

Persistent Pain Education Program:

Improving Quality of Life Through Education

Mid-Columbia Medical Center

A car with four flat tires...



- A person with persistent pain is like a car with four flat tires.
- The right medication might fill one tire.
- Exercise, pain education, healthy eating, restorative sleep, counseling and mindfulness are a few ways to fill up the other three tires.

Four Flat Tires Video

- <https://www.youtube.com/watch?v=5RIii6OUK2A>

Important Pain Facts

- Pain is a complex process that does not require an actual physical injury as a cause.
- Thoughts, feelings, emotions and beliefs all play a part of the pain experience.
- Persistent pain is often no longer reflective of actual or ongoing injury or damage.
- A “sensitized nervous system” contributes to persistent pain.
- Our nervous systems are highly changeable. If they can be changed from “normal” towards a persistent pain state, then they should be able to change back towards “normal.”

A sensitized nervous system can be perpetuated by...

- STRESS
- POOR OR INADEQUATE SLEEP
- UNHEALTHY DIET
- NEGATIVE THOUGHTS AND BELIEFS

Ways to Re-train the Brain

- Movement
- Touch/massage
- Relaxation/stress reduction/mindfulness
- Restorative sleep
- Changing our thoughts and beliefs
- Healthy Diet (boosts the immune system and aids in healing)
- Engaging in pleasurable activities such as socialization, reading, family meals, hobbies, outdoor activity, etc...

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Where does medication come in?

- Medications have positive effects and negative effects. It is important to incorporate ALL aspects of the pain care model (physical, mental, emotional). Medications alone are rarely adequate to manage chronic pain and in some cases, may worsen quality of life.
- Opioid medications are an important tool for managing acute and chronic pain. In some cases opioids may worsen the pain experience through a process known as “opioid-induced hyperalgesia.”. It is important to know and understand the risks and benefits of these medications.

The Wheel of Pain Rehabilitation



Sleep and Pain

Paul Cardosi, MD

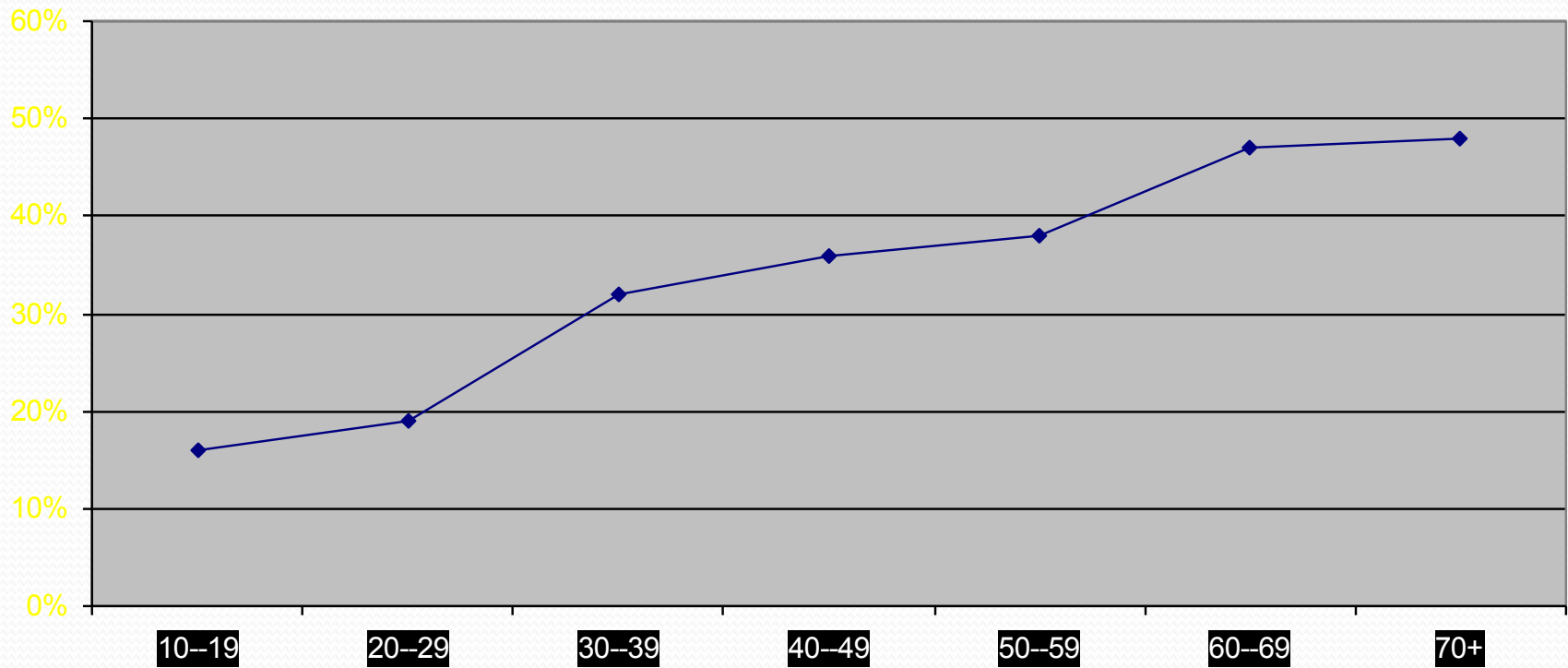
Outline

- Sleep Facts
- Insomnia
- Sleep and Pain
- Improving Sleep Quality
- Sleeping Pills
- Summary

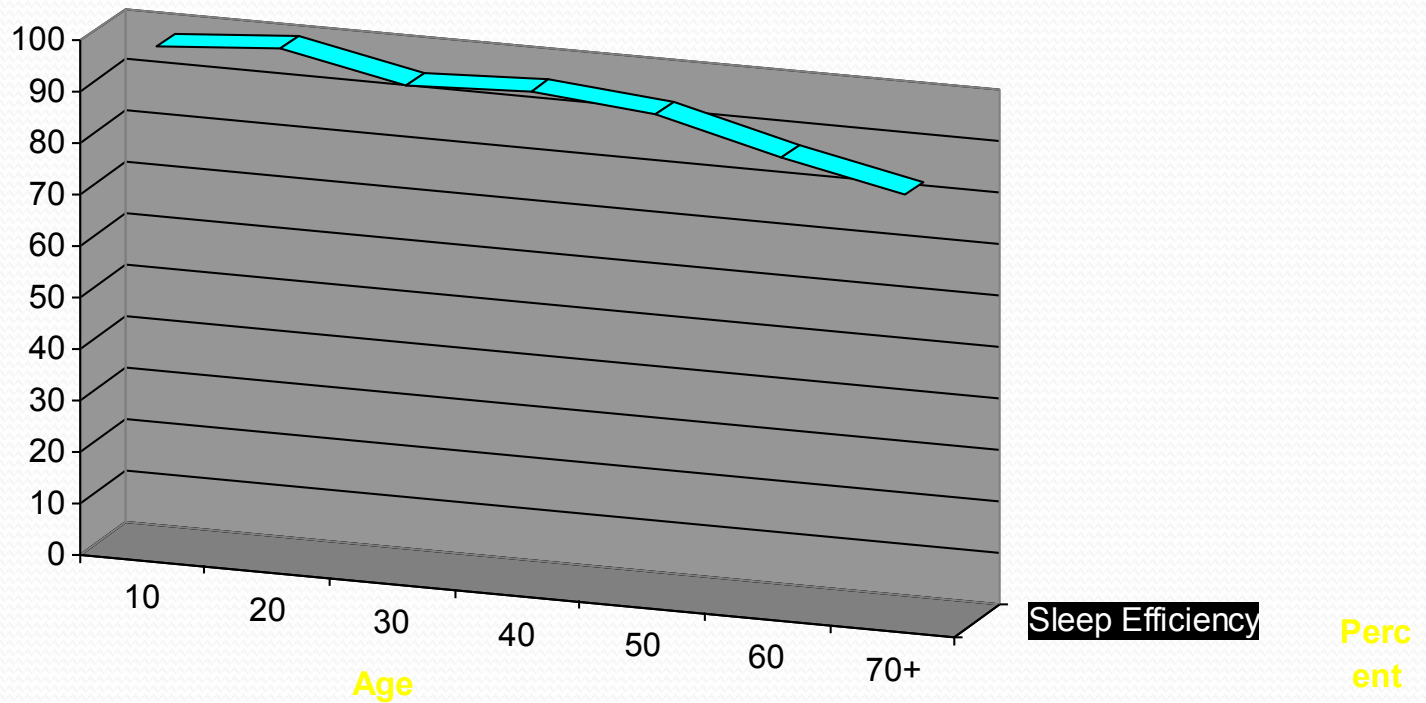
Normal Sleep

- Nobody knows why we sleep
- What tells our body to sleep?
 - circadian rhythms “body clock”
 - homeostatic mechanisms (your body wants a certain amount of sleep--the less you get, the more sleepy you are)

Changes in Sleep with Age

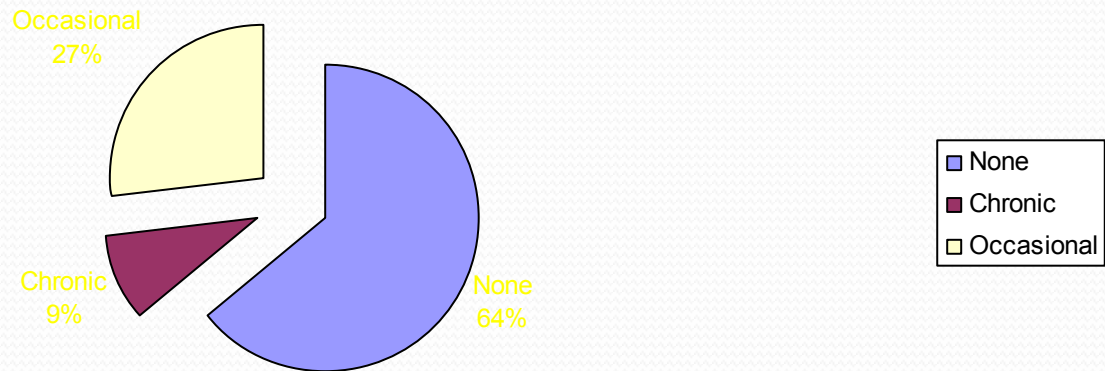


Changes in Sleep Efficiency with Age



Insomnia Prevalence

One third of Americans are Affected by Insomnia



What is Insomnia?

- Insomnia is a symptom:

“A report of insufficient amount of sleep or not feeling rested after the habitual sleep episode”

Insomnia Severity

- Mild, Moderate, and Severe
 - Frequency of Symptoms
 - degree of impairment of social or occupational function
 - Severity of associated restlessness, irritability, anxiety, daytime fatigue, and sleepiness

Sleepiness Severity

- Mild Sleepiness
 - unintentional sleep episodes occurring only during times of rest or when little attention is required (television, reading quietly passenger in car)
 - produces mild impairment in social or occupational functioning
 - MSLT score of 10-15 minutes

Sleepiness Severity

- Moderate Sleepiness
 - Unintentional sleep episodes occurring almost daily during activities which require a moderate degree of attention (concerts, movies, group meetings, and DRIVING)
 - Produce a moderate impairment in social or occupational functioning
 - MSLT score of 5-10 minutes

Sleepiness Severity

- Severe Sleepiness
 - Unintentional sleep episodes occurring daily during activities requiring a moderate to high degree of attention (eating, direct conversation, driving, walking, and operating airplanes)
 - severe impairment of social and occupational function
 - MSLT <5 minutes

Transient Insomnia

- Emotional or physical discomfort
- Illness
- Jet-lag
- Environmental disturbances

Sleep and Pain

- 53% of people report nighttime pain
- 56 million report nighttime pain and sleepiness

Gallup Poll 1996

Sleep and Pain

- 19% have insomnia but no pain
- 44% of people with chronic pain have sleep difficulties
- Higher prevalence in the elderly

Arthritis Patients

- More “light” stage I sleep
- More “alpha” brainwave disturbances during flares
- More restlessness and movement, including “periodic limb movements of sleep”

Pain Syndromes

- Arthritis/musculoskeletal conditions
- Cardiovascular conditions
- Kidney disease
- Metabolic problems
- Fibromyalgia
- Headache
- Pregnancy

Nighttime Pain sufferers

- Lower
 - Overall mood
 - Perception of health
 - Stress handling
 - Ability to “get up and go”
 - Lost about 20 hrs of sleep per month

Pain and Sleep

- Severity of pre-sleep pain did not predict sleep quality, but cognitive arousal (and depression) did
- *Subjective* Sleep quality predict next day pain level

Sleep and Pain

- In experimental conditions sleep restriction decreased pain threshold.
- Increased inflammation

Multiple Factors Bear on Sleep Quality



Positioning and Sleep Comfort



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Positioning and Sleep Comfort



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Positioning and Sleep Comfort



Differential Diagnosis of Insomnia

- **Primary Sleep Disorders**

- Sleep Apnea
- Restless Legs/PLMS
- Idiopathic Insomnia
- Sleep State Misperception

- **Behavioral Disorders**

- Psychophysiologic insomnia
- Inadequate Sleep Hygiene
- Adjustment Sleep Disorder

Differential Diagnosis of Insomnia

• Psychiatric Disorders

- Mood Disorder
- Anxiety Disorder
- Psychosis
- Substance Dependence

• Medical Disorders

- Respiratory Disorders
- Rheumatologic Disorders
- Cardiovascular Disease
- Neurodegenerative disorders

Chronic Insomnia

causes

- Poor sleep hygiene is endemic !!
 - TV primetime 8-11pm
 - Rigid work schedules
 - New distractions all the time (the internet)

Sleep Hygiene

- Avoid a bedroom clock or other time cues
 - set an alarm, if you must, and hide it
 - The more we are aware of time ticking by, the more difficult it is to fall asleep

Sleep Hygiene

- Exercise (20+ minutes) about 6 hours prior to going to bed (late afternoon or early evening)
- OR take a hot bath 2 hours before bedtime

Sleep Hygiene

- Avoid sleep inhibiting substances
 - coffee
 - long half life; after 8 hours, half of dose still active
 - alcohol
 - does induce sleep, but is very light and prone to awakenings
 - nicotine
 - direct central nervous system stimulant

Sleep Hygiene

- Eat a light snack (avoid large meals)
 - hunger directly interferes with sleep
 - snacks of milk, cheese, malted drinks recommended

Sleep Hygiene

- Try to deal with worries and anxiety before bedtime.
 - Some people benefit from setting aside 30 minutes of ‘worry time”

Sleep Restriction

- Consider cutting down your “time in bed”
 - Staying in bed longer than your body needs can cause insomnia
 - Insomniacs who cut time in bed experience more deep sleep and fewer awakenings

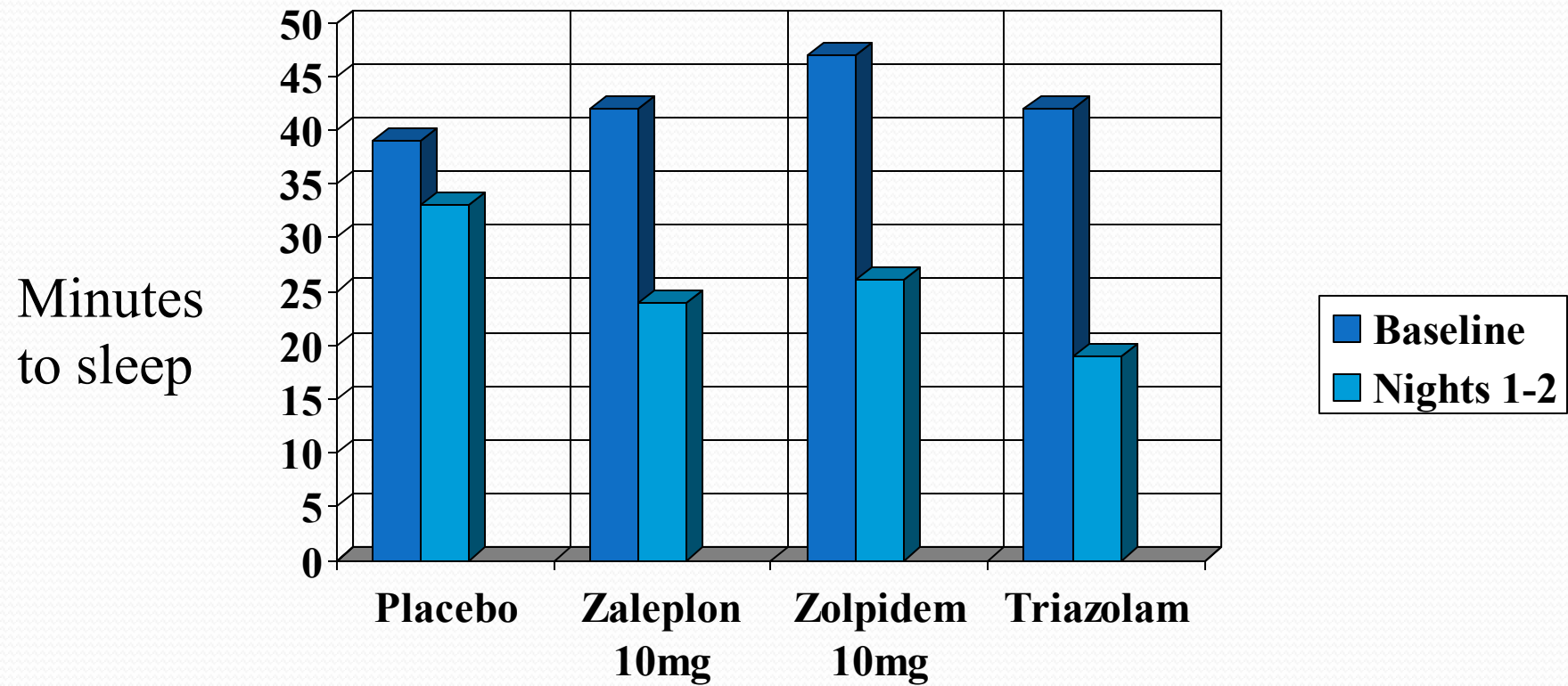
Stimulus Control Techniques

- Use bed for sleeping only
- If you cannot fall asleep within 30 minutes then you can get up, and read quietly, and return to bed when you feel sleepy
- Do not sleep in late, even after a poor night of sleep.

Cognitive Behavioral Therapy

- Cognitive Restructuring
 - Sleep Education
 - Correcting false beliefs
 - De-catastrophizing
- Behavioral Techniques
 - Sleep Restriction
 - Stimulus Control
 - Relaxation Training

Changes in Latency to Persistent Sleep with Benzodiazepines



Benzodiazepine Receptor Agonists: Actions and Side Effects

- Actions
 - Hypnotic
 - Anxiolytic
 - Myorelaxant
 - Anticonvulsant
- Non-BZ more selective for 'hypnotic' effect
- Potential Side Effects
 - Sedation
 - Anterograde amnesia
 - Falls
 - Respiratory Depression
 - Rebound insomnia
 - Dependence

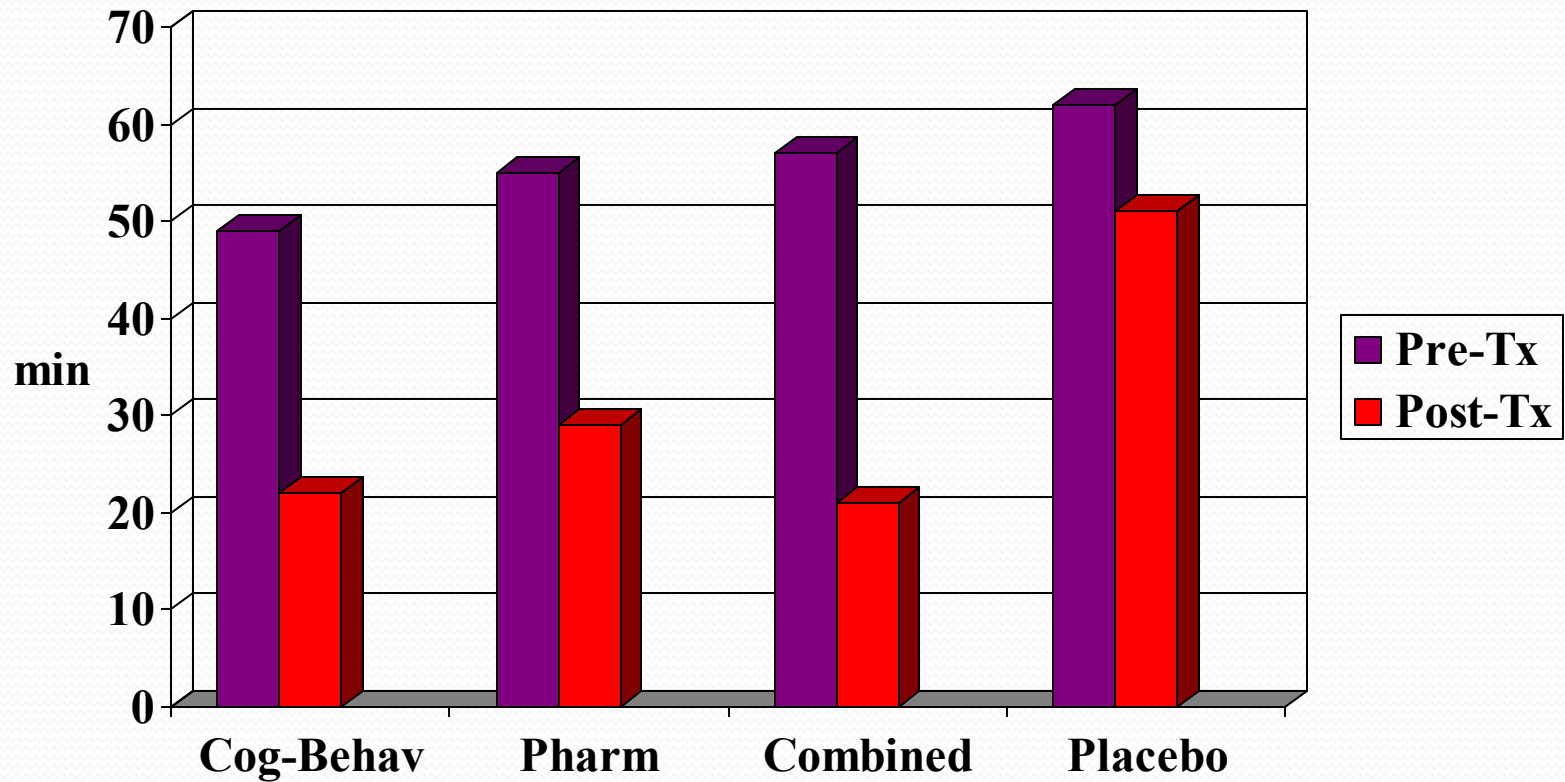
Pharmacological Treatment of Insomnia

Treatment Guidelines

- All medications except zaleplon must be taken before bedtime to avoid residual daytime effects
- Use lowest effective dose
- No dose escalation by patient
- Dosing schedule may be “at HS” or scheduled intermittent

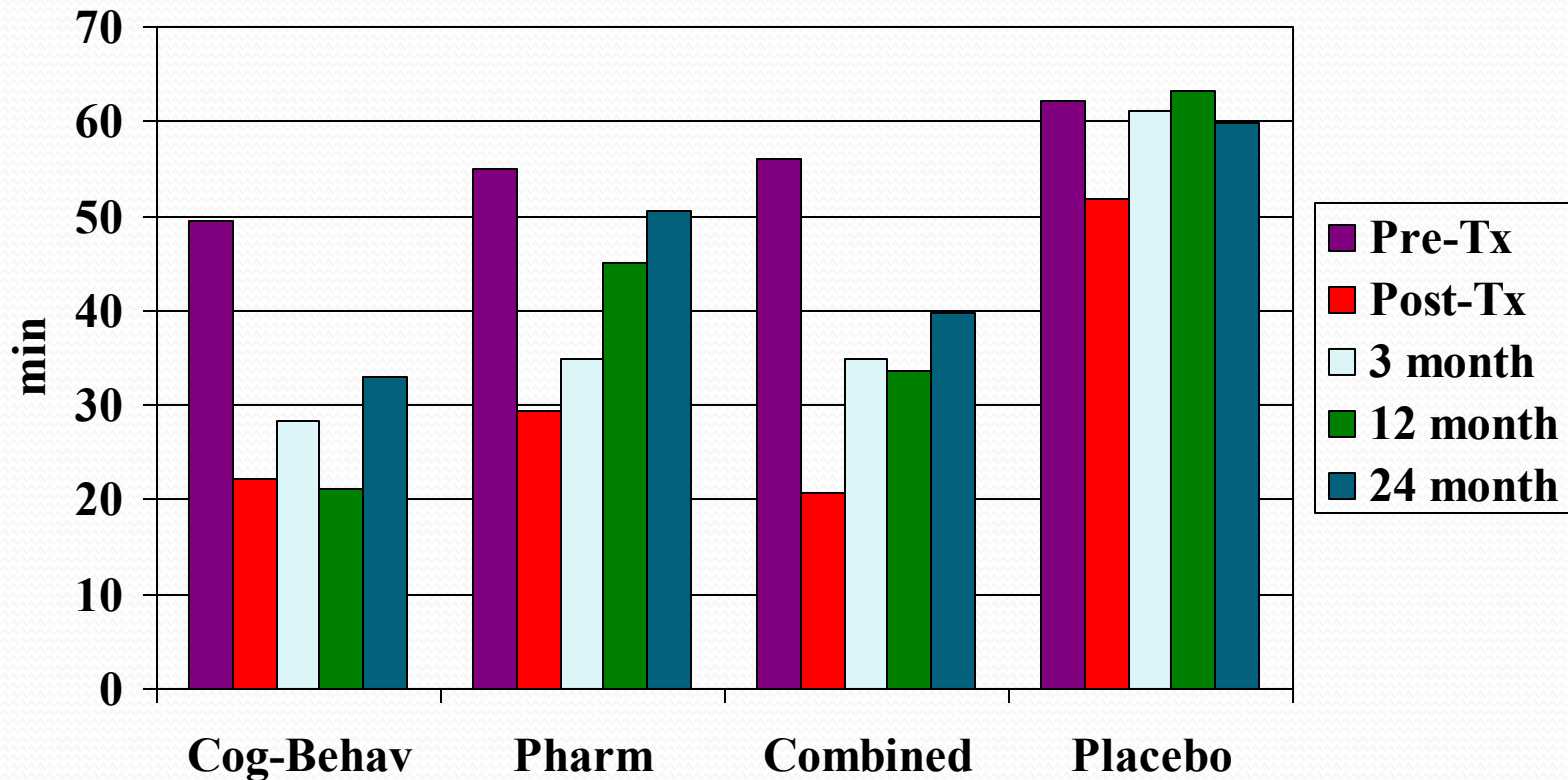
Insomnia

Comparison of Treatment Regimens



Insomnia

Long Term Gains by treatment regimen



Summary

- Zolpidem, zopiclone did not improve sleep quality in patients with pain.
- CBT-I improves insomnia in patients with osteoarthritis.
- Pain improves somewhat but the effect is small
- Therapies that can reduce cognitive arousal may help sleep (yoga, tai chi, meditation)

Summary

- Treat the pain
- Improve mood, stress, and cognitive arousal
- Assess for OTHER causes of insomnia
- Evaluate and employ the concepts of sleep hygiene, stimulus control, and in some cases, medication.