

Sleep and Insomnia



Stress Management Series

Sleep and Insomnia

Condensed from a seminar
& workshop of the same title

Lionel Hartley

Thank God for sleep!

And, when you cannot sleep,

Still thank him that you live

To lie awake.

– *John Oxenham (1861-1941)*

Stress Management Series:

Sleep and Insomnia



By Lionel Hartley

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Sleep and Insomnia

by Lionel D C Hartley

Part of the Stress Management Series

Condensed from a seminar & workshop of the same title, written, presented and illustrated by Lionel Hartley

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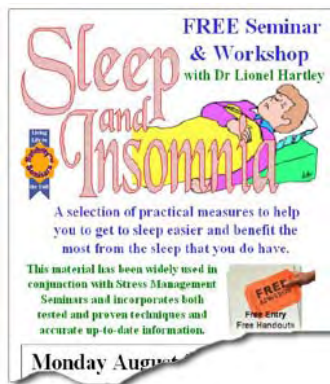
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There is seldom a sleeper so sound that he fails, when one position tires him, to assume another. Moreover, he guards each movement so that he will not fall out of bed. If he grows hot, he throws off the covers; if he grows cold, he draws them tighter, but always leaves cunning passages between covers and the bed for ventilation. These are intelligent responses and choices, and yet we make them while we sleep!

How do we know about sleep behaviour? In 1927 Zalmon G. Simmons, a mattress maker who suffered from insomnia, began to seriously investigate how people normally slept. He inspired Dr. Harry M. Johnson of Ohio State University to assist him in his search for the kind of mattresses to be

designed for sound sleep. Studies by Dr. Erich Guttman provided much of the understanding of sleep of that time. Guttman was studying a group of manic-depressive patients and found that they constantly tossed and turned in their sleep. When I studied psychiatric nursing in the 1970s we were required to study his classic article describing the tortured sleep of the insane. Men of good conscience and sound mind, he assumed, slept as motionless as logs, and so still thought many in the medical profession even at that time.

In Dr. Harry M. Johnson's classic experiments in sleep motility, Johnson rigged up a bed with an automatic recording machine mechanically connected with the springs to chart every move the sleeper made in a night's rest. A concealed motion-picture camera, also wired to the springs, photographed the sleeper in each of his changing positions. The experiments lasted six years, and gave Dr. Johnson some 2,500,000 measurements of the

movements of his one hundred and sixty subjects and about 20,000 photographs of the strange postures they assumed in their sleep. A normal sleeper, as Dr. Johnson had suspected, never slept long in the same position. During an eight-hour night, the average sleeper changed his posture 35 times, rarely held one pose longer than five or ten minutes.

This nocturnal activity Dr. Johnson named “motility,” and he found that it always accompanied healthy sleep. The reason, he hypothesised, is that the muscular arrangement of the human body is so complex that the sleeper rarely succeeds in resting all his muscles at once. As the muscles in one position grow tired, the sleeper moves, and allows these muscles their turn to relax. Complete relaxation, with the body limp all over as in a swoon, was so rare that Dr. Johnson found hardly a single instance of it.

There is a normal motility curve for each sleeper, varying with the individual; some stir

only 20 times a night, some as many as 60 times. If the sleeper turns more than his allotted number of times in a night (from pain, excitement, fever, constipation, hunger, or surfeit in eating or drinking,) he gets insufficient rest. But if he turns too seldom (from weariness, stupor, or maladjusted beds and covers) he gets only partial rest and is likely to wake stiff and sore.

The sleep of children is violent and often disturbed; old people sleep more quietly than children, though with frequent interruptions. Manual labourers rest for longer intervals than brain workers; women rest 30 per cent longer than men.

Dr. Johnson also found that narrow beds interfered with the sleeper's freedom of movement; that people who slept together in double beds sometimes interfere with each other's movements. Linda Beck tells this anecdote: "The bedtime rituals had extended longer than the allotted time, and three-year-

old Kevin's requests had gone beyond the second drink of water and more stories. But my husband and I were soon caught off guard when Kevin yelled from his room, "Can three people fit in a big bed?" When I answered yes, he said, "Okay, I'll be right over."

Dr. Johnson also found that for good sleep a bed should be neither too soft nor too hard.

An American physician, Dr. Glenville Giddings, carried on where Dr. Johnson left off. In the mountains near Atlanta, Georgia, at the side of the Tallulah Falls Industrial School, he began to study the sleep of children. Twelve girls and twelve boys, under the care of two nurses slept nightly for Dr. Giddings for an extended research period.

From 170,000 hours of spying on their sleep, Dr. Giddings concluded that the most popular notions of the effects of various habits and therapies on sleep are pure superstition.

The things, he found, that make children more restless at night are hot weather, heavy meals before bedtime, emotional disturbances (including toys at Christmas), and physical pain. The things that have little or no effect on motility are hard exercise before retiring, warm baths, cold baths, intensive study in the evening, almost all hot and cold beverages.

One thing that seemed to quiet the children and improve their rest, and that was warm milk (I suggest a reason for this later in this publication). Dr. Giddings also made the interesting discovery that, during an epidemic, he could predict the onset of disease several days in advance by the increased restlessness of his children.

To help in our understanding of sleep, many studies have shown that when you fall asleep certain specific things happen. You fall into a state of comparative unconsciousness. Your eyeballs roll upward and out-ward; the pupils contract. Your reflex muscular

responses (such as the famous knee jerk) diminish or disappear. You breathe more in your chest (thoracic breathing) and less in your belly (abdominal breathing). Your blood pressure falls, your heart beats more slowly. Some of your bodily secretions diminish, such as the urine, and mucus from the glands of the nose. Your blood becomes less alkaline.

These, I would suggest, are the phenomena that accompany the process of building up tissue; they are the charging of the battery of the human vehicle, so that it may once more discharge.

Sleep is God's natural gift for the replenishment of our body, and using this information we can now develop a régime for sleeping better.

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1. Monitor Your Sleeping.

Men cannot do without sleep. The longest period of authentic wakefulness on record is 231 hours (not quite 10 days) achieved under laboratory conditions. So start to record in a journal a diary of your sleeping habits and patterns and note any difficulties you may have in going to or staying asleep. Ask your spouse to contribute with observations that he or she has made.

Karen Wingate in the *Coldwater (Kansas) Christian Reader* said, “I was having a sleepless night - an evening cup of coffee, my husband’s abnormally loud snoring, and details

about an upcoming trip were keeping me hopelessly awake. Even after I slipped into the guest bedroom, I still had trouble. Finally, at 3:15 a.m., I crawled back into my own bed, next to a now half-awake husband. ‘Honey, I can’t sleep,’ I whispered. ‘I start to drift off and even dream, but then I wake up with a jerk.’ ‘Wait a minute,’ my husband said, now fully awake. ‘I am not a jerk!’)

Then using this information, try to work out possible reasons for your sleeping difficulty - reading through this whole manuscript may give you information about possible bad bedtime habits. Is it possible that your sleep could be disturbed by a physical problem, like sleep apnea (difficulty breathing and sleeping at the same time), narcolepsy (excessive daytime sleepiness), muscular twitching, or pain that may need some form of medical attention?

Is snoring keeping you awake or does your partner exclaim, “Pardon me, but your *sleep* is

showing.”? Anthony Burgess in *Inside Mr Enderby*, said, “Laugh and the world laughs with you, snore and you sleep alone.”

Shakespeare said in *Hamlet*, “Thou dost snore distinctly. There’s meaning in thy snores.”

And Mark Twain in *Tom Sawyer Abroad* wrote, “There ain’t no way to find out why a snorer can’t hear himself snore.”

If you or your partner snores, seek medical advice. Snoring may be related to obesity, allergies, bad sleeping habits, poor muscle tone or a myriad of other reasons.

It may be interesting to ponder upon Melvin Switzer, an overweight British dock-worker who trumpeted his way into the Guinness Book of World Records with a snore which registered at eighty-eight decibels and cause his wife to become deaf in one ear. (That’s as loud as a motorcycle revving at full

throttle!)

Have you got into lazy or inappropriate sleeping habits, like irregular hours, or using your bed while you watch TV (Richard Foster said, “Too many of us allow the late news to dictate what we think about when we go to bed” - Leadership, Vol. 3, no. 1).

Or maybe using your bed as somewhere to do tomorrow’s planning or to do your worrying? Chronic worriers don’t have more serious problems than other people - they just *think* that they do *and then fret about it*.

Dale Carnegie (1888-1955) said, “It’s the worry that gets you, not the loss of sleep”

Many worriers try to cope by *trying not to think* about their problems, but this just makes things worse.

Chronic worriers feel less anxious if they actually budget for and spend an half-hour a

day *each morning* thinking specifically about their problems. Albius Tibullus (C. 55-C. 19 B.C.) saw the relationship between worry and insomnia when he said, “Sleep vanishes before the house of care”.

An old saying I learnt as a child reminds us that “Night is the mother of thoughts, yet he that contemplates on his bed has a day without a night.”

Are you consuming too much caffeine or alcohol during the day, especially close to bedtime? What about your intake of sugar, spices, and salt? Large meals are better taken earlier in the day - someone has well said, eat breakfast like a king, lunch like a prince and dinner like a pauper.

By identifying the nature and possible causes of your sleeping problem, you will have the tools to help you to choose which of the following other seven suggestions may be of help to you.

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2. Make up a Contract with Yourself.

Sticking to a good sleep régime is not easy. You may find it helpful to write yourself a contract as a motivator. Our patterns of sleeping become a habit. Let's look at that word HABIT for a moment. HABIT is made up of five letters. H, A, B, I, and T. If we take the H away, we still have a bit left (ABIT). If we take the A away we still have a BIT left. And even if we take the B out of our HABIT, we still have IT left. You see, IT is still there!

Even after all our attempts to eat it away. Habits take more than willpower to change. They require a choice to change, a plan to

effect the change, and then the determination to stick to the plan.

It is not our purpose to fight the habit. If we try that we will become disheartened and possibly give up. It is our purpose to simply replace the bad habits with good ones.

And when we are giving up some things we have enjoyed, we need to be clear what we have to gain. Setting a contract can help us clarify the gain and motivate us to work toward it.

Montgomery & Evans in *You and Stress*, suggest the following standard contract. Fill in the blank spaces to suit yourself: your rewards and penalties should be big enough to be a real incentive, but not so big that it isn't practical to enforce your contract on yourself. It can be helpful to write the contract out and put it up on a wall, say in your bedroom, as a reminder of what you are going to do to solve your sleeping problem.

My Sleep Contract

I (your name) promise myself that, for each week that I stick to my good sleeping régime, I will reward myself with (fill in your idea of a suitable reward, such as a record, or small piece of clothing, or cash towards a large reward later).

Any week that I don't stick to my régime, my penalty will be (fill in your idea of a suitable penalty, such as an unpleasant chore, or a cash gift to your least favourite charity).

I recognise that this contract is a way of helping myself achieve a goal I have set myself so, if I break it, only I lose.

Signed, dated, witnessed

(You sign, then it can be supportive to get your spouse or a friend to hold your contract).

A form for you to use is on the next page.

My Sleep Contract

I _____

promise myself that, for each week that I stick to my good sleeping régime, I will reward myself with

Any week that I don't stick to my régime, my penalty will be

I recognise that this contract is a way of helping myself achieve a goal I have set myself so, if I break it, only I lose.

Signed _____

Dated _____

Witnessed _____

3. Learn To Relax.

We tire ourselves in the pursuit of rest. Physical relaxation is a useful component in better sleeping s, because it helps in the transition from wakefulness to sleep. It is also a practical component of sensible strategies in a régime for coping with not falling asleep readily. You can even use a Roads to Relaxation™ video prior to sleeping to help you to relax. These videos are specifically designed to initiate the Relaxation Response.

Boston cardiologist Dr. Herbert Benson of the New England Deaconess Hospital first coined the term *relaxation response*, by which

he meant the physiological change in our bodies that occurs when we alter the state of our consciousness through non-drug means. Benson's original quest, which turned out to be successful, was to find a way to help victims of heart disease without risking side effects.

The physical changes that he found during patients' relaxed states included such easily measurable parameters as a lowering of heart and breathing rates, a lowering of arterial blood lactate concentration (a measure of the end products of metabolism in the muscles), and even a lowering of blood pressure. Relaxation can help the body's immune mechanisms improve, with measurably increased levels of killer "T" white blood cells in the bloodstream.

The relaxation response is quite distinct from actual sleep, and is best described as a wakeful hypometabolic state. The relaxation response produces low-end alpha and high

theta waves.

The relaxation response helps elevate circulating levels of endorphine, making pain tolerance much greater. This explains why headaches can often be aborted in their early stages by relaxation techniques.

According to Paul Hanson in *Stress for Success*, the relaxation response demonstrates our physiological power to counteract our bodies' negative, inappropriate responses to stress.

This power is so profound that it can offer lifesaving benefits to post-heart-attack victims and, even more importantly, to pre-heart-attack victims.

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4. Use Sensible Self-Talk.

What will happen if you start to fill your mind with upsetting thoughts about how bad your sleeping problem is or how rotten you are going to feel the next day? You will find yourself lying in bed and not able to go to sleep (or to go back to sleep) as readily as you would like. Here is some sensible self-talk to learn off by heart and then practise in your mind (it comes from Montgomery & Evans in *You and Stress*):

‘It is disappointing that I am not easily able to sleep now, but I can cope with feeling disappointed. So, I won’t pretend I’m not disappointed, but I also won’t exaggerate my

disappointment and arouse myself more by dwelling on negative thoughts.

Lying here relaxed is nearly as refreshing as being asleep. So, I will concentrate on relaxing myself physically, and then I will occupy my mind with pleasant and restful thoughts and images.

Repeat this self-talk to yourself when you need it, and practice relaxing yourself and concentrating on pleasant and restful thoughts. *Life's Little Instruction Book, Volume II* from the Rutledge Hill Press suggests, "Make a habit of reading something inspiring and cheerful just before going to sleep."

Another sensible type of talking that is not self-talk is prayer. An anonymous writer suggested, "If you can't sleep, don't count sheep, talk to the Shepherd."

Handing the burdens of the day over to God, talking to Him about the troubles of your

heart, seeking his forgiveness for waywardness of your life, believing he does forgive and then taking the time to thank Him for all his gifts will give you a sweet inner peace to help promote the most peaceful sleep.

Sir Thomas Browne (1605-1682) said that sleep is “so like death. I dare not trust it without my prayers.”

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5. Try Non-Expectational Sex

Now you won't find the expression "Non-expectational Sex" in the textbooks, as this is a term I have coined to describe a particular range of purposeful sexual activities.

Non-expectational Sex is a sexual sharing (with your marriage partner only, of course) with no expectations from either in regard to completing it as an activity.

It may include hugging and holding, cuddling and caressing, or whatever else you both desire.

Non-expectational Sex is a relaxant for some and a stimulant for others. Be aware how you each will respond and adapt accordingly. Non-expectational Sex means that neither will be bothered if the other person falls asleep. And if you do feel a trifle neglected, it can be fun kissing and making up in the morning.

Relaxing massage of the back, feet, forehead or arms in downward caresses or gentle stroking of your spouse's hair is a tremendous aid to relaxation for some.

Mark and Chrissy Donnelly in Jack Canfield's *Chicken Soup for the Couple's Soul* suggest, "Give loving massages with no strings attached, ... never go to bed mad, kiss each other goodnight, (and) sleep like spoons.

6. Establish a Pattern of Good Sleeping Habits.

Check out your environment. You may need a quiet room, but not too quiet if you are used to the sounds of traffic, clocks, etc. Is your bed comfortable?

Thomas Hood (1799-1845) said, “O bed! O bed! Delicious bed! That heaven upon earth to the weary head.”

Is the room ventilated but neither too hot nor too cold? The best temperature for most people is between 60-70 degrees Fahrenheit (15-22 degrees Centigrade).

Is the bedroom darkened but not “pitch” black? Would a soft fabric (domino) face mask help?

Are your feet and head warm? Don’t let fashion shy you away from bed-socks and night-cap if they will help you to sleep.

Are the colours in your bedroom conducive to sleep. Cool pastel hues are more relaxing than vibrant, brilliant colours - save the bright colours for your office to keep you awake!

Is your computer or your TV in the bedroom to draw your thoughts away from sleeping? A computer in the bedroom can put your body into screensaver mode during the day and turbo mode during the night.

Are there visually stimulating posters or pictures on the bedroom walls - ocean waves are more relaxing than warhorses.

In the spirit of the old, “Early to bed, early to rise, makes a man healthy, wealthy, and wise”, A. Wolfson in *Healing by God’s Natural Methods*, says “One hour of sleep before midnight is worth four hours of sleep after midnight. One hour of work early in the morning is worth four hours of work before midnight.”

I believe that your deepest, most refreshing sleep should come within the first two hours or so after you retire. From that time on until you wake up in the morning, you are getting steadily smaller returns in rest from the hours you lie in bed.

Sleep is as fluid as a pool of water and the mind sinks and rises, drifts and hovers in it, often near the surface.

If you are a shift worker, see if you can arrange not to change your shift times too often because the idea here is to try to go to bed and to get up at approximately the same

times each day. By making sure that these two times allow for a reasonable amount of sleep you can then make slight variations in the times according to your daily needs.

Our needs for sleep differ as we grow older. New-born babies sleep up to eighteen hours a day. This usually is reduced to about ten hours by age ten.

Adults usually need seven to eight hours, although five to ten is still quite normal. Efficient sleep is a more valuable measure than duration.

One scientist facetiously suggested that the *exact* amount of sleep we require is ...”five minutes MORE!”

An Italian proverb suggests, “Five hours of sleep a traveller, seven a scholar, eight a merchant, and eleven every knave.”

It will be helpful if you can avoid frequent

or marked changes to your waking and sleeping times. At a specific point in the day, an individual will usually come to expect sleep. His blood content is changed, his squandering of energy falters, the tear glands cease to secrete water and his eyes become hot and dry (when the tear glands no longer lubricate your eyes, you want to close them; and when you close them, you are likely to desire sleep.)

If, at your regular bedtime you find that you aren't at all sleepy, then delay going to bed until you feel drowsy.

Similarly, if you are in bed, and you haven't gone to sleep within thirty minutes (after using sensible self-talk and relaxation), then get up out of bed and go into a different room.

Do something relaxing, like reading, until you do feel drowsy.

A **cool** shower can be invigorating and stimulating so take one when you wake up in the morning and a long **warm** bath can be relaxing so take one before you sleep (if the bath is too hot or too cold it becomes a stimulant).

Don't use your bed for reading or watching horror stories or other arousing activities. Avoid using your bed for eating and drinking. Also, avoid caffeine or alcohol drinks just before going to bed.

Smoking in bed is a one-hundred-percent no-no, as the ashes that fall on the floor may be your own. Although the *act* of smoking may be relaxing *the nicotine* acts as a stimulant when it reaches your bloodstream.

These procedures of behaviour change can be very difficult and unfortunately, like all habits, bad sleep habits are difficult, at least at first, to change. But in time you will appreciate the effort.

7. Manage Daytime Feelings and Activities.

Recognise that stress is a killer. A life filled with stress can really wreak havoc on your body causing a number of illnesses such as heart attacks, strokes, asthma, gastric problems, menstrual disorders, ulcerative colitis, angina, irritable colon, increased blood pressure, ulcers, headaches, and sleep disturbance.

There are different types of stress such as mental, emotional and physical. Emotional stress seems to take the greatest toll on everyone.

Not all stress is bad; in fact, life would not

be very interesting if it were not met with challenges. However, too much stress, too often with no effective and appropriate outlet, does not allow the body and soul to recuperate.

You might review a typical week to see if you can identify things that might be making you anxious or causing you stress. Once identified, stressors can be attacked and eliminated.

If depression, anger, conflict, anxiety, tension or stresses during the day are setting you up for difficulty sleeping at night then learn how to manage those bad feelings better.

We have seminars to cover these topics - check out our website: www.lrhartley.com

Many pages on this site contain additional free resources..

If you find that you have trouble sleeping

during the night, don't try to make up for it by sleeping in the next morning or taking naps during the day.

Get up at your usual time, and save your body's sleep needs for the next night. Prolonged wakefulness, unless it is carried to such an extreme that exhaustion and death follow, has no permanently harmful effect on the body.

You cannot "make up for lost sleep," as laymen like to think, by sleeping longer when you finally get to bed; even after three or four days without rest, a single night's sleep will restore you so far as you can be restored. Your efficiency may be slightly impaired for as long as two weeks afterward, but no longer. And more sleep than usual will not reduce that impairment.

Get plenty of exercise during the day. People who are physically fit look good and feel good.

A good exercise regimen will lengthen your life, improve your appearance, build self-confidence, possibly delay the ageing process, and help promote restful sleep.

Walking is one of the best exercises for strengthening bones, controlling weight, toning the leg muscles, maintaining good posture and improving positive self-concept.

Honest manual labour can be a great sleep inducer, as Ecclesiastes 5:12 says, “The sleep of a labouring man is sweet...”.

However balance is required, as fatigue doesn't bring on sleep, for abnormal fatigue produces abnormal nocturnal motility, despite the words of Benjamin Franklin, “Fatigue is the best pillow”.

8. Wean Yourself Off Drugs Slowly.

Sleeping tablets may make you feel muddle-headed next day, although some preparations are better than others in this respect. Most of them cause a reduction in the amount of rapid eye movement (REM) sleep, in which dreams occur, and this is not necessarily a good thing. It is widely believed that fears and conflicts are acted out during dreams, providing a natural safety valve for anxiety.

When people stop taking sleeping pills, they experience extra REM sleep, almost as if they are trying to make up for the amount lost.

Natural sleep without pills is the best way of restoring health to your psyche.

If you do take medication for sleeping it is better to have pills for this purpose prescribed by your doctor, who knows what type you will be suited to, than to buy them directly over the counter.

If you have been using sleeping medications (or any other drugs), and you now want to stop using them, first discuss it with your doctor, then reduce your use of the drugs gradually to minimise the discomfort of withdrawal.

Don't be surprised if you get temporary unpleasant side effects if you are cutting out or reducing sleeping medications. Recognise that, although these side effects are genuinely unpleasant, they are only temporary and result from the withdrawal of the drugs and the side effects are not a part of your sleeping problem.

Non-drug sleep inducers are some of the suggestions above and also herbal teas like camomile.

According to Jethro Kloss in *Back to Eden*, sleep is aided by the use of herbs such as hops, motherwort, mullein, vervain, skullcap or peppermint. He also suggests consuming a concoction of equal parts of skullcap, nerve root, hops, catnip, and black cohosh.

I would suggest that shortly before bedtime you try drinking a warm (plain or flavoured) milk drink, which can help you to feel sleepy. This is because milk actually contains, in addition to simple sugars, an amino acid (called *L-tryptophan*) which rapidly reaches the brain and increases the production of serotonin which helps to promote natural sleep.

(Our website www.lrhartley.com/sleep contains information on non-dairy sources of *L-tryptophan*)

It may also help to then empty your bladder before retiring to bed.

And finally...

A word from Oswald Chambers (1874-1917), who said:

“Sleep recreates. ... Sleep is God’s celestial nurse who croons away our consciousness, and God deals with the unconscious life of the soul in places where only he and his angels have charge. As you retire to rest, give your soul and God a time together, and commit your life to God with a conscious peace for the hours of sleep, and deep and profound developments will go on in spirit, soul, and body by the kind creating hand of our God.”

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Here follows a selection of slides from the seminar



www.lrhartley.com/sleep

**FREE Seminar
& Workshop**
with Dr Lionel Hartley

Sleep and Insomnia

A selection of practical measures to help you to get to sleep easier and benefit the most from the sleep that you do have.

This material has been widely used in conjunction with Stress Management Seminars and incorporates both tested and proven techniques and accurate up-to-date information.

FREE
Admission
Free Entry
Free Handouts

Monday August



Welcome to



Sleep
and
Insomnia

A pleasing land of drowsy head it was,
Of dreams that wave before the half-shut eye;
And of gay castles in the clouds that pass,
Forever flushing round a summer sky.

— Washington Irving, *The Legend of Sleepy Hollow*



How do we know about sleep behaviour?

Sleep
and
Insomnia

- **Zalmon G. Simmons**





How do we know about sleep behaviour?



- **Zalmon G. Simmons**
- **Dr. Harry M. Johnson**
- **Dr. Erich Guttman**
- **Dr. Glenville Giddings**
- **Dr. Harvey Moldofsky**





Signs That You Need More Sleep:

Sleep
and
Insomnia

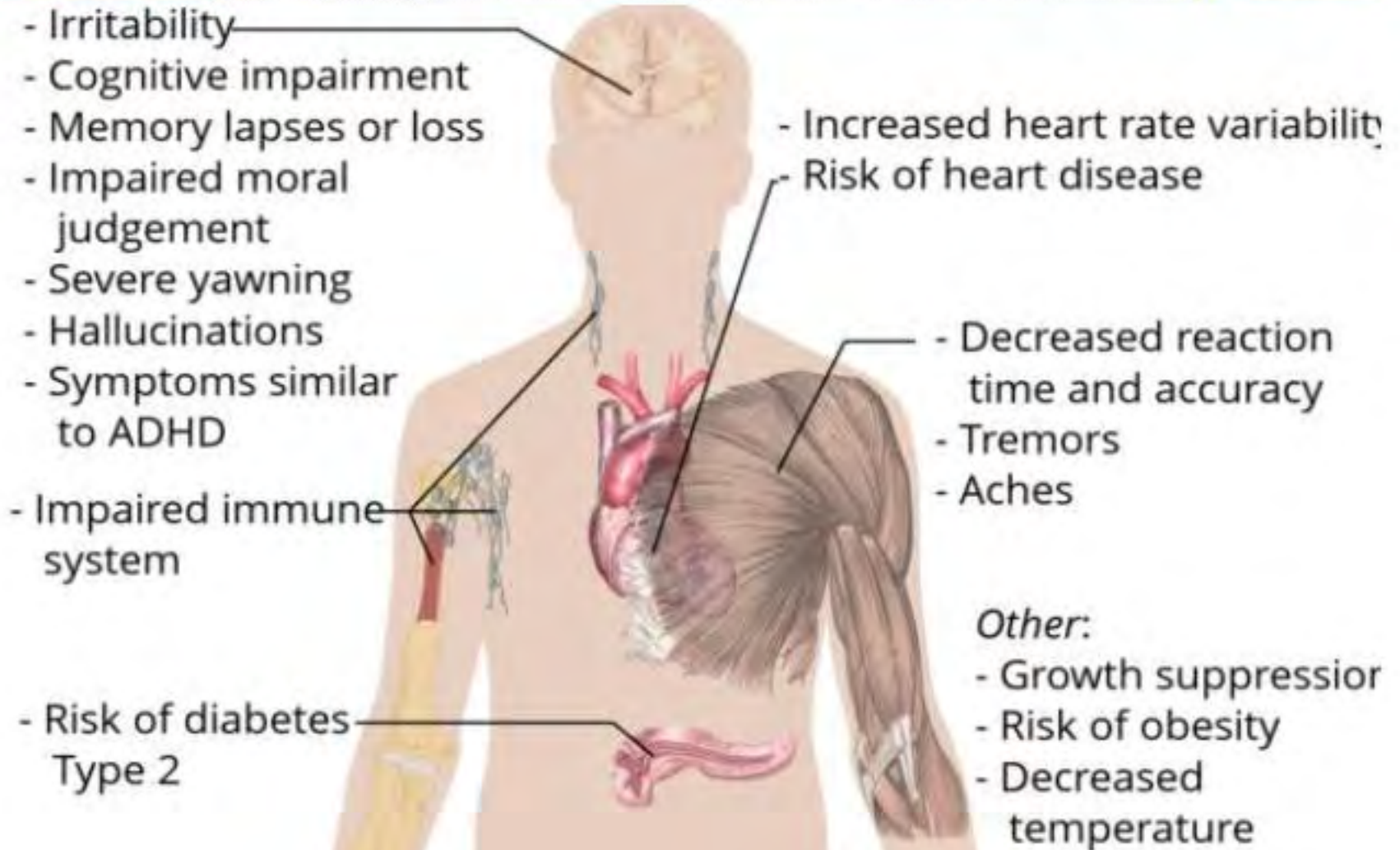
- **Longer than 30 minutes to fall asleep.**
- **Awakening frequently**
- **Waking up feeling tired**
- **Having trouble staying awake**
- **Difficulty remembering things**
- **.....**





Effects of Sleep Deprivation

Sleep
and
Insomnia





Sleep Thieves

Sleep
and
Insomnia

Many things can decrease the quantity and quality of sleep, sometimes in surprising ways:

- Caffeine—can diminish REM and deep sleep
- Alcohol—can promote sleep initially, then wakefulness later
- Noise, temperature—can interrupt sleep
- Light—can confuse body clock
- Stress—can delay sleep or reduce deep sleep
- Working, using Internet, cellphones, text messages close to bedtime—can delay sleep, increase awakenings
- Erratic schedules—can confuse body clock
- Pets in the bedroom—can interrupt sleep
- Jet lag—can confuse body clock
- Napping—can delay sleep or cause early awakening



Sleep stages



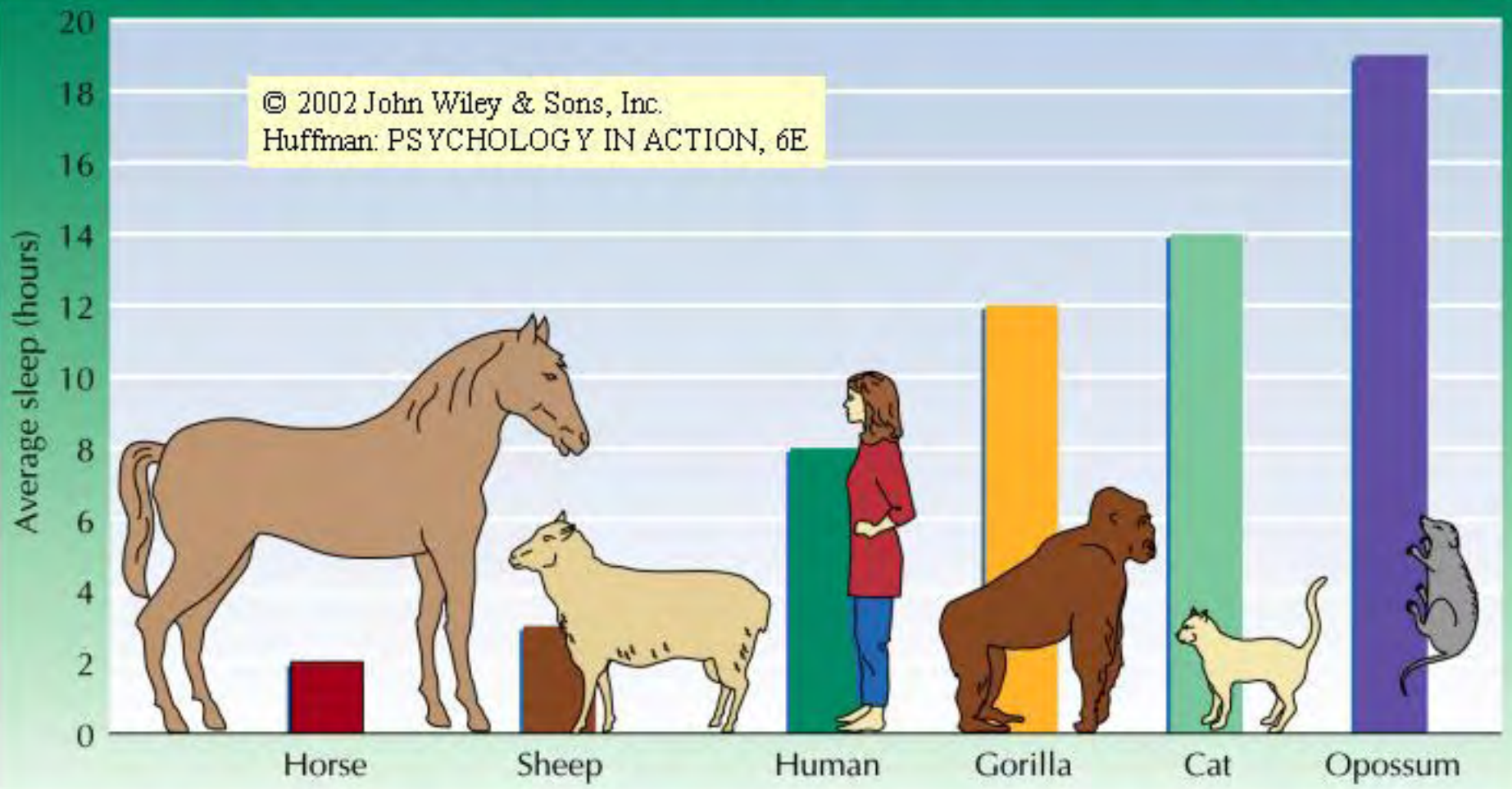
- **We cycle through the stages of sleep about every 90 minutes during the night, in the same order**
- **Most dreaming occurs during the second half of the night, as REM sleep lasts longer and longer**
 - **Stage 1: Very light sleep**
 - **Stage 2: Light sleep**
 - **Stage 3: Deeper sleep**
 - **Stage 4: Very deep sleep, most restorative**
 - **Stage 5: Rapid Eye Movement sleep, when we dream**



How much sleep do we need?

Sleep
and
Insomnia

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Huffman: PSYCHOLOGY IN ACTION, 6E





Sleep throughout life



- **Childhood and adolescence**
 - Sleep needs range from 18 hrs a day for infants to about 9 hrs a day for teenagers
- **Adulthood**
 - Amount of deep sleep drops dramatically between age 20 and 40, and average sleep time is 7.5 hours
 - Women's reproductive cycles affect sleep
 - Especially pregnancy (sleepier first trimester)
 - Also affected by menstrual cycle (sleepier second half of cycle)



Sleep in middle age

Sleep
and
Insomnia

- **Sleep becomes lighter and nighttime awakenings become more frequent and last longer**
- **Often wake up after 3 hours of sleep**
- **Menopause may lead to hot flashes that interrupt sleep repeatedly**
- **Breathing problems may begin, especially among overweight people**
- **Physically active adults sleep more soundly than their sedentary peers.**
- **About 20% of sleep time is spent in dreaming**



Sleep among older adults



- Little deep sleep, but dreaming still 20%
- Dozens of awakenings during the night
- Falling asleep takes longer
- Despite the above, over a 24-hour period older adults accumulate the same amount of total sleep as younger people
 - Older adults more likely to nap during the day
- Older adults *do need* the same amount of sleep as they did when they were younger



Your Sleep Toolkit: Practical Measures

Sleep
and
Insomnia

2. Make up a Contract with Yourself

The only proper way to
eliminate bad habits is to
replace them with good ones.

- Jerome Hines



Your Sleep Toolkit: Practical Measures



3. Learn To Relax

Progressive Muscle Relaxation





Healthy sleep habits (sleep hygiene)

Sleep
and
Insomnia

- **Avoid alcohol, nicotine, caffeine, chocolate**
 - For several hours before bedtime
- **Cut down on non-sleeping time in bed**
 - Bed only for sleep and satisfying sex
- **Avoid trying to sleep**
 - You can't make yourself sleep, but you can set the stage for sleep to occur naturally
- **Avoid a visible bedroom clock with a lighted dial**
 - Don't let yourself repeatedly check the time!
 - Can turn the clock around or put it under the bed



More healthy sleep habits



- **Expose yourself to bright light at the right time**
- **Establish a regular sleep schedule**
- **Exercise every day - exercise improves sleep!**
- **Deal with your worries before bedtime**





More healthy sleep habits

Sleep
and
Insomnia

- **Adjust the bedroom environment**
 - Sleep is better in a cool room, around 65F (20C).
 - Darker is better
 - If you get up during the night to use the bathroom, use minimum light
 - Use a white noise machine or a fan to drown out other sounds
 - Make sure your bed and pillow are comfortable
 - If you have a partner who snores, kicks, etc., you may have to move to another bed (try white noise first)



Topics from previous Q&A Sessions

Sleep
and
Insomnia



- **What can I do to help my child to sleep during the night?**
- **Can you provide some tips for coping with “Restless Legs Syndrome”**
- **How can a Shift Worker get adequate sleep?**



Settling Children

Sleep
and
Insomnia

- 1. Consistency is Key**
- 2. Use a Holistic Approach**
- 3. Get in a Routine**
- 4. Make Sure Expectations are Age Appropriate**
- 5. Have a Pre-Bed Ritual**
- 6. Try an Earlier Bedtime**
- 7. Encourage More Sleep During Day**
- 8. Or Cut Back on Naps**
- 9. Try a Reward Chart**





Settling Children

Sleep
and
Insomnia

10. Watch for Signs of Tiredness
11. Use a Comforter
12. Try White Noise
13. Use a Fun Night Light
14. Try (Safe) Co-Sleeping
15. Turn off the TV
16. Light a Bedtime Candle
17. Dream Feed
18. Invest in a Video or Audio Monitor





Settling Children

Sleep
and
Insomnia

19. Think Outside the Crib
20. Let them “Read”
21. Make Sure Their Tummy’s Full
22. Don’t Watch the Clock
23. Know that Every Child Is Different
24. Ride Out the Stage
25. Don’t Blame Yourself





Restless Legs Syndrome

Restless
Legs (RLS)
Syndrome

- **A Sensory-motor condition**
- **Uncomfortable sensations relieved by movements**
- **Occurs mostly in transition from wake to sleep**
- **Onset: middle age-elderly, more women**
- **Common medications often have side effects**
- **Learning coping activities can improve your quality of life.**



General Coping Activities

Restless Legs (RLS) Syndrome

- **A consistent bedtime routine**
- **Keep your mind engaged.**
- **Change the temperature.**
- **Exercise.**
- **Over-the-counter creams.**
- **Massage.**
- **Apply pressure.**
- **Stay active.**
- **Avoid symptom triggers.**
- **Educate.**





Coping Methods for Travel

Restless
Legs (RLS)
Syndrome

- **Pre-travel practices.**
- **Time of travel.**
- **Have room to move.**
- **Snack.**





Coping while at Work

Restless Legs (RLS) Syndrome

- **Request a sit/stand workstation.**
- **Work the nightshift.**
- **Stay on your feet.**
- **Let co-workers know.**





Shiftwork

Sleep
and
Insomnia

Tips to cope
with shiftwork...





Shiftwork



Preparing for the night shift

- **1. Successful sleep at home**
- **2. Getting plenty of sleep before your first night shift**
- **3. Taking an afternoon sleep**





Shiftwork



Surviving the night shift

- **1. Bright light**
- **2. Eating at night**
- **3. Caffeine**





Shiftwork



Recovering from the night shift

- **1. Getting home from work**
- **2. Working further night shifts**
- **3. Before you go to bed**
- **4. Sleeping in the daytime**
- **5. Recovering after your final night shift**





Types of Insomnia



- **Transient:** Less than 2 weeks
- **Intermittent:** Repetitive episodes of transient insomnia
- **Chronic:** Continuing difficulty with sleep



Chronic insomnia

Sleep
and
Insomnia

- **Complaint of poor sleep causing distress or impairment for 6 months or longer**
- **Average less than 6.5 hours sleep per day**
- **Or 3 episodes per week of:**
 - Taking longer than 30 minutes to fall asleep
 - Waking up during the night for at least an hour
- **Not accounted for by another sleep disorder, mental disorder, medical condition or substance use.**



Insomnia



- **People with insomnia may have**
 - Trouble falling asleep
 - Many awakenings during the night, with difficulty going back to sleep
 - Fitful sleep
 - Daytime drowsiness
- **During the day, people with insomnia may be**
 - Anxious and irritable
 - Forgetful, with difficulty concentrating



How common is insomnia?

Sleep
and
Insomnia

- **More than half of adults in the U.S. said they experienced insomnia at least a few nights a week during the past year**
- **Nearly one-third said they had insomnia nearly every night**
- **Increases with age**
- **The most frequent health complaint after pain**
- **Twice as common in women as in men**



Conditions that can cause insomnia

Sleep
and
Insomnia

- **Hyperthyroidism**
- **Arthritis or any other painful condition**
- **Chronic lung or kidney disease**
- **Cardiovascular disease (heart failure, CAD)**
- **Heartburn (GERD)**
- **Neurological disorders (epilepsy, Alzheimer's, headaches, stroke, tumors, Parkinson's Disease)**
- **Diabetes**
- **Menopause**



Common drugs that can cause insomnia

Sleep
and
Insomnia

- **Alcohol**
- **Caffeine/chocolate**
- **Nicotine/nicotine patch**
- **Beta blockers**
- **Calcium channel blockers**
- **Bronchodilators**
- **Corticosteroids**
- **Decongestants**
- **Antidepressants**
- **Thyroid hormones**
- **Anticonvulsants**
- **High blood pressure medications**



Additional Causes

Sleep
and
Insomnia

- **Psychiatric disorders**
 - **Especially phobias and panic attacks, bipolar disorder, depression, and schizophrenia**
- **Poor sleep habits**
- **Shift work**
- **Other sleep disorders**
 - **Circadian rhythm disorders**
 - **Restless legs syndrome**
 - **Periodic limb movement disorder**
 - **Sleep apnea**



Consequences of insomnia

Sleep
and
Insomnia

- **Decreases in mental performance and motor functioning**
- **Accidents**
- **Inability to accomplish daily tasks**
- **Mood disturbance**
 - More sadness, depression, and anxiety
- **Interpersonal difficulties**
 - With families, friends, and at work



Sleeping pills



- **Most common treatment approach**
 - Drowsiness common the next day
- **NOT meant for chronic insomnia**
 - Effective for short-term (a couple weeks) insomnia only
- **Tolerance and dependency may develop**
- **Withdrawal, rebound, relapse may occur**
- **But commonly used, despite the above**
 - 5-10% of adults have used a benzodiazepine in past year as a sleep aid
 - 10-20% of those over age 65 use sleeping pills



Non-drug treatments

Sleep
and
Insomnia

- **Cognitive-behavioral therapy (CBT)**
 - Stimulus control
 - Cognitive therapy
 - Sleep restriction
 - Relaxation training
 - Sleep hygiene



How to keep track of your sleep

Sleep
and
Insomnia

- **Daily sleep diary or sleep log**
 - Bedtime
 - Falling asleep time
 - Nighttime awakenings
 - Time to get back to sleep
 - Waking up time
 - Getting out of bed time
 - Naps



Cognitive Therapy

Sleep
and
Insomnia

- **Identify beliefs about sleep that are incorrect**
- **Challenge their truthfulness**
- **Substitute realistic thoughts**



False beliefs about insomnia



- **Misconceptions about causes of insomnia**
 - “Insomnia is a normal part of aging.”
- **Unrealistic expectations re: sleep needs**
 - “I must have 8 hours of sleep each night.”
- **Faulty beliefs about insomnia consequences**
 - “Insomnia can make me sick or cause a mental breakdown.”
- **Misattributions of daytime impairments**
 - “I’ve had a bad day because of my insomnia.”
 - I can’t have a normal day after a sleepless night.”



More common myths about insomnia



- **Misconceptions about control and predictability of sleep**
 - “I can’t predict when I’ll sleep well or badly.”
- **Myths about what behaviors lead to good sleep**
 - “When I have trouble getting to sleep, I should stay in bed and try harder.”



Sleep Restriction - best if done with a professional



- **Cut bedtime to the actual amount of time you spend asleep (not in bed), but no less than 4 hours per night**
- **No additional sleep is allowed outside these hours**
- **Record on your daily sleep log the actual amount of sleep obtained**



Sleep Restriction (cont'd)

Sleep
and
Insomnia

- **Compute sleep efficiency (total time asleep divided by total time in bed)**
- **Based on average of 5 nights' sleep efficiency, increase sleep time by 15 minutes if efficiency is $>85\%$**
- **With elderly, increase sleep time if efficiency $>80\%$ and allow 30 minute nap.**



INSOMNIA...defined:



- **Perhaps most common sleep complaint in general practice**
- **Experience of poor sleep *quality or quantity* that adversely affects *daily functioning***



Epidemiology (boring stuff):



- **30-40% adults have occasional poor sleep**
- **15-20% adults have chronic insomnia**



Consequences of Insomnia



- **Depression**
- **Irritability**
- **Decreased cognitive functioning**
 - Attention, focus, memory
- **Poor executive functioning**
 - Decision-making



Physiology of Normal Sleep:

Sleep
and
Insomnia

- **2 phases: REM, NREM**
- **REM:**
 - **Unclear purpose- ? Role in learning/memory**



Non REM Sleep

Sleep
and
Insomnia

- **4 stages of progressively deeper sleep**
- **Rolling eye movements**
- **Normal muscle tone**
- **Normal reflexes**



Stage One

Sleep
and
Insomnia

- **Light sleep**
- **Brief**
- **Transition between wakefulness and sleep**



Stage Two



- **Light sleep**
- **Accounts for 50% of total sleep time**



Stages 3,4



- **Increasing proportion of “Delta wave” sleep**
- **Stage 4= greater than 50% Delta wave**



Normal Sleep



- **Sleep Onset Latency: avg. 10-20min**
 - Longer in adolescence, shorter in adults
- **REM Latency: avg. 90-129min**
 - Decreased with ETOH/sedative withdrawal, depression, narcolepsy, apnea, and other forms of sleep deprivation



Normal Sleep



- **Sleep cycles between NREM and REM approx. 4-5 times/night**
- **Cycles last approx. 90min**



Age-Related Changes

Sleep
and
Insomnia



- **Increased early morning awakening, fragmentation, napping**



Sleep Disorders

Sleep
and
Insomnia

- **2 Classification Systems: ICSD, DSMIV**
- **Both separate disorders into:**
 - **Dyssomnias- disorders initiating or maintaining sleep, EDS**
 - **Parasomnias-behavioral syndromes associated with sleep that often produce arousals**



Dyssomnias- Subdivisions:

Sleep
and
Insomnia

- **Intrinsic: ex. Narcolepsy, apnea, RLS, PLM, hypersomnias**
- **Extrinsic: psycho physiologic insomnia, toxin/drug-induced insomnia**
- **Circadian: DSPS, ASPS, jet lag**



Parasomnias

Sleep
and
Insomnia

- **Sleep Terrors**
- **Somnambulism**
- **Sleep Talking**
- **REM Sleep Behavior Disorder**
- **Bruxism**
- **Enuresis**



Narcolepsy



- **Presents with Excessive Daytime Sleepiness (sedation)**
 - May precede other symptoms by years
- **Sleep is restless, fragmented**



Narcolepsy



- **Classic tetrad (rare):**
 - **Sleep attacks**
 - **Cataplexy**
 - **Sleep paralysis**
 - **Hypnagogic/pomic hallucinations**



Sleep Attacks

Sleep
and
Insomnia

- **Most common symptom**
- **Average 10-20/wk**
- **Last under 15 min.**
- **Refreshing, restful**



Cataplexy

Sleep
and
Insomnia

- **Sudden loss of tone/weakness in muscle or group (rarely full body paralysis)**
- **Triggers: heightened emotion**
- **No loss of consciousness**



Sleep Paralysis, Hallucination



- **Can occur in normal folks**
- **Remain alert with full eye movements and regular breathing**



Narcolepsy: Epidemiology



- **Multiple causes**
- **Familial type: onset in adolescence or young adulthood**



Narcolepsy: Diagnosis

Sleep
and
Insomnia

- **Polysomnography plus patient's report of symptoms- especially excessive daytime sleepiness**



Sleep Apnea



- **Common cause of EDS**
- **May precipitate depression in 20-50%**
- **Apneas last sec-minutes- produce brief arousal**



Sleep Apnea: Diagnosis

Sleep
and
Insomnia

- **Polysomnography: shows 5-10 apneas/hr, decreased sleep and REM latency**



Restless Legs Syndrome

Sleep
and
Insomnia

- **Uncomfortable sensations relieved by movements**
- **Occurs in transition from wake to sleep**
- **Onset: middle age-elderly, more women**
- **Etiology common medication side effects**



Periodic Limb Movements

Sleep
and
Insomnia

- **Brief stereotyped leg movements**
- **During non-REM sleep**
- **Leads to EDS**
- **Onset: mostly after 55**



PLM/ Nocturnal Myoclonus

Sleep
and
Insomnia

- **Etiology: medications, RLS and its causes, sleep apnea**
- **Diagnosis by PSG**



Kleine Levin Syndrome



- **Classic example of a Hypersomnia**
- **Epidemiology: rare; male adolescents**
- **Sleep episodes lasting days-weeks; 3-4 times/yr**
- **Associated with: hyperphagia, hypersexuality, irritable/withdrawn**



Psychophysiological Insomnia



- **Fancy term for poor sleep hygiene**
- **Classically conditioned sleep disorders**
- **Onset often with stressor or disruption to sleep schedule or environment**
- **Sleep onset most affected**
- **Treat with behavior modification**



Circadian Rhythm Disorders

Sleep
and
Insomnia



- **Delayed Sleep Phase Syndrome**
- **Jet Lag**
- **Accelerated Sleep Phase Syndrome**
- **Shift Work Sleep Disorder**



Parasomnias



- **Behavioral abnormalities associated with sleep**
- **Often produce arousals**
- **Often precipitated or worsened by sleep deprivation**
- **Kids may have a mixture of them**
- **In adults, may suggest CNS disease or psychiatric diagnosis**



Sleep Terrors

Sleep
and
Insomnia

- **Mostly kids (4-12)**
- **Episodes last up to minutes**
- **Autonomic arousal**
- **No memory of event**
- **Difficult to awaken**
- **Occurs in first few hrs of deep sleep**



Sleep Terrors

Sleep
and
Insomnia

- **A clinical diagnosis**
- **Sleep disruption may precipitate events**
- **Treat with naps, quiet sleep environment, and lots of love**



Sleepwalking

Sleep
and
Insomnia

- **Boys > Girls**
- **Resolves by Puberty**
- **No memory of event in the morning**



REM Sleep Behavior Disorder

Sleep
and
Insomnia

- **Failure of REM suppression of muscle tone leads to...**
- **“Patients acting out their dreams”**
- **Mostly disorganized behaviors: hit something, run, thrash**
- **Easily awakened**
- **Recall acting out their dreams**



REM Sleep Behavior Disorder

Sleep
and
Insomnia

- **Possible association with Alzheimer's Dementia, rebound from medication withdrawals**
- **Diagnosed by PSG showing increased muscle tone during REM**



Eneuresis: Bedwetting



- **Defined by persistence after age 5**



Nightmares



- **During REM sleep**
- **More common in 2nd half of night**
- **Worsened by stress, trauma, sleep deprivation, and various medications**



Stimulus Control - You can do this on your own



- **Go to bed only when sleepy**
- **Use the bed only for sleeping**
- **If unable to sleep, move to another room**
- **Return to bed only when sleepy**
- **Repeat the above as often as necessary**
- **Get up at the same time every morning**
- **Do not nap**



Relaxation training

Sleep
and
Insomnia

- **More effective than no treatment, but not as effective as sleep restriction**
- **More useful with younger compared with older adults**
- **Engage in any activities that you find relaxing shortly before bed or while in bed**
 - **Can include listening to a relaxation tape, soothing music, muscle relaxation exercises, a pleasant image**



**Thank God for sleep!
And, when you cannot sleep,
Still thank him that you live
To lie awake.**

— John Oxenham (1861-1941)

