

# Sleep Hygiene

William M. DeMayo, M.D.

John P. Murtha Neuroscience and Pain Institute

Conemaugh Health System

Johnstown, PA

# Why Is Sleep Important?

- **Symptoms of Sleep Deprivation**
  - Irritability / Poor Stress Management / Mood Swings
  - Cognitive fatigue / Impaired Concentration
  - Physical fatigue - impairment in function
  - Depression / Anxiety
  - Marital, Family, & Work Issues
  - Pain - Muscular Pain, Neuropathic Pain
  - Other effects – Hypertension, Immune Issues, etc.



## Health

- Health Library
- Breaking Bioethics
- Stem Cell Research
- Sexploration
- Women's Health
- Diet & Fitness
- Sexual Health
- Cancer
- Children's Health
- Heart Health
- Cosmetic Surgery
- Men's Health
- Alzheimer's Disease
- Health Care
- Pet Health

# HEALTH

## General Health

### LIVE VOTE

**How many hours of sleep do you get each night on average? \***

79316 responses

8 hours or more

**20%**

5 to 7 hours

**75%**

4 hours or less

**6%**

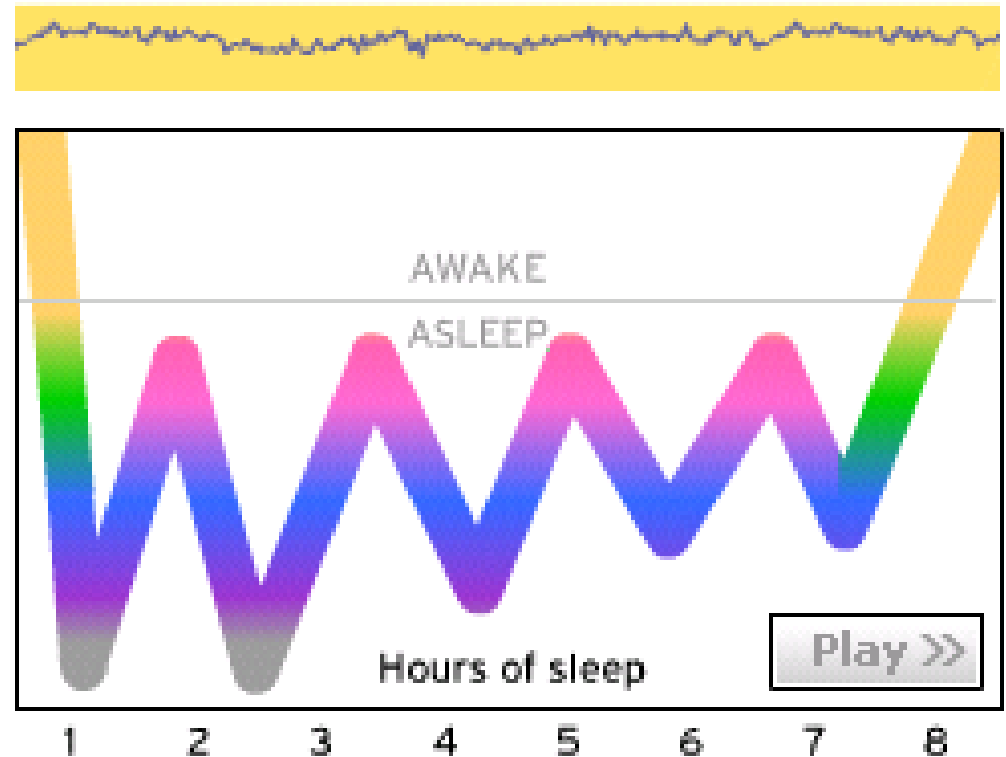
Not a scientifically valid survey. [Click to learn more.](#)

### CLICK FOR STORY

- **Sleep problems taking a toll on Americans**

During the course of a night, a sleeper passes through the different stages of sleep on a roughly 90-minute cycle.

- AWAKE
- STAGE 1
- STAGE 2
- STAGE 3
- STAGE 4
- REM SLEEP



CLICK ON THE BUTTONS AT TOP FOR MORE

SOURCES: Harvard Medical School, Encarta Encyclopedia

MSNBC

Sleep is an ACTIVE state

# Insomnia

(1/3 of population has suffered insomnia in past year, 10% chronic)

[1191 National Sleep Foundation Study]

- Definitions are subjective –

- American Sleep Disorders Association:

A complaint of an insufficient amount of sleep or not feeling rested after the habitual sleep episode

- American Psychiatric Association:

Difficulty falling asleep, staying asleep, and/or nonrestorative sleep with associated impairment or significant distress for at least 1 month

# Chronic Insomnia

- Defined as lasting 6 months or longer
- More difficult to manage with behavioral training alone
- You can teach an old dog new tricks

# Poor Sleep

## Common Reasons

- Pain
- Stress / Anxiety
- Medications (Including Caffeine, Alcohol, etc.)
- Environment
- Lack of Exercise / Sedentary lifestyle
- Urologic Issues
- **Poor Habits**
  - Maladaptive Behavior

# Chronic Insomnia

Poor Sleep

Hygiene

Meds

& Medical Issues

(Urologic, COPD, GERD,  
Parkinsons, Mood Disorders, etc.)

Sleep Disorders

(Sleep Apnea, Periodic Limb  
Movement, etc.)

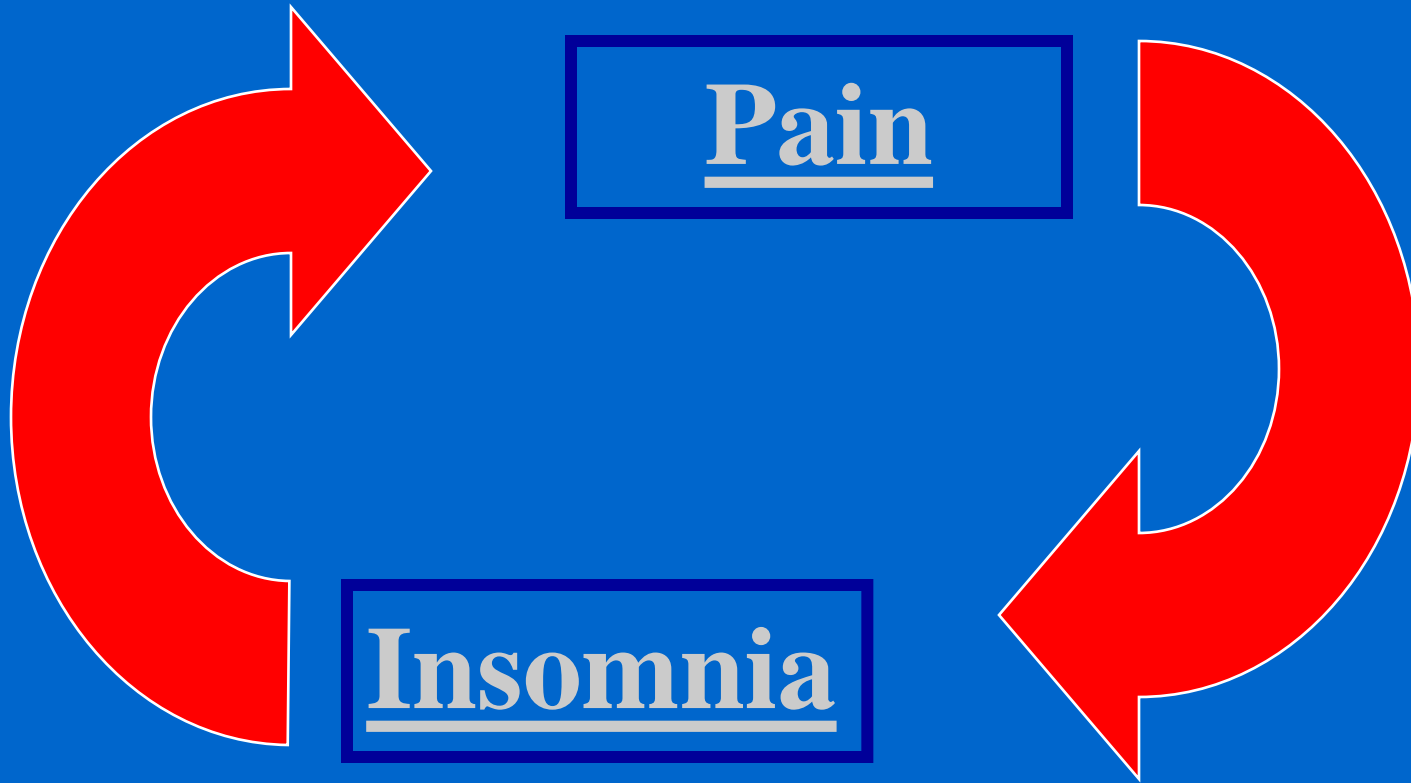


•  
•  
•

## SLEEP LOG

- Bedtime
- Sleep time
- Awakenings — including any clear cause
- Any nighttime symptoms — Pain, SOB, Anxiety, etc.
- Out of Bed time
- Napping

# Pain / Insomnia Cycle



Often times chronic pain is nearly impossible to treat until the Insomnia is treated.

# Sleep as a Trained Behavior

- Essentials of Training –
  - It's just like training your dog
    - Consistency
    - Pretraining Routine
    - Avoid
      - Positive reinforcement of undesired behavior  
(*TV, Reading, Eating during sleep hours*)
      - Diluting the Stimulus – Response association  
(*Laying in bed awake*)
  - Need for retraining when behavior deteriorates

# Sleep Hygiene

- Cognitive behavioral therapy -
  - progressive muscle relaxation
  - guided imagery
  - biofeedback
  - stimulus control
  - medical hypnotherapy
  - restriction of time in bed

# Frequent factors disturbing sleep

(The DON'T List)

- Alcohol - although it promotes sleep onset, alcohol leads to shallow, fragmented sleep
- Caffeine – can stay in your system for 14 hours
- Nicotine :
  - at low doses, tends to act as a sedative
  - high doses it causes arousals during sleep
- Daytime napping (can be ok if sleeping well at night)
- Exercise :
  - Lack of exercise during day
  - Too much exercise at night

# Frequent factors disturbing sleep

(The DON'T List)

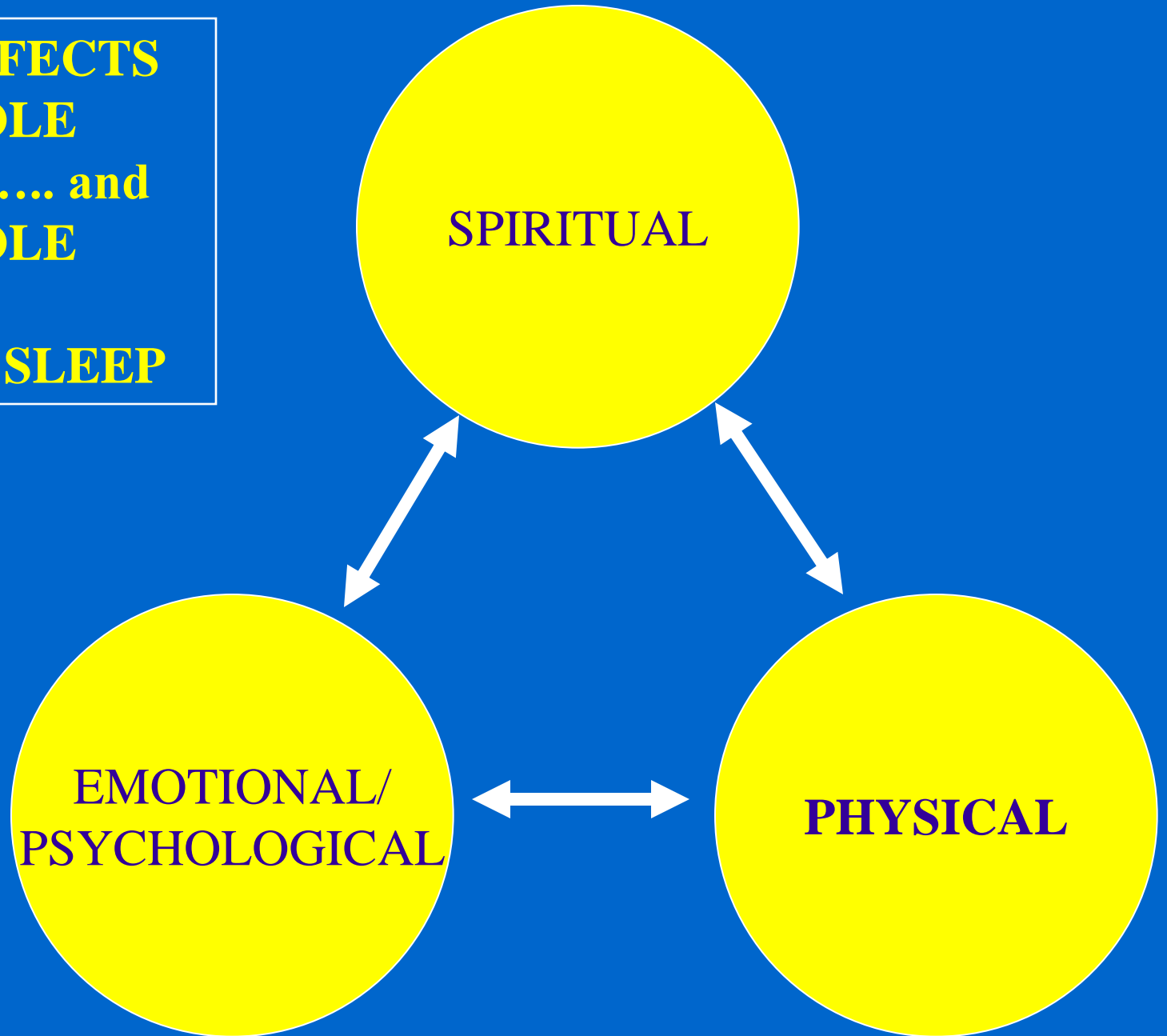
- Poor sleep environment
  - noise, distractions, other stressors associated with that space, temperature, positioning
- Medications (review with your physician & pharmacist)
- Television
- Pets
  - Care of pets at night, sleeping with pets

# Good Sleep Hygiene

(The DO List)

- Set specific bedtime & waketime – stick to it
- Establish a Bedtime Routine (Sleep Priming)
- Consider adapting environment
  - Sound machine / Ear Plugs, Aromatherapy, etc.
- Get out of bed if unable to sleep for 15 – 30 min.
  - Leave bedroom, sit quietly, Do Nothing (relaxation tape ok)

**SLEEP AFFECTS  
THE WHOLE  
PERSON ..... and  
THE WHOLE  
PERSON  
AFFECTS SLEEP**







# Emotional Issues and Sleep

- Case Example:
  - Job Stress and Frustration



•  
•  
•

# Spirituality and Sleep

- Case Example:
  - Spiritual Goals as Sleep Priming

# • • • Medical Intervention for Insomnia

- Benxodiazepines (Valium class of drugs)
  - Potential for dependency, not for long term use
- Elavil (Amitryptiline)
  - Narrow therapeutic window but very effective
  - Used every night (consistent with “training” approach)
- Trazadone
- Lonestia (Eszopiclone)
  - New, approved for long term use, no tolerance effect
  - Studies show improvement in functioning the next day



1450 Scalp Avenue, Suite 120  
Johnstown, PA 15904

Post-Polio Clinics Directors Network  
October 18, 2005

**Disclaimer: The following are unofficial notes that have not been read by or approved by the speaker.**

Points of Discussion:

- We screen every patient with questions on the number of hours they sleep. Sleep hygiene is a very common issue in post polio and in the speaker's private practice. It is a very important area that is under addressed in many ways.
- There are studies looking at sleep deprivation in the able-bodied population and those with chronic pain.
- Chronic sleep deprivation does worsen pain issues.
- There are significant numbers of people who do not get adequate hours of sleep and most people are not aware that it is a problem.
- Some people who complain of fatigue do not connect that to the fact that they are getting just five or six hours of sleep a night.
- It is significant if someone is not getting enough sleep and that is exacerbating their pain issues and decreasing their level of function.
- Poor sleep hygiene is one factor in terms of chronic insomnia and does overlap with medication-caused insomnia or a multitude of medical issues. If there are medical issues and sleep disorders, poor sleep hygiene will exacerbate the problem.
- Using a sleep log will get information from the patient and does change behavior. When a patient takes the effort to record the data in terms of their bedtime and number of awakenings, daytime napping, etc., they are going to be more aware of the number of hours they sleep. After education on sleep hygiene, they will improve simply by keeping track of it.
- There is interaction between pain conditions, specifically muscle pain, and insomnia. Insomnia in a patient will lead to an increase of muscle tightness. If a patient becomes sleep deprived their pain is sometimes worse.
- Oftentimes, the clinic needs to address the sleep issue and then the pain issue.
- Sleep as a trained behavior ? Dr. DeMayo educates patients by using analogy of training a dog, stressing issues of consistency as important. In terms of sleep, there would be specific bed time and waking time.

- It is very helpful to have a 15-minute time period of a routine, whether a hot bath or relaxation techniques or spiritual goals, that is gone through exactly the same every night before going to bed so your body is aware that it is time to go to sleep.
- Cognitive behavioral therapy -- each has different rules for different individuals depending on their resources.
- Restriction of time in bed -- sometimes that is a little counter-intuitive. It is very important to schedule eight hours of sleep.
- If you have an individual who is having difficulty getting eight hours of sleep, one technique is to restrict their sleep. Keep them up past when they are tired but continue to wake them at the same time. Gradually move the sleep time earlier and earlier.
- Things to avoid: alcohol -- likely leads to fragmentation of sleep and inhibits deep sleep. Daytime napping is a bit of a controversial issue with regard to post-polio. It is not uncommon to learn that those patients are encouraged to take daytime naps. If they are getting a good night's sleep, that is not bad. If they nap in the day, it may keep them from getting a good night's sleep.
- It is important for people with fatigue to rest in the day, take a break. Dr. DeMayo discourages falling asleep unless the patient is getting a good night's sleep as well.
- Poor sleep environment/issue of positioning. For anyone with pain issues, positioning can be a key issue to improving sleep. Dr. DeMayo recommends body pillows to keep the knees apart or a semi-prone position to bear weight on the upper chest and thighs.
- The issue of TV is a huge one. It is certainly not uncommon for individuals who are not sleeping during the night to watch TV. Unfortunately that is giving positive reinforcement to negative behavior. Also, what they are watching before going to bed may cause significantly more problems getting quality sleep.
- Stress and frustration from a person's job can cause significant sleep problems. Frustration and stress can be caused by not meeting a person's own expectations. A person will either need to change his/her expectations or change jobs.
- Spiritual issues for those who believe in God but may not go to church could consist of spending 15-20 minutes before going to bed just talking to God about their problems.
- Regarding medicines for insomnia, Dr. DeMayo does not use any of the classic sleep medications. They are not made for long-term use.
- It is not uncommon to have someone with significant sleep problems. If Dr. DeMayo sees they have problems with sleep hygiene, he sees it as a first line issue to address and works on that. If there is significant improvement but not completely improved, he will send them for a sleep study.
- Dr. DeMayo has been working with an apnea link screening device which is about the size of a cell phone with a nasal cannula attached to it. It tracks pressure fluctuations such as snoring and air flow. When you combine it with overnight O2

saturation, it is a good screen.

- Anything talked about with regard to sleep hygiene is meant to address the individual who is having a poor night's sleep.