Non-REM Parasomnias

This information should only be used for educational purposes in consultation with your physician. Good Sleep Health Inc assumes that you have read and understood the Terms of Use Agreement.

Author: Ron Cridland, MD

A *parasomnia* is essentially a behavior associated with sleep. Some parasomnias are more associated with *REM* sleep (REM Sleep Behaviour Disorder), and others more with non-REM sleep. Most non-REM parasomnias are "arousal disorders" where you have difficulty fully waking up or "breaking the surface-tension of sleep" so to speak. When something starts to wake you up, you can wake up enough to talk, walk, scream, eat, etc. but not enough to know what you are doing. This is the way you are neurologically "hard-wired", and the symptoms often begin in childhood. You are usually unaware that these behaviors are going on at the time, but they will often disturb the bed partner or other members of the household. Most of the time you do not remember these behaviors. Sometimes you may recall them as a dream and sometimes you may wake up in the middle of the behavior. If these arousals happen frequently enough you may awaken unrested the next day. In this way this condition is similar to insomnia with the difference being that you were not awake enough during the night to remember that you were "awake" or up and about.

These arousals usually occur in the first part of the night when the sleep "power" pulling you into sleep is the strongest. When reviewing the *nocturnal polysomnogram*, most often the arousals occur suddenly out of deep, stage III sleep as opposed to the gradual arousal into stage II, stage I and then wake like a normal sleeper might do. We typically see the eyes suddenly open and the person starts to look around, sit up or try and get out of bed. They may look strangely at their hands or at something in space that no one else can see. If you try to talk to them, they seem not to hear you or their response does not make sense. The person is usually hard to wake up and may be confused or disoriented for several minutes afterward.

There is often a family history of sleep walking or night terrors in one or both parents. Most children seem to gradually grow out of it. However, symptoms can reoccur in adulthood when sleep becomes disturbed by stress or even just by sleeping with a bed partner.

Confusional Arousals are episodes of mental confusion or confused behavior while remaining in bed. Although *sleep talking* or "somniloquy" may occur in any stage of sleep, it often occurs in non-REM sleep associated with confusional arousals. Confusional arousals are sometimes associated with ***sleep related abnormal sexual behaviors*** also called

sexsomnia or *sleep sex*. These behaviors may include masturbation or sexual intercourse with the bed partner. Often this is unwanted by the bed partner and has sometimes led to charges of sexual assault or molestation if it occurs with a minor. The person usually has no recollection of the behavior in the morning.

Sleep Walking or "somnambulism" is a confusional or partial arousal associated with getting out of bed. The EEG in children may show that they are still completely asleep. The person may, for example, walk around, move furniture, take pictures off the wall, urinate in a closet or act like they are trying to protect the bed partner from a perceived threat. They often return to bed without reaching conscious awareness but wake up in the morning to find things out of place or stories of their escapades from their bed partner. Occasionally they might go outside. There are rare reports of doing more complicated behaviors like driving a car without being aware that they are doing so.

Sleep Related Eating Disorder is a confusional or partial arousal associated with eating something. The person often eats things that they would not normally eat when awake such as frozen foods, junk foods and sometimes toxic or inedible substances. The person may cook food with the danger of burning something or leaving the stove on creating a fire hazard. They may eat multiple times per night. This sometimes results in the consumption of a large percentage of their daily caloric intake and can lead to weight problems.

Often the sleep eater is unaware of the behavior until they find evidence the next day of crumbs in their bed or dirty dishes and food left out in the kitchen. Some people even bring food with them to bed at bedtime knowing they will want to eat during the night. Some people are aware that they are eating but seem unable to control themselves. This condition should be differentiated from ***Night Eating Syndrome*** where people are awake and purposefully eating during the night. Night eating syndrome is probably more of a symptom of "insomnia" and the person seems to be eating because they feel it will help them get back to sleep. However, the two conditions sometimes co-exist in the same person and may be related. These conditions are not associated with purging such as found in bulimia.

Sleep Terrors also called *night terrors* or *pavor nocturnus* are different from other disorders of arousal because they often begin with a cry or piercing scream accompanied by physiological changes consistent with intense fear. These changes often include fast heart rate, sweating, rapid breathing, flushing and enlarged pupils. The may bolt up in bed. The common characteristic is being difficult to awaken and inconsolability which can last up to 40 minutes in some children. Most children grow out of it by the age of 12. It can occur in adults, most often in those who experienced it as a child, in response to stress and disturbed

sleep. Adults may bolt out of bed and can become defensive and violent particularly if you try to block or restrain them.

Diagnosis

The diagnosis of *Non-REM Parasomnia* is usually made by history. A *nocturnal polysomnogram* will help to rule out other conditions such as an underlying seizure disorder. The polysomnogram may also identify other sleep disorders causing arousals that are triggering the parasomnia behavior. People are more self conscious during a sleep study and tend not to manifest much in the way of parasomnia behavior in the lab. However, we will often notice sudden confusional arousals occurring out of deep, slow wave sleep associated with staring, mumbling, talking or confused behavior for a few moments. It is important to rule out alcohol, sleeping pills or other sedating medications that may be preventing the person from fully awakening from arousals and resulting in parasomnia behavior. Although sedating medication can be used to deepen sleep and reduce parasomnia activity, sometimes sleeping pills like Zopiclone lead to parasomnia activity especially when taken in higher than recommended dosages or combined with alcohol.

Management

As mentioned above, the non-REM parasomnias are essentially “arousal disorders” where the individual has difficulty fully waking up when something disturbs their sleep. They can wake up enough to talk or walk, but not enough to know what they are doing. This difficulty in arousing is usually neurologically “hardwired” so there is nothing we can do about that. What we can do is try to is deepen sleep either pharmacologically or non-pharmacologically. We can also reduce the arousals caused by other sleep disorders that are triggering the parasomnia behavior.

Arousals can be caused by underlying sleep disorders such as *obstructive sleep apnea* or *periodic limb movement disorder*. A *nocturnal polysomnogram* can be useful in identifying other significant sleep disorders contributing to the parasomnia behavior.
Arousals can also be caused by such things as environmental noise, bed partner movement, a full bladder or dream content. As mentioned earlier, non-REM parasomnias are a lot like insomnia in that they are associated with arousals that disturb sleep quality leaving you feeling tired the next day. The difference is that when you have a parasomnia you are not usually awake enough during the night to remember you were “awake” (or partially awake). The same *sleep hygiene* measures that we use to manage insomnia will also deepen sleep and reduce parasomnias.

The most important sleep hygiene measures include taking at least an hour to wind down before bed doing things you find relaxing and enjoyable such as reading, listening to pleasant music, or doing a craft or hobby. You should avoid TV, computers, tablets, video games and cell phones which are essentially bright, flashing lights which tend to stimulate the brain (even in those who fall asleep viewing them). The bedroom should be cool, dark, and quiet. You should do a *relaxation technique* as you are falling asleep so that you go to sleep with pleasant relaxing thoughts and are more likely to have pleasant, relaxing dreams that are less likely to trigger an arousal. Starting off by going to bed an hour later is one of the most powerful and natural ways of deepening sleep right away. After a week of sleeping deeper, you can gradually advance your bedtime routine 30 minutes every few nights until you are

getting enough sleep to feel rested.

If you have persisting parasomnia behaviors despite your best efforts at treating underlying sleep disorders and improving sleep hygiene, then there is a place for medication. Sometimes the parasomnia behavior is posing a risk of injury or embarrassment, or significantly disturbing the sleep of your bed partner. Sometimes the only thing you know is that you are still tired or sleepy during the day because of frequent arousals during the night that you or your bed partner may not be aware of. Clonazepam is a sedating medication that is very effective at relaxing the brain and reducing arousals that trigger parasomnia activity. The dosage is 0.5 mg starting with ½ pill an hour before bed and increasing by ½ pill per week to control parasomnia activity up, to a maximum of 2 mg per night. Keep in mind that if you have untreated sleep apnea, it could make that a little worse.