Carlos Schenck: Parasomnia involves sleepwalking or night terrors or eating during the night. Even sexsomnia now is a recognized sleep behavior disorder. Night terrors and sleepwalking are often genetic conditions and it emerges from the deepest stage of sleep called Delta Sleep. And on the one hand although stress is one of the triggers even if you’re genetically susceptible on a given night if you have physical or emotional stress or if you have irregular sleep hours or insufficient sleep, those are the precipitating factors for it. People engage in the most primitive behaviors as part of sleepwalking or other complex activity arising during sleep—Sexual activity, feeding behavior, aggression even violent behaviors. Any kind of behavior that people engage in while they’re awake they can engage in during sleep which is really counter intuitive. Sleep is not necessarily just a restful state where your body lies there while you dream or not dream. But basically we are capable of highly complex behaviors including sleep driving, sleep sex, getting on an airplane sometimes in a mixed state of sleep and wakefulness. We have to recognize that sleepwalking really is a mixed state, also called a dissociated state, where part of the brain is awake, part of the brain is asleep. What is suspended is your judgment. Your eyes are open. You can negotiate the environment, engage in complex behaviors but you don’t have any judgment. And that’s where you get into severe problems.

Page 2: Objectives

After going through this lesson, you will be able to identify characteristics of the four most common sleep disorders.

Page 3: Prevalence

There are more than 70 sleep disorders classified in the International Classification of Sleep Disorders. Such disorders affect at least 40 million Americans and account for an estimated $16 billion in medical costs each year. This doesn’t count additional costs due to lost work time and productivity or other factors.

The most common sleep disorders are:
Sleep, Eat & Exercise

- insomnia
- obstructive sleep apnea
- restless legs syndrome, and
- narcolepsy.

Page 4: Insomnia Revisited

Risk factors:
- Situational
- Physical
- Psychological

Insomnia is the most common sleep complaint. It affects about 58% of American adults at some point in their lives. Also recall that insomnia is characterized by difficulty falling or staying asleep, or by waking up unusually early in the morning and not being able to go back to sleep.

Insomnia is most often, but not always, secondary to some other underlying cause, which may be situational, physical, or psychological in nature.

Temporary insomnia is common and generally brought on by stressful situations such as work, family pressures or a traumatic event. Being in a new environment or otherwise experiencing a change in your normal routine are examples of situational risk factors for insomnia. Poor sleep conditions – bright lights or loud noises, for example – also represent situational risks. Sometimes your job or school might be risk factors.

Psychological risk factors for insomnia include stress, anxiety, depression and other psychiatric disorders.

Being sick or in pain and having medical conditions or physical disorders such as asthma or arthritis are physical risk factors for insomnia, as are the use of some medications, caffeine, alcohol, or other drugs. Age and gender also impact the risk of insomnia. Women are more likely to have trouble sleeping, as are older people. Hormone fluctuations, for example those experienced during menopause, are yet another physical risk factor for insomnia.

A relatively small percentage of people who suffer from insomnia don’t appear to have any associated situational, psychological, or physical risk factors. Rather, they experience a constant state of hyperarousal, which may be genetic.

OPTIONAL LESSON: Sleep Disorders
Sleep, Eat & Exercise

Regardless of the cause, insomnia is a real disorder that can seriously disrupt sleep quality and negatively impact one’s overall health and wellbeing.

Page 5: Insomnia: Student Story (video)

Elizabeth: Light coming under the door or from the fire alarm light that’s blinking all night long. Things like that will really keep me up. I have chronic insomnia. And I’ve had this since 9th grade so it’s been several years now. Temporary insomnia is usually related to something that’s happening in your life. That’d be, you know, maybe you have a big test coming up and you’re really anxious about it and chronic is when it keeps reoccurring. It has become a condition that is not brought on by any specific things that I do. This happens most nights of the week. I’ll wake up at least once during the night and generally I am so tired that I can’t even open my eyes. I can’t, you know, get up and make it useful that I’m actually awake during these hours. So it’s not like you can pull an all nighter or anything ‘cause you’re just so exhausted. I have to log probably eight to ten hours in bed to get maybe five hours of sleep. I’ve tried pretty much everything except for prescription medications to try to deal with the insomnia. You know, I’ve done over the counter meds which sometimes work but I don’t want to get hooked on them so I only do it like two nights in a row and then I have to be off it for a while. I’ve done hypnosis. I’ve seen a sleep doctor. Relaxation techniques, like taking a hot bath before bed. Also I find that exercise really helps me get tired enough that I can sleep more soundly when I do sleep. A big thing for coping for me is making sure that I can get enough hours actually just laying in bed whether or not I’m actually sleeping, ‘cause at least my body’s resting. Living in the dorms especially the first couple years when I had a roommate, very difficult. Any little thing will set me off. Noise, movement, light, I’ll wake up just like that. Now I have a single room and still I hear noise in the hallways from other people. I just find that I have to keep myself going just by pushing myself and trying to optimize all the other areas of my life. You know, getting exercise, eating right and just really trying to maintain a balance in everything else.

Page 6: Obstructive Sleep Apnea (OSA)

Another common sleep disorder is obstructive sleep apnea. It affects an estimated 12-18 million Americans, which means that it is just as common as asthma. It occurs more commonly in men than in women.

Sleep apnea is also referred to as sleep-disordered breathing. The term apnea means absence of breath. The diagnostic criteria for sleep apnea is that a person stops breathing for a period of at least 10 seconds at least five times per hour throughout the night. In severe cases, it can occur up to 100 times or more per hour.
Sleep, Eat & Exercise

It’s actually normal for the upper airway to narrow during sleep, and this isn’t a problem for most people. But in people with obstructive sleep apnea, the airway narrows too much and becomes constricted. Airflow stops at least partially, if not completely, which means that oxygen is not being taken into the blood. This decreases the oxygen saturation of the blood, and when the brain is deprived of oxygen, it alarms the body to wake up. Upon waking, the upper airway opens back up and proper airflow resumes. Unfortunately, this process is repeated frequently throughout the night. This means the person’s sleep is repeatedly disrupted, resulting in chronic sleep deprivation.

Page 7: Risk Factors for OSA

- DID YOU KNOW? It’s estimated that more than half of the people with sleep apnea are undiagnosed.

The obstruction can occur anywhere in the upper airway, but it’s typically in the back of the mouth or throat and is often caused by structural problems like enlarged tonsils, a receding jaw line, deviated septum, or large tongue. A common cause is excess fat around the airway, and people who are overweight or obese have a much higher risk of sleep apnea compared to individuals of normal weight. The more overweight one is, the greater the risk. In fact, the prevalence of sleep apnea is increasing with the increasing prevalence of overweight and obesity. More than half of the people who have sleep apnea are overweight. Other risk factors include smoking, asthma, epilepsy, endocrine disorders such as hypothyroidism, Down syndrome, menopause, and family history of sleep apnea.

Page 8: Symptoms of OSA

The lapse in breathing caused by obstruction in the airway often causes choking, gasping, or snorting sounds and usually loud snoring, although not everyone who snores has sleep apnea and not everyone with sleep apnea snores.

Additional symptoms include: needing to urinate frequently throughout the night, waking up with a dry mouth, feeling unrefreshed upon waking, and feeling sleepy during the daytime. People with sleep apnea generally suffer from decreased attention, concentration and memory, poor performance, and are at an increased risk for clinical depression, diabetes, hypertension, and long-term cardiovascular problems. Excess weight is a common factor in all of these things.

OPTIONAL LESSON: Sleep Disorders
Page 9: RLS (video)

Restless leg syndrome that’s a very common familial sleep disturbance where in the drowsy state your legs feel very unusual, they feel jumpy and the only way to relieve that distress is to walk around, but that’s incompatible with falling asleep.

Page 10: Restless Leg Syndrome

The third most commonly reported sleep disorder is restless legs syndrome, which affects 10-15% of the American population.

Symptoms vary, but a key characteristic of restless legs syndrome is an unpleasant sensation in the legs, such as a creepy crawly feeling, pulling, or deep itching. These abnormal sensations are called paresthesias. The severity of these sensations can range from an annoying discomfort to pain. One or both legs can be affected.

The other key aspect of restless legs syndrome is that the unpleasant sensation results in an insistent urge to move the legs. Moving or otherwise stimulating the legs – through massage or stretching, for example – is typically the only thing that relieves the sensation, and unfortunately such relief is only temporary.

The reason restless legs syndrome is considered a sleep disorder is because the sensations begin during periods of rest or inactivity and are worse at night, when sleepy, and while lying down. The discomfort or pain caused by these abnormal sensations and the subsequent need to move seriously disrupts sleep quality and duration. Restless legs syndrome is a common cause of chronic insomnia.

Page 11: Hypnic Jerks and RLS

Cramping and hypnic jerks are not symptoms of restless legs syndrome. Recall that hypnic jerks are normal, harmless, involuntary spasms that generally occur during the transition from wakefulness to sleep. They are not associated with pain or discomfort and don’t involve a desire to move.

Page 12: Risk Factors for RLS

Restless legs syndrome is nearly twice as common in women compared to men. It’s also most commonly reported in people over the age of 40 and tends to get worse with age. However, it can occur in childhood and unfortunately is often misdiagnosed as attention deficit hyperactivity disorder or growing pains.
Primary restless legs syndrome (meaning that it’s not caused by some underlying factor) runs in families; risk increases three to six times if an immediate family member has the disorder.

In other cases, restless legs syndrome is secondary to an underlying cause such as a medication or other disorder. For example, some cold and allergy medicines, antidepressants and other drugs like caffeine, tobacco, and nicotine can trigger symptoms. Iron deficiency, anemia, chronic kidney failure, diabetes, Parkinson’s disease, Lyme disease, and pregnancy are also associated with an increased incidence of restless legs syndrome. It appears that dopamine deficiency is the culprit. Dopamine is a neurotransmitter, which means that it is a messenger of neurologic information from one cell to another. Thus, dopamine is often used in the treatment of restless legs syndrome.

**Page 13: Narcolepsy**

Narcolepsy is the fourth most common sleep disorder. It affects an estimated 350,000 Americans, although only one in seven are correctly diagnosed. This is because it’s often misdiagnosed as stroke, multiple sclerosis, schizophrenia, epilepsy, panic attacks, or as a side effect to medication.

Narcolepsy affects men and women about equally. It may begin at any time during the lifecycle, but usually starts during puberty or early adulthood. There is increased risk among those with a family history of the disorder. It’s also associated with obesity.

**Page 14: Characteristics of Narcolepsy**

- daytime sleepiness
- cataplexy
- hallucinations
- sleep paralysis

Narcolepsy is highly associated with REM sleep dysfunction and involves blurred boundaries between sleep and wakefulness. Narcoleptics often experience very disturbed sleep throughout the night. The hallmarks of narcolepsy are excessive daytime sleepiness, cataplexy, hallucinations, and sleep paralysis. Only 10-25% of narcoleptics experience all four of these classic symptoms, but most experience at least the first two.

**Page 15: Excessive Daytime Sleepiness**
Sleep, Eat & Exercise

Excessive daytime sleepiness involves significant trouble staying awake, even in active environments. This excessive sleepiness results in a strong urge to sleep at inappropriate times during the day, such as at work or school, while driving, or even in the middle of a conversation. People with narcolepsy fall asleep quickly, generally several times a day, for periods of just a few minutes to up to an hour or two.

Page 16: Cataplexy

About 70% of people with narcolepsy experience some form of cataplexy. Cataplexy is the term used to describe a sudden loss of muscle tone during wakefulness. This loss of muscle tone is triggered by a strong emotion – laughter, fright, anger, shock, or sadness – and sometimes by things like dancing, running, or sexual activity. The cataplexy can be mild or severe, ranging from a feeling of weakness in the knees, sagging of facial muscles, head dropping forward, arms dropping to the side, and slurred speech to seizure-like activity causing the person to drop suddenly to the floor. Most episodes last fewer than five minutes, but some can last more than an hour. Although the person can’t move during the episode, she or he is alert and can remember the episode afterwards.

Page 17: Hallucinations

A third characteristic of narcolepsy is the occurrence of vivid, lifelike dreams or hallucinations during the transition from wakefulness to sleep or from sleep to wakefulness.

These hallucinations can occur in people without narcolepsy. This is typically due to sleep deprivation and often linked to medications, alcohol, or changes in sleep schedule.

Page 18: Sleep Paralysis

The fourth common characteristic of narcolepsy is sleep paralysis, a state in which the brain is awake but the body isn’t. Like hallucinations, sleep paralysis occurs during the transition from wakefulness to sleep or from sleep to wakefulness. Sometimes the two co-occur. Like cataplexy, it may involve just parts of the body or the entire body. Episodes typically last for a few minutes.

Page 19: Consequences of Narcolepsy

It’s no surprise that people with narcolepsy often suffer negative psychological consequences. They’re generally embarrassed by their cataplexies. They’re sometimes teased by peers for their excessive sleepiness and napping and are often mistaken for being lazy. Some suffer from poor self-esteem due to poor

OPTIONAL LESSON: Sleep Disorders
academic or work performance. Some suffer from anxiety and depression. Many withdraw socially.

Further, people with untreated narcolepsy are at a 10 times greater risk of having an accident while driving than people without narcolepsy. They’re also at a greater risk of developing other sleep disorders, such as sleep apnea.

Page 20: For More Information

- Carlos Schenck’s Sleep can be found at http://www.amazon.com/Sleep-Carlos-H-Schenck/dp/1583332707

We’ve only briefly described the four most common sleep disorders: insomnia, sleep apnea, restless legs syndrome, and narcolepsy. For more information on these or to learn about other sleep disorders, refer to the book called Sleep by Dr. Carlos Schenck. It’s a great resource that’s interesting and easy to understand. You’ll be able to read true stories about people who suffer from sleep walking, sleep-related binge eating, and sleep terrors to name just a few. You’ll also learn about how such disorders are diagnosed and treated.

Yes, most sleep disorders can be treated quite effectively with behavioral changes, medications, or both. For example, getting up and walking around or massaging the legs can relieve uncomfortable sensations from restless legs syndrome. Some ways of reducing symptoms of mild sleep apnea include: sleeping on your side instead of on your back, losing weight, and avoiding smoking. Also, paradoxically, avoiding sleeping pills, herbal supplements and other medications that relax the airway can reduce symptoms of mild sleep apnea. In more severe cases, medications are needed.

Unfortunately, many people who suffer from sleep disorders don’t seek help because they fear being mislabeled as having a psychological disorder. While it is true that some people with sleep disorders do have a co-occurring psychological disorder, and such disorders can negatively impact sleep quality, having a sleep disorder does not necessarily mean that you have a mental health condition. Most often, sleep disorders are just sleep problems, and they can be treated.