

3. Sleep-wake transition disorders

These behaviors occur during the process of falling asleep or in transitions from sleep to wake. They can occur in otherwise healthy individuals, but when present with a high frequency or severity, problems such as anxiety, discomfort, pain, embarrassment may arise.

Sleep starts - are brief body jerks, usually in isolation, but sometimes several in succession that principally involve the legs but may also affect the arms and head and at times may be accompanied by sensory symptoms e.g. flash of light, feeling of falling. The intensity of sleep starts varies and may even cause an abrupt cry. Treatment includes avoiding precipitating factors such as stimulants and irregular sleep-wake schedules.

Rhythmic movement disorders e.g. headbanging - may involve the entire body (body rocking). This typically occurs just before sleep onset and persists into light sleep. Rhythmic movements are repeated about every 2 seconds in long clusters and may be associated with chanting or other vocalizations. This is more common in children, especially infants, but may persist into adulthood. Treatment is not required in the majority of infants and children although the parents should be reassured. Padding the bed area or wearing a protective helmet may be indicated.

Sleep talking - occurs without the sleeper having any detailed awareness of what they say, or that they were talking. Episodes are usually brief, infrequent, and without signs of emotional stress, they may be spontaneous or induced by conversation.

Nocturnal leg cramps "charley horse" - painful sensations of muscle tightness, usually in the calf but occasionally the foot. Cramps may last for a few seconds and spontaneously disappear, but may remain for up to 30 minutes. These sensations have been identified in up to 16% of healthy individuals, particularly following vigorous exercise, in the elderly and in women during pregnancy. Cramps are usually relieved by local massage, application of heat or cold, or by movement.

4. Other parasomnias

Other parasomnias usually occur during light sleep and the transition from wake into sleep.

Enuresis (or bed wetting) - is common in school-age children with a prevalence rate of 8-10% at age 6 years and 4-5% at 10 years, 3% of 12 year olds. Primary enuresis is when full urinary continence, which should occur by 5 years, has never been achieved. Secondary enuresis is when, after learning bladder control for at least 6 months, children lose control and start bed wetting at night. Causes may include small bladder size, increased urine output, other medical conditions such as obstructive sleep apnea (OSA), or stress. Bedwetting tends to occur in the first third of the night. Treatment options should consider the child's age. Preventing irregular schedules and sleep deprivation may control bedwetting in younger children. Avoid fluids in the evening, use bladder training exercises, reassurance, incentive measures e.g. dry-nights star chart, use of an alarm system that is triggered by the release of urine as well as family support and avoid teasing. Medication may be necessary, particularly for children under social stress and for adults and includes desmopressin (intra-nasal or oral administration).

Bruxism (or teeth grinding) - is repeated grinding or crunching of the teeth that often disturbs the bedpartner; it may lead to tooth wear, and is often associated with jaw pain. Stress reduction and wearing a rubber mouth guard over the teeth to prevent dental damage.

Sudden Infant Death Syndrome (SIDS) - Unexpected sudden death of an infant where a postmortem investigation fails to demonstrate an adequate cause for death. Rarely seen during the first week of life, the rate peaks between 10-12 weeks of age; 90% of SIDS deaths occur before six months of age. Sleeping position is important - most of the decline in the SIDS rate has occurred since 1992, and has been attributed to advice that healthy infants are placed on their sides or backs for sleep. Putting infants to sleep on their backs is associated with the lowest risk.

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UNUSUAL BEHAVIORS DURING SLEEP: THE PARASOMNIAS



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What constitutes “unusual behaviors” during sleep?

Normal behavior during sleep should be quiet restfulness with a few changes in body position. Some people may talk, walk or eat in their sleep or perform complex behaviors when they enact their dreams. In general, these unusual sleep-behaviors often occur in childhood and are transient. Most parasomnias are precipitated or perpetuated by stress (both biological and psychological) and poor sleep. Many simple parasomnias improve with good sleep hygiene, stress reduction, decreased alcohol and caffeine consumption.

To date, more than 20 parasomnias have been described. They are grouped into four different categories according to the sleep-state during which they usually occur:

- 1) Arising from deep sleep or slow wave sleep (SWS)
- 2) Associated with rapid eye movement (REM) sleep
- 3) Sleep-wake transition disorders
- 4) Other parasomnias

1. “Deep sleep parasomnias” e.g. sleep walking and night terrors

Most of our deep - slow wave sleep, occurs within the first three hours of the night. When woken from deep sleep people or disturbed from this type of parasomnia, people are confused and disorientated, their heart rate and breathing also increase. Memory of these events is usually poor. A typical episode lasts about 6 minutes but may range from a few seconds to 30 minutes. Young children have a lot of SWS - both sleep walking and night terrors typically occur between 4-12 years of age, and are usually out-grown. Since SWS decreases with age, these behaviors are more common in children and unlikely in the elderly.

There is often a family history, and this sleep behavior may also be associated with sleep deprivation, irregular sleep-wake schedules, fever, and certain medications including cardiac drugs and sedatives.

Sleep walking (somnambulism) - seems to occur with vision and coordination maintained although accidental injuries have been reported. More than one episode a night is rare, as is the likelihood of complex maneuvers. It is particularly important that sleepwalkers are instructed to sleep in a safe environment.

Night terrors - usually start with a terrifying scream, increased heart and breathing rates, sweating and a frightened expression. They last from one to several minutes. Specific details of a night terror are rarely remembered. Particularly for children experiencing night terrors, reassuring the parents and the child is important. A regular bedtime routine that permits sufficient sleep often leads to improvement.

Confusional arousals “Sleep drunkenness” - occur during and after brief awakenings without sleep walking or sleep terrors. Behavior is often inappropriate, with confused thinking, misunderstandings and errors of logic. They are more common in children under 5years of age. Although they may last several minutes, memory of the associated event is typically absent. Treatment is rarely necessary.

Features of sleep walking and night terrors

- Occur in the first third of the night - from deep sleep.
- It is difficult to wake the person.
- The “sleeper” rarely remembers specific details of the event.
- More common in children (onset usually before 10 years of age).
- Situations such as sleep deprivation, which lead to higher levels of SWS tend to increase the frequency of events.
- Medical disorders associated with these parasomnias include obstructive sleep apnoea syndrome, migraine and epileptic seizures.
- A person may have more than one form of parasomnia.
- May occur in response to stress or anxiety and with irregular sleep schedules.

2. Parasomnias during rapid eye movement (REM) sleep e.g. nightmares

Adults spend about 20-25% of the total sleep time in REM sleep. The first episode of REM sleep occurs about 70-110minutes after falling asleep. The REM sleep parasomnias occur during the middle and last third of sleep and patients arouse easily and quickly.

Dream anxiety attacks, nightmares - are frightening dreams with vivid recall (thus different to night terrors). Often a quick reactive movement in the nightmare is played out which wakes the sleeper with a feeling of fear or anxiety. Children who experience nightmares need support and comfort. Environmental factors such as horror films may be important triggers. Nightmares typically start during the late teens and correlate with increases in stress, depression, painful life events, insecurity, anxiety and guilt; and are common among patients with post traumatic stress disorder. Other causes include fever, abrupt discontinuation of drugs that suppress REM sleep such as amphetamines, many antidepressants and benzodiazepines (sleeping-tablets), and alcohol withdrawal. These situations can lead to a rebound in REM sleep, which promotes nightmares.

Sleep paralysis - is a brief period of awakening from sleep being unable to move or speak and may be accompanied by auditory or visual hallucinations.

REM sleep behavior disorder (RBD) - is a relatively recently described disorder (ca 1981) where people seem to be trying to enact dreams. Movements are explosive, including punching, kicking, leaping, and running from the bed. Medical attention is often sought after self-injury or injury to a bedpartner. Violent episodes, usually lasting 2-10minutes, typically occur about once/week but may be as frequent as four times per night over several consecutive nights. Reported cases are more common in older men (60-70 years). Treatment is usually with clonazepam (at bedtime). Ensure that the environment is safe to prevent injury.