

“I’m Losing Sleep because so many of my patients have INSOMNIA!”

Presented by
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kp.org/sleep

Multi-Specialty Symposium
For Advance Practice Practitioners
November 4, 2017

Disclosure
The planners and presenter of this activity, as well as the CME staff, do not have any relevant financial relationships with commercial interests to disclose

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Objectives


- Recognize and diagnose insomnia and other sleep disorders
- Describe the clinical benefits of CBT (Cognitive Behavioral Therapy) for treating insomnia and share resources with patients
- Discuss the tiered approach to treating insomnia with CBT as first line option, followed by melatonin then sedating anti-depressants, with limited use of non-benzodiazepine hypnotics especially in the elderly

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Kaiser Fontana Sleep Disorders Center
427- 4432
DREAM TEAM

Fontana is the "go to" sleep center for all of KP So Cal
 PIC - Dennis Hwang, MD


- Sleep Disordered Breathing:
 Central and Obstructive sleep apneas,
- Hypoventilation: Morbid obesity, Neurologic Disorders,
 Premature Infants, Children
- Narcolepsy and other Hypersomnias
- Restless Leg Syndrome
- Parasomnias – REM and non-REM
- Insomnias
- Circadian Rhythm – especially Delayed Sleep Disorder
- Occupational – Shift workers
- Commercial Driver program

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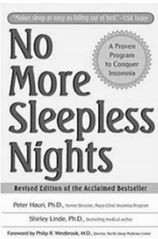
Kaiser Fontana Sleep Disorders Center
909-427-4432

1100 referrals per month
 40 in-lab polysomnography studies per week
 80+ ambulatory "Embletta/ WatchPAT" sleep studies /wk
 6 Hypersomnia MSLT/MWT day testing per week
 Insomnia class: 30-35 attend per week
 Consults: MD, NP & Respiratory Care Coordinators
 Multiple research projects, including alternative therapy

Insomnia: Sleep Eazzy Class, Fontana MOB 7
 One class-2.0 hours, direct book, no referral needed.
 Spanish Insomnia – individual consults with NP

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Sleep Eazzzy Class for insomnia
Kaiser Fontana Sleep Disorders Center




Currently:

- Single session class with Follow-up phone calls or 40 minute consults with
 Valerie Williams ANP-c
- Internet: kp.org/sleep 2016
 6 one-week sessions
 Interactive (DREAM program)

2015:

- Health Education: 4 session x 2 hours for Insomnia

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Types of Adult Insomnia



Acute: less than 3 months duration

327.41 Transient, Adjustment, Non-organic Insomnia

Chronic:

307.42 Idiopathic, Primary, Paradoxical, Psychophysiological, or Persistent Insomnia

Other:

- 327.00 Organic Insomnia
- 327.01 Insomnia due to medical disorder
- 327.02 Insomnia due to mental disorder
- 780.51 Insomnia with sleep apnea
- 780.52 Insomnia NOS
- 281.35 – 282.85 Insomnia due to various substances

American Academy of Sleep Medicine. International Classification of Sleep Disorders, Diagnostic and Coding Manual, 2005



Chronic Insomnia more than 4 months



Problem with:

- Falling asleep
 - Staying asleep
 - Waking too early
- and significant daytime impairment:**

- Fatigue
- Irritability / Moody
- Decreased function
- Decreased socialization
- Reduced energy or motivation
- Poor memory or concentration
- Headaches or GI upset
- Worry about sleep

Most Common Types:
 780.52 Insomnia NOS
 307.42 Idiopathic, Primary, Paradoxical Psychophysiological, Persistent
 327.01 with medical disorder
 327.02 with mental disorders



Insomnia prevalence and risk factors

Chronic: 10-20% of general population
Risk factors:
 Older age, females, co-morbid psychiatric disorders, substance abuse, shift work, co-morbid pain conditions, unemployment, lower socioeconomic status
 Single, divorced or separated more than married.
 Most common is depression.
 Persistent insomnia increases risk of developing depression by four fold.



Fatigue vs Sleepy

The sleep department also specializes in helping people stay awake!

Insomnia – Problems falling and staying asleep
 Insomnia patients are fatigued, *but not very sleepy.*

Epworth Sleepiness Score 13+/24
 Excessive daytime sleepiness usually another reason than insomnia

When people are sleepy while driving, they try many things to stay alert. **NONE** of them will keep them awake.



Safety first. Fall asleep crashes are often fatal.



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Epworth Sleepiness Scale

Use the following scale to circle the most appropriate number for each situation:

0 = You would *never* doze or sleep

1 = There is a *slight* chance you would doze or sleep

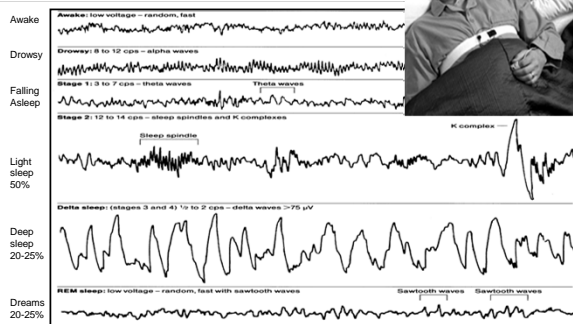
2 = There is a *moderate* chance you would doze or sleep

3 = There is a *high* chance you would doze or sleep

SITUATION	CHANCE OF DOZING OR SLEEPING			
Sitting and reading	0	1	2	3
Watching TV	0	1	2	3
Sitting inactive in a public place	0	1	2	3
Passenger in a car for more than 1 hour	0	1	2	3
Lying down in the afternoon	0	1	2	3
Sitting and talking to someone	0	1	2	3
Sitting quietly after lunch (no alcohol)	0	1	2	3
While driving, stopped in traffic	0	1	2	3
Total	___/24			

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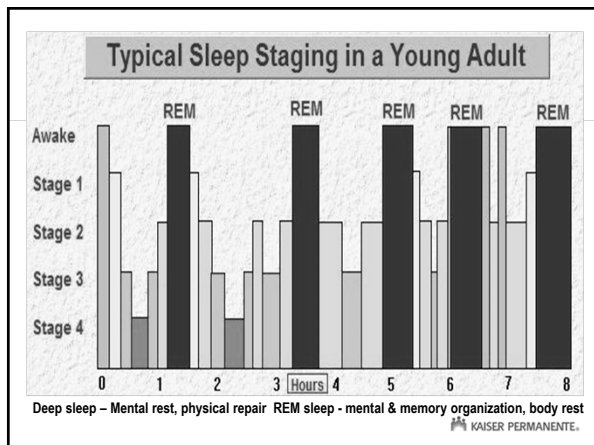
Sleep staging is by brain waves
 Sleep study rarely done for Insomnia



Actigraphy – compare with self report diary Helpful for Sleep State Misperception

Actigraphy tracks sleep patterns

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Sleep changes with age

Worsened by:

- Cloudy yellowing of lens decreases blue light input for natural circadian rhythm
- Decreased melatonin production
- Less physical and mental activity in day
- Poor day vs night demarcation
- More naps
- Depression – feeling less productive

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Sleep disturbances in depressed patients

- Depression: 80-90% have insomnia
- longer onset sleep (SOL),
 - early REM onset, increased REM - disturbing
 - decreased total sleep time (TST), less slow wave sleep (SWS) and low sleep efficiency (SE)
 - early awakening
 - Non-restorative sleep

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Sleep disturbances in other mood disorders

- Anxiety / Insomnia:** longer SOL, decreased TST and SWS, and SE resulting increase REM
- Mania:** decreased TST, low SWS, early and increased REM
- sleep loss most common trigger of episodes
- Alcoholism:** decreased TST profoundly reduced REM – rebounds in detox -> day hallucinations

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Psychiatric medications effect on sleep

- Depends on normal vs depressed patients
- Antidepressants increase REM latency and decrease amount of REM
- Bupropion increases REM latency but increases amount of REM
- Mirtazapine only mild REM reduction / none
- Sedating antidepressants increase SE
- Non-sedating antidepressants decrease SE
- But if depression improved -> subjective improvement, despite sleep study findings

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As the day progresses, there is a continuing shift in the balance between the forces for wakefulness to sleep.



Wakefulness stimulated by:

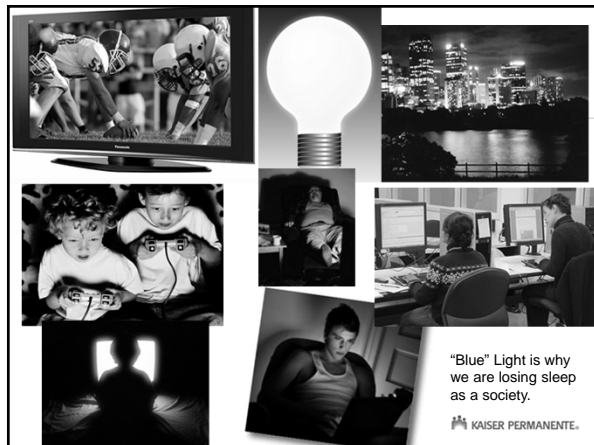
- Light
- Heat
- Cortisol also high with stress, anxiety
- Energy intake (eating calories)
- Physical and mental activity

Sleepiness stimulated by:

- Dark
- Cool
- Melatonin
- Less energy intake
- Less activity

Sleep is a 24 hour issue – not just at bedtime!





Blue Blocker Glasses

Wear from sundown until bedtime to promote natural sleepiness.



Regular styles - plastic safety shield, Example - Pyramex Venture II @ available@ amazon.com



"Fit-Over" styles are worn over prescription glasses, available from SolarShield® or SunShield® available@ amazon.com

f.lux, twilight and other apps can lower the light level on electronic devices at sundown automatically



Internal Clocks can be adjusted
 Useful for shift-workers, jet lag or delayed sleep phase teenagers.



Dark Sunglasses
 (or blue-blockers) to mimic night
 Wear sundown until bedtime = Sleep



Bright light to mimic day = energy, awake




Melatonin – natural hormone of sleep



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Delayed Sleep Phase Disorder not insomnia



Age onset 8 – 20, estimated 10%
 Usually diagnosed as insomnia
 “Different time zone”:
 problem falling asleep, not staying asleep
 Usual Rx: TCAs, benadryl, benzos – not helpful
 Treatment with light, dark sunglasses and melatonin can shift to correct “time zone”.
 10% of adult insomniacs also have DSPD = “Night owls”

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Design your bedroom for SLEEP

DARK

- No TV or Computer
- Sleep mask
- Minimum light with bathroom breaks

COOL Try ice pack, Chillow Pillow

COMFORT

- Bed and pillows

QUIET

- White noise, fan or ear plugs







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SLEEP HYGIENE = Healthy Sleep Habits



Avoid:

- Alcohol – most common sleep aid in the world
avoid 4 hours before bedtime
reduces melatonin and dreams
- Nicotine - lessens physical repair in deep sleep
- Caffeine: avoid after lunch – agitating, raises temperature and heart rate, causes people to “twitch” in their – more likely to wake up
- Large meal before bedtime – not within 4 hours of bedtime – causes sleep disturbance, light snack ok.

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Take naps?

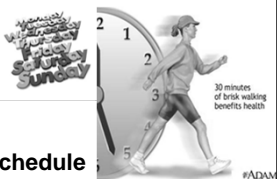


80% of people with insomnia sleep **WORSE** when they nap
 Only 20% of people with insomnia sleep **BETTER** when they nap

If retired - Limit nap to 30 minutes. Never after 3pm.
 If shift-worker – Sleep at least 2 hours before work

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SLEEP HYGIENE = Healthy Sleep Habits



Establish a regular sleep schedule

Most important:

Get up at the same time 7 days a week

Helpful – same bedtime each night

Schedule sufficient sleep opportunity.

Exercise improves sleep and mood–

Best time is morning in sunshine up to late afternoon.

Takes 4-5 hours to cool for sleep

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Dysfunctional Beliefs and Attitudes about Sleep Morin, et al, APA, 1993

BELIEFS:

- Trying hard will help me fall asleep
- I can't sleep without medication
- I can't function without 8 hours sleep
- I can't control my thoughts in the night
- I should sleep as well as my partner
- I am losing control over my ability to sleep

BEHAVIORS:

- More time in bed to increase sleep
 - Monitoring sleep times closely
 - Watch TV or listen to radio to relax to sleep
 - Drink alcohol to fall asleep
 - Napping to make up sleep
 - Laying in bed worrying about sleep
-All lead to less sleep

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Insomnia Treatment options

Cognitive Behavioral Therapy for Insomnia=
 cognitive therapy + stimulus control +/- sleep
 restriction with or without relaxation therapy.
 Effective for primary and secondary insomnia.
 Combination of hypnotic and CBT-I is NOT more
 effective than CBT-I alone for primary insomnia.
 Sleep education and paradoxical intention,
 biofeedback also helpful.

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Behavior modification

1: Do not have a visible bedroom clock
 Covered alarm clock ok

Clock watching reduces
 sleep time with anxiety




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2: Bed for sleep and sex ONLY

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STIMULUS CONTROL
to avoid lying in bed trying to sleep



- Going to bed earlier to “get more rest” worsens insomnia.
- Go to bed **ONLY WHEN SLEEPY**
- If unable to sleep or relax, go to another room and do something boring or relaxing
- Return to bed **ONLY WHEN SLEEPY**
- Repeat the above as often as necessary
- Get up at the same time every morning

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Ultimate Insomnia treatment: SLEEP RESTRICTION THERAPY

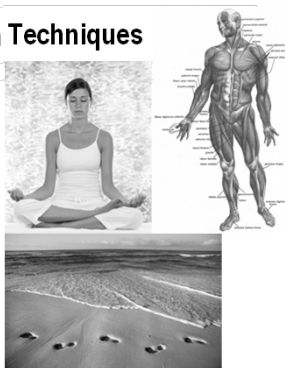


A process to make sleep time more equal to time in bed.
VERY EFFECTIVE for sleep consolidation.
 Requires self discipline for a few weeks, but gives excellent results.
 Can acutely improve depression.
 Compute actual sleep hours, deduct from set wake time to find initial start time. Shift earlier by 15-30 min every 4-5 days to goal. Wake time is stays constant.

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3: Practice Relaxation Techniques

- Deep Breathing
- Progressive Muscle Relaxation
- Guided Imagery
- Meditation
- Mindfulness



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RELAXATION

POD CASTS by
Belleruth Naparstek

kp.org/listen



LIVING HEALTHIER

- Sleep
- Relaxation and wellness

EMOTIONAL WELLNESS

- Self confidence
- Stress
- Anger and Forgiveness
- Grief
- Panic Attacks and Anxiety

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Pre-Bedtime Routine to unwind from your day

**Plan: make it a habit
before bedtime**

- Listen to relaxing music
- Warm bath
- Read boring book
- Relaxation
- Go to bed and fall asleep.



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Choose Positive Thoughts

“How can I turn off my mind?”

Problem solve in daytime – journaling

Then at bedtime you can...
Choose bedtime thoughts to be positive and practice “gratitude”

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Chronic insomnia patients – 4+ x risk for developing depression, 2-4 x risk to remain depressed

Pain • Insomnia • Depression • Stress

NAME _____ DATE _____

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Mental health resources are outlined in the class handout.

Medications Known to Cause Sleep Disturbances


- Stimulants:
 - Diet pills or Energy supplements
 - Decongestants like Sudafed®, Afrin
 - Excedrin migraine®
- Steroids, Interferon
- Antidepressants:
 - Effexor, Cymbalta, Wellbutrin,
 - Prozac, Celexa, Lexapro
- Blood pressure medications:
 - HCTZ or Furosemide (Lasix®)
 - Beta-blockers
 - Calcium channel blockers
- Bronchodilators – Theophylline, Pro-Air
- Rx stimulants
- Best to take these meds in the Morning

Alternative for nasal Congestion is sinus rinse before bed

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Over-The-Counter Sleep Aid Medications

used by 25% of insomniacs, 5% every night




- **Diphenhydramine**
 - Advil PM
 - Benadryl
 - Simply Sleep
 - Tylenol PM
 - Unisom SleepGels
 - ZZZ-quil
- **Doxylamine**
 - Unisom SleepTabs
 - Vicks Nyquil

Antihistamine medications

- Minimally effective for sleep
- Reduce sleep quality
- Cause restless legs
- Cause drowsiness the next day
- Worsen prostate, glaucoma and constipation conditions
- *Better to use claritin, zyrtec or allegra for allergy symptoms.*

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Most common Rx for insomnia



Medication	Daily Dose	Effects and Considerations
Benzodiazepine Receptor Agonists: Zolpidem (Ambien®)	Women 5mg Men 10mg	<ul style="list-style-type: none"> • Helps you fall asleep and improves sleep quality (Dementia, Memory Loss, Parasomnias) • Little help to stay asleep • Risk for tolerance effect • There is a risk of dependence and abuse
Benzodiazepines: Temazepam (Restoril®)	15mg to 30mg	<ul style="list-style-type: none"> • Helps you stay asleep during the night • Tolerance and dependence can occur with long term use • Can have additive effects with alcohol /other medicines that affect the brain
Antidepressants: Trazodone (Desyrel®)	50mg to 150mg	<ul style="list-style-type: none"> • Helps you fall asleep and stay asleep • Effective in patients who have both depression and insomnia

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Zolpidem/ Eszopiclone new cautions



SAMHSA – Report 5/1/2013
Substance Abuse and Mental Health Services Administration
ED visits for adverse reactions involving Zolpidem increase 220% - 6,111 in 2005 to 19,487 in 2010:

- Females = 68%
- Over 45 years old = 74%
- Over 65 years old = 32%

Half of visits involved combination with other pharmaceuticals:

- Anti-anxiety and other insomnia meds = 16%
- Pain relievers = 26%

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Ambien/Lunesta: new cautions



- AGS, Beers, Medicare, HEDIS:
Limiting use in patients >64yo
Letters advising all current Ambien patients
- Max dose– 5mg, couple nights a week
 - Max prescription total 90 days per year
 - Extreme caution for usage >64 year old
 - Increased dementia, falls, parasomnias, MVAs
 - Increased death rate (5x)

Advised alternatives: CBT, melatonin, trazodone
Not Tricyclic Antidepressants or Benzodiazepines,
if only for sleep

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Non-formulary sleep medications:



- Formulary: only 5mg pills
Ambien – zolpidem 5-10mg– half life 2.5 hours
- NON-FORMULARY:
Ambien CR – zolpidem 6.25-12.5mg
Lunesta – eszopiclone – 1-3mg - half-life 6 hours
- NON-FORMULARY-no additional benefit:
Intermezzo – zolpidem sublingual 1.75-3.5mg – 2.5 hrs
Sonata – zaleplon – 5-10mg – half-life 1 hour
Rozerem – ramelteon – 8mg - melatonin agonist

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Melatonin: natural sleep hormone



Teenagers, shift workers, older adults,
and patients on certain medications benefit

Over-the-counter, take 3 -5 mg –
30 to 60 min before bedtime
Never take after sleep onset.



NSAIDs, Beta-blockers, calcium-channel
blockers, diuretics, benzodiazepines,
alcohol, and caffeine may decrease normal
melatonin production.

Light greatly reduces melatonin production.

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**Alternative therapies:
little research**

Aromatherapy - relaxing
Lavendar, Roses

Herbal formulas
Chamomille tea "sleepytime"

Relaxation drinks
ex: Vacation In a Bottle
ex: Bob Marley water

Yoga

Herbals: most can be very helpful
Liver cautions with valerian and kava.
St. John's wort can disturb sleep.



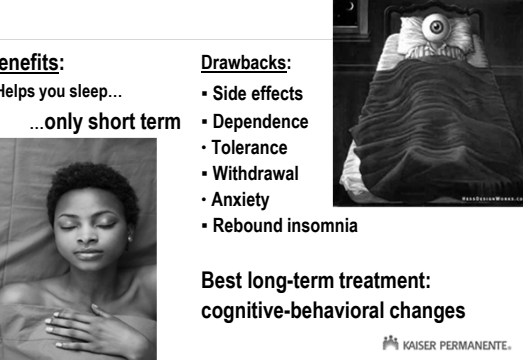
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Rx or OTC medications that help with Insomnia:

Benefits:
• Helps you sleep...
...only short term

Drawbacks:
• Side effects
• Dependence
• Tolerance
• Withdrawal
• Anxiety
• Rebound insomnia


**Best long-term treatment:
cognitive-behavioral changes**



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Restless Legs

Worse in the evening
Uncomfortable or unpleasant
sensations in legs when at rest
Overwhelming urge to move legs
Movement or massage relieves the discomfort
Can also occur during sleep = PLMD – uncommon to arouse patient
Test for ferritin (precursor to dopamine)– goal >75, if needed,
tx with FeSO4 take with vitamin C to reduce risk of augmentation
Preferred treatments: dopamine agonists
pramipexole (mirapex) or ropinirole (requip) before klonopin
High incidence in ADD / ADHD



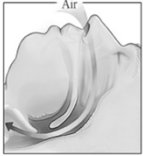
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Obstructive Sleep Apnea – screening:




S – snore loudly
T – tired, day fatigue
O – observed apnea
P – high blood pressure
B – BMI > 35
A – age > 50
N – neck > 17
G – gender: male score >2, send for testing

Normal airway



Airway is open and air moves through

Obstructive sleep apnea

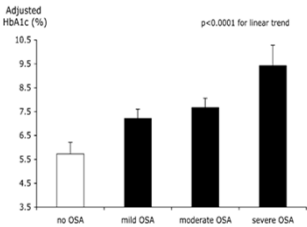


Airway is blocked and air does not move through

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Diabetes and Sleep Apnea

- Over 50% of type II diabetics have sleep apnea
- Degree of OSA severity is directly related to A1c



Aronsohn et al., American Journal of Respiratory Critical Care Medicine, 2009
 ** Data adjusted for age, gender, race, BMI, number of diabetic medications, level of exercise, years of diabetes and total sleep time.

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Obstructive Sleep Apnea

Main problem is compliance

OSA – moderate or severe - has serious cardiovascular risks and needs treatment: **MI, stroke, diabetes**

Commercial drivers with OSA are now held to compliance guidelines, 70% of days with use >4 hours

Urge patients to come to sleep lab if they are not using their CPAP at least 4 hours every night.



CPAP treatment for Sleep Apnea:






CPAP Full face mask Nasal mask Nasal pillows

Many Alternative Therapies available:







PROVENT Positional Devices Oral Device

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Narcolepsy or Hypersomnia

NARCOLEPSY
Is described as an excessive urge to sleep at inappropriate times...

With cataplexy = hypocretin deficiency
 Without cataplexy = normal / low hypocretin
 50% undiagnosed
 Most commonly misdiagnosed as mood disorder
 Dx: polysomnography / mean sleep latency
 Hypersomnia if average short mslt
 Narcolepsy if REM onset with sleep
 Poor sleep at night

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Sleep disorders treatments

RBD: preferred tx : melatonin or benzo
 Sleep walking : safety precautions
 PTSD / nightmares: prazosin, BH: EMDR, IRT
 Narcolepsy / Hypersomnia – Dx: PSG/MSLT
 Provigil – day preferred over stimulants,
 Xyrem – night (narcolepsy only)
 Shift workers –
 provigil, hygiene + sleep med

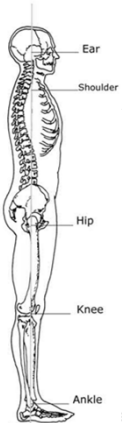
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IMPORTANCE OF PROPER SPINE ALIGNMENT DURING SLEEP

Getting enough sleep can be difficult when you can't find a comfortable position

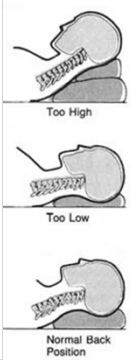
Chronic pain and fibromyalgia patients

- Wake up with pain, numbness, tingling
- "I must have slept wrong"
- Tossing & turning through the night
- Unable to relax muscles
- Feel stiff & achy in the morning




Labels in diagram: Ear, Shoulder, Hip, Knee, Ankle


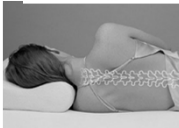

Neck spinal position



Labels: Too High, Too Low, Normal Back Position



Align nose with the center of your body

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SLEEPING ON YOUR BACK

1-2 pillows or wedge under legs improves low back pain



1 pillow under each arm for shoulder support

Picture is an example of what **NOT** to do

Stomach sleeping not advised, because it twists the neck too far to the side



Wedge relieves low back pain

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SIDE SLEEPING Recommended


1-2 pillows under head ensures your cervical spine is straight & elongated


1-2 pillows between knees 1 pillow under arm

Body pillow or wedge behind back

- Roll body forwards or backwards weight on shoulder blade and bottom
- Body weight not on top of shoulder or hip joints

Picture: example of good positioning





Challenge patients - which path will you choose?

Motivation - "You can't satisfy your hunger by reading a menu, you have to eat some of the food"anonymous

Encourage patients to - Be patient with themselves... Humans need 3 to 4 weeks of repetition to change or develop new habits.

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Build patient skills and confidence so they can sleep normally again.
Insomnia is nothing to lose sleep over!



THANK YOU

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