DOES SLEEP EMBARRASS YOU?

There is no doubt every one of you have experienced thwarting situations or felt odd when others could not concentrate on lectures and seminars, nodding heads with excessive sleepiness, start yarning, continuous headaches or become day dreamers during the study hours. Have you ever joked by the room mates for snoring, sleep walking or pulling hair out or screaming because of jerking muscles while sleeping? If these things have become part and parcel of your life that you want to get rid of, then it is worthwhile to read this article.

Doctors have described there are more than 70 sleep disorders, most of which can be managed effectively once they are correctly diagnosed. The most common sleep disorders include insomnia, sleep apnea, restless legs syndrome, and narcolepsy.

If a person had most frequently identified difficulty in falling or staying asleep, the absence of restful sleep or even though he slept when he wakes up feel lethargic, drowsy because time to time waken up while sleeping it is possible to suspect that he is suffering from Insomnia. Insomnia is a symptom and not a disease.

The most common causes of insomnia are medications, psychological conditions (for example, depression, anxiety), environmental changes (for example, travel, jet lag, or altitude changes), and stressful events. Insomnia can also be caused by faulty sleeping habits such as excessive daytime naps or caffeine consumption. Insomnia may be classified by how long the symptoms are present. *Transient insomnia* usually is due to situational changes such as travel, extreme climate changes, and stressful events. It lasts for less than a week or until the stressful event is resolved. *Short-term insomnia* usually is due to ongoing stressful events, medication side effects, medical conditions, and lasts for one to three weeks. Almost everyone occasionally suffers from transient and short-term insomnia. *Chronic insomnia (long-term insomnia)* often results from depression or substance abuse and continues for more than three weeks.

If a person's sleep disturbs due to loud snoring, obesity and excessive daytime sleepiness it is possible to suspect he is suffering from sleep apnea. Sleep apnea is a disorder of interrupted breathing during sleep. It usually occurs in association with fat buildup or loss of muscle tone with aging. These changes allow the airflow to collapse during breathing when muscles relax during sleep .This problem, called *obstructive sleep apnea,* is usually associated with loud snoring (though not everyone who snores has this disorder). Sleep apnea also can occur if the neurons that control breathing malfunction during sleep. The frequent awakenings that sleep apnea patients experience leave them continually sleepy and may lead to personality changes such as irritability or depression.The severity of the Sleep apnea is that it may deprive the oxygen flow during sleeping, which can lead to morning headaches or a decline in mental functioning. It also is linked to high blood pressure, irregular heartbeats, and an increased risk of heart attacks and stroke.

Depression is a state of low mood and aversion to activity. Depressed people may feel sad, anxious, empty, hopeless, helpless, worthless, guilty, irritable or restless. They may lose interest in activities that once were pleasurable, experience loss of appetite or overeating, or problems concentrating, remembering details or making decisions; and may contemplate or attempt suicide.

Anxiety is the result of threats that are perceived to be uncontrollable or unavoidable situations. Anxiety often associates with uneasiness, fear or worry. **http://www.happynews.com/living/sleep/rem-sleep.htm**

Substance abuse excessive addiction to drugs such as cocaine, alcohol, heroin

Restless legs syndrome (RLS), a disorder causing unpleasant crawling, prickling, or tingling sensations in the legs and feet and an urge to move them for relief, is emerging as one of the most common sleep disorders, especially among older people. Severe RLS is most common in elderly people, though symptoms may develop at any age. In some cases, it may be linked to other conditions such as anemia, pregnancy, or diabetes. People with **narcolepsy** have frequent "sleep attacks" at various times of the day, even if they have had a normal amount of night-time sleep. These attacks last from several seconds to more than 30 minutes. Excessive daytime sleepiness (EDS) is the main symptom other primary symptoms of narcolepsy include: loss of muscle tone (cataplexy), distorted perceptions (hypnagogic hallucinations), and inability to move or talk (sleep paralysis). These symptoms seem to be features of Rapid Eye Movement (REM) sleep that appears during waking, which suggests that narcolepsy is a disorder of sleep regulation. Additional symptoms include disturbed nocturnal sleep and automatic behavior (carry out certain actions without conscious awareness). All of the symptoms of narcolepsy may be present in various combinations and degrees of severity.

Out of all sleep disorders narcolepsy gain the at most priority and need to pay more attention since it will decline not only the efficiency of daily work but also a person can face many accidents by falling into sudden sleep in inappropriate places. Narcolepsy usually begins in teenagers or young adults and affects both sexes equally. The first symptom to appear is excessive daytime sleepiness, which may remain unrecognized for a long time in that it develops gradually overtime. The other symptoms can follow excessive daytime sleepiness by months or years.

The disorder (or at least a predisposition to it) is usually hereditary, but it occasionally is linked to brain damage from a head injury or neurological disease. There is a tendency of habit formation if a person addict to sleep during the daytime or lack of concentration on activities or any depressive thoughts always come in to the mind then automatically he tends to sleep. This Stimulus Response (SR) bond can later develop in to narcolepsy.

The newest discovery has been the finding of abnormalities in the structure and function of a particular group of nerve cells, called hypocretin neurons, in the brains of patients with narcolepsy. These cells are located in a part of the brain called the hypothalamus and they normally secrete neurotransmitter substances (chemicals released by nerve cells to transmit messages to other cells) called hypocretins. Abnormalities in the hypocretin system may be responsible for the daytime sleepiness and abnormal REM sleep found in narcolepsy. Criteria for REM sleep includes not only rapid eye movement, but also low muscle tone and a rapid, low-voltage EEG, Rapid eye movement (REM) sleep is marked by extensive physiological changes, such as accelerated respiration, increased brain activity, eye movement, and muscle relaxation. People dream during REM sleep, perhaps as a result of excited brain activity and the paralysis of major voluntary muscles.

How to overcome sleep disorders????

It is better to get some basic understanding about the sleep cycle because the sleep cycle also significant to prevent sleep disorders. Sleep can divide into to Non REM state and REM State. ***Sleep Cycle*** The five stages of sleep, including their repetition, occur cyclically. The first cycle, which ends after the completion of the first REM stage, usually lasts for 100 minutes. Each subsequent cycle lasts longer, as its respective REM stage extends. So a person may complete five cycles in a typical night's sleep.

Anemia is a decrease in normal number of red blood cells (RBCs) or less than the normal quantity of hemoglobin in the blood.

Hypnagogia the transitional state between wakefulness and sleep therefore hypnagogic hallucinations often link with imaginary thoughts during the sleep especially in REM stage of the sleep cycle.

Hypocretin is a hormone seems to promote wakefulness. A major role of the hypocretin system is to integrate metabolic, circadian and sleep debt influences to determine whether an animal should be asleep or awake and active.

Electroencephalography (EEG) is the recording of electrical activity along the scalp produced by the firing of neurons within the brain In clinical contexts, EEG refers to the recording of the brain's spontaneous electrical activity over a short period of time

The waking stage is referred to as relaxed wakefulness, because this is the stage in which the body prepares for sleep. All people fall asleep with tense muscles, their eyes moving erratically. Then, normally, as a person becomes sleepier, the body begins to slow down. Muscles begin to relax, and eye movement slows to a roll. Stage 1 sleep, or drowsiness, is often described as first in the sequence, especially in models where waking is not included. 50% reduction in activity between wakefulness and stage 1 sleep. The eyes are closed during Stage 1 sleep, but if aroused from it, a person may feel as if he or she has not slept. Stage 1 may last for five to 10 minutes. Stage 2 is a period of light sleep during which intermittent peaks and valleys, or positive and negative waves. These waves indicate spontaneous periods of muscle tone mixed with periods of muscle relaxation. Muscle tone of this kind can be seen in other stages of sleep as a reaction to auditory stimuli. The heart rate slows, and body temperature decreases. At this point, the body prepares to enter deep sleep. Stage 4 and 5 are deep sleep stages. These stages are known as slow-wave, or delta, sleep. During slow-wave sleep, especially during Stage 4, the electromyogram records slow waves of high amplitude, indicating a pattern of deep sleep and rhythmic continuity.

The period of non-REM sleep (NREM)is comprised of Stages 1-4 and lasts from 90 to 120 minutes, each stage lasting anywhere from 5 to 15 minutes. Surprisingly, however, Stages 2 and 3 repeat backwards before REM sleep is attained. So, a normal sleep cycle has this pattern: waking, stage 1, 2, 3, 4, 3, 2, REM. Usually, REM sleep occurs 90 minutes after sleep onset.

REM sleep is distinguishable from NREM sleep by changes in physiological states, including its characteristic rapid eye movements. In normal sleep (in people without disorders of sleep-wake patterns or REM behavior disorder), heart rate and respiration speed up and become erratic, while the face, fingers, and legs may twitch. Intense dreaming occurs during REM sleep as a result of heightened cerebral activity, but paralysis occurs simultaneously in the major voluntary muscle groups, including the submental muscles (muscles of the chin and neck). Because REM is a mixture of encephalic (brain) states of excitement and muscular immobility, it is sometimes called paradoxical sleep. It is generally thought that REM-associated muscle paralysis is meant to keep the body from acting out the dreams that occur during this intensely cerebral stage. The first period of REM typically lasts 10 minutes, with each recurring REM stage lengthening, and the final one lasting an hour.

Factors that Affect Sleep Stage and the Sleep Cycle Sleep deprivation, frequently changing sleep schedule, stress and environment all affect the progression of the sleep cycle. Rapid eye movement latency (the time it takes a person to achieve REM sleep) may be affected by a sleep disorder like narcolepsy.

For short-term insomnia, doctors may prescribe sleeping pills. Most of the time the ***drug therapy*** will stop working after several weeks of nightly use, however, and long-term use can actually interfere with good sleep. Mild insomnia often can be prevented or cured by practicing good sleep habits.

Behavioural Therapy is another precaution that you can take at the mean time you pay attention on other treatment for sleep disorders. By changing some aspects of their lifestyle, habit and daily routines, they make a huge difference to sleep disorder. Firstly, it is important that you get a full night's sleep, which is about 5-8 hours a day. Other behavioral activities are,

- Keep your bedroom or sleep area quiet, comfortable, and free of light and distractions.
- Avoid eating just before bed time especially food that can make it hard for you to fall asleep.
- Avoid caffeine, nicotine, and alcohol:

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Avoid drinks that contain caffeine, which acts as a stimulant and keeps people awake. Sources of caffeine include coffee, chocolate, soft drinks, non-herbal teas, diet drugs, and some pain relievers. Smokers tend to sleep very lightly and often wake up in the early morning due to nicotine withdrawal. Alcohol robs people of deep sleep and REM sleep and keeps them in the lighter stages of sleep.

- Relax before go to bed:

A warm bath, reading, or another relaxing routine can make it easier to fall sleep. You can train yourself to associate certain restful activities with sleep and make them part of your bedtime ritual.

- Don't lie in bed awake:

If you can't get to sleep, don't just lie in bed. Do something else, like reading, watching television, or listening to music, until you feel tired. The anxiety of being unable to fall asleep can actually contribute to insomnia.

For more serious cases of insomnia, researchers are experimenting with ***light therapy*** and other ways to alter circadian cycles. Light therapy is a way to treat seasonal affective disorder, depression and certain other conditions by exposure to bright artificial light. During light therapy, you sit or work near a device called a light therapy box. The light therapy box gives off bright light that mimics natural outdoor light. Exposure to bright light from a light therapy box is thought to alter your circadian rhythms and suppress your body's natural release of melatonin. Together, these cause biochemical changes in your brain that help reduce or control symptoms of seasonal affective disorder and other conditions. Light therapy is also known as bright light therapy or phototherapy.

Chromatherapy - Researchers found out the colours have healing power of certain mental disorders and different body parts get energy by exposing to different colours. What we think of as color is actually reflected light that reaches our retinas through vibratory wavelengths. Our brains then interpret the waves as colours. Colour, therefore, is really a sensation. Such consciousness forms the basis of chromatherapy, a branch of holistic healing that uses color to achieve optimal health. Research has shown that certain colors have measurable psychological and physiological effects on people. For example, warm colors such as red and orange usually act as stimulants and have been shown to elevate heart rates, induce perspiration and arouse feelings of excitement.

Aromatherapy also can help to decline the sleep disorders but need to follow the instructions of aurvedic doctor. Aromatheraphy consists with essential oils that are inhaled into the lungs offer both psychological and physical benefits. Not only does the aroma of the natural essential oil stimulate the brain to trigger a reaction, but when inhaled into the lungs, the natural constituents (naturally occurring chemicals) can supply therapeutic benefit. Diffusing eucalyptus essential oil to help ease congestion is a prominent example.

Now have you realized that you're not alone in your quest for a better sleep and why sleep annoyed you?

A **circadian rhythm** is a roughly 24-hour cycle in the biochemical, physiological, or behavioural processes of living entities, including plants and animals.

Melatonin is a naturally occurring compound found in animals, plants, and microbes.In animals, circulating levels of the hormone melatonin vary in a daily cycle, thereby allowing the entrainment of the circadian rhythms of several biological functions

Retina is a light-sensitive tissue lining the inner surface of the eye. The optics of the eye create an image of the visual world on the retina, which serves much the same function as the film in a camera

Dushanthi Dinusha Lokuge
BSc Mgt
Lecturer (Probationary)
Department of Social Sciences and Humanities
General Sir John Kotelawala Defence University