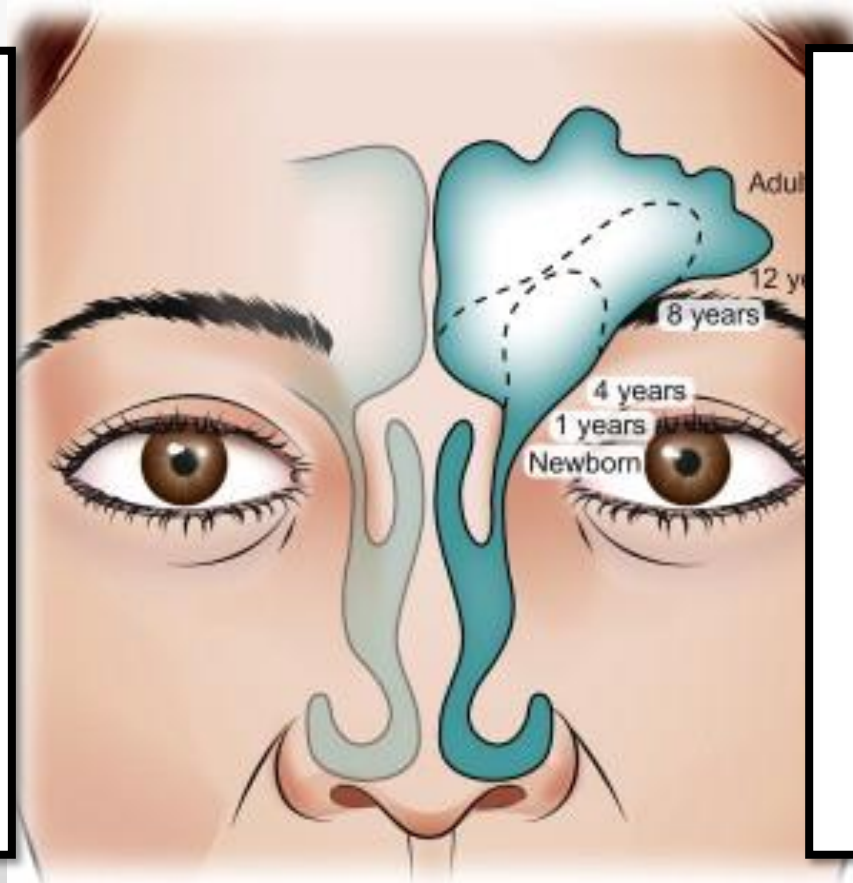
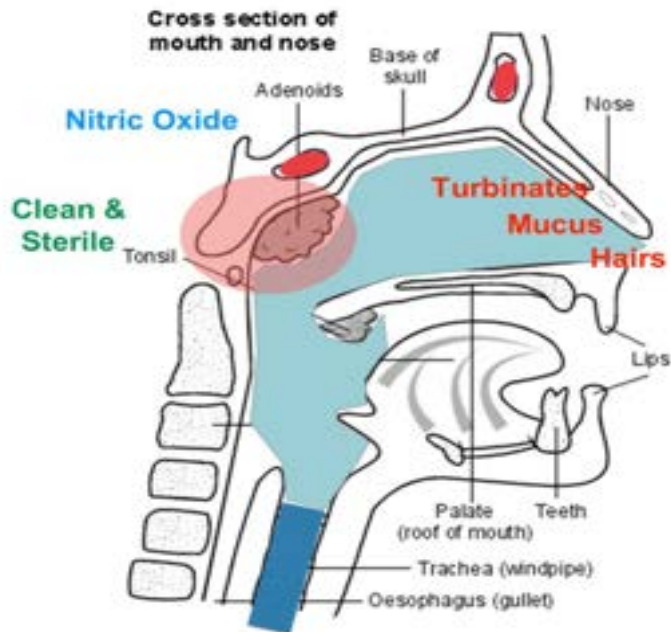


# BALANCE!



# Breathing Through The Nose And Breathing Through The Mouth

## Noses are made for Breathing

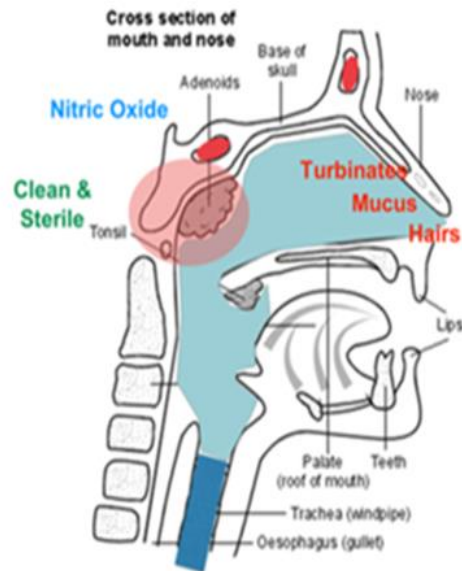


Mouth breathing stops the sinus from growing

Slides provided by Roger Price & SomnoMed AA program

# NOSE(NASAL VALVE, NASAL CAPULE AND SINUSES) PHARYNX (NASOPHARYNX, OROPHARYNX, HYPOPHARYNX)

## Noses are made for Breathing



### 4 stage filtration system:

**Nostrils:** filter out floaties in the air

**Mucus:** contain enzymes that kill viruses and bacteria

**Turbinates' and Sinus:** warm and condition the air, control the air, and humidify the air

**Adenoids and Tonsils:** Final filtration before air enters the lungs

## TURBULENCE TROUBLE SPOTS

### Nasopharynx

Maxillary Deficiency  
Swollen Adenoids  
Long soft Palate  
Inflamed Uvula

### Oropharynx

Swollen Tonsils  
Displaced Tongue  
Under toned Dilators  
Low Hyoid  
Cervical Misalignment  
Mandibular Retrognathia

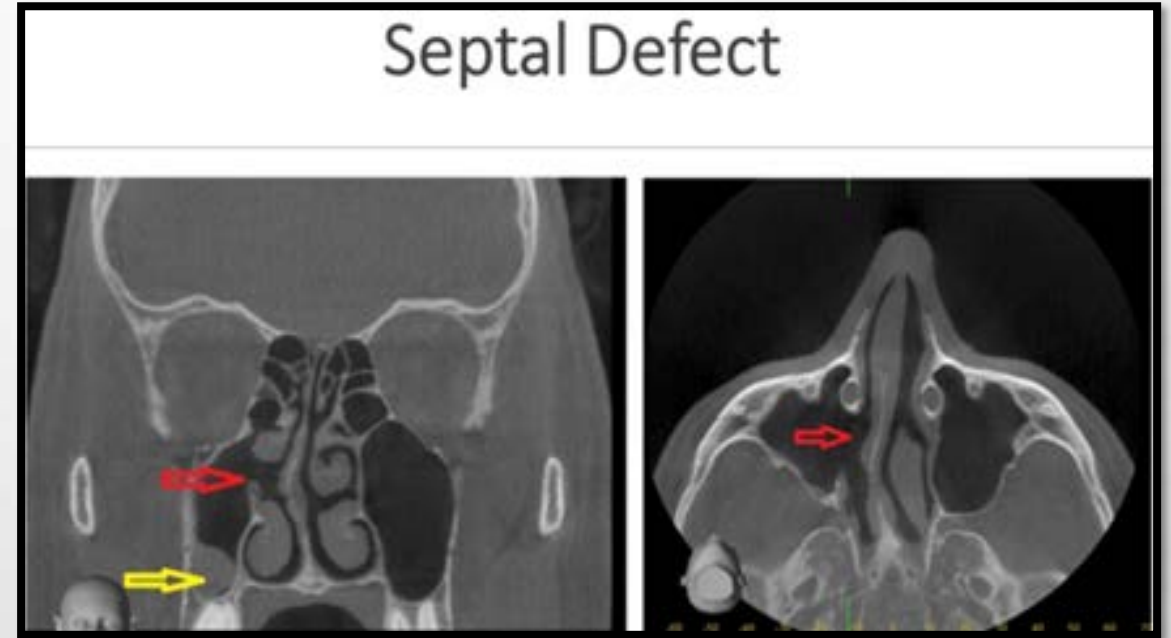
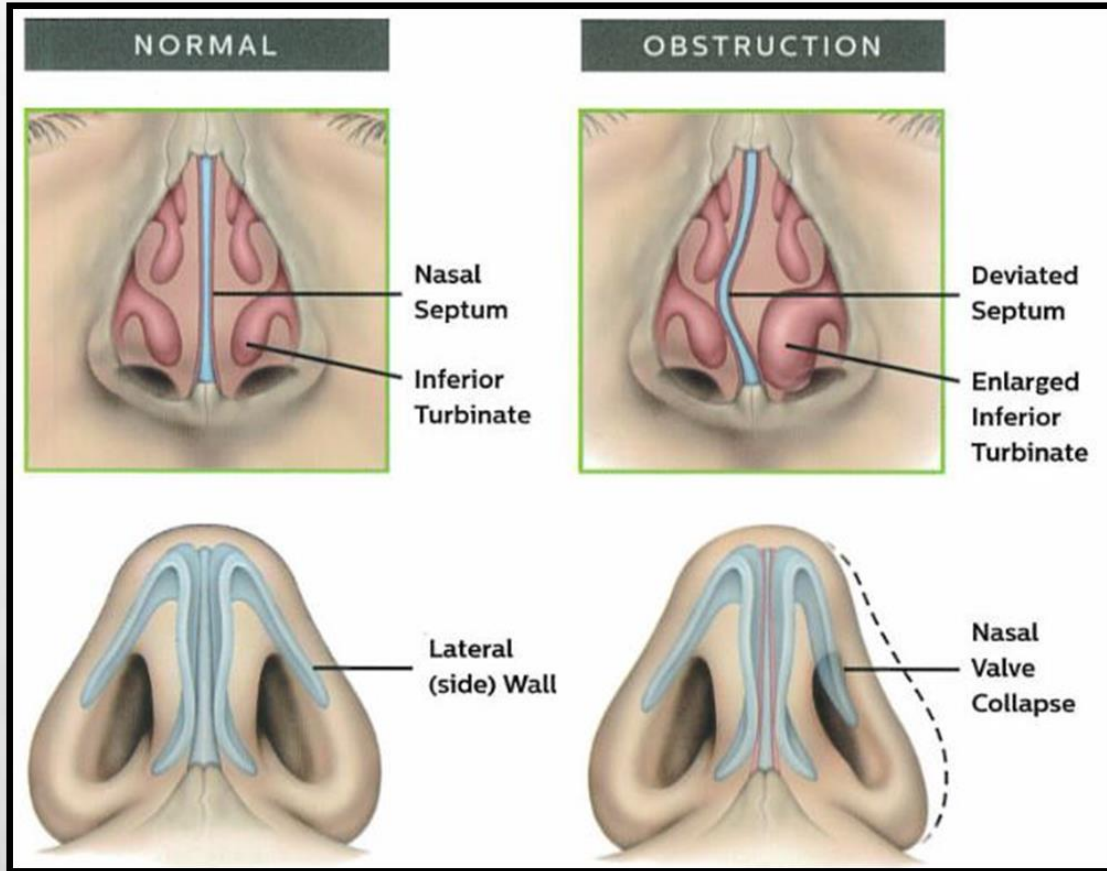
### Nasal Capsule and Sinuses

Swollen Turbinates  
Clogged Sinuses  
Polyps and Cysts  
Deviated Septum  
Narrow Maxilla

### Nasal Valves

Narrow nares  
Collapsed nasal cartilages  
Mucus and poor hygiene

# NASAL BREATHING





So ... Is this a normal Breathing position? Sleeping position?



# INTERESTING FACTS ABOUT SLEEP



Humans can survive longer without food than they can without sleep

During the first YEAR of a baby's life, new parents getting **4 hrs 44mins** of sleep on average AND will miss 50 nights first year

Sleep-related errors and accidents cost U.S. businesses:

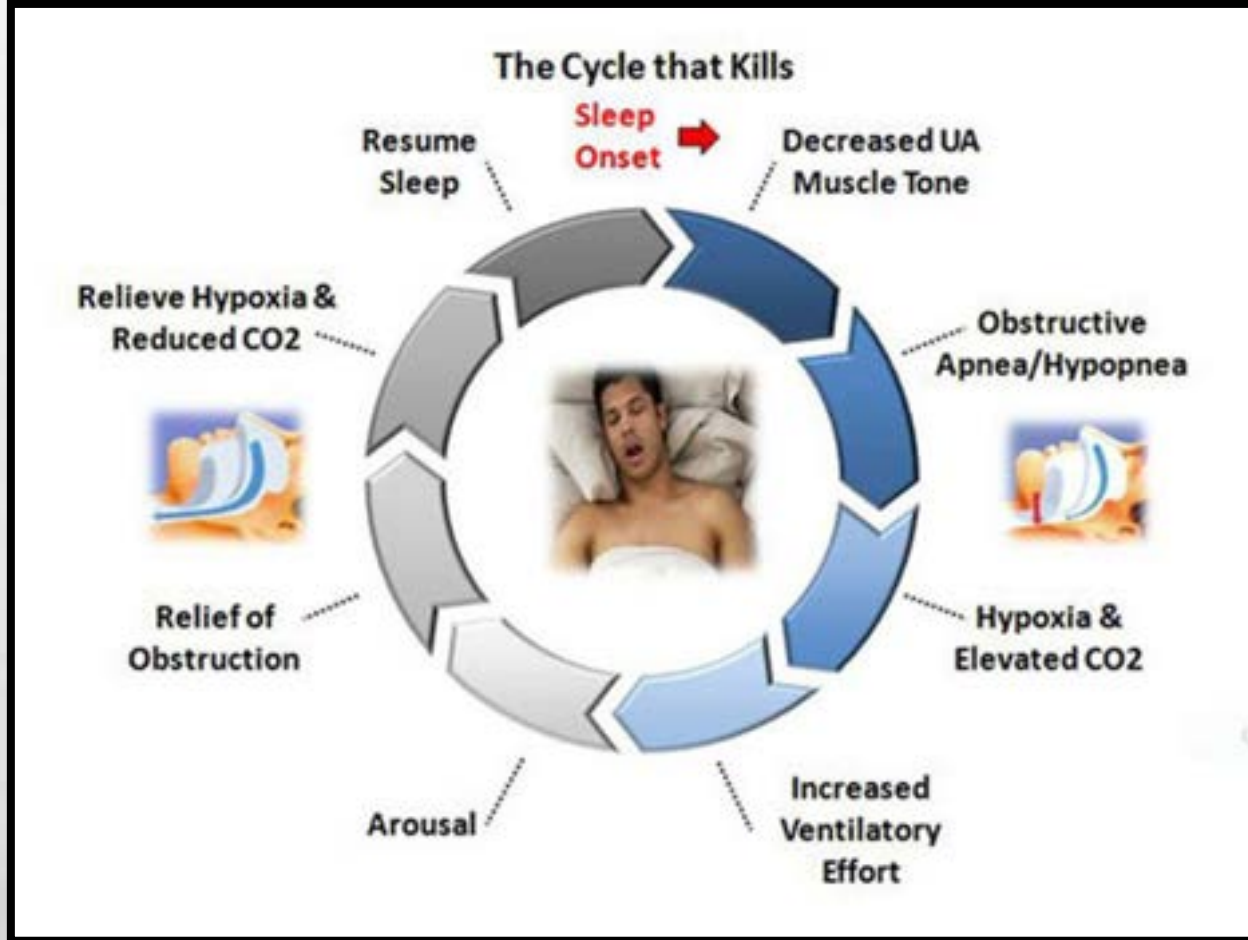
## **Sleep Deprivation:**

- **85%** of police officers
- **80%** pilots
- **48%** of air-traffic controllers
- **41%** medical providers,
- make fatigue-related mistakes.

Lauber, Patricia. 2008. What You Never Knew about Beds, Bedrooms, & Pajamas. New York, NY: Simon & Schuster. Nadelson, Carol C., ed. 2001. Sleep Disorders. Philadelphia, PA: Chelsea House Pub. Each year, sleep-related errors and accidents cost U.S. businesses an estimated \$56 billion, cause nearly 25,000 deaths, and result in 2.5 million disabling injuries. Thorpy, Michael and Jan Yager. Encyclopedia of Sleep and Sleep Disorders. 2nd Ed. New York, NY: Facts on File, Inc, 2001.



# THE CYCLE THAT KILLS!



## THREE TYPES OF SLEEP DISORDERS:

- **OBSTRUCTIVE:** Collapse of airway
- **CENTRAL:** Brain fails to activate the muscles to breath
- **MIXED:** Combination of the both

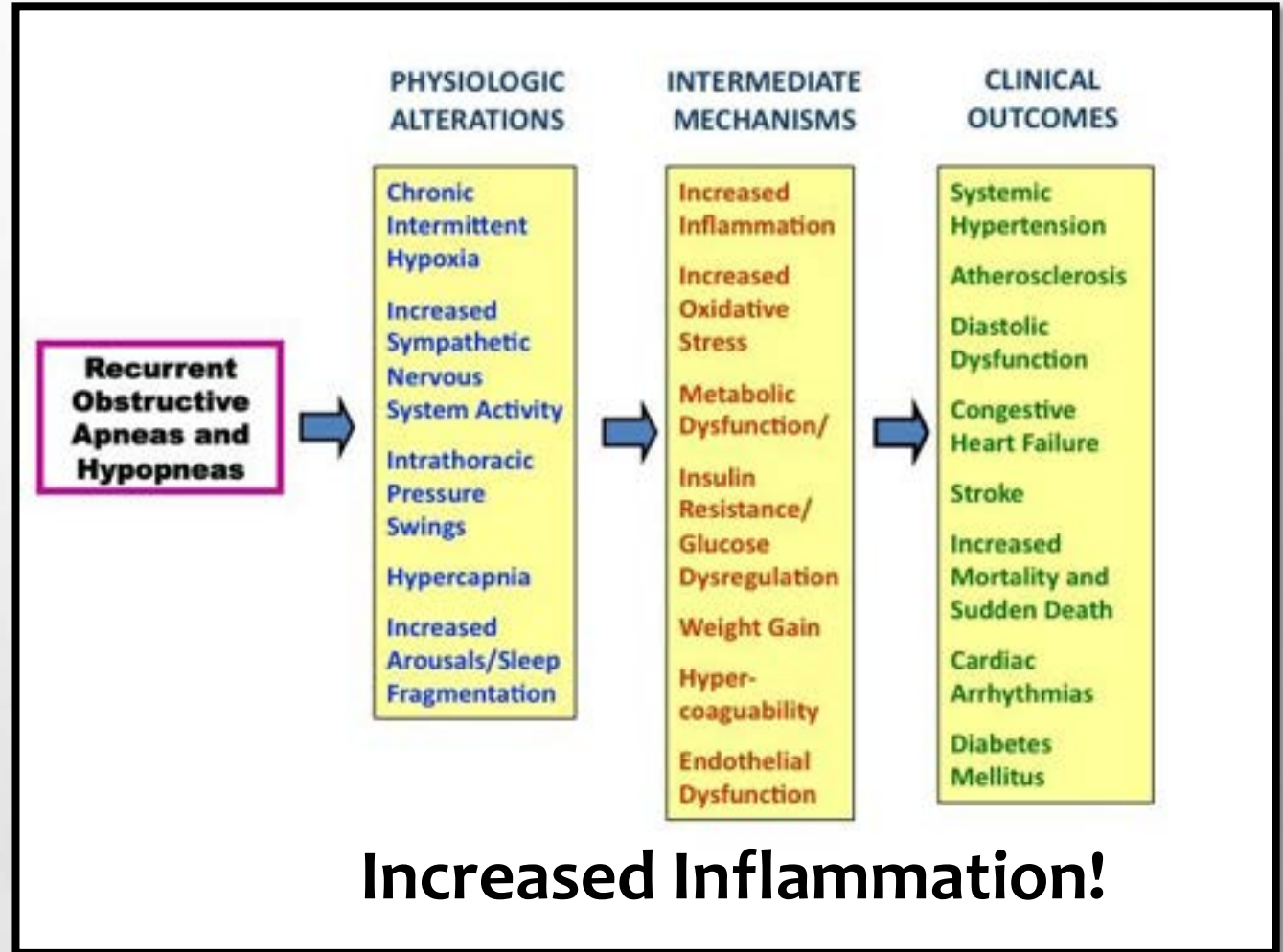


# WHY IS IT SO DANGEROUS? DOES IT CAUSE INFLAMMATION?

## SLEEP APNEA THE HIDDEN DANGER



Obstructive Sleep Apnea and Cardiovascular Disease: Back and Forward in Time Over the Last 25 Years  
Stuart F. Quan, M.D.



**OSA**



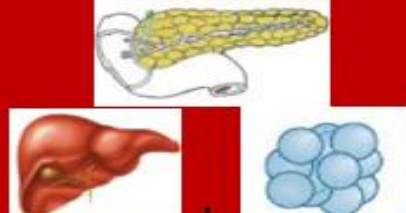
**Dyslipidemia**



**Inflammation**



**Insulin Resistance**



**High Blood Pressure**



**Oxidative Stress**



**Arterial lumen**

**Arterial intima**

**Endothelial Dysfunction**

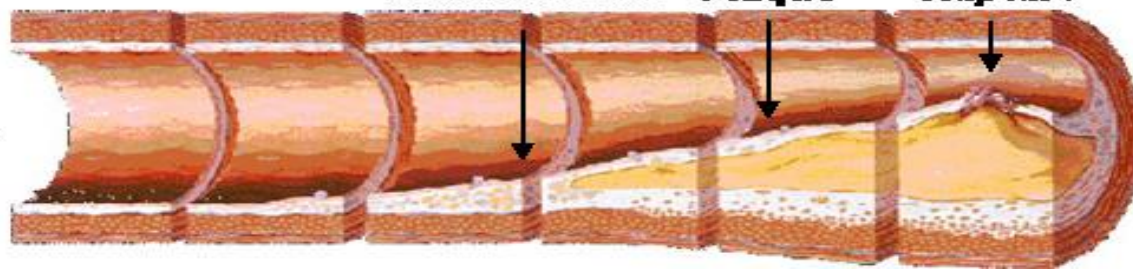
**Foam cells formation**

**Apoptosis**

**Migration and proliferation of smooth muscle cells**

**Progression**

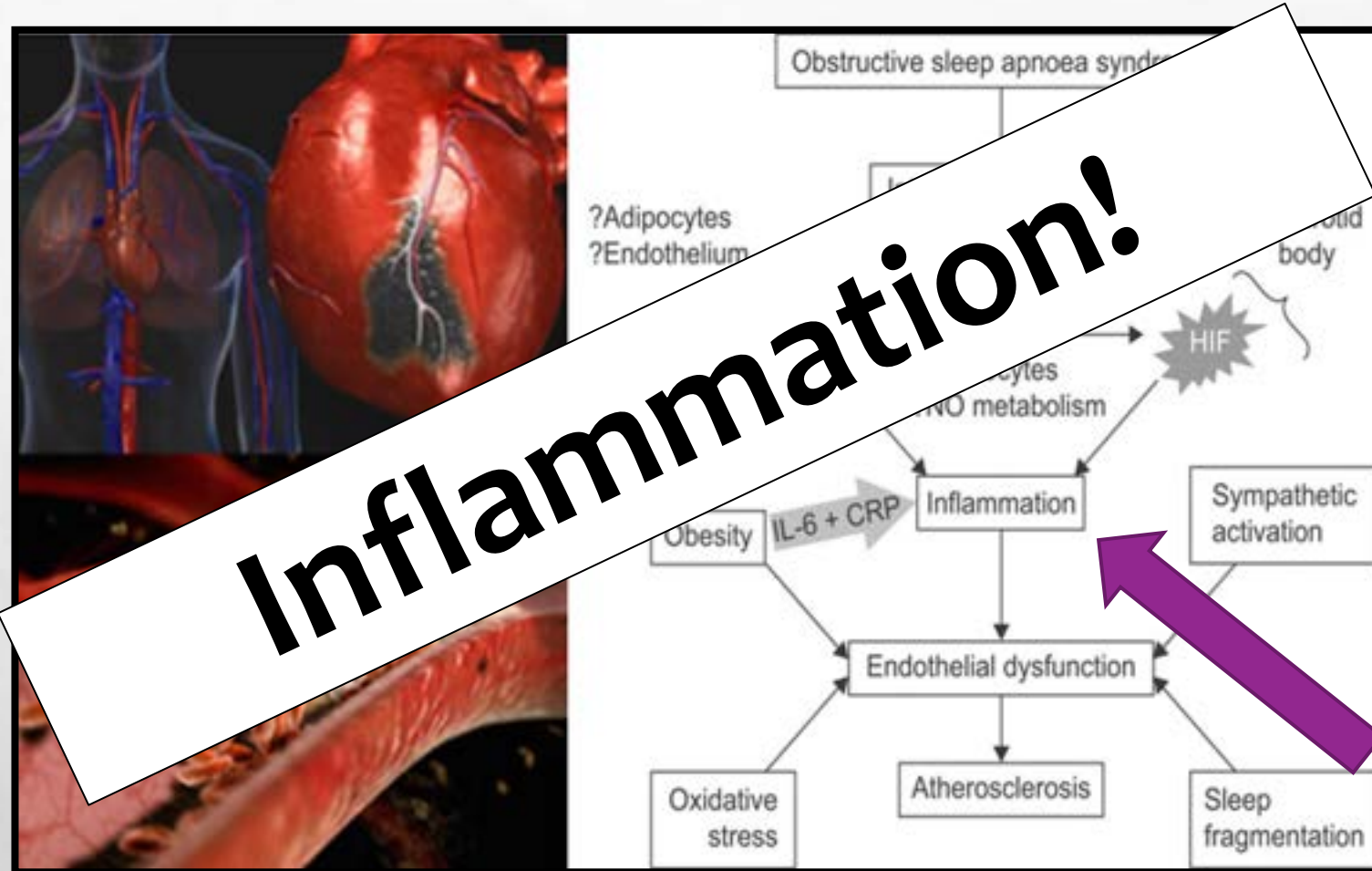
**Increased IMT** **Plaque** **Rupture**



**Myocardial Infarction**  
**Stroke**

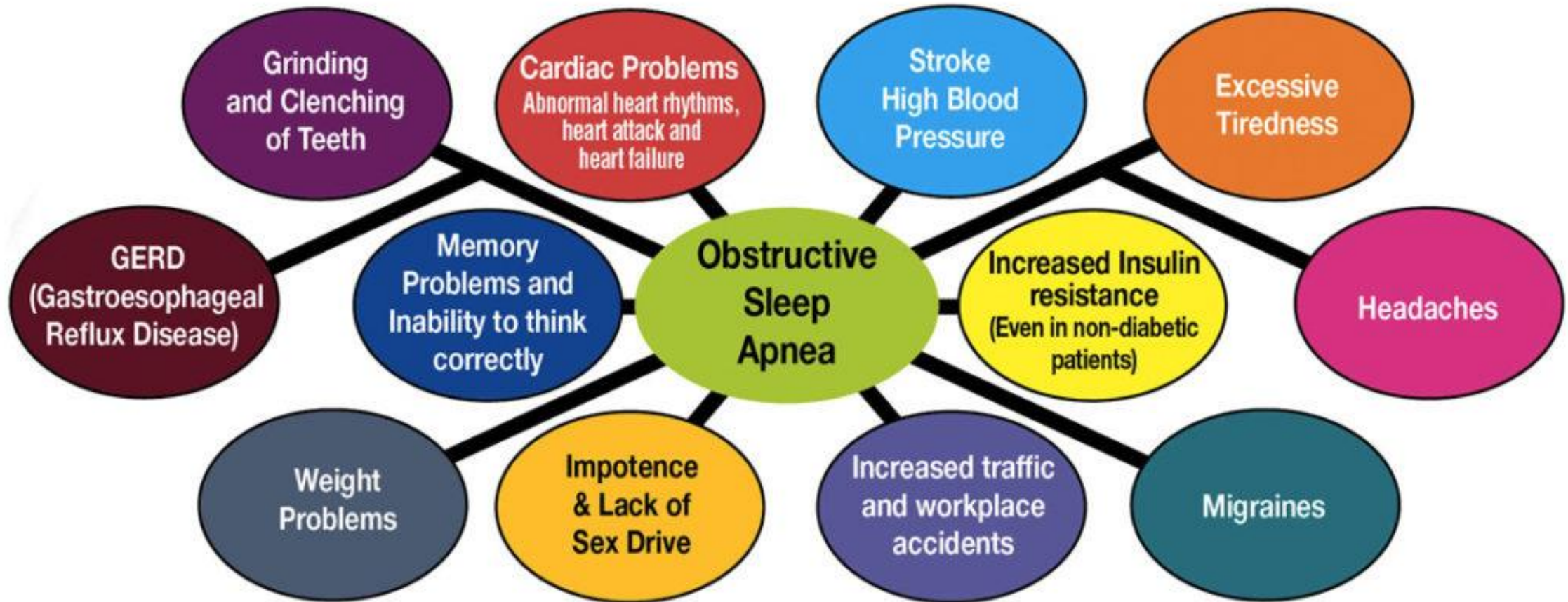


# SLEEP APNEA IS A SILENT DRIVER OF INFLAMMATION

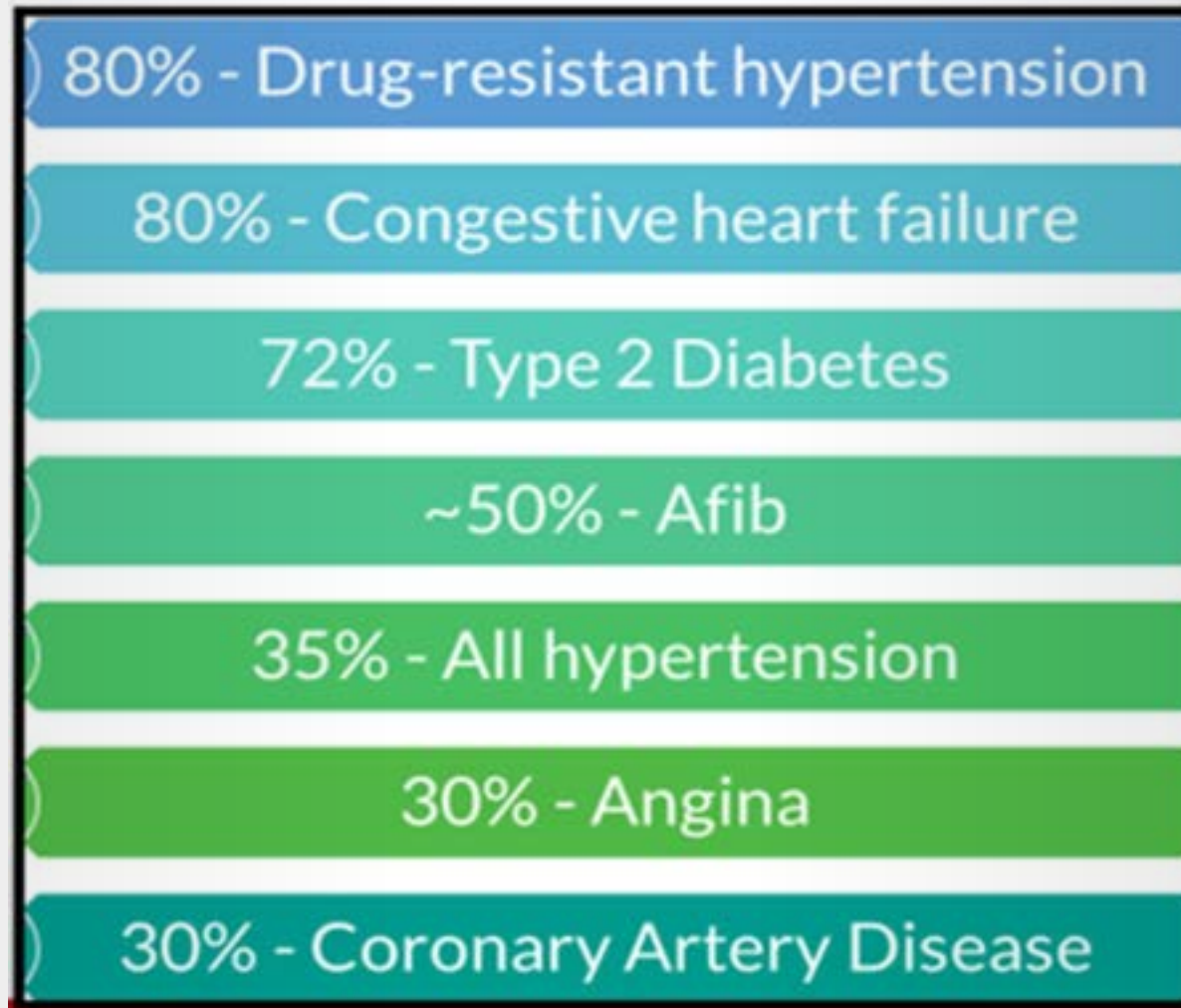




# CONSEQUENCES OF OBSTRUCTIVE SLEEP APNEA

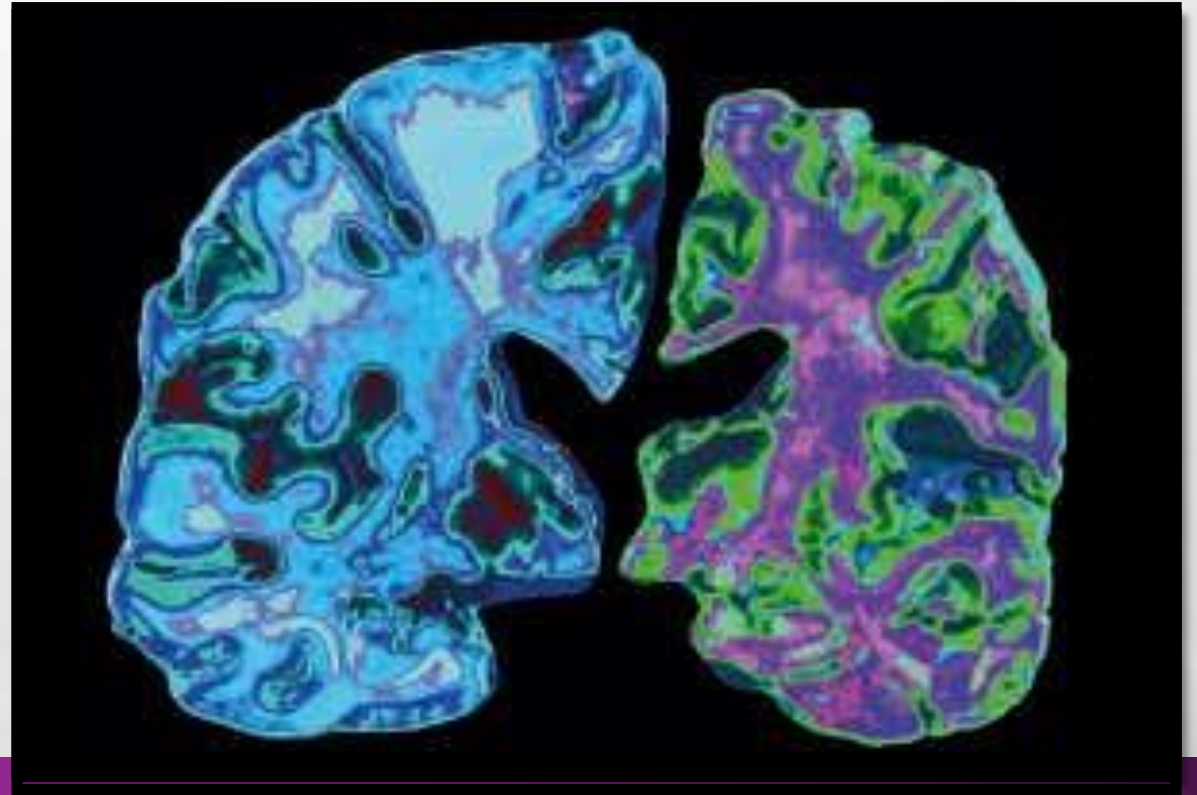


# CONSEQUENCES OF OBSTRUCTIVE SLEEP APNEA





**IF NOT CORRECTED IN INFANCY, LONG TERM HEALTH  
CONSEQUENCES DUE TO AIRWAY AND SLEEP ISSUES ARE  
EXPECTED!**



Leads to Chronic Inflammation throughout a Lifetime



## TRAGIC FETAL LOSS DUE TO A BACTERIAL ORAL INFECTION



Loud frequent snoring increases preterm risk Pb date June 12,2017  
Debra L. Beck, Ob. Gyn. News

## AN OXYGEN DEPRIVED MOTHER LEADS TO AN OXYGEN DEPRIVED FETUS!



Time Mag. Oct. 4<sup>th</sup> 2010: How the Nine Months Before Birth Shape the Rest of Our Lives. The new science of fetal development Anne Murphy Paul

# SO, WHAT CAN GO WRONG?



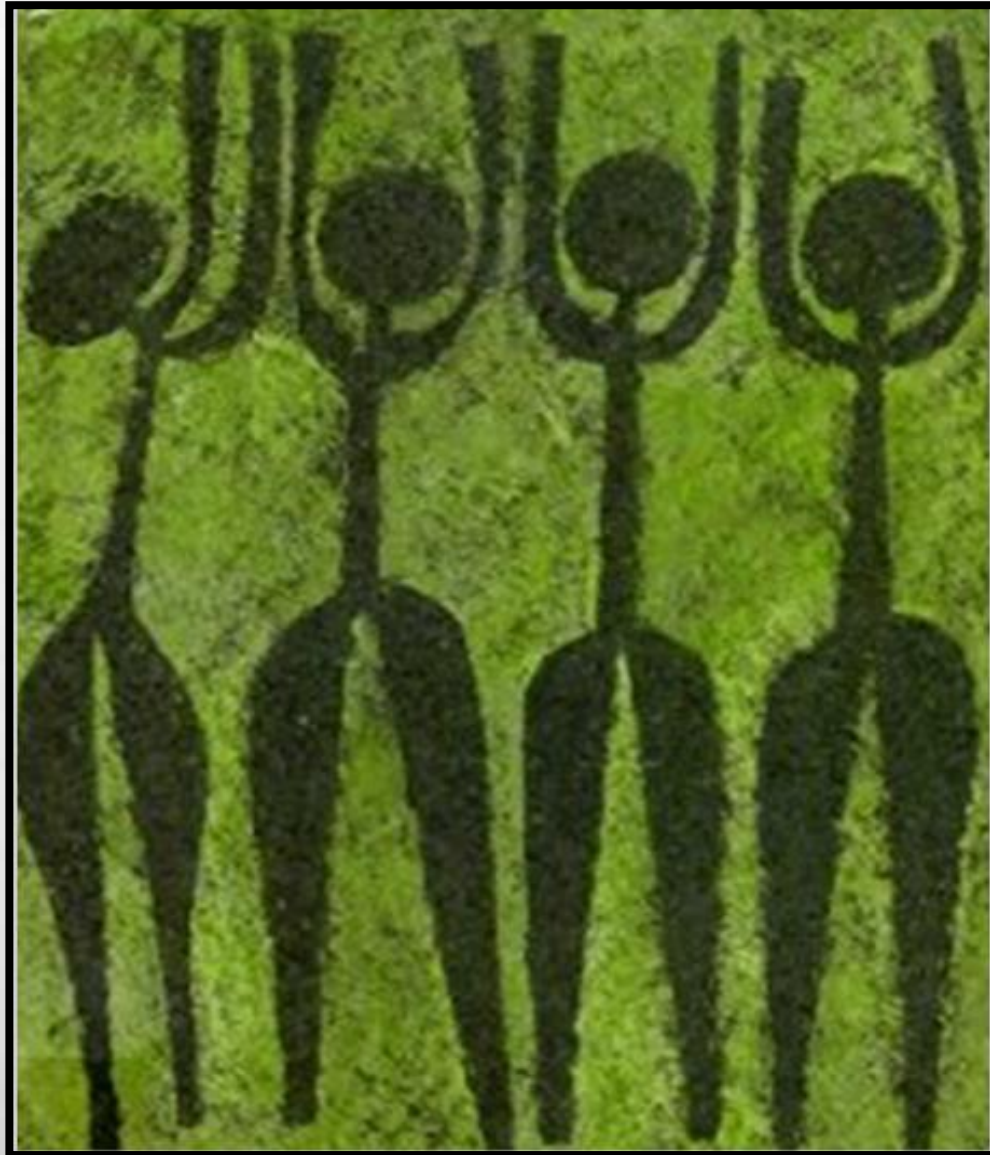
**So, What Can Go Wrong and How Can Your History Help for a Healthier Pregnancy?**



## IN THE PAST.....

- Natural birth
- Mother provided nutrition and nurturing
- Termination of birth
- Mortality rate





## BUT THAT WAS THEN.....

- Food
- Remedies
- Chemicals
- Day/night
- Stress
- No electromagnetic radiation
- Breast fed babies
- Life span
- Death



## AND THIS IS NOW.....

- Food
- Medications
- Environment, chemicals, radiation
- Day is night
- Stress
- Bottle fed babies , mushy food
- Longer life span + chronic diseases
- Death is extended, vegetated state

# NUTRIENT, STRESS & EXHAUSTION



Lead to:

- Syndactyly
- Ankyloglossia
- Neuro tube development
- Physical and mental development



# GENETIC VS EPIGENETICS

← **Genetic** is inherited.

**Epigenetic** is created through a vastly complex combination of external factors which interfere with the full expression of the gene.



Genetics



Epigenetics

# INCOMPLETE APOPTOSIS





# NUTRITION

Energy:

Nutrition

Hydration

Optimal pH

Minimal Stress

Absence of Toxins

Optimal oxygenation



**END STAGE DISEASE COMORBIDITIES**

**ADULTS IN COMPROMISE**

**BRACES AGE**

**TRANSITIONAL/MIXED DENTITION**

**PRIMARY DENTITION**

**INFANT - TODDLER**

**GESTATION  
BIRTH**

**CONCEPTION**

**UPPP - CPAP - MMA - HGNS -  
TRACHEOSTOMY**

**BREATHING DISORDERED SLEEP AND ITS  
CONSEQUENCES**

**UARS - UPPER AIRWAY FLOW  
LIMITATION**

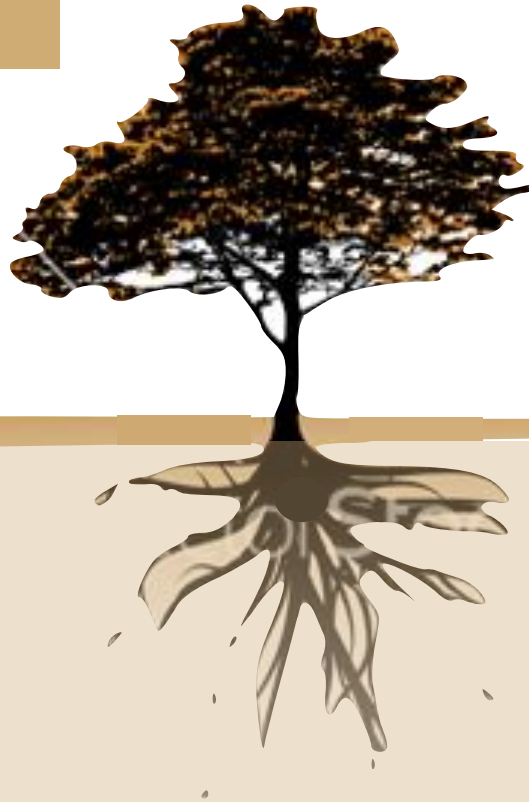
**CRANIOFACIAL DYSTROPHY**

**SOFT TISSUE DYSFUNCTION**

**PARAFUNCTIONS AND  
COMPENSATIONS**

**EPIGENETIC  
INFLUENCES**

**NUTRITION  
AND STRESS**





# NUTRITION

Significant:

- Ease of the pregnancy
- Various stages of fetal development
- Birth process
- Easy of delivery
- Successful breast feeding
- Timed released of primitive reflexes

# NUTRITION IS VITAL



- Ease of the pregnancy
- Various stages of fetal development
- Birth process
- Ease of delivery
- Successful breast feeding
- Timed released of primitive reflexes



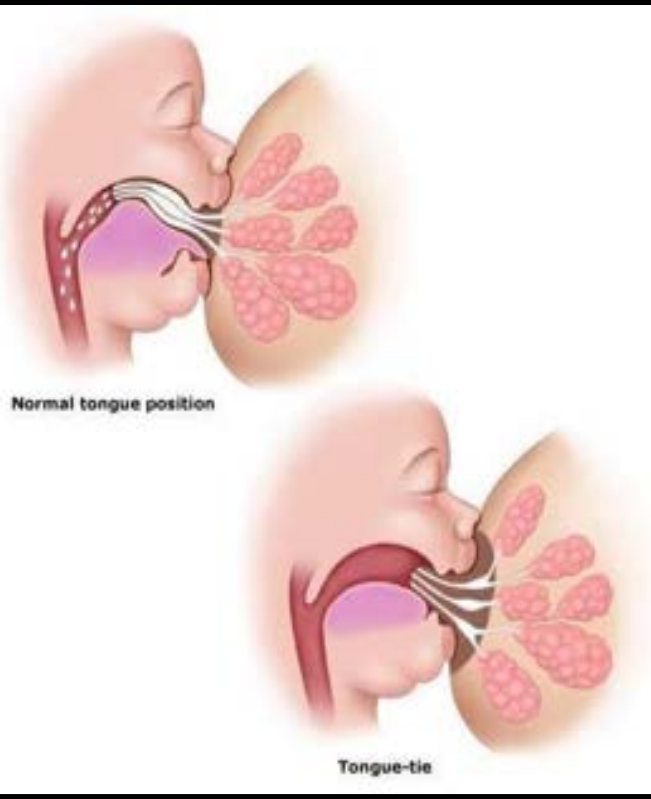
# PRE-PREGNANCY OR PREGNANCY EVAL.

- Diet survey
- Blood work: genetics, nutritional assessment, and fire panel
- Sleep and stress survey
- EMF survey and screen time (no mobile phones on the belly)
- Assessment for oral bacterial load
- Assessment for sleep apnea



# THINGS TO LOOK FOR WHICH ARE WARNING SIGNS IN INFANT & MOTHER:

Inadequate draw of nipple/areolar complex





# PATHOLOGICAL LATCH

Improper latch and inadequate flange

Open mouth

Open mouth, protruding tongue







Improper lip competence=  
pronounced mentalis? tongue tie?

Puffy eyes and retrognathic jaw, chin lift= airway issue

Open mouth, long philtrum,  
Overdeveloped mentalis = airway issue

All of these signs represent opportunities for correction  
to reduce adult airway compromise

# THINGS TO LOOK FOR WHICH ARE WARNING SIGNS IN CHILDREN:

SNORING

Mouth Breathing

Stop breathing when asleep

TEETH GRINDING

Sleep talking  
Sleep walking  
Night terrors

BED WETTING

Walking up tired  
Tired during the day

Emotionally sensitive  
(cries at the drop of a hat, moody, grumpy, anger management issues)

Educational problems  
Behavioral issues

Sleeping with the head arched back

Restless sleep, tossing and turning  
Bed is all messed up

Sweating at night

Chewing on food and spitting certain ones out consistently – esp. meat

EAR INFECTIONS



# THINGS TO LOOK FOR WHICH ARE WARNING SIGNS IN CHILDREN:

Drooling on pillow

Wakes up with a head  
ache

Gasping or waking  
with a startle

Fidgety during the day,  
can't sit still

Has symptoms  
suggestive of ADHD

Has to be propped up  
on a few pillows to  
sleep

Wakes with a dry  
mouth and or dry lips

Lower jaw sits  
backwards relative to  
the upper jaw when  
viewed from the side

Narrow upper jaw,  
with the roof of the  
mouth sometimes  
forming a high narrow  
arch the same time

When the mouth is  
wide open, the tongue  
can't touch the roof of  
the mouth

Has chewing and or  
swallowing problems

A regular or persistent  
blocked nose

Coughing at night

Regular throat clearing

Frequent bloody noses  
specifically when  
asleep snoring





8-YEAR-OLD  
HANDCUFFED  
ADHD AND PTSD DX

What do you see now?







What about his nose?

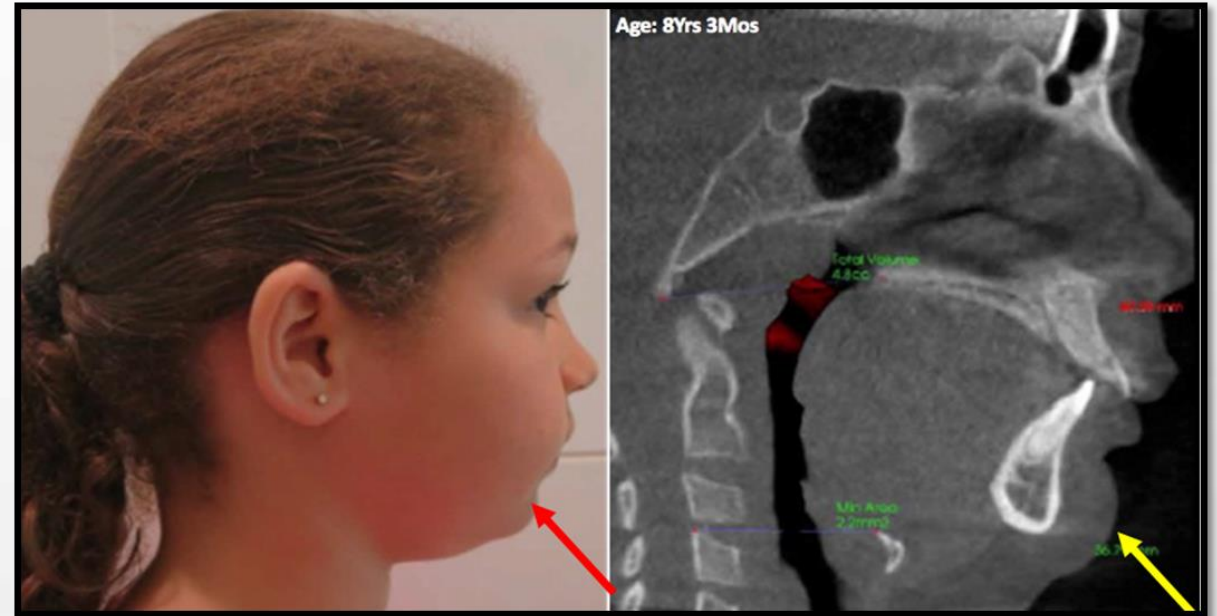


Pursed lips





## Class II Mandibular Retrusion



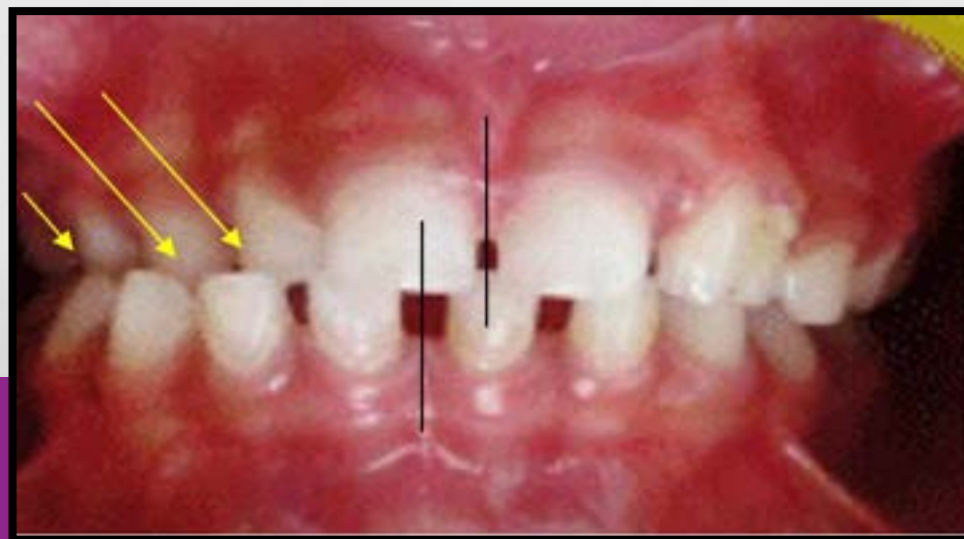
## Class III Maxillary Retrusion

Photo provided by Dr. Kevin Boyd

# Anterior Cross Bite

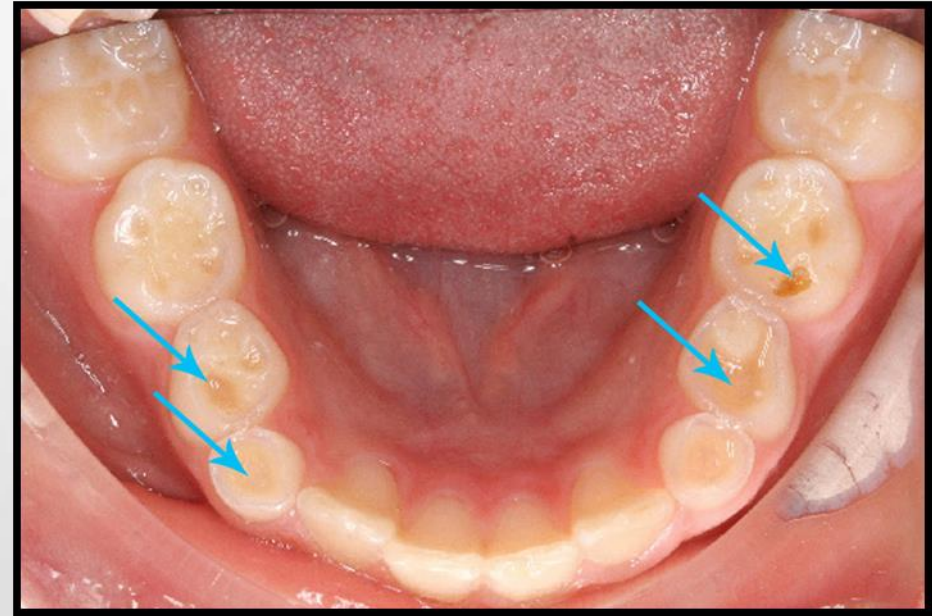
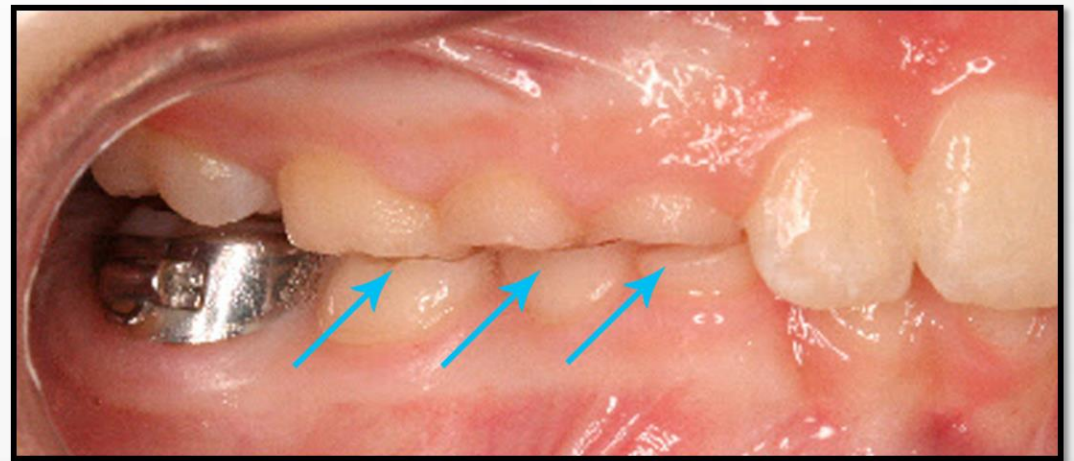


# Posterior Cross Bite





## Constricted Arches



## Grinding and Wear



# STUDY LINKS SNORING IN CHILDREN WITH STRUCTURAL BRAIN CHANGES AND BEHAVIORAL PROBLEMS(OSDB) 4/13/2021

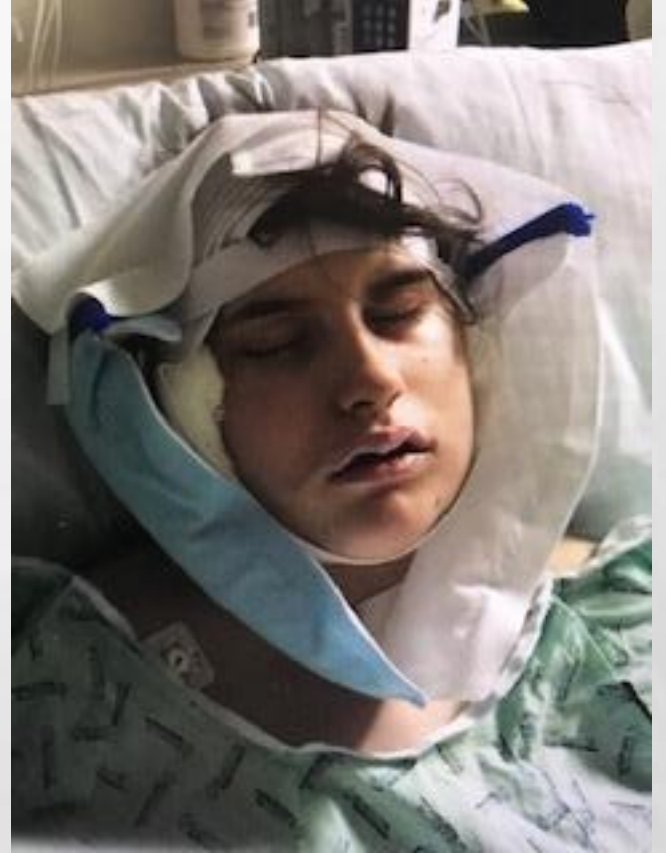
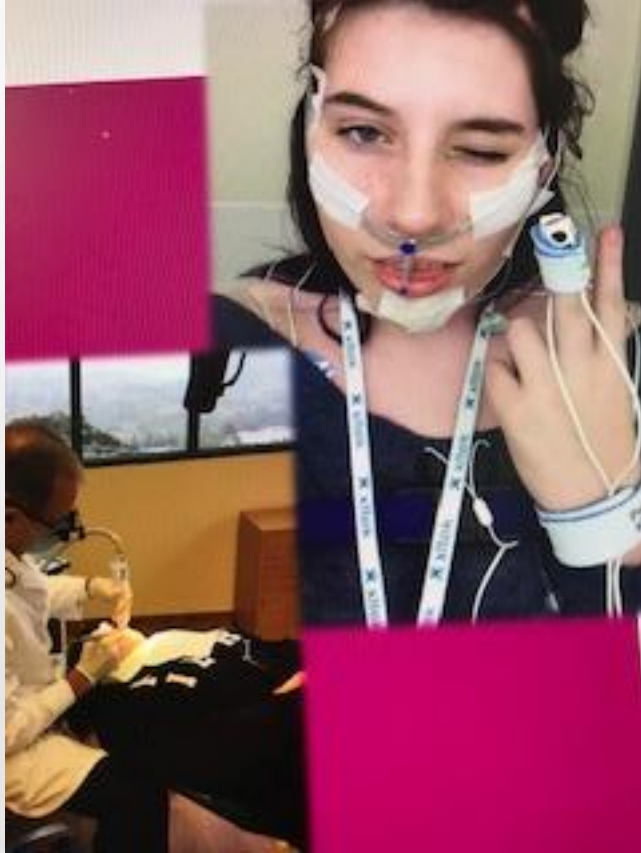


UW Maryland  
9-10 yr olds MRI Snored 3X +  
per week

Structural changes in  
brain(frontal cortex)

Focus issues

- Behavioral prob.
- ADHD/hyperactivity
- Learning disabilities



# THINGS TO LOOK FOR WHICH ARE WARNING SIGNS IN TEENAGER AND ADULTS:

Snoring

Difficulty focusing

## Head Pain, Headache

1. Forehead
2. Temples
3. "Migraine" type
4. Sinus type
5. Shooting pain up back of head
6. Hair and/or scalp painful to touch

## Eyes

1. Pain behind eyes
2. Bloodshot eyes
3. May bulge out
4. Sensitive to sunlight

## Mouth

1. Discomfort
2. Limited opening of mouth
3. Inability to open smoothly
4. Jaw deviates to one side when opening
5. Locks shut or open
6. Can't find bite

## Teeth

1. Clenching, grinding at night
2. Looseness and soreness of back teeth

## Throat

1. Swallowing difficulties
2. Laryngitis
3. Sore throat with no infection
4. Voice irregularities or changes
5. Frequent coughing or constant clearing of throat
6. Feeling of foreign object in throat constantly

## Ear Problems

1. Hissing, buzzing or ringing
2. Decreased hearing
3. Ear pain, ear ache, no infection
4. Clogged, "itchy" ears
5. Vertigo, dizziness

## Jaw Problems

1. Clicking, popping jaw joints
2. Grating sounds
3. Pain in cheek muscles
4. Uncontrollable jaw and/or tongue movements

## Neck Problems

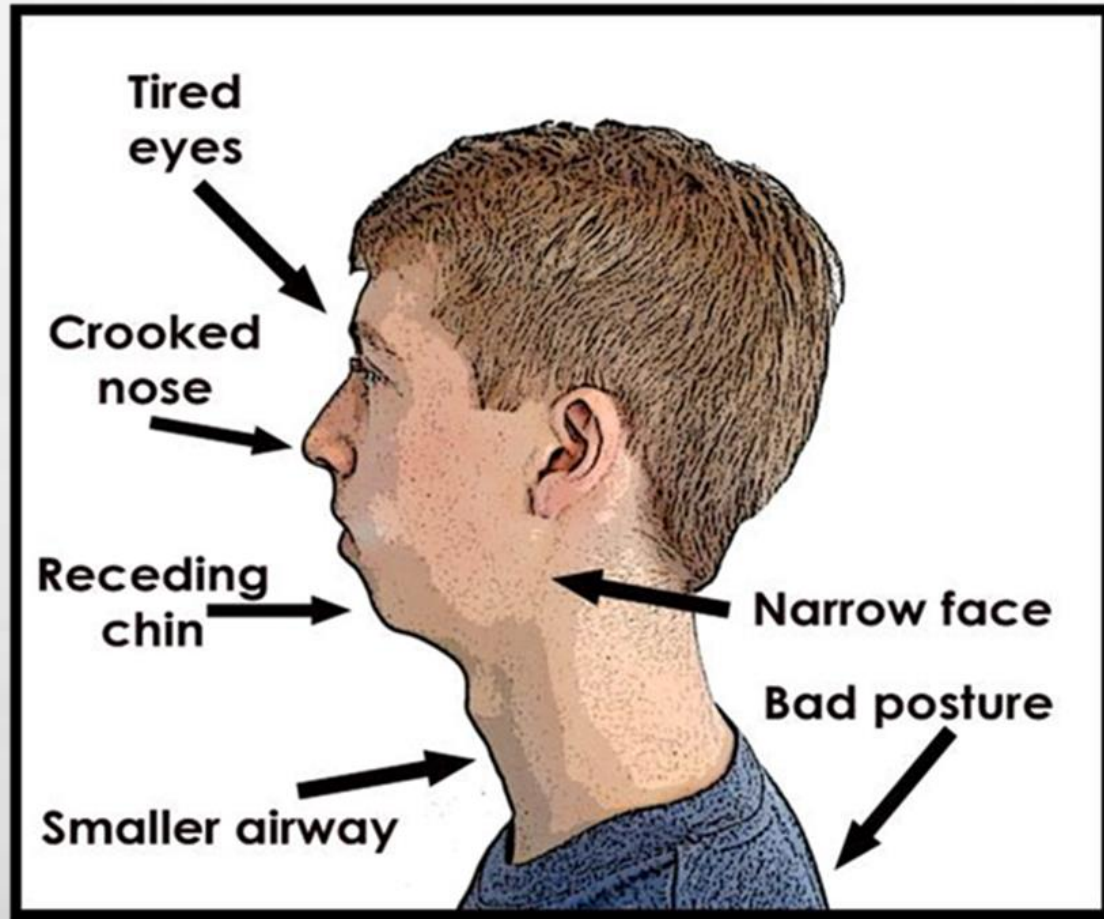
1. Lack of mobility, stiffness
2. Neck pain
3. Tired, sore muscles
4. Shoulder aches and backache
5. Arm and finger numbness and or pain

Excessive daytime sleepiness

Frequent bathroom trips at night



# WHAT DO YOU SEE?



Show  
cooling





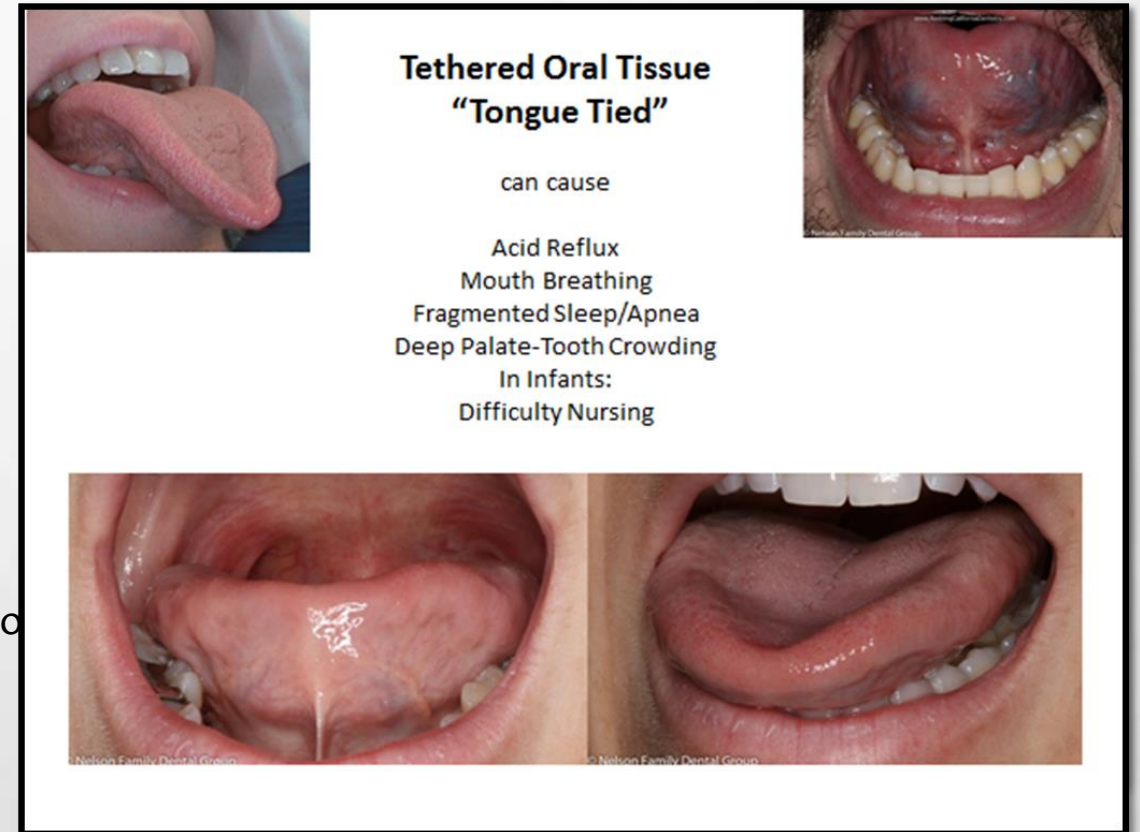


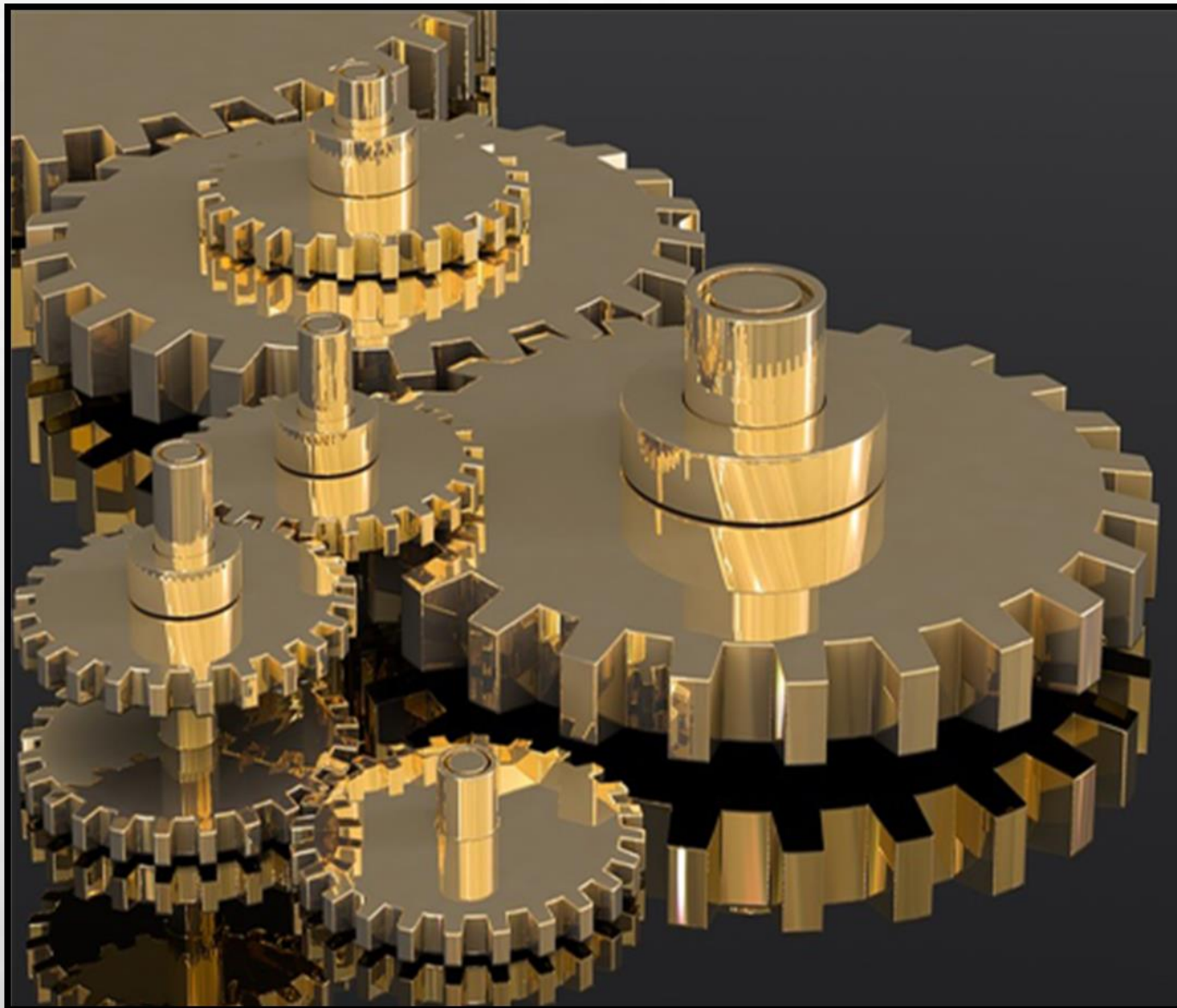
[www.childrensairwayfirst.org](http://www.childrensairwayfirst.org)



# OROFACIAL COMPONENT OF PATIENT CARE

- LOOK at the patient's face, tongue and jaw
- Is the face symmetrical
- Size and symmetry of nostrils
- Canine to canine ratio
- Molar to molar ratio
- This is a GREAT opportunity for neonatal and pediatric providers to intervene
  - If neonate is not suckling/latching on, seek consultation not only from lactation consultant but also from experienced dentist and orofacial myofunctional therapist.
  - Consider craniosacral therapy as well





# MANY COMPONENTS OF AN AIRWAY ASSESSMENT:

Medical and Dental history

forms/Questionnaires:

Physical Examination:

- Posture
- BMI
- Neck size
- Facial Features

## Airway assessment:

### 1. Upper airway:

- Nose
- Pharynx:
  - **Nasopharynx**
  - **Oropharynx**
  - **Hypopharynx**

### 2. Lower Airway

- Trachea
- Bronchial tree



## MEDICAL HISTORY

Patient Name \_\_\_\_\_ Nickname \_\_\_\_\_ Age \_\_\_\_\_  
 Name of Physician/and their specialty \_\_\_\_\_  
 Most recent physical examination \_\_\_\_\_ Purpose \_\_\_\_\_  
 What is your estimate of your general health? ☐ Excellent ☐ Good ☐ Fair ☐ Poor


DO YOU HAVE or HAVE YOU EVER HAD:		YES	NO			YES	NO
1. hospitalization for illness or injury _____	<input type="checkbox"/>	<input type="checkbox"/>		26. osteoporosis/osteopenia (i.e. taking bisphosphonates) _____	<input type="checkbox"/>	<input type="checkbox"/>	
2. an allergic or bad reaction to any of the following: <input type="checkbox"/> aspirin, ibuprofen, acetaminophen, codeine <input type="checkbox"/> penicillin <input type="checkbox"/> erythromycin <input type="checkbox"/> tetracycline <input type="checkbox"/> sulfas <input type="checkbox"/> local anesthetic <input type="checkbox"/> fluoride <input type="checkbox"/> metals (nickel, gold, silver, _____) <input type="checkbox"/> latex <input type="checkbox"/> nuts <input type="checkbox"/> fruit <input type="checkbox"/> other _____	<input type="checkbox"/>	<input type="checkbox"/>		27. arthritis _____	<input type="checkbox"/>	<input type="checkbox"/>	
				28. autoimmune disease _____ (i.e. rheumatoid arthritis, lupus, scleroderma)	<input type="checkbox"/>	<input type="checkbox"/>	
3. heart problems, or cardiac stent within the last six months _____	<input type="checkbox"/>	<input type="checkbox"/>		29. glaucoma _____	<input type="checkbox"/>	<input type="checkbox"/>	
4. history of infective endocarditis _____	<input type="checkbox"/>	<input type="checkbox"/>		30. contact lenses _____	<input type="checkbox"/>	<input type="checkbox"/>	
5. artificial heart valve, repaired heart defect (PFO) _____	<input type="checkbox"/>	<input type="checkbox"/>		31. head or neck injuries _____	<input type="checkbox"/>	<input type="checkbox"/>	
6. pacemaker or implantable defibrillator _____	<input type="checkbox"/>	<input type="checkbox"/>		32. epilepsy, convulsions (seizures) _____	<input type="checkbox"/>	<input type="checkbox"/>	
7. orthopedic implant (joint replacement) _____	<input type="checkbox"/>	<input type="checkbox"/>		33. neurologic disorders (ADQ/ADHD, prion disease) _____	<input type="checkbox"/>	<input type="checkbox"/>	
8. rheumatic or scarlet fever _____	<input type="checkbox"/>	<input type="checkbox"/>		34. viral infections and cold sores _____	<input type="checkbox"/>	<input type="checkbox"/>	
9. high or low blood pressure _____	<input type="checkbox"/>	<input type="checkbox"/>		35. any lumps or swelling in the mouth _____	<input type="checkbox"/>	<input type="checkbox"/>	
10. a stroke (taking blood thinners) _____	<input type="checkbox"/>	<input type="checkbox"/>		36. hives, skin rash, hay fever _____	<input type="checkbox"/>	<input type="checkbox"/>	
11. anemia or other blood disorder _____	<input type="checkbox"/>	<input type="checkbox"/>		37. STI/STD/HPV _____	<input type="checkbox"/>	<input type="checkbox"/>	
12. prolonged bleeding due to a slight cut (PR > 3.5) _____	<input type="checkbox"/>	<input type="checkbox"/>		38. hepatitis (type _____) _____	<input type="checkbox"/>	<input type="checkbox"/>	
13. pneumonia, emphysema, shortness of breath, sarcoidosis _____	<input type="checkbox"/>	<input type="checkbox"/>		39. HIV/AIDS _____	<input type="checkbox"/>	<input type="checkbox"/>	
14. tuberculosis, measles, chicken pox _____	<input type="checkbox"/>	<input type="checkbox"/>		40. tumor, abnormal growth _____	<input type="checkbox"/>	<input type="checkbox"/>	
15. asthma _____	<input type="checkbox"/>	<input type="checkbox"/>		41. radiation therapy _____	<input type="checkbox"/>	<input type="checkbox"/>	
16. breathing or sleep problems (i.e. sleep apnea, snoring, sinus) _____	<input type="checkbox"/>	<input type="checkbox"/>		42. chemotherapy, immunosuppressive medication _____	<input type="checkbox"/>	<input type="checkbox"/>	
17. kidney disease _____	<input type="checkbox"/>	<input type="checkbox"/>		43. emotional difficulties _____	<input type="checkbox"/>	<input type="checkbox"/>	
18. liver disease _____	<input type="checkbox"/>	<input type="checkbox"/>		44. psychiatric treatment _____	<input type="checkbox"/>	<input type="checkbox"/>	
19. jaundice _____	<input type="checkbox"/>	<input type="checkbox"/>		45. antidepressant medication _____	<input type="checkbox"/>	<input type="checkbox"/>	
20. thyroid, parathyroid disease, or calcium deficiency _____	<input type="checkbox"/>	<input type="checkbox"/>		46. alcohol/recreational drug use _____	<input type="checkbox"/>	<input type="checkbox"/>	
21. hormone deficiency _____	<input type="checkbox"/>	<input type="checkbox"/>		ARE YOU:			
22. high cholesterol or taking statin drugs _____	<input type="checkbox"/>	<input type="checkbox"/>		47. presently being treated for any other illness _____	<input type="checkbox"/>	<input type="checkbox"/>	
23. diabetes (HbA1c = _____)	<input type="checkbox"/>	<input type="checkbox"/>		48. aware of a change in your health in the last 24 hours (i.e. fever, chills, new cough, or diarrhea) _____	<input type="checkbox"/>	<input type="checkbox"/>	
24. stomach or duodenal ulcer _____	<input type="checkbox"/>	<input type="checkbox"/>		49. taking medication for weight management _____	<input type="checkbox"/>	<input type="checkbox"/>	
25. digestive or eating disorders (e.g., celiac disease, gastric reflux, bulimia, anorexia) _____	<input type="checkbox"/>	<input type="checkbox"/>		50. taking dietary supplements _____	<input type="checkbox"/>	<input type="checkbox"/>	
				51. often exhausted or fatigued _____	<input type="checkbox"/>	<input type="checkbox"/>	
				52. experiencing frequent headaches _____	<input type="checkbox"/>	<input type="checkbox"/>	
				53. a smoker, smoked previously or use smokeless tobacco _____	<input type="checkbox"/>	<input type="checkbox"/>	
				54. considered a touchy/sensitive person _____	<input type="checkbox"/>	<input type="checkbox"/>	
				55. often unhappy or depressed _____	<input type="checkbox"/>	<input type="checkbox"/>	
				56. taking birth control pills _____	<input type="checkbox"/>	<input type="checkbox"/>	
				57. currently pregnant _____	<input type="checkbox"/>	<input type="checkbox"/>	
				58. diagnosed with a prostate disorder _____	<input type="checkbox"/>	<input type="checkbox"/>	

Describe any current medical treatment, impending surgery, genetic/development delay, or other treatment that may possibly affect your dental treatment.  
 (i.e. Biotin, Collagen Injections) \_\_\_\_\_

List all medications, supplements, and or vitamins taken within the last two years.			
Drug	Purpose	Drug	Purpose

PLEASE ADVISE US IN THE FUTURE OF ANY CHANGE IN YOUR MEDICAL HISTORY OR ANY MEDICATIONS YOU MAY BE TAKING.

Patient's Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Doctor's Signature \_\_\_\_\_ Date \_\_\_\_\_

ASA \_\_\_\_\_ (1-6) 

# Begins with the Medical History!

Heart/heart related issues

Strokes/ vascular issues/ED

Diabetes/Pre-diabetes/IR/Metabolic syndrome

PTSD/Depression/Anxiety /ADHD

High Blood Pressure

Breathing issues , pneumonia, asthma, COPD

Acid reflux

Headaches

Fatigue/chronic pain excess sleepiness

Medications

Diet and Drinking history





## The Epworth Sleepiness Scale

The Epworth Sleepiness Scale is widely used in the field of sleep medicine. The test is a list of eight situations in which you are likely to doze off, on a scale of 0, no chance of dozing, to 3, high chance of dozing. Your total score is based on the values of your responses. Your total score is based on whether you are experiencing excessive sleepiness that interferes with your daily life.

### How Sleepy Are You?

How likely are you to doze off or fall asleep in the following situations, not just feeling tired. Even if you have not done so, determine how they would have affected you. For each situation, write down the number corresponding to your choice in the table below.

- No chance of dozing = 0
- Slight chance of dozing = 1
- Moderate chance of dozing = 2
- High chance of dozing = 3

Write down the number corresponding to your choice in the table below.

Situation	Chance of dozing
Sitting and reading	•
Watching TV	•
Sitting inactive in a public place (e.g., a theater or a meeting)	•
As a passenger in a car for an hour without a break	•
Lying down to rest in the afternoon when circumstances permit	•
Sitting and talking to someone	•
Sitting quietly after a lunch without alcohol	•
In a car, while stopped for a few minutes in traffic	•

Total Score =

### Analyze Your Score

#### Interpretation:

- 0-7: It is unlikely that you are abnormally sleepy.
- 8-9: You have an average amount of daytime sleepiness.
- 10-15: You may be excessively sleepy depending on the situation and should consider seeking medical attention.
- 16-24: You are excessively sleepy and should consider seeking medical attention.

Reference: Johns MW. A new method for measuring daytime sleepiness: the Epworth sleepiness scale. *Am J Respir Crit Care Med* 1994; 150(5):1260-6.

## STOP-BANG Score

Chung F et al

### STOP

Do you **SNORE** loudly (louder than talking or loud enough to be heard through closed door)?

Do you often feel **TIRED**, fatigued, or exhausted during the daytime?

Has anyone **OBSERVED** you stop breathing during your sleep?

Do you have or are you being treated for high **BLOOD PRESSURE**?

### BANG

BMI more than 35kg/m<sup>2</sup>?

AGE over 50 years old?

NECK circumference > 16 inches (40 cm)?

GENDER: Male?

### TOTAL SCORE

High risk of OSA: Yes 5 - 8

Intermediate risk of OSA: Yes 3 - 4

Low risk of OSA: Yes 0 - 2

## LAMBERG QUESTIONNAIRE

A Risk Assessment Tool for Sleep Apnea - version 4.0

### 1: STANDARD QUESTIONS

- ☐ Do you awaken unrefreshed or feel sleepy during the day due to restless sleep?
- ☐ Is your snoring loud enough to disturb others?
- ☐ Have you been aware of your snoring for a long time?
- ☐ Have you been told your breathing stops while asleep?
- ☐ Do you ever wake yourself from sleep feeling that you are choking?
- ☐ Have you ever had a sleep study?
- ☐ Have you tried CPAP? (was the pressure > 10.5 cmH<sub>2</sub>O?)
- ☐ Is your BMI > 27? Or is your neck size > 17 mm, or > 35.5 women?

### 2: CARDIOLOGY & VASCULAR

- ☐ Do you have high blood pressure or take medicine for hypertension?
- ☐ Have you been diagnosed with CAD, Stroke, Congestive Heart Failure, A Fib, or other cardiovascular pathology?
- ☐ Do you have a pacemaker?
- ☐ Do you have elevated total cholesterol levels?

### 3: PULMONOLOGY

- ☐ Have you experienced difficulty breathing during the day?
- ☐ Do you have symptoms of breath, even with mild exertion?
- ☐ Have you been diagnosed with COPD or Asthma? (Asthma worse at night?)
- ☐ Do you have a chronic cough, either dry or productive?

### 4: GASTROENTEROLOGY

- ☐ Do you experience heartburn or acid reflux at night or the morning?
- ☐ Have you or your dentist noticed erosion on molars?
- ☐ Do you take heartburn medications, either over-the-counter or prescription?

### 5: NEUROLOGY

- ☐ Do you experience numbness, tingling or pain in your arms or hands or feet?
- ☐ Do you ever experience muscle weakness or difficulty with coordination?

### 6: ENDOCRINOLOGY

- ☐ Have you been diagnosed with diabetes or hypothyroidism?
- ☐ Have you unexpectedly gained or lost weight lately?
- ☐ Have you gone through menopause? Are you on HRT?
- ☐ Do you experience repetitive limb movements or leg sleep, sleep to move legs, or night sweats?

www.lambergseminars.com www.lambergsteepwell.com

## FATIGUE SEVERITY SCALE (FSS)

Date \_\_\_\_\_ Name \_\_\_\_\_

Please circle the number between 1 and 7 which you feel best fits the following statements. This refers to your usual way of life within the last week. 1 indicates "strongly disagree" and 7 indicates "strongly agree."

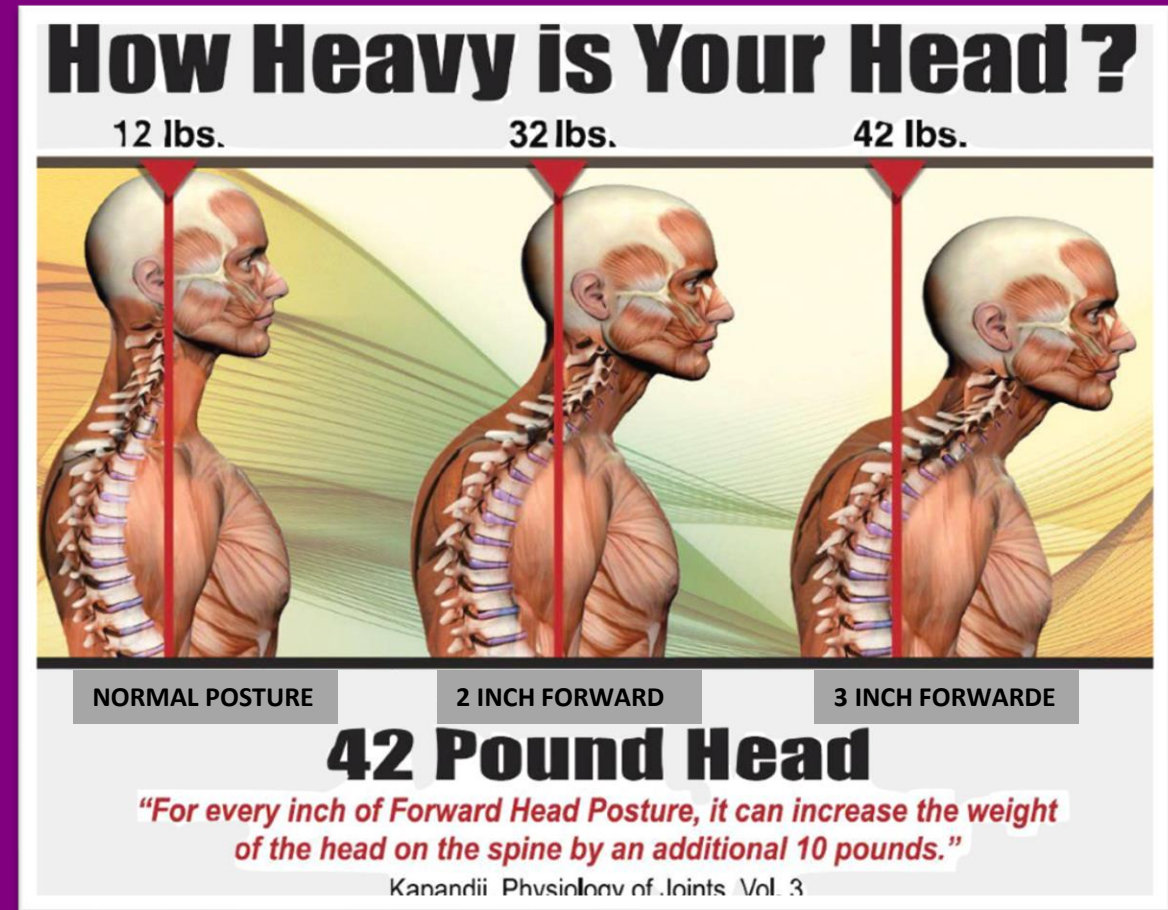
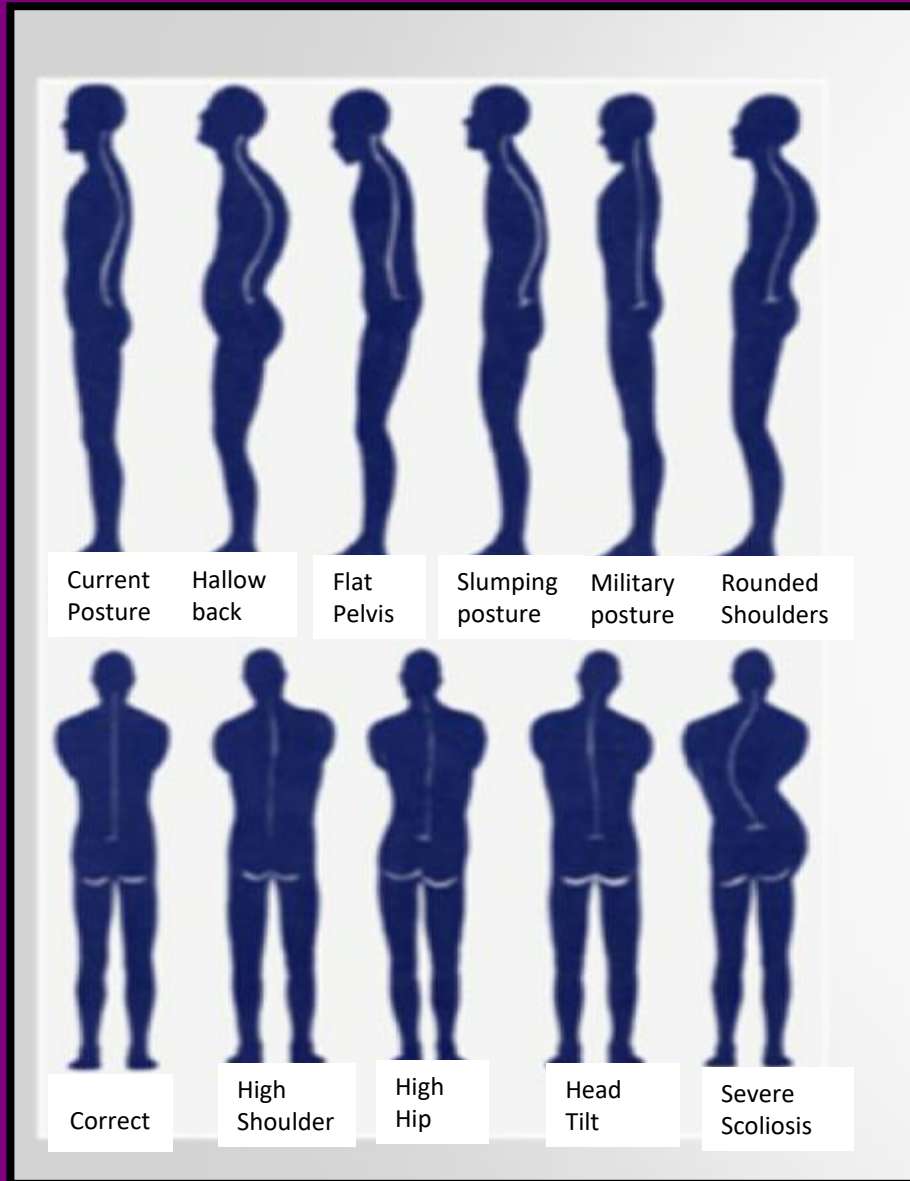
Read and circle a number.	Strongly Disagree	→	Strongly Agree
1. My motivation is lower when I am fatigued.	1	2	3 4 5 6 7
2. Exercise brings on my fatigue.	1	2	3 4 5 6 7
3. I am easily fatigued.	1	2	3 4 5 6 7
4. Fatigue interferes with my physical functioning.	1	2	3 4 5 6 7
5. Fatigue causes frequent problems for me.	1	2	3 4 5 6 7
6. My fatigue prevents sustained physical functioning.	1	2	3 4 5 6 7
7. Fatigue interferes with carrying out certain duties and responsibilities.	1	2	3 4 5 6 7
8. Fatigue is among my most disabling symptoms.	1	2	3 4 5 6 7
9. Fatigue interferes with my work, family, or social life.	1	2	3 4 5 6 7

## VISUAL ANALOGUE FATIGUE SCALE (VAFS)

Please mark an "X" on the number line which describes your global fatigue with 0 being worst and 10 being normal.

0	1	2	3	4	5	6	7	8	9	10
<div style="text-align: center;">X</div>										

# POSTURE

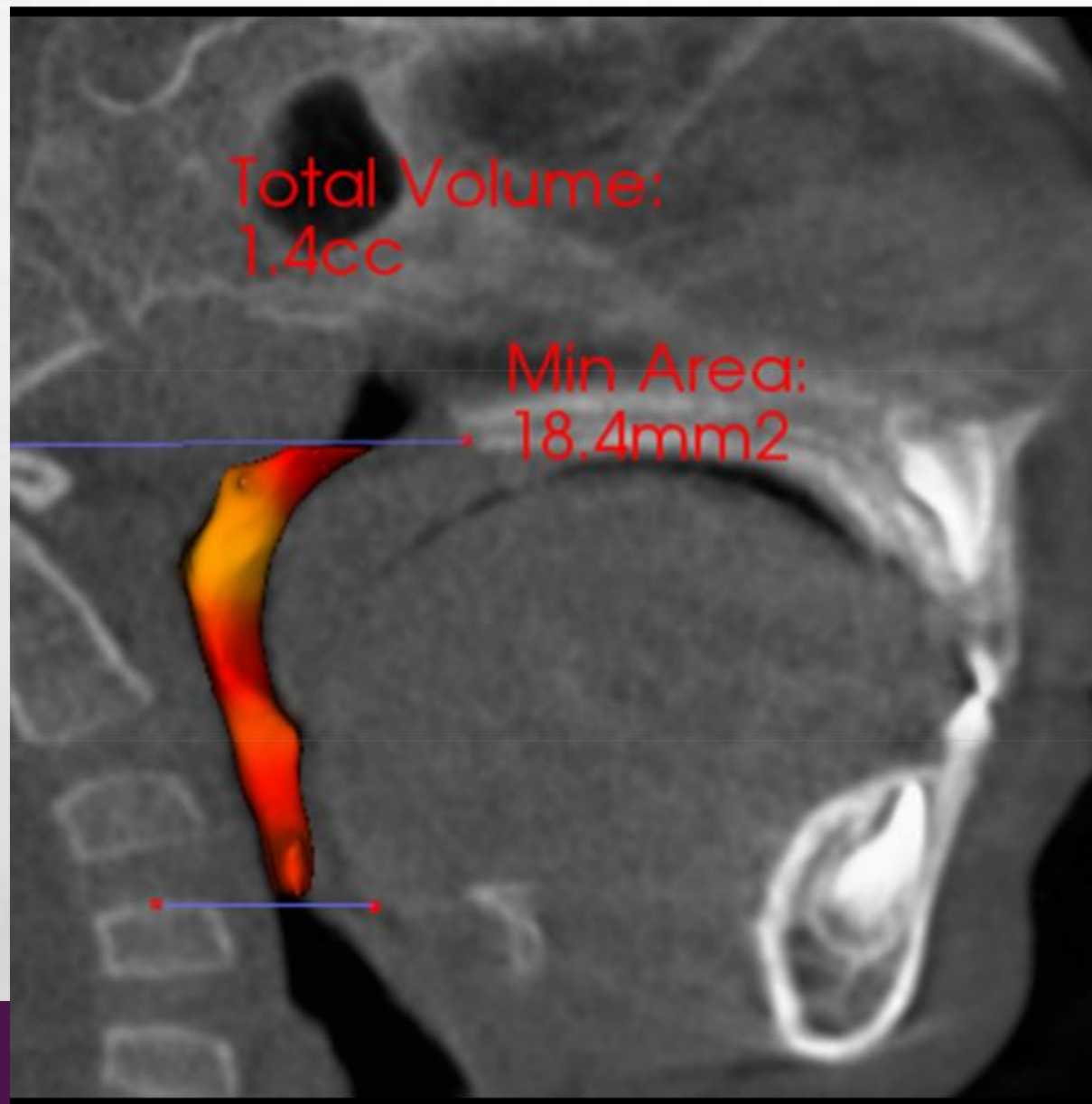


Dysfunctional behavior patterns which have become the norm!



Total Volume:  
1.4cc

Min Area:  
18.4mm<sup>2</sup>

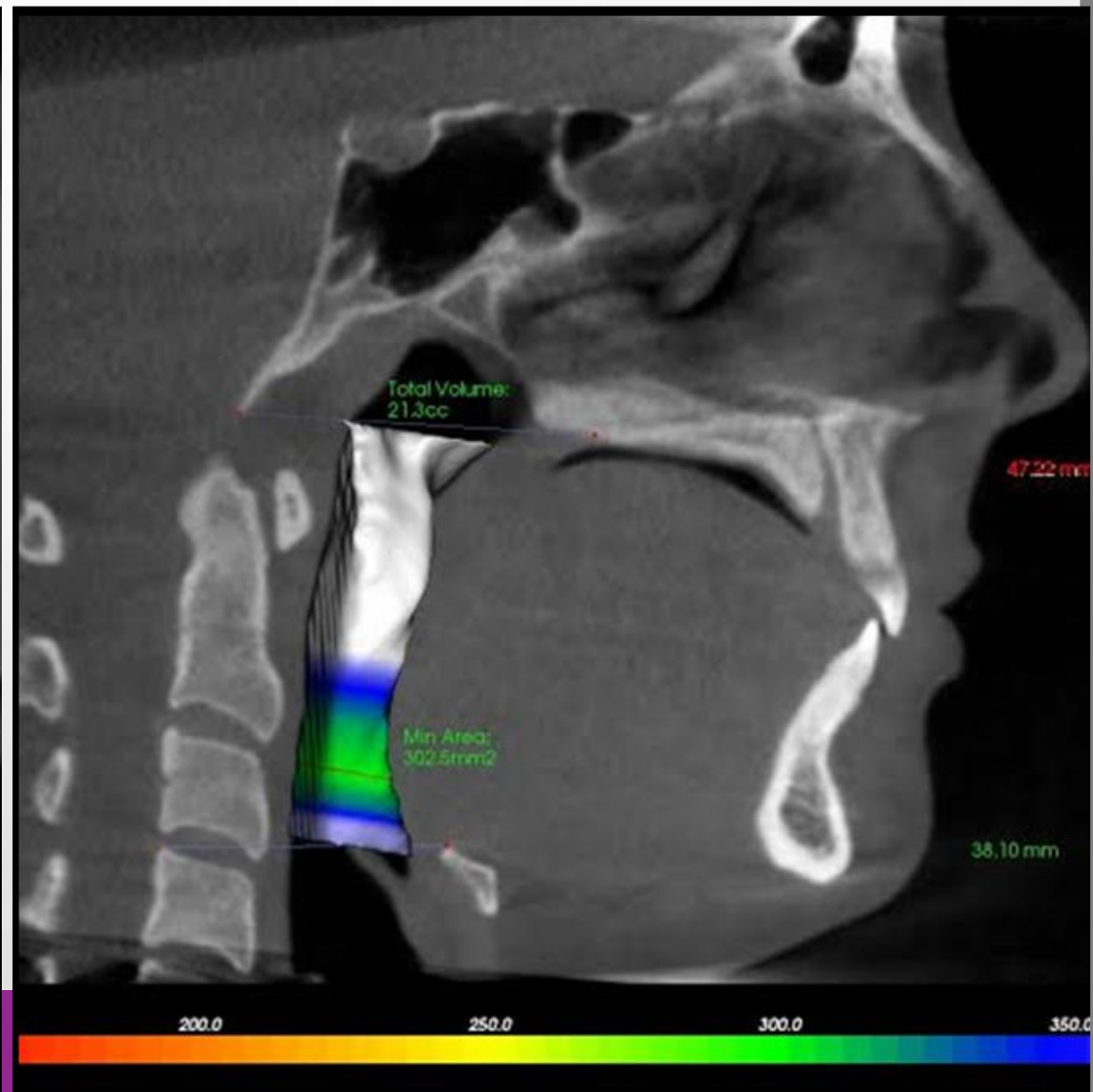


Total Volume:  
21.3cc

Min Area:  
302.5mm<sup>2</sup>

47.22 mm

38.10 mm



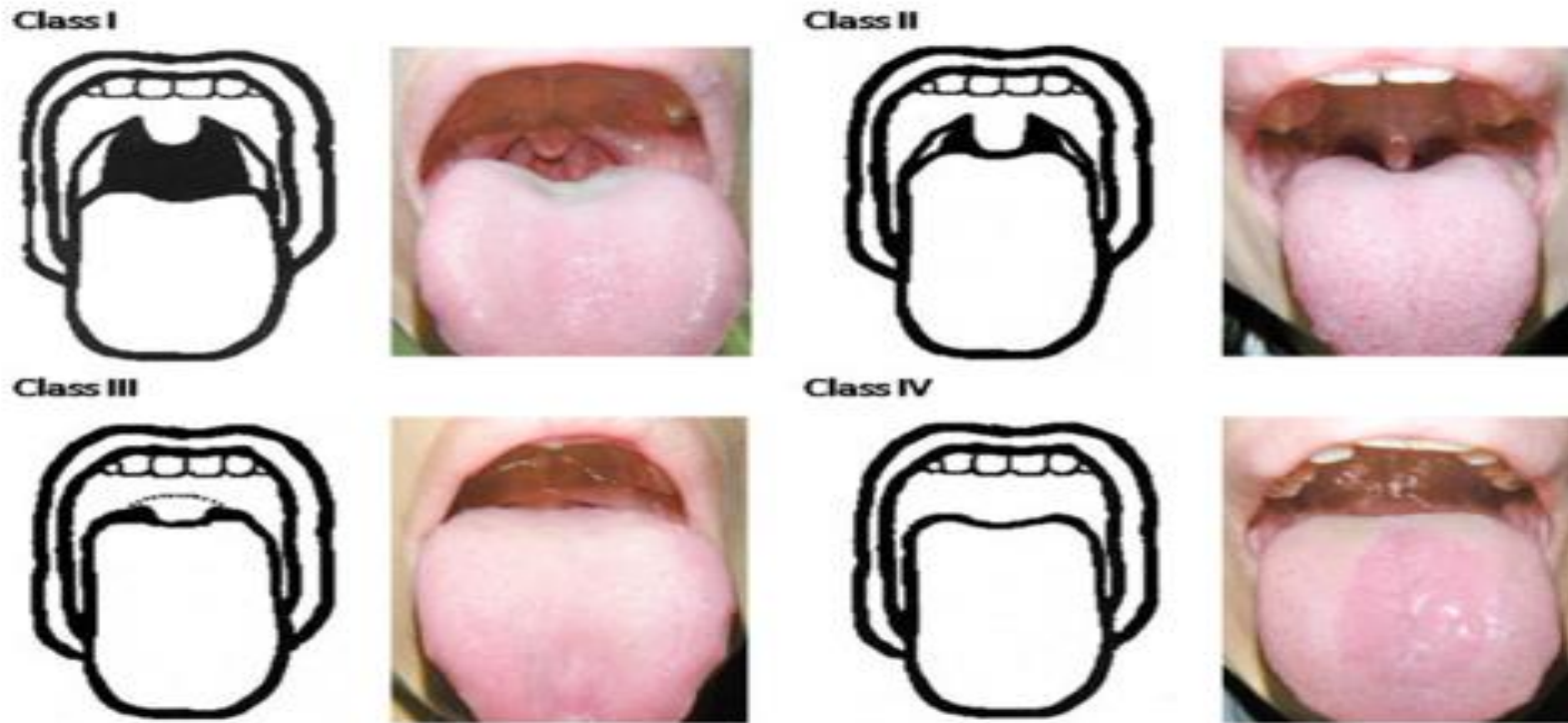


# WHAT DO YOU SEE?



**Mouth – Gateway to your Health!**

# Tongue-Malampati



3 and 4 will indicate an airway issue and tongue-tie  
Look Carefully!



# TONGUE



Coated  
Enlarged  
Reddened  
Scalloped on lateral border  
Tongue-tied  
Tongue level



**Moderate**



**Severe**



☐ Low

Top of tongue at  
the occlusal plane



☐ Median

Top of tongue moderately  
above occlusal plane



☐ High

Top of tongue markedly  
above the occlusal plane



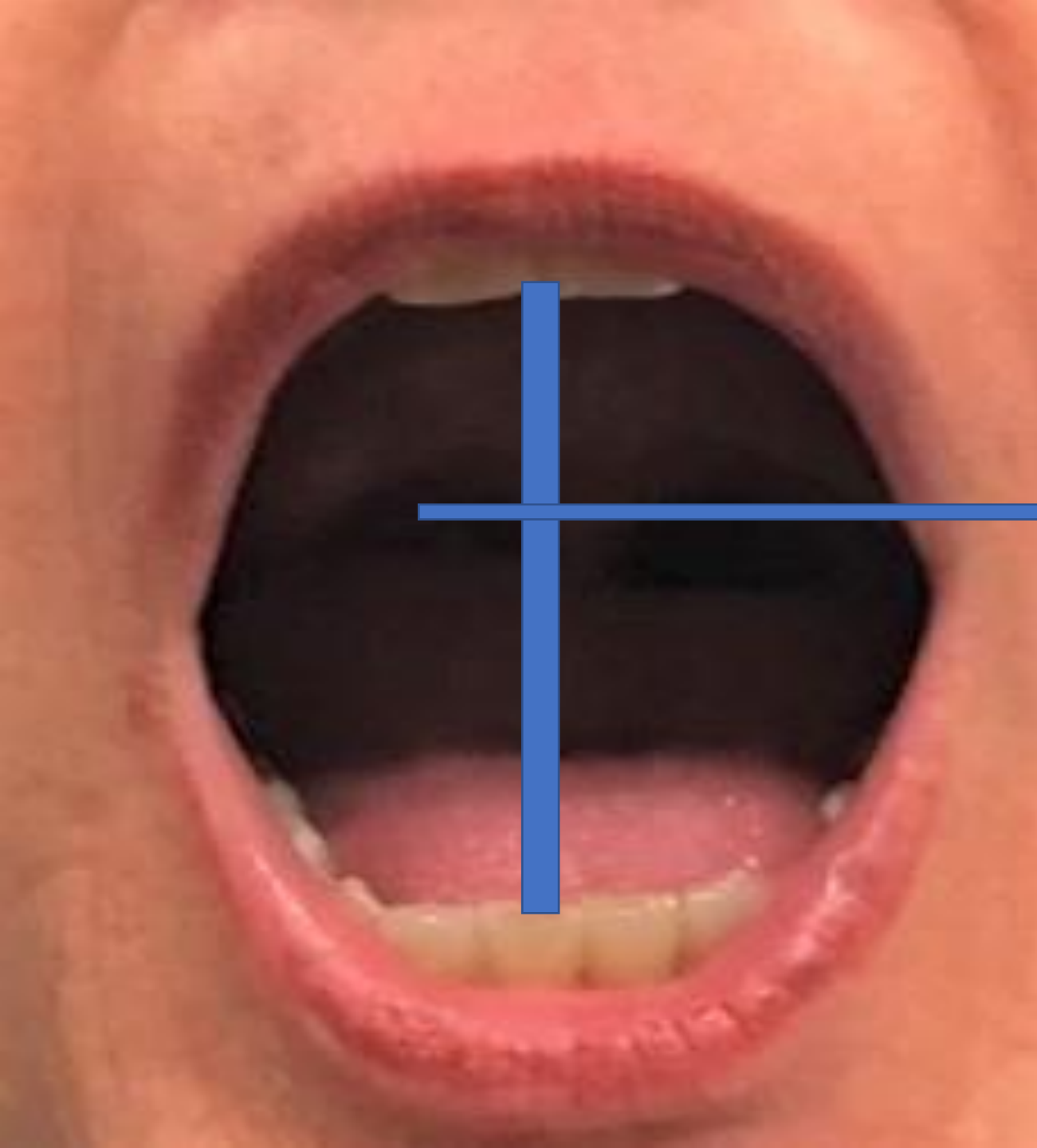


# TONGUE POSTURE

Sarah has Down syndrome and at age 6 underwent 4 months of Orofacial Myology









# MAXILLARY AND MANDIBULAR TORI AND OCCLUSION

Tori:

lingual or labial; maxillary and mandibular arch.

Lower/Upper partial or denture.

Occlusion:

Observe the dental bite... note the classification of occlusion.

Class I, Class II, Overjet, Overbite, Class III, Pseudo Class III, Cross bite, Unilateral or Bilateral, Over-closed bite...

Status of the dental arch. Missing teeth, reconstruction with crown, bridgework, partial or full dentures present, periodontal disease, gum recession, tooth wear, tendency to decay, and the status of their oral hygiene.



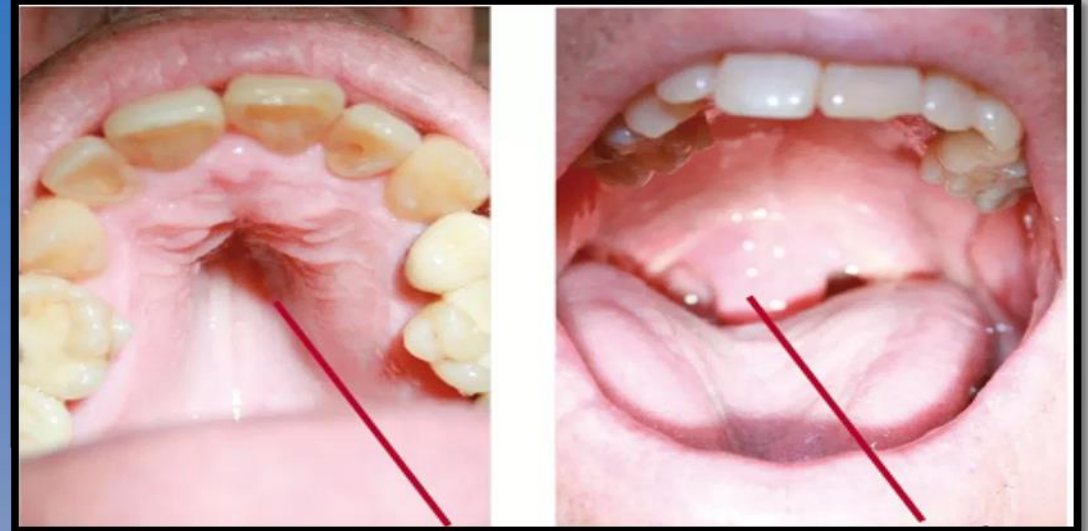
# HIGH VAULTED PALATE

Paleo diet = Paleo palate!!

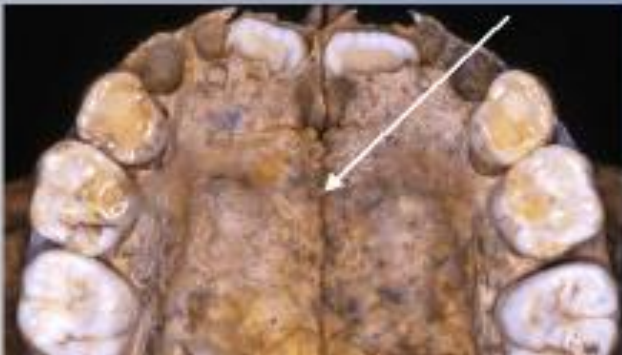
Shallow Palate



Highly Vaulted Palate



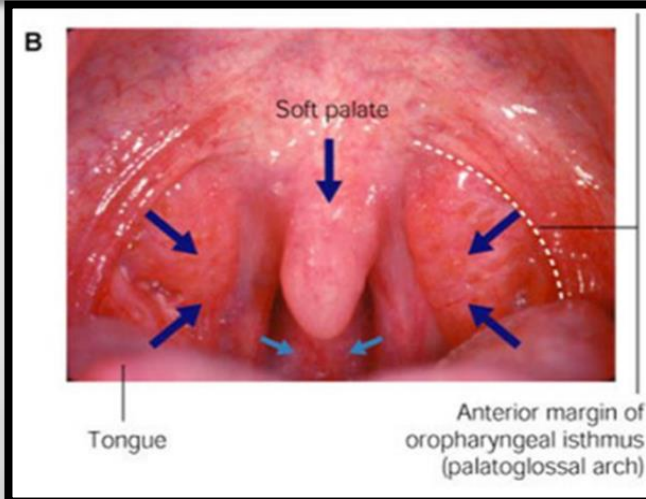
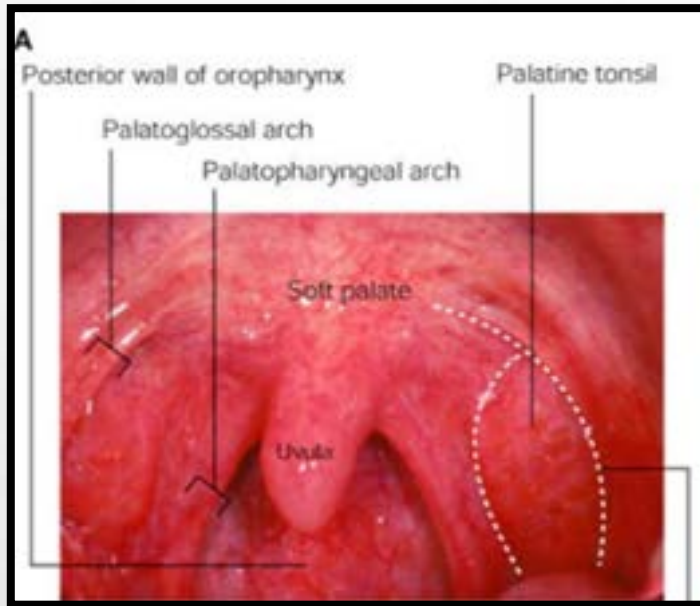
Pre-Industrial



Modern Day



# UVULA



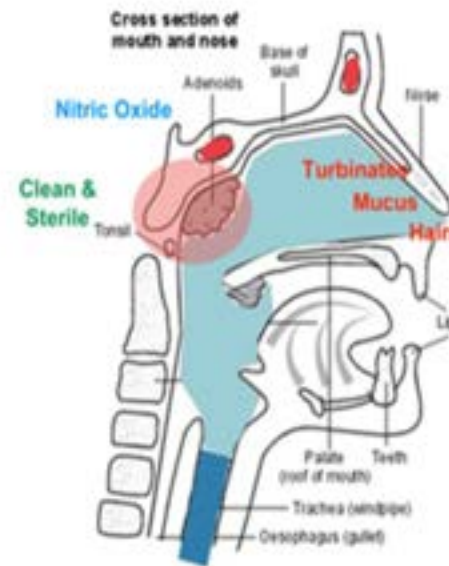
Absent  
Elongated  
Edematous  
Enlarged  
Obstruct the airway





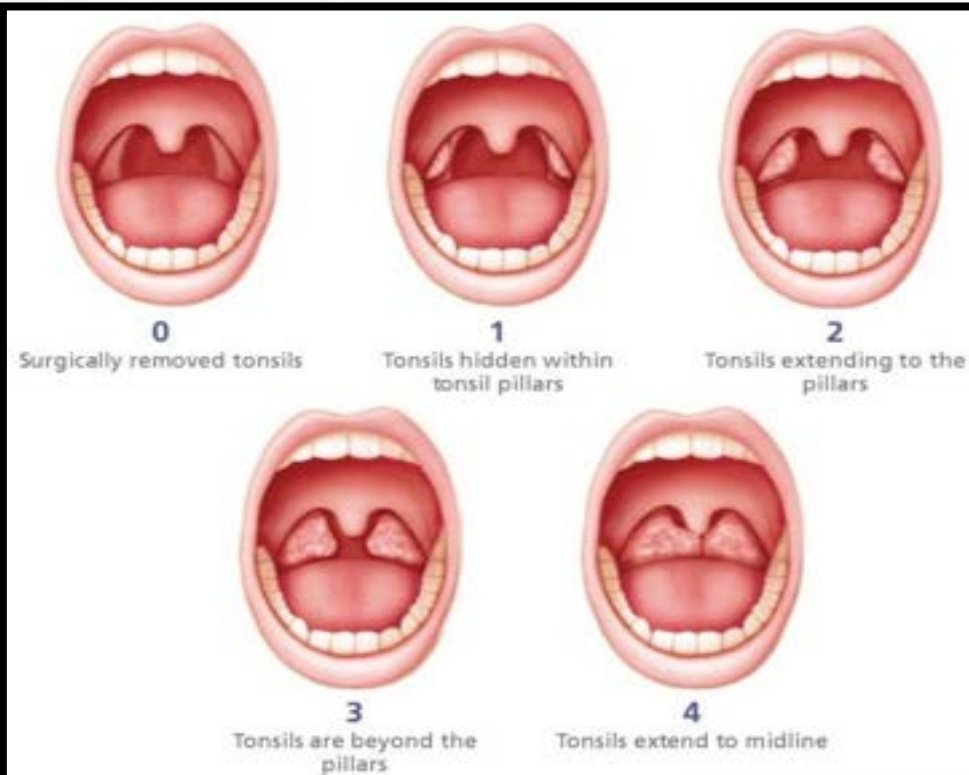
# TONSILS

## Noses are made for Breathing



### 4 stage filtration system:

- Nostrils:** filter out floaties in the air
- Mucus:** contain enzymes that kill viruses and bacteria
- Turbينات' and Sinus:** warm and condition the air, control the air, and humidify the air
- Adenoids and Tonsils:** Final filtration before air enters the lungs

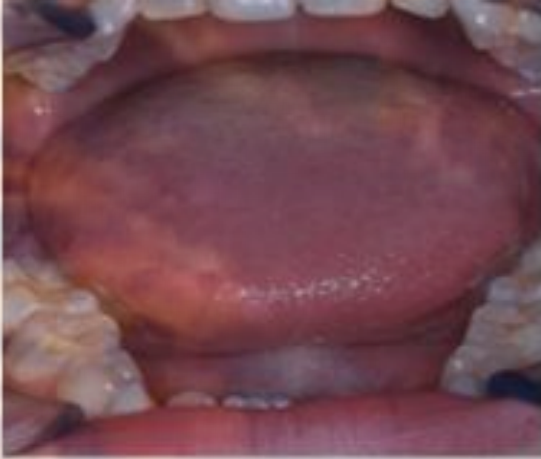




Photos provided by Kevin Boyd



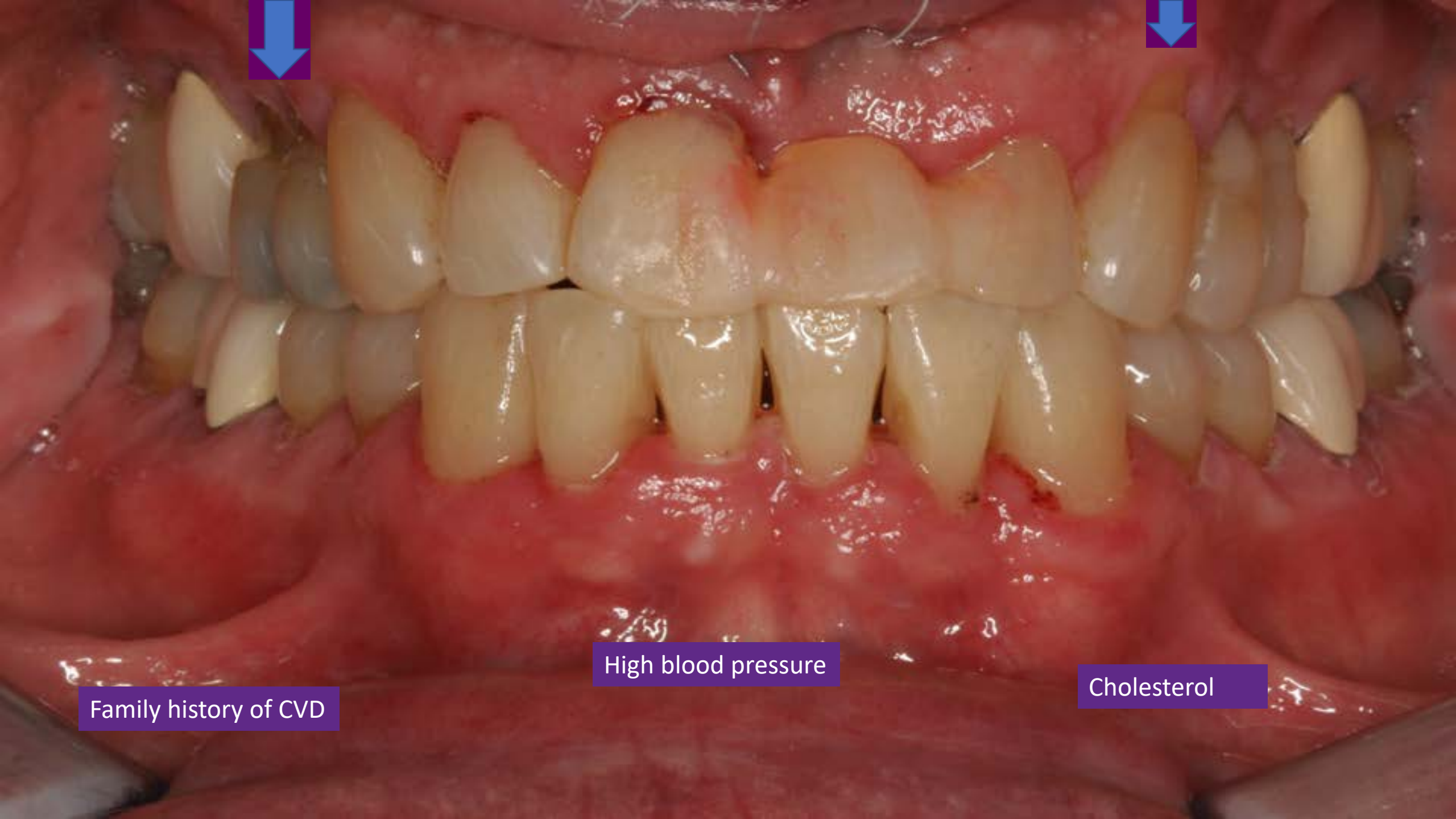
# INFLAMMATION!



**\*AIRWAY\***







Family history of CVD

High blood pressure

Cholesterol



High vaulted palate

Pronounced rugae

Faulty restorations

Occlusal wear

**AIRWAY ISSUE!**



# Medical Dental history

- 2 knee surgeries ACL's
- Staph infection while in hospital
- Chronic fatigue
- Depression/ PTSD
- Mood swings
- Head aches
- Mouth breather

## Family history

- Men: in family died of CVD/Cancer
- Women:
  - Breast cancer/other cancers
  - Depression
  - Periodontal dz

Sleep apnea/CPAP 12.8/3.4 AHI

MEDICAL HISTORY			
Patient Name _____		Nickname _____ Age _____	
Name of Physician/and their specialty _____		Purpose _____	
Most recent physical examination _____			
What is your estimate of your general health? <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor			
DO YOU HAVE or HAVE YOU EVER HAD:		YES	NO
1. hospitalization for illness or injury _____		<input type="checkbox"/>	<input type="checkbox"/>
2. an allergic or bad reaction to any of the following: <input type="checkbox"/> aspirin, ibuprofen, acetaminophen, codeine <input type="checkbox"/> penicillin <input type="checkbox"/> erythromycin <input type="checkbox"/> tetracycline <input type="checkbox"/> sulfa <input type="checkbox"/> local anesthetic <input type="checkbox"/> fluoride <input type="checkbox"/> metals (nickel, gold, silver, _____) <input type="checkbox"/> latex <input type="checkbox"/> nuts _____ <input type="checkbox"/> fruit _____ <input type="checkbox"/> other _____		<input type="checkbox"/>	<input type="checkbox"/>
3. heart problems, or cardiac stent within the last six months _____		<input type="checkbox"/>	<input type="checkbox"/>
4. history of infective endocarditis _____		<input type="checkbox"/>	<input type="checkbox"/>
5. artificial heart valve, repaired heart defect (PFO) _____		<input type="checkbox"/>	<input type="checkbox"/>
6. pacemaker or implantable defibrillator _____		<input type="checkbox"/>	<input type="checkbox"/>
7. orthopedic implant (joint replacement) _____		<input type="checkbox"/>	<input type="checkbox"/>
8. rheumatic or scarlet fever _____		<input type="checkbox"/>	<input type="checkbox"/>
9. _____		<input type="checkbox"/>	<input type="checkbox"/>
10. _____		<input type="checkbox"/>	<input type="checkbox"/>
11. _____		<input type="checkbox"/>	<input type="checkbox"/>
12. _____		<input type="checkbox"/>	<input type="checkbox"/>
13. _____		<input type="checkbox"/>	<input type="checkbox"/>
14. tuberculosis, measles, chicken pox _____		<input type="checkbox"/>	<input type="checkbox"/>
15. asthma _____		<input type="checkbox"/>	<input type="checkbox"/>
16. breathing or sleep problems (i.e. sleep apnea, snoring, sinus) _____		<input type="checkbox"/>	<input type="checkbox"/>
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18. liver disease _____		<input type="checkbox"/>	<input type="checkbox"/>
19. jaundice _____		<input type="checkbox"/>	<input type="checkbox"/>
20. thyroid, parathyroid disease, or calcium deficiency _____		<input type="checkbox"/>	<input type="checkbox"/>
21. hormone deficiency _____		<input type="checkbox"/>	<input type="checkbox"/>
22. high cholesterol or taking statin drugs _____		<input type="checkbox"/>	<input type="checkbox"/>
23. diabetes (HbA1c = _____)		<input type="checkbox"/>	<input type="checkbox"/>
24. stomach or duodenal ulcer _____		<input type="checkbox"/>	<input type="checkbox"/>
25. digestive or eating disorders (e.g., celiac disease, gastric reflux, bulimia, anorexia) _____		<input type="checkbox"/>	<input type="checkbox"/>
26. osteoporosis/osteopenia (i.e. taking bisphosphonates) _____		<input type="checkbox"/>	<input type="checkbox"/>
27. arthritis _____		<input type="checkbox"/>	<input type="checkbox"/>
28. autoimmune disease _____ (i.e. rheumatoid arthritis, lupus, scleroderma)		<input type="checkbox"/>	<input type="checkbox"/>
29. glaucoma _____		<input type="checkbox"/>	<input type="checkbox"/>
30. contact lenses _____		<input type="checkbox"/>	<input type="checkbox"/>
31. head or neck injuries _____		<input type="checkbox"/>	<input type="checkbox"/>
32. epilepsy, convulsions (seizures) _____		<input type="checkbox"/>	<input type="checkbox"/>
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44. psychiatric treatment _____		<input type="checkbox"/>	<input type="checkbox"/>
45. antidepressant medication _____		<input type="checkbox"/>	<input type="checkbox"/>
46. alcohol/recreational drug use _____		<input type="checkbox"/>	<input type="checkbox"/>
ARE YOU:			
47. presently being treated for any other illness _____		<input type="checkbox"/>	<input type="checkbox"/>
48. aware of a change in your health in the last 24 hours (i.e. fever, chills, new cough, or diarrhea) _____		<input type="checkbox"/>	<input type="checkbox"/>
49. taking medication for weight management _____		<input type="checkbox"/>	<input type="checkbox"/>
50. taking dietary supplements _____		<input type="checkbox"/>	<input type="checkbox"/>
51. often exhausted or fatigued _____		<input type="checkbox"/>	<input type="checkbox"/>
52. experiencing frequent headaches _____		<input type="checkbox"/>	<input type="checkbox"/>
53. a smoker, smoked previously or use smokeless tobacco _____		<input type="checkbox"/>	<input type="checkbox"/>
54. considered a touchy/sensitive person _____		<input type="checkbox"/>	<input type="checkbox"/>
55. often unhappy or depressed _____		<input type="checkbox"/>	<input type="checkbox"/>
56. taking birth control pills _____		<input type="checkbox"/>	<input type="checkbox"/>
57. currently pregnant _____		<input type="checkbox"/>	<input type="checkbox"/>
58. diagnosed with a prostate disorder _____		<input type="checkbox"/>	<input type="checkbox"/>
Describe any current medical treatment, impending surgery, genetic/development delay, or other treatment that may possibly affect your dental treatment. (i.e. Botox, Collagen Injections) _____			
List all medications, supplements, and or vitamins taken within the last two years.			
Drug	Purpose	Drug	Purpose
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
PLEASE ADVISE US IN THE FUTURE OF ANY CHANGE IN YOUR MEDICAL HISTORY OR ANY MEDICATIONS YOU MAY BE TAKING.			
Patient's Signature _____		Date _____	
Doctor's Signature _____		Date _____	
ASA _____		(1-6) _____	
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# COMBATING THE INFLAMMATION BY BRINGING IT ALL TOGETHER!

Retrognathic jaw

Over developed mentalis

Forward head posture with posterior head tilt

Rounded shoulders

Length of philtrum

Thick neck









## INFLAMMATION

	In Range	Out of Range	Flag
Myeloperoxidase <sup>(5)</sup>	225		
Based on a high risk sub-population (N=920) defined as ambulatory stable patient undergoing elective diagnostic coronary angiography (1) and a reference range study defined the following cut-offs for MPO: A cut-off of <470 pmol/L defines an 'apparent' for a cardiovascular event, 470-530 pmol/L defines a population at intermediate risk for increased risk of MACE at 3 years, and >= 540 pmol/L defines a population with increased risk of MACE at 3 years. (Reference: 1. Tang et al. Am J Cardiol. 2013; 111:455-470 and personal communication)			
Lp-PLA <sub>2</sub> Activity <sup>(2)</sup>	70		
Based on the documented clinical utility of Lp-PLA <sub>2</sub> Activity to assess risk of CHD for Lp-PLA <sub>2</sub> Activity: A cut-off of >=75 nmol/min/mL defines a population with increased risk of CHD. (Reference: 1-The Lp-PLA <sub>2</sub> Studies Collaboration. Lancet. 2010; 375: 1536-1544)			
High-sensitivity CRP	0.7		
Microalbumin/Creatinine	2.0		
In the Framingham Heart Study, it was shown that healthy individuals (defined as without prevalent CVD) with elevated microalbumin had approximately 3x greater risk of cardiovascular disease. These levels were gender-specific and noted to be >=3.9 mg/g or for men and >=2.5 mg/g for women. (Reference: 1-Arnlov et al. Circulation 2005; 112: 969-975. 2-Fox et al. Nephrol Dial Transplant. 2005; 20: 105-111)			
Microalbumin	3.6		
Creatinine, Urine, Random	179.6		
ADMA (Asymmetric dimethylarginine) <sup>(11)</sup>	96		
Elevated ADMA levels are associated with significant subclinical atherosclerosis with kidney function and strongly correlate with reduced eGFR. Available prospective data suggest that higher ADMA concentrations (1). Based on an international 'apparently healthy' non-smoking donors, CHL has defined the following cut-offs: an 'apparently healthy' population at a relatively low risk for a cardiovascular event, intermediate risk for a cardiovascular event, and >123 ng/mL defines a relatively high risk for a cardiovascular event. (Reference: 1-Holvoet et al. J Am Heart Assoc. 2015; 4: e001833).			
SDMA (Symmetric dimethylarginine)	100		
OxLDL	38		
Based on a recent study of an 'apparently healthy' and non-metabolic syndrome population, a low level of OxLDL has been defined for OxLDL: A cut-off of <60 U/L defines a population with a low risk for a cardiovascular event, 60-100 U/L defines a population with a moderate relative risk (2.6 fold), and >100 U/L defines a population with a high relative risk (3.5-fold). (Reference: 1-Holvoet et al. JAMA. 2008; 299: 2287-2294)			

\*\*Flags: H = Out of Range High; L = Out of Range Low; CH = Critical High

Cleveland HeartLab, Inc. | 6701 Carnegie Ave. Suite 500 | Cleveland, OH 44130  
Laboratory Director: Deborah J. Berman, MD

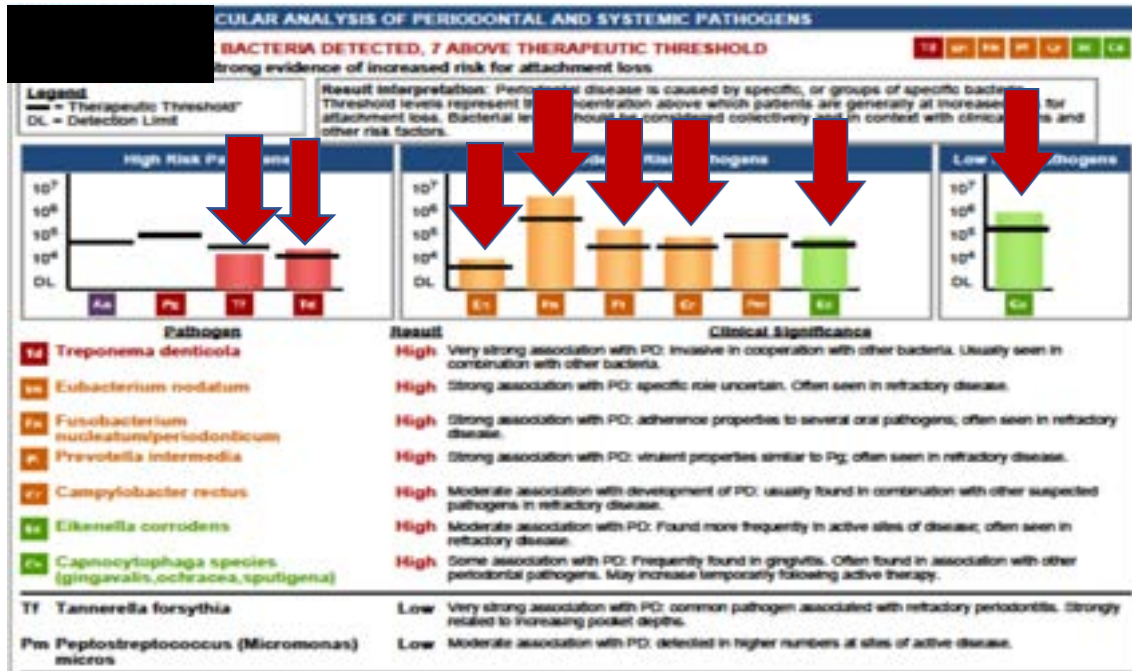
	In Range	Out of Range	Flag**	Relative Risk	Optimal	Units	Previous Result	Date
a population at moderate relative risk, and <=3.7% by wt defines a population at high relative risk of sudden cardiac death. The totality of the scientific evidence demonstrates that when consumption of fish oils is limited to 3 g/day or less of EPA and DHA, there is no significant risk for increased bleeding time beyond the normal range. A daily dosage of 1 gram of EPA and DHA lowers the circulating triglycerides by about 7-10% within 2 to 3 weeks. (Reference: 1-Albert et al. N Engl J Med. 2002; 346: 1113-1118).								
Arachidonic Acid/EPA Ratio		28.0	H		<5.0			
Omega-6/Omega-3 Ratio		13.7	H		<4.5			
Omega-3 total	3.1					% by wt		
EPA		0.5	L		>2.0	% by wt		
DPA	1.4				>1.0	% by wt		
DHA		1.2	L		>4.0	% by wt		
Omega-6 total	42.6					% by wt		
Cleveland HeartLab measures a number of omega-6 fatty acids with AA and LA being the two most abundant forms reported.								
Arachidonic Acid		14.0	H		<9.0	% by wt		
Linoleic Acid		25.1	H		<20.0	% by wt		

## GENERAL CHEMISTRY

	In Range	Out of Range	Flag**	Relative Risk	Reference Range	Units	Previous Result	Date
Glucose	94				65-99	mg/dL		

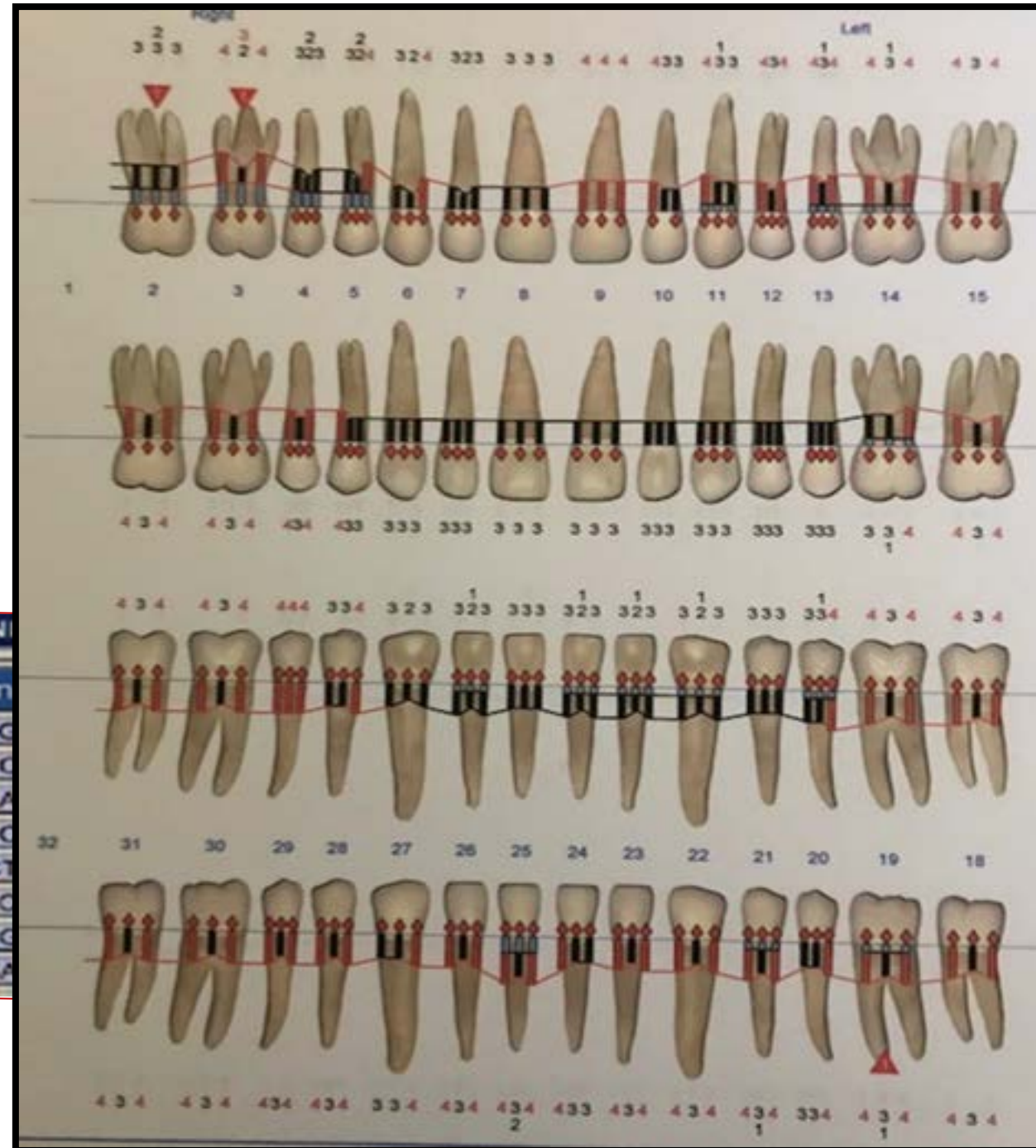
Deficiency in Vit D and Omega 3 and APO A1 and ApoB/ApoA1 ratio is out of range. How about the glucose? (94) There is atherosclerosis! What would you have him tested for?





**CELSUS ONE: GENETIC ANALYSIS FOR MARKERS OF ORAL AN**

Type of Immunity	Gene Marker	Gen
Innate	Beta-defensin 1 (DEFB1)	C
	CD14 (CD14)	C
	Toll-like receptor 4 (TLR4)	AA
	Tumor necrosis factor alpha (TNF-alpha)	C
Acquired	Interleukin 1 (IL1)	CT
	Interleukin 6 (IL6)	C
	Interleukin 17A (IL17A)	C
	Matrix Metalloproteinase 3 (MMP3)	5A



What else would you do for this patient?





What about length of philtrum?



Nares



Scalloped tongue



Heavy Wear



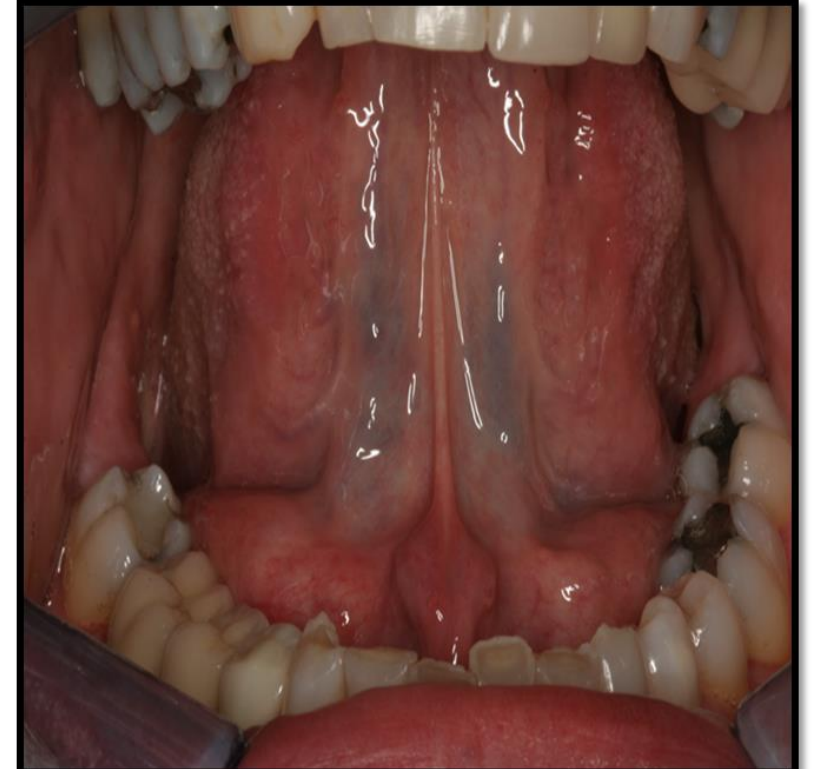
High narrow Palate



# OCCLUSION



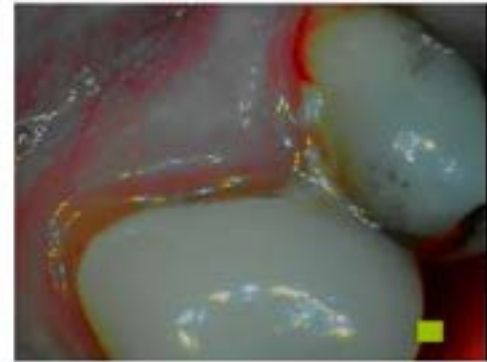
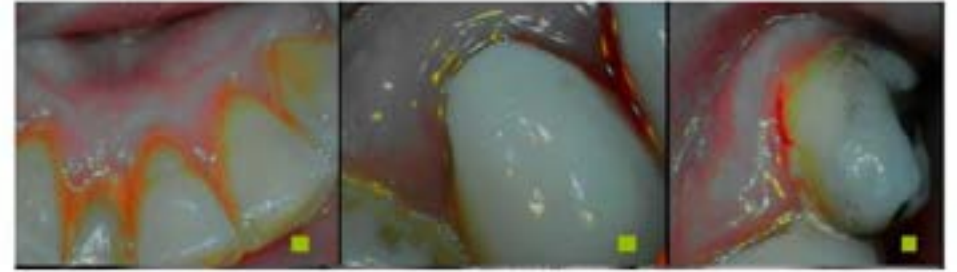
# FRENUM ATTACHMENTS







# WHAT DO YOU SEE?





# MYPERIOPATH MOLECULAR ANALYSIS OF PERIODONTAL AND SYSTEMIC PATHOGENS

Result: **PATHOGENIC BACTERIA DETECTED, 7 ABOVE THERAPEUTIC THRESHOLD**

Bacterial Risk: **HIGH** - Strong evidence of increased risk for attachment loss

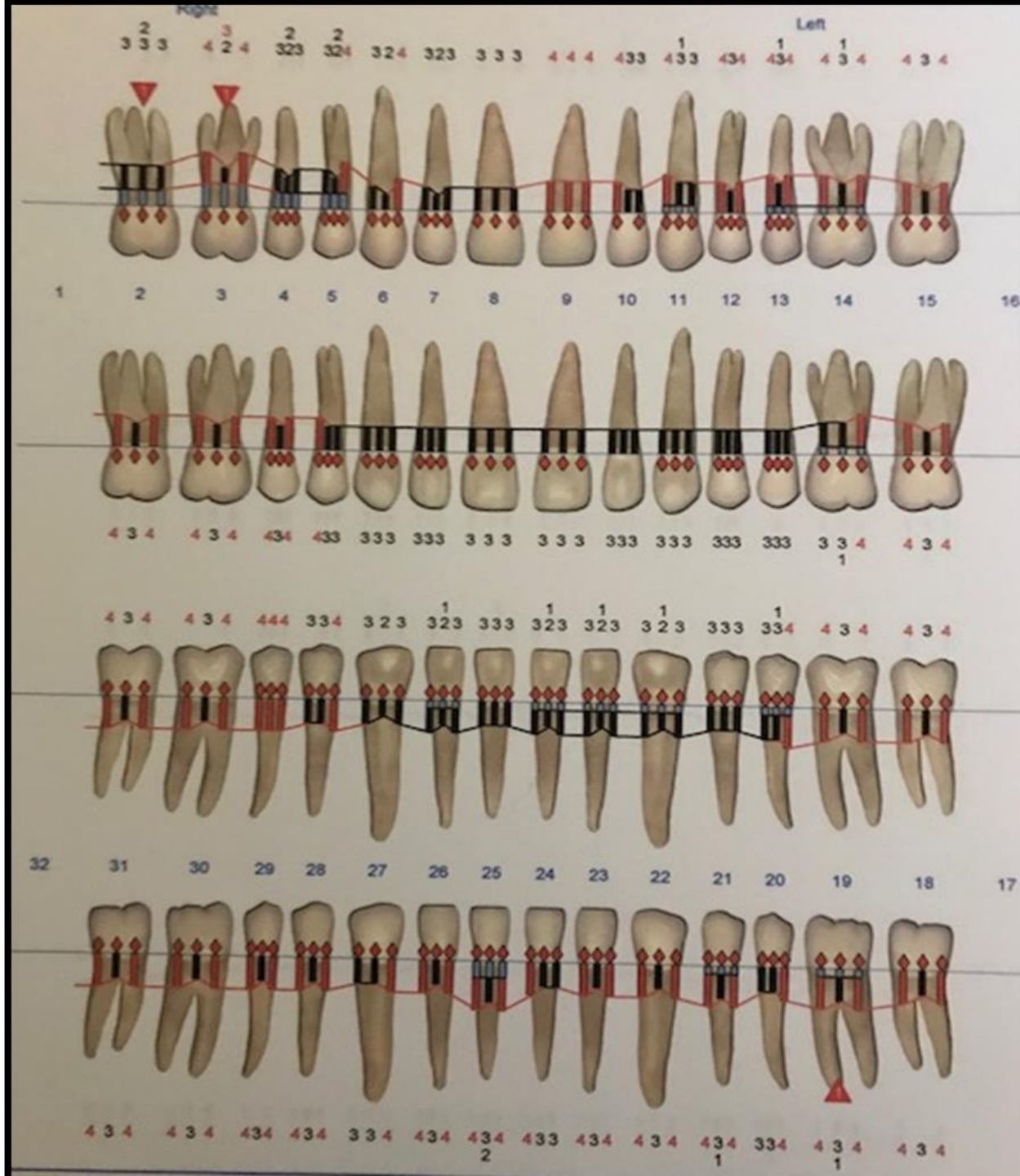
## Legend

■ = Therapeutic Threshold  
DL = Detection Limit

Result Interpretation: Periodontal disease is caused by specific, or groups of specific bacteria. Threshold levels represent the concentration above which patients are generally at increased risk for attachment loss. Bacterial levels should be considered collectively and in context with clinical signs and other risk factors.

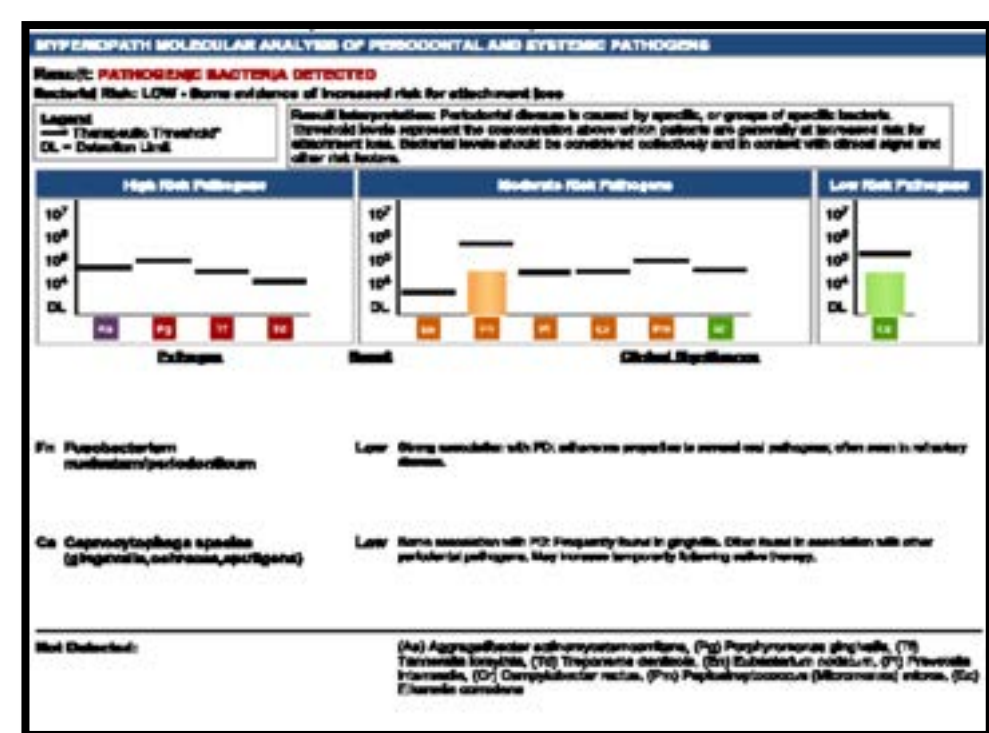
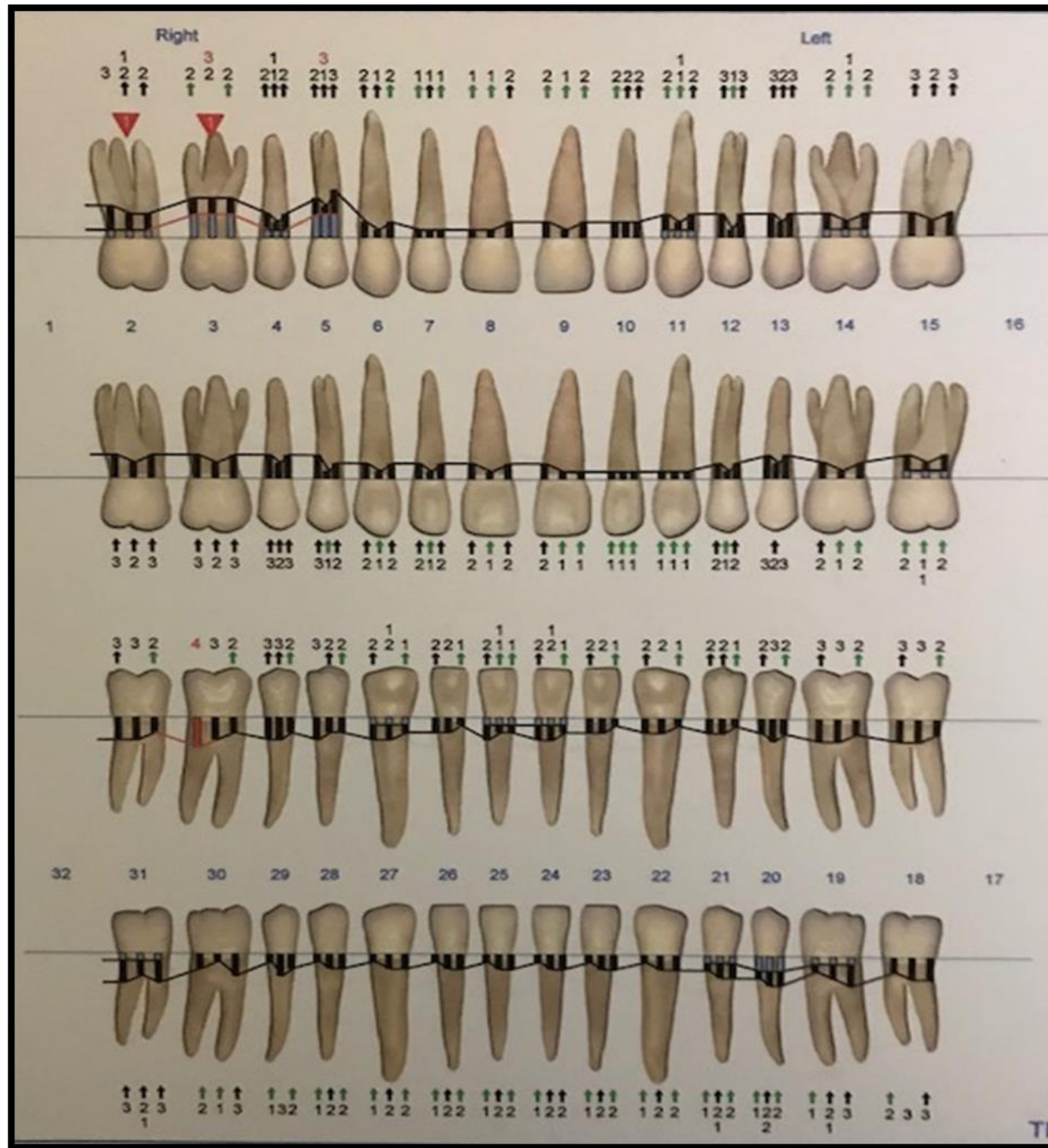


Pathogen	Clinical Significance
<b>Tf</b> <i>Treponema denticola</i>	<b>High</b> Very strong association with PD; Invasive in cooperation with other bacteria. Usually seen in combination with other bacteria.
<b>En</b> <i>Eubacterium nodatum</i>	<b>High</b> Strong association with PD; specific role uncertain. Often seen in refractory disease.
<b>Fa</b> <i>Fusobacterium nucleatum/periodonticum</i>	<b>High</b> Strong association with PD; adherence properties to several oral pathogens; often seen in refractory disease.
<b>Pe</b> <i>Prevotella intermedia</i>	<b>High</b> Strong association with PD; virulent properties similar to <i>Pg</i> ; often seen in refractory disease.
<b>Cr</b> <i>Campylobacter rectus</i>	<b>High</b> Moderate association with development of PD; usually found in combination with other suspected pathogens in refractory disease.
<b>Ec</b> <i>Eikenella corrodens</i>	<b>High</b> Moderate association with PD; Found more frequently in active sites of disease; often seen in refractory disease.
<b>Cs</b> <i>Capnocytophaga species (gingivalis, ochracea, sputigena)</i>	<b>High</b> Some association with PD; Frequently found in gingivitis. Often found in association with other periodontal pathogens. May increase temporarily following active therapy.
<b>Tf</b> <i>Tannerella forsythia</i>	<b>Low</b> Very strong association with PD; common pathogen associated with refractory periodontitis. Strongly related to increasing pocket depths.
<b>Pm</b> <i>Peptostreptococcus (Micromonas) micros</i>	<b>Low</b> Moderate association with PD; detected in higher numbers at sites of active disease.



- ▶ Perio therapy:
  - ▶ BP/O<sub>2</sub>
  - ▶ Air N Go Easy
  - ▶ Sopro Camera
  - ▶ Laser
  - ▶ O<sub>3</sub> gas and O<sub>3</sub> oil
  - ▶ Newtron/Piezo tips:
    - ▶ H4L/H4R, H3, H1, P2L/P2R/ O<sub>3</sub>
- ▶ \*\*\* Medical referral to evaluate for meds due to cIMT results and review fire panel and blood results\*\*\*
- ▶ 6-8 wk. PMT 2nd MPP, Sopro photos, Air N Go, Newtron, O<sub>3</sub>, laser decontamination
- ▶ Continue Orofacial Myology program
- ▶ Anti inflammatory nutritional and exercise program, Vit. D's, K2mk7, Omega 3's, Vit Bs
- ▶ Monitor CPAP pressure/appliance therapy/orthognathic surgery
- ▶ Correspondence with MD/PCP
- ▶ Restorative Tx., endodontic tx., ortho?
- ▶ 3-month recare possible PP trays





Orofacial myofunctional therapy completed:

CPAP pressure decreased: 12.8 to 11.2

AHI 3.4 to 1.2

Perioprotect trays

Shortened recare

Oral sleep device with breathing behavioral program







# IMPORTANT TO DO CO THERAPY WITH HEALTHCARE PROVIDERS

## MYPERIOPATH MOLECULAR ANALYSIS OF PERIODONTAL AND SYSTEMIC PATHOGENS

Result: **PATHOGENIC BACTERIA DETECTED, 7 ABOVE THERAPEUTIC THRESHOLD**

Bacterial Risk: HIGH - Strong evidence of increased risk for attachment loss

### Legend

— Therapeutic Threshold  
DL - Detection Limit

Result Interpretation: Periodontal disease is caused by specific, or groups of specific bacteria. Threshold levels represent the concentration above which patients are generally at increased risk for attachment loss. Bacterial levels should be considered collectively and in context with clinical signs and other risk factors.



Pathogen	Clinical Significance
<b>Td</b> <i>Treponema denticola</i>	<b>High</b> Very strong association with PD; invasive in cooperation with other bacteria. Usually seen in combination with other bacteria.
<b>Ea</b> <i>Eubacterium nodatum</i>	<b>High</b> Strong association with PD; specific role uncertain. Often seen in refractory disease.
<b>Fa</b> <i>Fusobacterium nucleatum/periodonticum</i>	<b>High</b> Strong association with PD; adherence properties to several oral pathogens; often seen in refractory disease.
<b>P</b> <i>Prevotella intermedia</i>	<b>High</b> Strong association with PD; virulent properties similar to Pg; often seen in refractory disease.
<b>Cr</b> <i>Campylobacter rectus</i>	<b>High</b> Moderate association with development of PD; usually found in combination with other suspected pathogens in refractory disease.
<b>Ec</b> <i>Eikenella corrodens</i>	<b>High</b> Moderate association with PD; Found more frequently in active sites of disease; often seen in refractory disease.
<b>Ca</b> <i>Capnocytophaga species (gingivalis, ochracea, sputigena)</i>	<b>High</b> Some association with PD; Frequently found in gingivitis. Often found in association with other periodontal pathogens. May increase temporarily following active therapy.
<b>Tf</b> <i>Tannerella forsythia</i>	<b>Low</b> Very strong association with PD; common pathogen associated with refractory periodontitis. Strongly related to increasing pocket depths.
<b>Pm</b> <i>Peptostreptococcus (Micromonas) micros</i>	<b>Low</b> Moderate association with PD; detected in higher numbers at sites of active disease.
<b>Not Detected:</b>	(Aa) <i>Aggregatibacter actinomycetemcomitans</i> , (Pg) <i>Porphyromonas gingivalis</i>

Additional information is available from [OralDNA.com](http://OralDNA.com)  
Methodology: Genomic DNA is extracted from the submitted sample and tested for 10 species-specific bacteria and 1 genus of bacteria known to cause periodontal disease. The bacteria are assayed by real-time quantitative polymerase chain reaction (qPCR). Bacteria are reported as copies per mL of collection. \*Modified from: Microbiological goals of periodontal therapy. Developed, and its performance characteristics determined by OralDNA Labs pursuant to CLIA requirements. The FDA has determined that such clearance or approval is not necessary.

OralDNA Labs, A Service of Access Genetics, LLC, 7400 Flying Cloud Drive, Eden Prairie, MN 55344 Phone: 952-938-3809 FAX: 952-938-3809

Web enabled system provided by: [AccessGenetics.com](http://AccessGenetics.com)

## MYPERIOPATH MOLECULAR ANALYSIS OF PERIODONTAL AND SYSTEMIC PATHOGENS

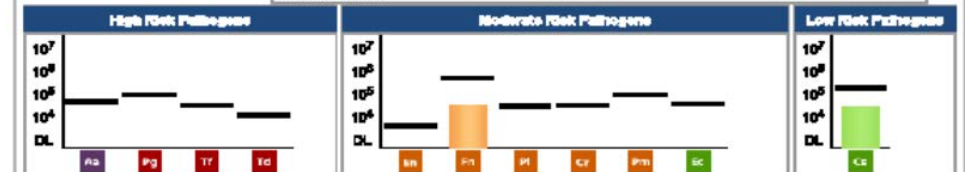
Result: **PATHOGENIC BACTERIA DETECTED**

Bacterial Risk: LOW - Some evidence of increased risk for attachment loss

### Legend

— Therapeutic Threshold  
DL - Detection Limit

Result Interpretation: Periodontal disease is caused by specific, or groups of specific bacteria. Threshold levels represent the concentration above which patients are generally at increased risk for attachment loss. Bacterial levels should be considered collectively and in context with clinical signs and other risk factors.



Pathogen	Clinical Significance
<b>Fa</b> <i>Fusobacterium nucleatum/periodonticum</i>	<b>Low</b> Strong association with PD; adherence properties to several oral pathogens; often seen in refractory disease.
<b>Ca</b> <i>Capnocytophaga species (gingivalis, ochracea, sputigena)</i>	<b>Low</b> Some association with PD; Frequently found in gingivitis. Often found in association with other periodontal pathogens. May increase temporarily following active therapy.
<b>Not Detected:</b>	(Aa) <i>Aggregatibacter actinomycetemcomitans</i> , (Pg) <i>Porphyromonas gingivalis</i> , (Tf) <i>Tannerella forsythia</i> , (Td) <i>Treponema denticola</i> , (Ea) <i>Eubacterium nodatum</i> , (P) <i>Prevotella intermedia</i> , (Cr) <i>Campylobacter rectus</i> , (Pm) <i>Peptostreptococcus (Micromonas) micros</i> , (Ec) <i>Eikenella corrodens</i>

Additional information is available from [OralDNA.com](http://OralDNA.com)  
Methodology: Genomic DNA is extracted from the submitted sample and tested for 10 species-specific bacteria and 1 genus of bacteria known to cause periodontal disease. The bacteria are assayed by real-time quantitative polymerase chain reaction (qPCR) using fluorescently labeled hydrolysis probes. Bacterial levels are reported as copies per mL of collection. \*Identified from: Microbiological goals of periodontal therapy. Developed, and its performance characteristics determined by OralDNA Labs pursuant to CLIA requirements. The FDA has determined that such clearance or approval is not necessary.

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1 of 3

Important!!!

See medical provider to get vascular health under control

OGTT test, genetic testing, medical treatment plan to go along with restorative/oral health plan

Medical, dental, sleep questionnaires ,fatigue, stop band, ESS, Lamberg:

Red Flags/Associations/Ask ?

Interview pt **Ask Questions.** Get to know their story!

**Life saving screenings:** Blood Pressure/o2/capnometry

**Salivary diagnostics,** sample for phase contrast microscope

**Carifree swab**

**Imaging:** X-rays, pano, CBCT, Photos

**Oral assessment:** OCX, (Velscope, Oral ID ect)anatomy, signs and symptoms, photos, IO camera(Sopro), phase contrast, salivary testing, CPC, (Florida probe) Educate, Educate, Educate!!

**Supragingival cleaning and education (IPT)**

**Treatment rec:**

Labs/blood work up(fire panel, vits CBC, lipid panel, nutrition

OGTT, (if pt agrees) genetics

Breathing/Sleep assessment

OM evaluation and rec tx if necessary

Perio Tx

Restorative Tx

Frenectomy

Appliance therapy

Ortho

Perio Protect trays or ?

Treatment completed, maintenance, assessments and follow up







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MARCH 2017

**Everything Is Not Black or White!**

AIRWAY  
FOCUSED  
DENTISTRY

**Offer optimal Care to your Patient!**



1928-2014

Do the best you can until you  
*know better*

Then when you know better,  
*do better*

Maya Angelou



# IF NOT YOU THEN WHO?



Kriston Reishour RDH, BSDH, CCSH, CSOM  
Intentional Hygiene  
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C: 360-770-1784

# Course Code:

# KV90Z723