



Sleep Disorders

Sleep.

- **Definition.**
- Sleep is a state of unconsciousness in which the brain is relatively more responsive to internal than external stimuli.

- **Functions**
- Restorative
- Homeostatic function



Sleep disorders

- **Definition**

- **Epidemiology**

10.2% insomnia

3.2% hypersomnia

- **Causes**

- ❖ Aging
- ❖ Mental / Physical illness
- ❖ Night Shift work
- ❖ Blindness
- ❖ Genetics
- ❖ Stress
- ❖ Diet (caffeine, Alcohol, excessive smoking)
- ❖ Medications (e.g., anti-depressants)



Sleep disorders

- Classification

- 1) Dyssomnia:

disorders of Quantity and timing of sleep

- 2) Parasomnias:

abnormal behaviors during sleep or the transition between sleep and wakefulness.



Dyssomnia

- Disorders of quantity and timing of sleep

- Insomnia
- Hypersomnia
- Narcolepsy
- Breathing Related Sleep Disorders
- Circadian Rhythm Sleep Disorder
- Dyssomnia NOS
 - Periodic limb movement syndrome
 - Restless Leg Syndrome
 - Kleine-Levin Syndrome



Insomnia

Difficulty in initiating or maintaining sleep.

Persistent problems (at least 3days/week or 1 month)

F>M

Transient insomnia: occurs at time of stress or jet lag

Short term insomnia: with personal problems as illness, bereavement, relationship difficulties

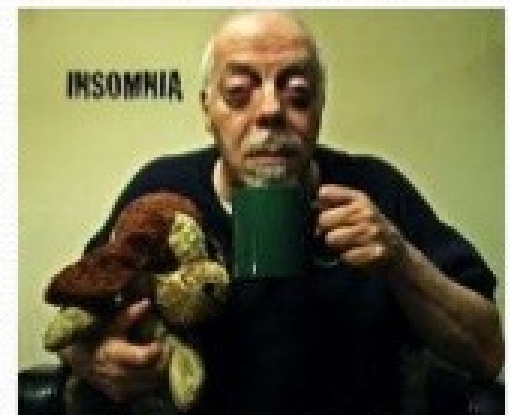
Secondary to : excessive use of caffeine or alcohol or stimulants.

Only 15% -----→ primary insomnia.

- **Primary insomnia:**

- when chief complain of non-restorable sleep or difficulties in initiating or maintaining sleep for at least 1 month.

- Independent of physical and mental disorder



Treatment

Non-pharmacological

- 1) sleep hygiene
- 2) cognitive therapy
- 3) stimulus control therapy
- 4) sleep restriction
- 5) progressive muscle relaxation.

Pharmacological.

- ❖ Dietary supplements
 - melatonin
 - L-tryptophan
- ❖ Short acting benzodiazepines
- ❖ Z- drugs
 - zolpedium
 -
- ❖ Low dose sedative antidepressants
 - mirtazepine
- ❖ Long acting medicines
 - flurazepam
 - quazepam
- ❖ Other medicines
 - nefazadone
 - quetiapine.

hypersomnia

- Excessive amounts of sleep, excessive day time sleepiness, or sometimes both.
- 3-5%
- Mostly secondary to loss of night time sleep

causes

- Insufficient night sleep



Unsatisfactory sleep routine
Circadian Rhythm sleep disorder
Frequent parasomnias
Chronic physical illness
Psychiatric disorders

- Pathological sleep



Narcolepsy
Obstructive sleep apnea
CNS diseases
Drug effects
Kleine-Levin Syndrome.

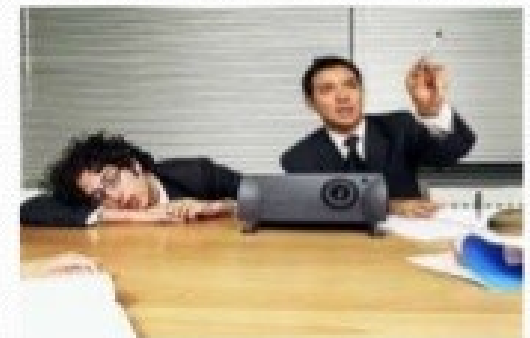


- **Primary hypersomnia:**

- when no other cause can be found for excessive somnolence occurring for at least 1 month

- **Treatment.**

- Stimulant drugs
- Non sedating SSRIs.



Narcolepsy

- Epidemiology
 - age of onset: 10-20years
 - prevalence : 0.02-0.16%
- Sleep attack of narcolepsy represents episodes of irresistible sleepiness leading to 10-20 minutes of sleep after which person is fresh
- Occurs in inappropriate times (talking, eating or during sex)
- Characteristic features



Treatment

- Follow regular routine
- Planned naps
- Avoid fatigue as it provokes cataplexy
- Medicines
 - Dexamphetamine
 - Modafinil
 - Methylphenidate (Ritalin)
- For Cataplexy—
 - TCAs or SSRIs.



Breathing related sleep disorders/ obstructive sleep apnea syndrome

- Characterized by sleep disruptions leading to excessive sleepiness or insomnia caused by sleep-related breathing disturbances such as apnea, hypopnea, and oxygen desaturation.

- Features

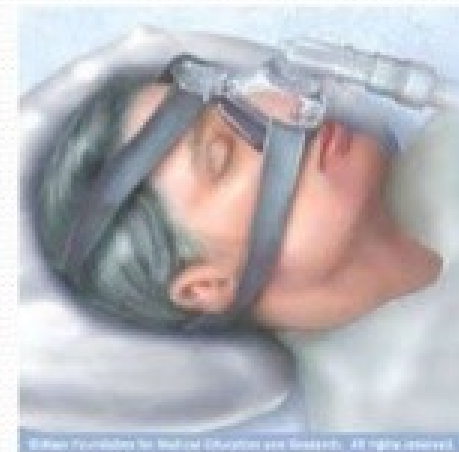


- **Epidemiology:**

- 4% in male
- middle age
- overweight

- **Treatment :**

- Relieving cause of respiratory obstruction
- Encouraging weight loss.
- Continuous positive airway pressure (CPAP)



Circadian Rhythm Sleep Disorder

Types

Jet lag type

- Symptoms include varying degrees of difficulty in initiating or maintain sleep, daytime fatigue, decrements in daytime alertness and performance.
- Resolves without treatment after 2-7 days.

Delayed sleep phase type

- Late appearance of sleep(around 2a.m) but normal total sleep time and architecture which lead to sleep-onset insomnia and difficulty awakening at desired time.

Shift work type

- Symptoms of insomnia or excessive sleepiness.
- Adaptation takes 1-2 weeks

Circadian Rhythm Sleep Disorder

- Management .

- 1) General measures.

 - education about sleep nature
 - establishing good sleep habits
 - regular sleep and meal times

- 2) Chronotherapy

 - establish regular waking time.

- 3) Medication.

 - short-acting BdZs(lormetazepam)
 - melatonin.



Dyssomnia NOS

Kleine-Levin Syndrome

- Characteristic features:



Megaphagia



Hyper
somnolence



Sexual
disinhibition



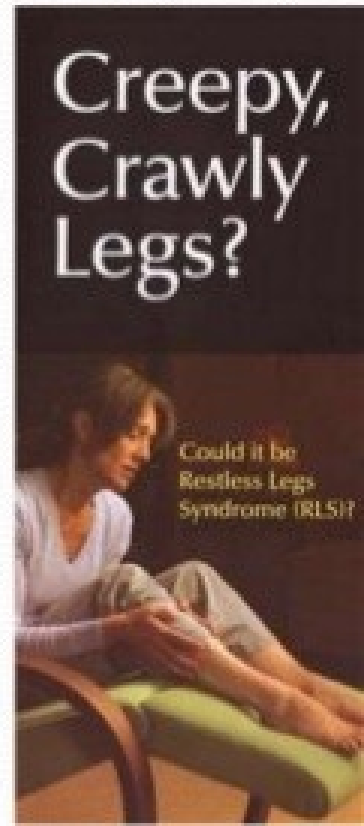
Periodic Limb Movement Syndrome (PLMS)

- PLMS also called Nocturnal Myoclonus
- Consist of highly stereotyped abrupt contractions of certain leg muscle during sleep.
- These include extension of toes, as well as flexion of ankle and knee.
- Patient unaware .
- Associated with renal disease, iron and Vit B₁₂ anemia, exacerbated by TCAs.
- Treatment :
 - Benzodiazepines
 - Levodopa
 - Quinine
 - rarely Opioids



Restless leg syndrome (RLS)

- Distressing & painful condition which can result in severe insomnia and periodic limb movement during sleep.
- More common
- Prevalence 10%
- M=F
- Exacerbated by caffeine, fatigue or stress
- Also called Ekbom's Syndrome (Creepy Crawling)
- Causes
 - Anemia
 - Vit B12 deficiency



- **Treatment.**

- Look for anemia & Vit B12 and treat if
- Clonazepam.
- L-Dopa
- Carbidopa
- Bromocriptine
- Pergolide
- Ropinirole



Parasomnias.

- Abnormal behavior or physiological events occurring in association with sleep, specific sleep stage or sleep wake transition.
- 1) Night mares
- 2) Night terror
- 3) Sleep walking
- 4) Parasomnias NOS
 - Sleep-related bruxism
 - REM sleep behavior disorder
 - Sleep talking
 - Sleep-related head banging

Night mares/ dream anxiety disorder

- Awakening from REM sleep to full consciousness with detailed dream recall.
- Age: children 5-6years
- Stimulated by frightening experience during day.
- Frequent night mare occur during period of anxiety .
- **Causes.**
 - PTSD
 - Fever
 - Psychotropic drugs
 - Alcohol detoxification.



Sleep-walking disorder/somnambulism



- Automatism that occurs during deep NREM sleep usually in early part of night.
- Age: 5-12 years.
- 17% in childhood
- 4-10% in adults.
- Familial
- Features
 - sits up & makes repetitive movements
or
 - walk with eyes open
 - do not responds to questions
 - very difficulty in walking
 - led back to bed.
- Lasts for few seconds to minutes.

Sleep-walking disorder/somnambulism

- Polysomnography.
non epileptic high-voltage delta waves.

- **Management**.

Reassurance

Protect patient from coming harm

Relaxation techniques and minimization of stressors

Sleep hygiene measures

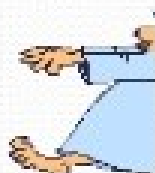
Medications

small night dose of BDZ

Diazepam 2-10mg

Clonazepam 1-4mg

or Anti-depressants



Parasomnias not otherwise specific

1) Sleep-related BRUXISM (tooth grinding):

- Grinding occurs throughout night
- Treatment: Dental bite plate and corrective orthodontic procedure.

2) REM SLEEP BEHAVIOR DISORDER:

- Characterized by episodes of complex often violent behavior and thought to represent a patient acting out his/her dream.

3) SLEEP TALKING:

- Talking involves few words that are difficult to distinguish

4) SLEEP RELATED HEAD BANGING.



- Thank you for not sleeping