



Sleep and Dreams: Seminar Notes

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SLEEP and DREAMS

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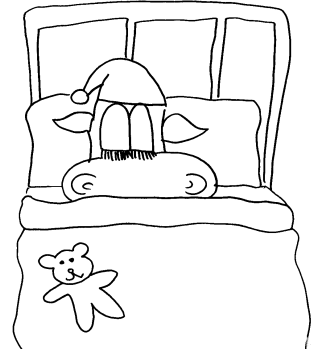
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Sleep and Dreams

We spend about a third of our lives asleep. We dream for about a fifth of the time we are asleep. If we were to live for 75 years, we would have spent about 25 years asleep and about five of those years dreaming.

It is not surprising that good sleep and dreaming are important for our health and well-being.

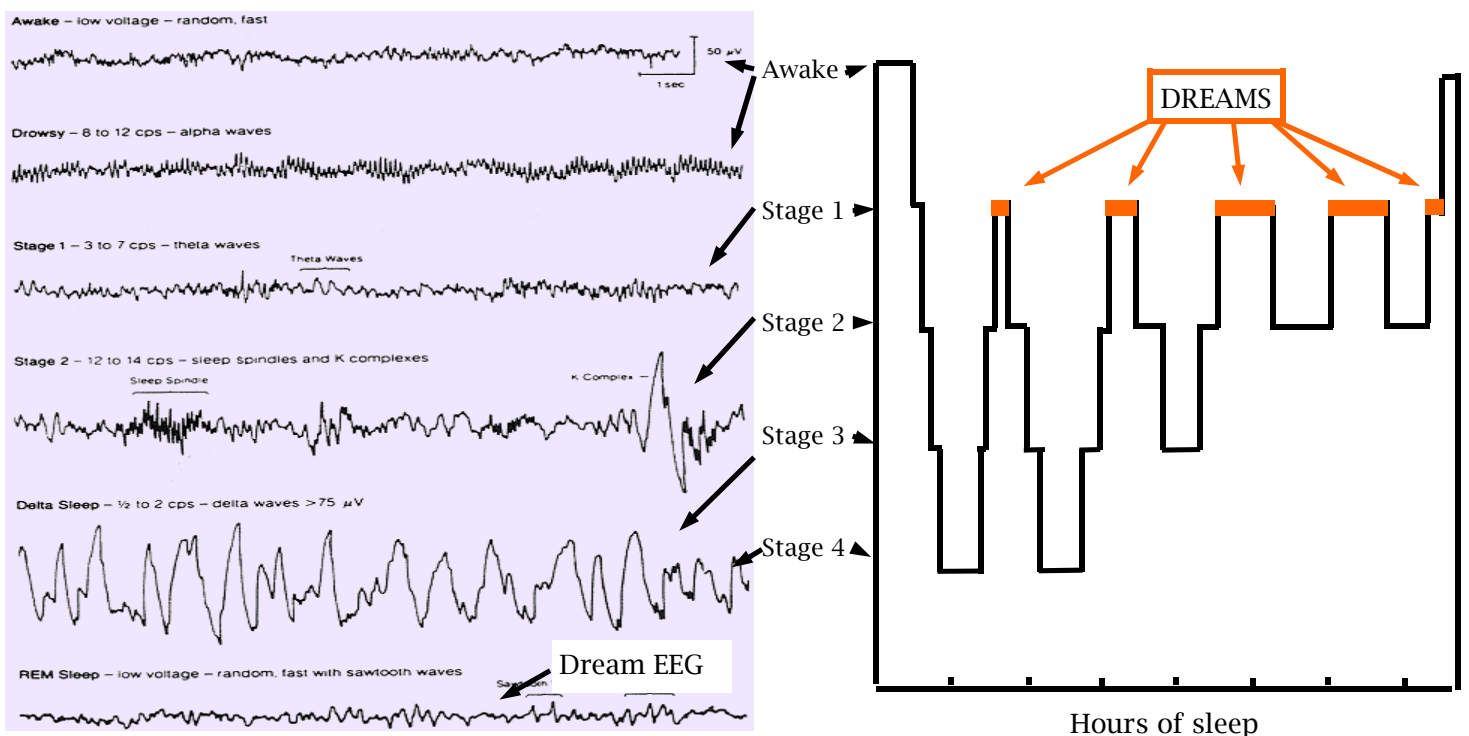
This programme aims to help you to better understand, and improve the quality of, your sleep and dreams.



“Cowtoons” by Kieran Somerville

The Sleep and Dream Cycle

During the night our brain/mind goes through a repeating cycle of distinct physiological and psychological states. These “sleep stages” have special roles in resolving emotions and healing the physical body.



Sleep alternates between two basic states. During Stage 1 Sleep the brain’s electrical activity looks like we are awake and our eyes dart around in so-called “Rapid Eye Movements” or “REMs”. During Stages 2, 3, and 4 Sleep our eyes are generally quiet and our brain’s electrical activity indicates sleep. This type of sleep has been called “No Rapid Eye Movement” or “NREM” sleep.

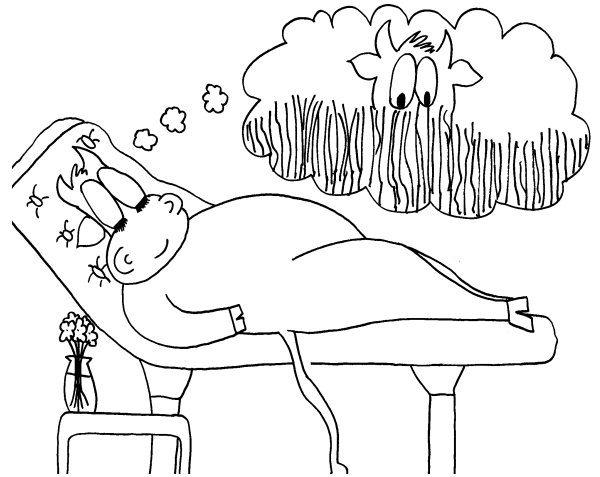
If we wake during REM sleep we are usually dreaming. If we wake during NREM sleep we are usually just “thinking”. It seems that there is always something going on in the mind of a sleeper.

A typical night of sleep begins with about 80 minutes of NREM sleep, followed by a REM/dream period of about ten minutes. This 90 minute NREM-REM cycle is then repeated about 3-6 times during the night. Everybody dreams, but not everybody remembers their dreams.

Dreams become longer and more-dramatic, and are more likely to be aggressive and sexier as the night goes on.

During dreams the brain appears awake on an Electroencephalogram (EEG), and on some measures is more active than when we are awake.

We sleep most when we are young, and need less sleep as we get older.



Our bodies are paralysed while we dream. This is essential to stop us from walking out of our beds while we dream. None-the-less, some twitches and jerking movements in our bodies and our eyes get through the paralysis. These twitches and eye movements tend to mimic and follow the actions occurring in the dream. When your sleeping cat twitches and meows it is probably dreaming that it is chasing a mouse.

It takes about the same amount of time to dream that we are doing something as it takes to actually do that thing while we are awake.

Dreams are not always bizarre, unrealistic and emotional, but these are the kinds of dreams that we are more likely to remember. Dreams are often fairly realistic adventures.

During dreams our speech is usually grammatically correct, but it has been claimed we cannot read properly in a dream. People have told me that even though they cannot actually read the words in front of them in a dream they understand what the words mean. Please let me know what happens the next time you get a chance to read something in a dream.

During a single night our dreams are usually not related to each other like the chapters of a book. However, sometimes common themes and preoccupations can be seen across a series of dreams.

Some more dream and sleep info....

Men often get erections during dreams, but only rarely during NREM sleep, and the dream does not even have to be sexy.

If we are depressed or anxious our dreams will tend to have a depressed or anxious tone. If we are happy our dreams will tend to be happy.

There is no good evidence that we can learn things by listening to audiotapes while we are asleep. However things that we learn during the day may be "consolidated" in memory during sleep.

The emotional tone of a dream can strongly affect how we feel all the next day and things that we think about or that happen to us before we go to sleep can affect the quality of our dreams. An example of this was Mary Shelley writing "Frankenstein" from a dream she had after a dinner discussion with Lord Byron about the scientific demonstration that frogs' legs will twitch when an electrical current is applied to the muscle.

Sleep and dreams are important for both body and mind healing. The Human Growth and Prolactin hormones are produced during sleep. These hormones assist the body to deal with stress and physical injury.

When our bodies are fighting off an infection we tend to sleep more, but our dreams are suppressed.

Scientists speculate that dreams might have evolved to stimulate brain growth, to fine tune the brain's visual system, to process memories, or to resolve emotions. No one knows for sure why we dream.

What is the sleeping mind like? Is it smart or dumb, friendly or sour?

Have you ever set the alarm for say 5am only to wake five minutes before the alarm would have gone off?

When we think about it, this experience demonstrates that the sleeping mind is knowledgeable, rational and cooperative. It must know what we want, be capable of accurately measuring time while we are asleep, and then be willing and able to wake us at the right time.

In fact, the sleeping and dreaming mind is a very intelligent resource that we can draw upon to achieve our goals.

Types of Dream

Lucid dreams - Dreams in which we know that we are dreaming. Can be a powerful healing process. We can learn to be “lucid” in dreams, so that we know we are in a dream and can control what happens.

Dreams of death - Premonitions?

Reminder dreams - Bring to our attention something we have over looked.

Flying dreams - Have you flown like a bird in your dreams?

Falling dreams— Do you always wake before hitting the bottom?

Nightmares and Night terrors— More on these later.

Alien abduction - Dream or reality?

Out of the body experiences and Astral travel - Dreams?

Dream telepathy—Possible?

Hypnagogia—Falling Asleep Dreams

Have you ever thought that you heard someone speak, perhaps call your name, as you were drifting off to sleep? If this has happened to you, then you have caught a little of what goes on as we drift off to sleep.

As we relax before falling asleep the electrical activity in our brains changes from the rapid and chaotic high frequency oscillations of wakefulness, to the steady pulse of the “alpha rhythm”. At this point we are not thinking in words, but are relaxing and letting our minds drift.

As we fall asleep, we lose muscle tone and our eyes roll in large slow movements that are clearly visible under the eyelids. As we enter a very brief period of Stage 1 Sleep we often experience vivid visual images. For about 30 seconds or so we see a number of sometimes bizarre images, like a crocodile wearing a bonnet, or people sitting on a giant donut, which appear one after the other, like images on a poker machine wheel. These quickly settle down and we experience a brief dream, for a minute or so, that is every bit as “dream-like” as any night dream.

Sometimes, people start to notice their hypnagogic dreams and, not knowing that such experiences are completely normal, become upset and think that something is wrong with them.

Dreams and other altered states of consciousness at sleep onset have been recorded in Western literature for 2,500 years and in Eastern writings for a considerably longer time.

In a Hindu holy text, Shiva says to Devi:

"At the point of sleep when sleep has not yet come and external wakefulness vanishes, at this point being is revealed".

From the Sochanda & Malini Vigaya Tantras (circa 2,500 B.C.).

The imagery and dreams that occur as we fall asleep can involve all our senses, and are often hallucinatory (we think that they are really happening) and are beyond our conscious control. Similar phenomena labelled "hypnapompic imagery" occur as we wake-up.

While falling asleep people sometimes feel as if they are "falling", so that they wake up with a start. This is sometimes like dreaming that we are falling, and sometimes it is just the bodily feeling of falling. Even though we tend to remember these experiences they rarely occur during scientific sleep studies (less than 1% of experimental trials).

Sudden muscle contractions can accompany vivid visual imagery at sleep onset. These are normal events, although they tend to occur more frequently when we are stressed or our sleep patterns are disturbed.

Paralysis at sleep onset can occur in normal people as the brain makes the "switch" from daytime to nighttime functioning.

Hypnagogic dreams have been used creatively by scientists and artists.

Kekule discovered the structure of the benzene molecule after a hypnagogic dream of atom characters holding hands and dancing in a circle.

Enid Blyton described how she simply wrote down the "Noddy" books from sleep onset dreams. The creators of the film "Picnic at Hanging Rock" described how they conceived the story entirely at sleep onset.

With practice, you can learn to use your sleep onset dreams creatively, to solve problems or come up with new ideas.

Catching Your Dreams

Night Dreams

Have you ever awakened from a dream that was so vivid you were sure you could not forget it, only to have it disappear from memory a few minutes later?

To remember night dreams say them out loud or write them down when you wake. This will consolidate the memory in a part of the mind that you can access while awake. If you wish to recall your dreams, it is a good idea to just before going to sleep ask the “dreaming mind” to help you remember your dreams.

Sleep Onset Hypnagogic Dreams

The easiest way to explore your sleep onset hypnagogic dreams is to have a friend help you. Ask your friend to gently ask you what is going through your mind when they see your head nodding and your eyes closing as you drift near to sleep.

Expect that your dream will instantly disappear the first time your friend asks you what is going through your mind. However, if you persevere you will find that you will be able to recall your dreams in detail.

Make sure that you have the permission of anyone that you might question in this way before you interrupt their reverie with your questions.

It is a bit difficult to catch these dreams yourself because when they occur you are well on your way to falling asleep. One method is to lie down with your leg bent so your knee is in the air. As you fall asleep and lose muscle tone your knee will drop waking you to hopefully catch your dream.

Things that can Disrupt the Sleep/Dream Cycle

There are a number of factors that can disrupt the normal sleep/dream cycle. These disruptions can have profound effects on emotional and physical health.

Heat—If you sweat during the night you might be sleeping too hot, and this can especially disrupt deep sleep. If you like sleeping with a lot of blankets and a doona your “internal thermostat” might be set too high. By gradually reducing the number of blanket you use you can reset your thermostat to a healthier level.

Noise- Excessive background noise can disrupt the sleep cycle even if we are not aware that noise is disturbing our sleep.

Alcohol- Alcohol tends to take the colour out of dreams, has a depressant effect on the nervous system, and disrupts the normal sleep cycle.

Drugs- Cannabis tends to suppress dreams. When long-term users attempt to give up cannabis they can experience disturbingly vivid dreams that wake them up a number of times during the night. This experience can work against heavy users cutting back on their smoking. Coffee is a potent anxiety causing drug.

Medications- Certain prescription and non-prescription medications can disrupt the sleep cycle or cause excessive drowsiness during the day. Check the precautions on the label if this is happening to you.

Anxiety- Anxiety is a natural emotion that warns us of danger. The thoughts and physiological arousal that go with chronic anxiety can make it very difficult to get off to sleep.



Depression- Depression can disrupt the sleep dream cycle in different ways, either by making it difficult to sleep during the night, or making it hard to stay awake during the day. Addressing the causes of the depression can help correct the sleep cycle disturbance.

Trauma- Recurring memories of bad things that happened in the past can cause high levels of stress and physiological arousal which profoundly disrupt sleep and effect our physical and emotional health in many ways.

Nightmares related to the traumatic incident are particularly distressing for the dreamer. Nightmares can usually be effectively relieved with psychological techniques. Ask Wayne for more details if you are interested.

Illness and Pain— Anyone who has tried to sleep with an injury like a very sore shoulder or back knows that pain can make it hard to sleep soundly.

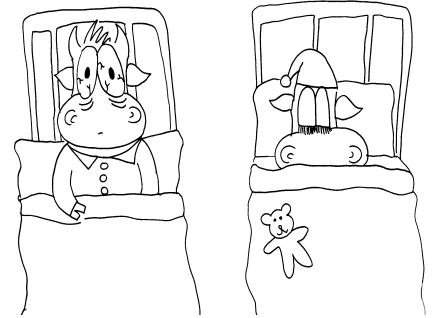
Shift Work- Shift workers know that working through the night might leave you very tired, but does not guarantee that you will be able to sleep during the day. Such difficulties are due to disruptions to the natural circadian rhythm.

International airline flights- Long flights across time zones can cause the well-known “jetlag” syndrome.

Common Sleep/Dream Problems

Insomnia

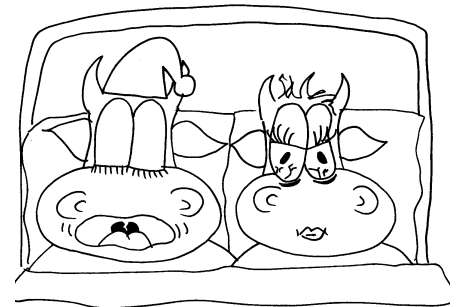
Can be caused by such medical conditions as arthritis, endocrine disturbances; the use of certain chemical substances (eg respiratory stimulants) or by the withdrawal from others (including alcohol); by psychological problems such as anxiety and depression; and by disturbances in biorhythm (jet lag).



Insomnia is very common. Surveys indicate that between 20 and 33 percent of the population complain of difficulty with sleep. Women, the elderly, and shift workers report higher than average rates of insomnia. Rates of insomnia increase from about 25% of people at age 30 to over 50% at age 70. Aged people are particularly susceptible to awakening during the night and being unable to return to sleep.

Sleep Apnea

Sleep Apnea is a potentially serious disorder in which the sleeper stops breathing during sleep, and then has to wake gasping for air. It is most common in men and is strongly associated with snoring, being overweight, and alcohol use. Apnea is becoming more common in children.



LIVING WITH A SNORER

In snorers, due to altered anatomy, upper airway resistance can increase to ten times waking values. In some people, this blocks their breathing completely. Apnea has important implications for cardiovascular health.

If your sleeping partner says that you snore heavily, and sometimes stop breathing while you are asleep, medical assessment could be a good idea. The testing is covered by Medicare with a referral from your GP, and requires an overnight stay at a sleep clinic in Lismore. The procedures are not invasive, and involve the monitoring of your sleep stages, breathing and muscle movements during the night.

I know men who did not know that they snored or gasped for breath during the night who were found to be waking up to 200 times every night. Sleep apnea is very treatable without medications by using a positive pressure air mask. The dramatic improvements in emotional and physical health more than make up for any minor inconvenience in using the mask.

Restless legs

This condition is characterized by an irritating sensation of uneasiness, tiredness, and itching deep within the muscles of the leg, sometimes accompanied by twitching and pain. Relief is achieved by walking or moving the legs. The cause is unknown.

Night terror

A person suffering a night terror wakes suddenly, usually with a panicky scream, in the state of intense anxiety, confusion, agitation and disorientation. Night terrors occur during Stage 3 and Stage 4 sleep and not during dreams. They are most common in children, especially boys and can be associated with medication use or stress.

The sufferer is usually either amnesic for the event or has a vague memory of terror, impending death, or burial. Sleep terrors may overlap with sleepwalking, in which case walking or running occur in conjunction with shouting, jumping and flailing about. Milder episodes, or confusional arousals, may be accompanied only by moaning, muttering, and/or thrashing.

Nightmares

Disturbing dreams are not necessarily a bad sign. They can indicate that our dreaming mind is working to solve some problem or issue in our lives. However repetitive nightmares that keep going over and over the same old ground suggest that the natural healing process is stalled. There are psychological techniques that can be used to relieve such repetitive nightmares. If you suffer such nightmares see Wayne for more information.

REM Behavior Disorder

In this condition, the normal sleep paralysis does not operate during dreams and the dreamer's body acts out the dream action. Very disruptive, as you can well imagine.

Narcolepsy

Persons with narcolepsy suffer sudden sleep attacks in which they experience an uncontrollable desire to sleep, sometimes many times in one day. Episodes may last from a few minutes to several hours. The condition is thought to afflict 1 person in 10,000. It typically begins in adolescence.

"Monday Morning Blues"

If a person sleeps late on Saturday morning their internal circadian clock can be disrupted by about one hour. If the process is repeated on Sunday morning, when the alarm clock rings at 6 a.m. on Monday morning the body's clock is 2 hours behind and one has to struggle to get out of bed because the body feels like it is really 4 am.

Sleepwalking

Sleepwalking is more common in children than in adults. It is most likely to occur during the first third of the night, particularly during the first NREM period.

The sleepwalker typically sits up in bed or stands and walks aimlessly with purposeless and clumsy movements. The eyes are open but glassy and "unseeing". The sleepwalker might dress or undress, fumble with objects, mumble or moan, and walk to different rooms or even outside the house, and usually does not respond to another's voice but often can be led back to bed.

Sleepwalkers can usually avoid objects, but they may be injured by falling or by touching hot objects. There is usually no recall or only fragmentary, dreamlike recollections of the events. Episodes last from 15 seconds to 30 minutes.

Some Tips for Better Sleep

- ◇ Use your bed only for sleeping and making love.
- ◇ Bed is not for worrying or thinking about problems.
- ◇ Do your worrying in the daytime, or make an appointment with yourself to worry the problem to death at a set time in the future
- ◇ If you can not sleep, get out of bed and use the time productively.
- ◇ Expect a period of drowsiness every 90 minutes or so.
- ◇ When drowsy just think about something pleasant.
- ◇ You cannot get to sleep by “trying”.
- ◇ Use relaxation breaks during the day to make up for lost sleep.
- ◇ Reduce alcohol and avoid caffeine altogether at night.
- ◇ Readjust your internal thermostat and sleep cooler.
- ◇ Do not watch the evening news or violent action movies before bed.
- ◇ Check your medications and question your doctor.

Some books suggest that there is a simple “key” for interpreting the “symbols” and meanings in dreams. When it comes to dreams, one size does not fit all, and it is better to explore what your dreams mean to you rather than use someone else’s ideas.

The following procedure derives from Carl Jung’s method for interpreting dreams. This process can help draw out the personal meaning of your dream.

A Dream Analysis Procedure

1) Keep a pencil and notepad next your bed to write down any dream that you catch during the night, or say the dream out loud so you do not forget it.

2) Before sleep, request of the "dreaming self" the kind of dream you would like to have. You might ask for a dream about a problem, or a solution, or perhaps just a creative idea. Any dreams that you recall after making such a request will be significant, no matter how bizarre they may seem at first.

3) To define the dream pattern, retell the dream in the third person (as if dream is about someone else). Ask yourself how "the dreamer" feels, or what is the general mood or feeling of the dream. Reflect on what the dreamer is doing and feeling. Ask yourself if there is any relationship between these feelings and any that you may be experiencing in your waking life. Trust your intuition and take heed of the first thoughts that come to your mind.

4) Find the focal point of the dream by starting with that part which interests you the most or which seems most mysterious, interesting, incongruous, or nonsensical.

5) Define every “symbol” by giving an objective “dictionary” definition for each dream element. Then, for each definition, ask yourself "what does this remind me of? What could it represent?" Pay close attention to the first thoughts that come into your mind. Your intuitive association will give the key to understanding the dream meaning. When numbers are reported they should be regarded as significant.

6) Once the dream elements are clear, go through the dream step by step substituting meaning to the symbols. This will make the dream story clearer. In this way, arrive at the dream message. Verbalize the message so that it can be acted upon in your waking life.

7) It is often useful to work out a solution within the dream then apply it to your waking life. Look at what the dreamer could do differently. Generate new alternatives and new endings for the dream. Ask yourself "how can I use this understanding?", "how could I apply this?".

Knowing When to Take a Break Using The Basic Rest/Activity Cycle

The biological process that powers the recurring Sleep/Dream cycle also operates throughout the day. Psychologists have discovered that every 90 to 120 minutes during the day we enter a 20-minute period during which the mind and body seek a break from activity to reduce stress and "recharge the batteries". These recurring periods of reduced energy are ideal for practising relaxation or for countering the effects of a disturbed night's sleep.

If you take a break during the appropriate part of the Basic Rest/Activity Cycle (BRAC) you will relax deeply and, in about 20 minutes, you will feel refreshed and able to think and perform well for the next 90 to 120 minutes.

Everyone knows about the after-lunch low energy period, and in many cultures this signals siesta time. Many people take a brief "nap" at this time and awaken refreshed. In our society we have unintentionally structured the usual timing of lunch and tea breaks to match the Basic Rest/Activity Cycle.

Although many people see out this 20-minute opportunity for natural stress reduction and healing by drinking tea or coffee, or smoking cigarettes, we can learn to use nature's cycle of rejuvenation and renewal.

Recognising the Signals for a Break

The early signs that you are becoming ready to take a break include:

- * wanting to stretch or loosen up your muscles
- * yawning, sighing or taking deep breaths
- * noticing your body becoming quiet, still, and relaxed
- * feeling a desire for a snack or drink
- * daydreaming
- * diminished concentration and wandering thoughts
- * feeling tiredness and discomfort in your muscles
- * realising your performance is slowing down
- * staring vacantly into space
- * slower reflexes, clumsiness
- * a growling stomach, hunger pangs.
- * needing to use the toilet
- * lapses of hearing or tuning out of the outside world

The signals for a break can be subtle and are easily drowned out by the pressing needs of the outer world, or by using coffee or cigarettes. If you recognise and respond to these signals by taking a break, you will find that your relaxation will become deeper and more satisfying and your sleep will improve.

Entering the Natural Relaxation Break.

Find a quiet place. Ideally, lie down or sit in a comfortable chair. Even a brief walk or a change to a more relaxing activity will help.

Unfortunately many of us have grown up with negative attitudes towards relaxing or napping during the day. However, many people who say that they cannot find time to care for themselves already take breaks to drink tea, eat or smoke cigarettes.

You can use any type of relaxation, meditation or good thought that you like. Or simply close your eyes, attend to your breathing and allow the comfort to spread throughout your body. Enjoying the natural rest periods during the day will improve your mind/body health.

As you prepare for the relaxation break you will find yourself taking a deeper breath and comfortably yawning. Deeper breaths are a sign of your body shifting into a more relaxed mode. Simply enjoy the deepening comfort. There is no need to do anything or pay any special attention to things. There is no right or wrong method. You simply allow your mind-body to take a break in your own way.

When the time is right, in about 15 to 20 minutes, you will find yourself smoothly coming back to your usual waking state of mind. Notice how comfortable and well you feel. This is the signal that restoration and healing have taken place and your energy is recharged.

You will awaken with improved concentration and thinking abilities. You may now know how to deal with a problem or solve some task that was previously difficult.

While the Healing Break usually takes about twenty minutes, its length will vary widely among different people, or for the same person at different times.

You may find in the early stages of your learning this new routine that your breaks last for more than 20 minutes and sometimes progress into a deeper sleep. This is normal for people who have a sleep deficit or who have been under stress. Within a week or two your breaks will become regular, shorter and more satisfying.