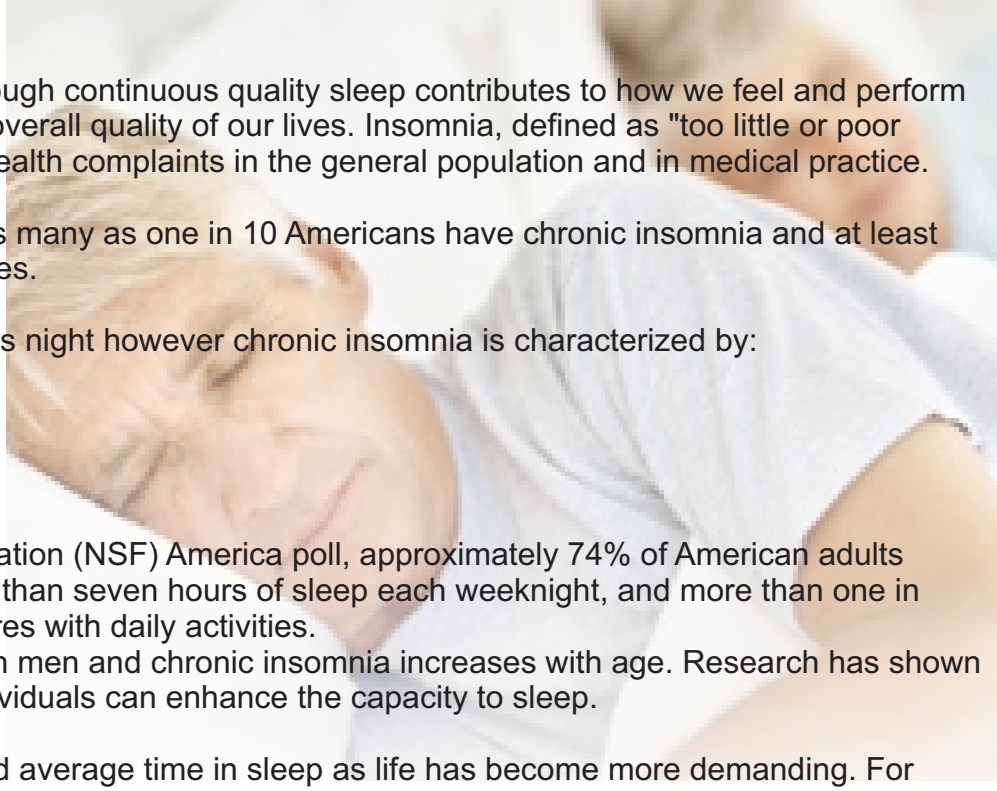
Insomnia



Sleep is a basic necessity of life. Getting enough continuous quality sleep contributes to how we feel and perform the next day, and has a huge impact on the overall quality of our lives. Insomnia, defined as "too little or poor quality sleep", is one of the most prevalent health complaints in the general population and in medical practice.

According to studies from the Mayo Clinic, as many as one in 10 Americans have chronic insomnia and at least one in four has difficulty in sleeping sometimes.

Nearly everyone has the occasional sleepless night however chronic insomnia is characterized by:

Having problems falling asleep
Waking up during the night
Waking up too early
Daytime fatigue or sleepiness
According to the 2002 National Sleep Foundation (NSF) America poll, approximately 74% of American adults experience sleeping problems, 39% get less than seven hours of sleep each weeknight, and more than one in three (37%) are sleepy enough that it interferes with daily activities.
Women report insomnia more frequently than men and chronic insomnia increases with age. Research has shown that special sounds and noises heard by individuals can enhance the capacity to sleep.

In the past century, there has been a reduced average time in sleep as life has become more demanding. For example, employees experience extended working hours in the evening, longer working hours, 20–25 percent of the Americans are shift workers, and people commute long distances to and from work.

Though our society has changed the way we live, our brains and bodies still demand the usual sleep time to function without fatigue. Dr. R. H. Carmona, at the March 2004 National Health Medicine conference in Bethesda, M.D. stated "Sleep science is some of the most important work in medicine today; however, it is some of the least understood and least appreciated." Further to this, he stated that seventy million Americans may be affected at an annual cost of $15 billion in healthcare expenses and $50 billion in lost work productivity.

What Causes Insomnia?

Stress
Concerns about work, school, health or family can keep the mind too active, making you unable to relax.

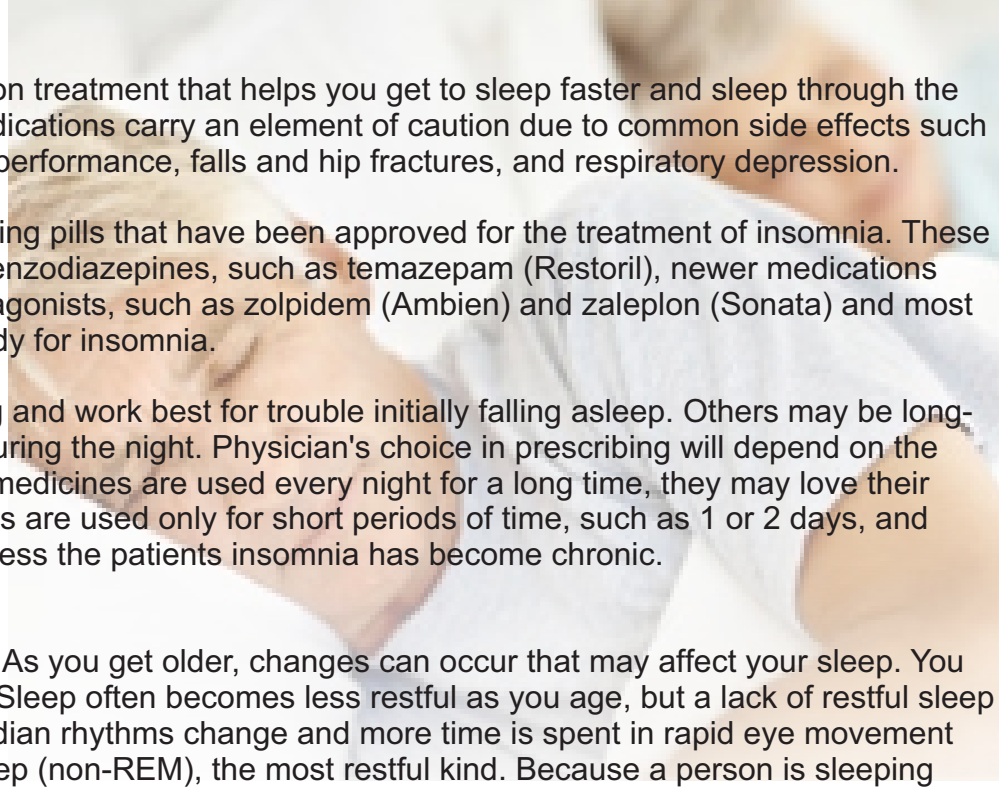
Stimulants
Prescription drugs, including some antidepressants, high blood pressure and corticosteroid medications can interfere with sleep. Many over-the-counter medications such as decongestants and weight loss products containing caffeine and other stimulants that causes insomnia. Antihistamines may initially make one groggy but they can worsen urinary problems, causing a person to get up more during the night.

Change in Environment or Work Schedule
Travel, working late or early shifts can disrupt the body's circadian rhythms, making a person unable to get to sleep. The word – circadian – comes from two Latin words, “circa for about" and "dia for day". Circadian rhythms act as internal clocks guiding such things as ones wake-sleep cycle, metabolism and body temperature.

As we sleep we pass through different states and stages of sleep - more likely to be experienced with continuous sleep. The normal sleep cycle consists of two different kinds of sleep – REM (rapid eye movement or dreaming sleep) and non-REM (quiet sleep). Everyone has about four or five cycles of REM and non-REM sleep a night .

Both states are important to experiencing quality sleep. For older persons, the amount of time spent in the deepest stages of non-REM sleep decreases. This may explain why older people are thought of as light sleepers.

Circadian Rhythm Disorders
A complex biological "clock" in humans, sometimes breaks down. In delayed sleep phase syndrome, the "clock" runs later than normal. The sufferer often cannot fall asleep before 3 or 4 am and cannot "wake" before noon. In advanced sleep phase syndrome, a person falls asleep early, for example at 7 or 8 pm and wakes at 3 or 4 am, and is unable to fall back asleep.



Long-Term Use of Sleep Medications

While the use of sleep medicines is a common treatment that helps you get to sleep faster and sleep through the night, it is not a cure for insomnia. Sleep medications carry an element of caution due to common side effects such as daytime sedation, impaired psychomotor performance, falls and hip fractures, and respiratory depression.

There are several types of prescription sleeping pills that have been approved for the treatment of insomnia. These include medications in the class known as benzodiazepines, such as temazepam (Restoril), newer medications that are known as benzodiazepine receptor agonists, such as zolpidem (Ambien) and zaleplon (Sonata) and most recently Ramelteon is being used as a remedy for insomnia.

Some prescription drugs may be short-acting and work best for trouble initially falling asleep. Others may be long-acting and work best for maintaining sleep during the night. Physician's choice in prescribing will depend on the patient's symptoms. In general, when sleep medicines are used every night for a long time, they may love their effectiveness. In most cases, sleep medicines are used only for short periods of time, such as 1 or 2 days, and generally for no longer than 1 or 2 weeks unless the patients insomnia has become chronic.

Aging

Insomnia becomes more prevalent with age. As you get older, changes can occur that may affect your sleep. You may experience a change in sleep patterns. Sleep often becomes less restful as you age, but a lack of restful sleep is not a normal consequence of aging. Circadian rhythms change and more time is spent in rapid eye movement (REM) sleep and less time in quiet, deep sleep (non-REM), the most restful kind. Because a person is sleeping more lightly, there is greater tendency to wake up. This may explain why older people are thought of as light sleepers. With age, your internal clock often advances, which means you get tired earlier in the evening and consequently wake up earlier in the morning .

A change in activity – As one grows older an individual may be less physically or socially active. Activity helps promote a good night's sleep. You may also have more free time and, because of this, drink more caffeine, alcohol or take a daily nap. These can also interfere with sleep at night.

A change in health – The chronic pain of conditions such as arthritis, back problems, fibromyalgia as well as depression, anxiety and stress can interfere with sleep. Older men often develop non-cancerous enlargement of the prostate gland (benign prostatic hyperplasia), which can cause the need to urinate frequently, interrupting sleep.

In women, hot flashes and night sweats that accompany menopause can be equally disruptive. Other sleep-related disorders, such as sleep apnea and restless legs syndrome, also become more common with age.

Sleep apnea causes you to stop breathing periodically throughout the night and then awaken. Consult your doctor for treatment regarding this disorder. Restless legs syndrome causes unpleasant sensations in your legs and an almost irresistible desire to move them, which may prevent you from falling asleep.

Prescription Medication

Antidepressants

Lexapro, Zoloft, Prozac, and Paxil

High Blood Pressure

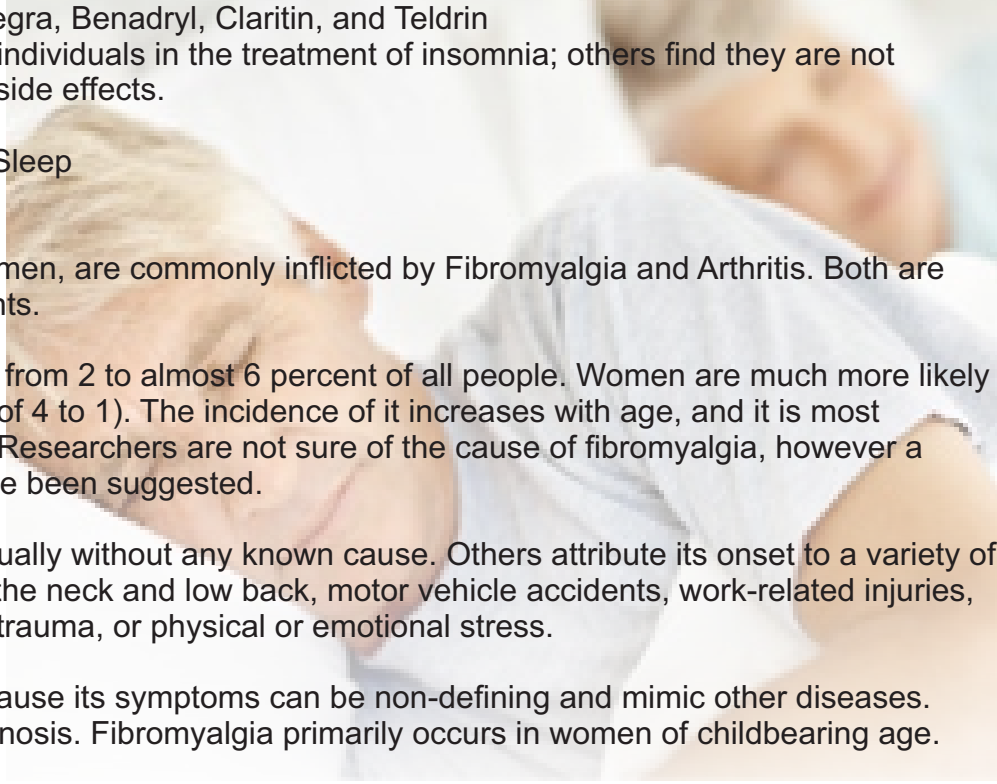
Aldactone, Spirolactone, and Lopressor

Corticosteroid

Prednisone is commonly used for Arthritis, Ulcerative Colits, Crohn's colitis, and Lupus It is not advisable to stop taking prescribed medication that causes insomnia as a side effect instead it is advisable to find ways to relax while continuing the medication. Research has shown that special sounds and noises heard by individuals can enhance the capacity to sleep.

Over-the-Counter Medication

Decongestants



Sudafed, Otrivin, Dristan. Antihistamines: Allegra, Benadryl, Claritin, and Teldrin
Sedating antihistamines are useful for some individuals in the treatment of insomnia; others find they are not effective, and are associated with unwanted side effects.

Chronic Pain Conditions That Interfere With Sleep

Fibromyalgia and Arthritis
Middle aged and older people, especially women, are commonly inflicted by Fibromyalgia and Arthritis. Both are inflammatory type diseases triggering the joints.

Fibromyalgia is a common disease, affecting from 2 to almost 6 percent of all people. Women are much more likely to develop fibromyalgia than men (by a ratio of 4 to 1). The incidence of it increases with age, and it is most common in women 50 years of age or older. Researchers are not sure of the cause of fibromyalgia, however a number of potentially responsible factors have been suggested.

For many people fibromyalgia develops gradually without any known cause. Others attribute its onset to a variety of triggers including problems with the joints in the neck and low back, motor vehicle accidents, work-related injuries, viral illnesses, surgery, infections, emotional trauma, or physical or emotional stress.

Fibromyalgia can be difficult to diagnose because its symptoms can be non-defining and mimic other diseases. Patients must persist in getting a proper diagnosis. Fibromyalgia primarily occurs in women of childbearing age.

Children, the elderly, and men can also be affected. Non-restorative sleep is a major symptom; those affected sleep, but lightly and do not feel rested. Besides the defining symptoms of pain, muscle fatigue and tenderness there are other non-defining symptoms associated with fibromyalgia.

This list is not exhaustive and includes stiffness especially in the morning, and pain (tender points) in muscles and joints all over the body, trouble sleeping at night and a feeling of being very tired all the time.

Numbness in muscles and joints on the body suffer from memory and concentration. Other warning signs may include depression, tension and migraine headaches, and pain in the jaw.

More Information About Arthritis
When referring to Arthritis in this document, reference is made to Osteoarthritis (not to confuse this with Rheumatoid Arthritis).

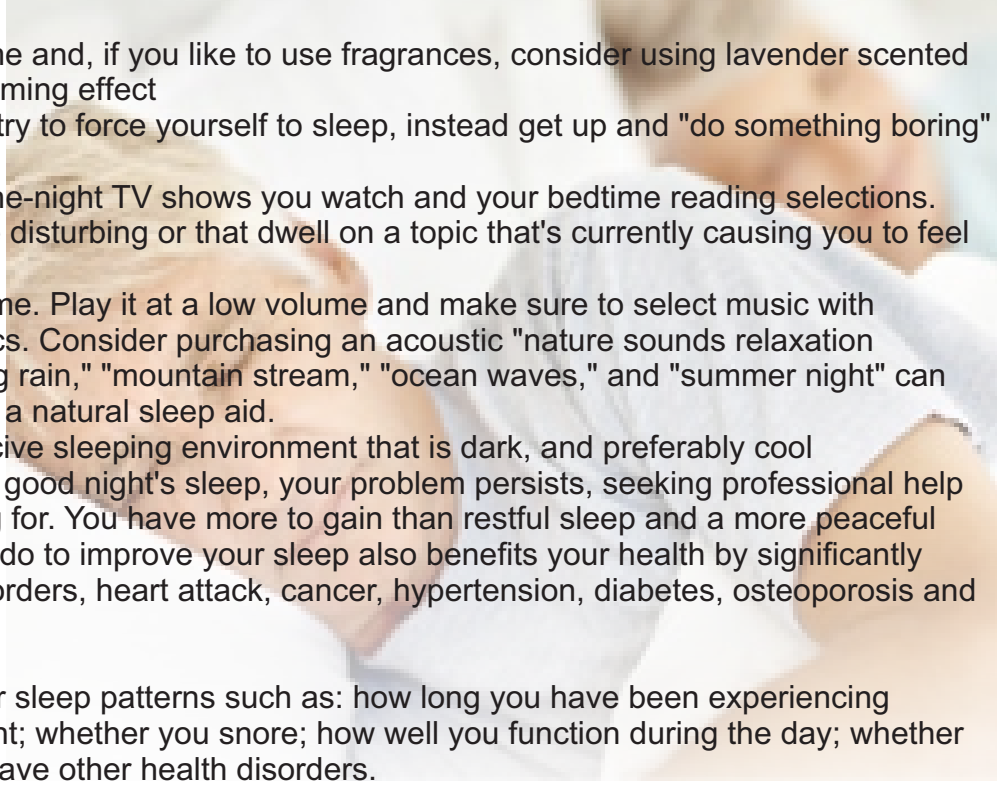
Osteoarthritis is an inflammatory disease that causes the breakdown of joint tissue, leading to joint pain and stiffness. It can affect any joint, but commonly occurs in the hips, knees, feet and spine. It also may affect some finger joints, the joint at the base of the thumb and the joint at the base of the big toe. It rarely affects the wrists, elbows, shoulders, ankles or jaw, except as a result of injury or unusual stress. Inflammation, swelling, and, most importantly, pain are hallmarks of arthritis.

Osteoarthritis is one of the oldest and most common diseases in humans. It probably affects almost every person over age 60 years to some degree, but only some have it badly enough to notice any symptoms. Although there is no cure for osteoarthritis, proper treatment can help relieve the symptoms and prevent or correct serious joint problems.

What Should I Do If I Have Insomnia?

If insomnia is caused by a short-term change in the sleep/wake schedule, as with jet lag, an individual's sleep schedule may return to normal on its own. Consider a daily routine to include the following:

Follow a regular schedule--go to sleep and get up at the same time each day
Avoid taking cat-naps during the day
Exercise at regular times each day. Moderate physical activity 2 to 4 hours before bedtime may improve your sleep
Adjust your internal sleep clock, by getting some exposure to the natural light in the afternoon
Eat smart, avoid heavy dinners, and do not eat too close to bedtime
Refrain from stimulants: drinking alcohol, smoking, and drinking caffeinated beverages late in the day
Do something pleasurable before bedtime to help you unwind and get your mind off the day's responsibilities and



nagging concerns
Take a relaxing shower or bath before bedtime and, if you like to use fragrances, consider using lavender scented body soaps, lotions or oils for its naturally calming effect
Go to bed when you're actually tired. Do not try to force yourself to sleep, instead get up and "do something boring" then head back to bed.
Be especially thoughtful about what end-of-the-night TV shows you watch and your bedtime reading selections. Avoid content that focuses on issues that are disturbing or that dwell on a topic that's currently causing you to feel concerned, worried, threatened, or afraid.
Listen to music you especially enjoy at bedtime. Play it at a low volume and make sure to select music with especially soothing rhythms and calming lyrics. Consider purchasing an acoustic "nature sounds relaxation machine. Settings for such sounds as "Spring rain," "mountain stream," "ocean waves," and "summer night" can help relieve end-of-the-day stress and act as a natural sleep aid.
Create a safe, comfortable and sleep-conducive sleeping environment that is dark, and preferably cool
If, despite your efforts to "set the stage" for a good night's sleep, your problem persists, seeking professional help may provide you with the relief you're looking for. You have more to gain than restful sleep and a more peaceful emotional state. Virtually everything you can do to improve your sleep also benefits your health by significantly reducing your risk of depression, anxiety disorders, heart attack, cancer, hypertension, diabetes, osteoporosis and similar ailments and diseases.
How Will Sleep Experts Treat My Insomnia?
Your physician may ask questions about your sleep patterns such as: how long you have been experiencing symptoms and whether they occur every night; whether you snore; how well you function during the day; whether you take any medications and whether you have other health disorders.

It is helpful if you use a sleep diary to record your sleep patterns and the amount of sleep you get so that you and your doctor can pinpoint any causes of poor sleep. The National Sleep Foundation has published a sleep quiz that might assist you in determining your sleep patterns.

Sleep experts may treat chronic insomnia in the following manner:

Finding and treating any medical conditions or mental health problems.
Looking for routines or behaviors that may lead to the insomnia
Possibly using sleeping pills, although controversy surrounds the long-term use of sleeping pills; always talk to your doctor about the risks and side-effects
Try one or more methods to improve sleep, such as relaxation therapy, sleep restriction therapy, reconditioning, and meditation and relaxation therapy.
Relaxation Therapy – This type of therapy aims to reduce stress and body tension. As a result, your mind is able to stop "racing," the muscles can relax, and restful sleep can occur. The goal of such treatments is to assist the insomnia sufferer in gaining sufficient relaxation skills in order to reduce anxiety and tension at bedtime to be able to fall asleep.

Sleep Restriction – Some individuals suffering from insomnia spend too much time in bed trying to fall asleep. They may be helped by a sleep restriction program under the guidance of their doctor. The goal is to sleep continuously and get out of bed at the desired wake time. This treatment involves, for example, going to bed later or getting up earlier and slowly increasing the amount of time in bed until the person is able to sleep normally throughout the night.

Reconditioning – This means using your bed only at bedtime when sleepy or for sex. Avoid other activities in your bed, such as reading or watching TV. The goal here is that your body over time will relate bed and bedtime with sleep.

Meditation and Relaxation Therapy – Recent research by Dr. Gregg Jacobs at Harvard Medical School on the effects of meditation-based relaxation techniques has demonstrated the link between meditation and brain wave activity.

These findings suggest that people suffering from insomnia will find it easier to get to sleep if they practice meditation at bedtime or after awakening during the night. Dr Greggs has said that "75% of long-term insomniacs who have been trained in relaxation and meditation can fall asleep within 20 minutes of going to bed". The use of these techniques for insomnia is based on the fact that individuals who suffer from insomnia exhibit elevated brain arousal that is associated with excessive mental activity during the night. This is often described by insomniacs as

"racing thoughts".

Researchers have consistently documented this excessive mental arousal as measured by increased fast brain wave patterns called beta activity. Beta activity, an alertness brain wave, is elevated both at sleep - onset and during the night, particularly in dream sleep, in insomniacs.

This may explain why insomniacs overestimate how long they are awake during the night, since beta activity, may alter the usual sense of time. As a result of these findings, insomnia is now conceptualized as a disorder of excessive brain arousal and interventions are now designed to reduce this excessive arousal.

In a study by Dr. Jacobs and Dr. Friedman, after a six week practice, found meditation-based relaxation techniques produced greater reductions in brain arousal. The findings suggest that insomniacs can reduce elevated brain arousal by practicing meditation or relaxation techniques at bedtime or after awakening during the night. By quieting the "racing mind" and excessive mental activity during the night, insomniacs will find it easier to fall asleep at bedtime or during the night.

Treatment for Fibromyalgia
A person with this diagnosis requires a variety of treatments that include: aerobic exercise such as swimming and walking, heat and massage. According to the Arthritis Society, patients with fibromyalgia may benefit from a combination of exercise, physical therapy and relaxation.

Physicians may prescribe a variety of fibromyalgia medication including: antidepressants, muscle relaxants, analgesic painkillers, nonsteroidal anti-inflammatory drugs (NSAIDs), sedatives, other medications that elevate mood, ease pain, relax muscles, promote sleep and fight off fatigue. An individual suffering with fibromyalgia needs a good relationship with a Rheumatologist (a doctor who has received special training in the diagnosis and treatment of problems with muscles, joints and bones) or Doctor, a good understanding of meditation and relaxation techniques and a physical therapy regimen to follow.

Treatment for Arthritis
A cornerstone of therapy of any form of arthritis is physical therapy and occupational therapy to maintain joint mobility and range of motion. The proper kind and amount of this therapy will vary depending upon the underlying cause and upon individual factors that your physician will discuss with you.

Many drugs are now used to treat the inflammation and pain associated with arthritis. Aspirin and other nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen (Motrin, and others), naproxen (Naprosyn, and others) and dicolfenac (Voltaren), have immediate analgesic and anti-inflammatory effects and are relatively safe.

Aspirin in high doses is as effective as any other NSAIDs and much less expensive, but some patients cannot tolerate the gastrointestinal toxicity. Aspirin interferes with platelet function and can in rare circumstances cause serious bleeding; this effect can persist for four to seven days after the drug has been discontinued.

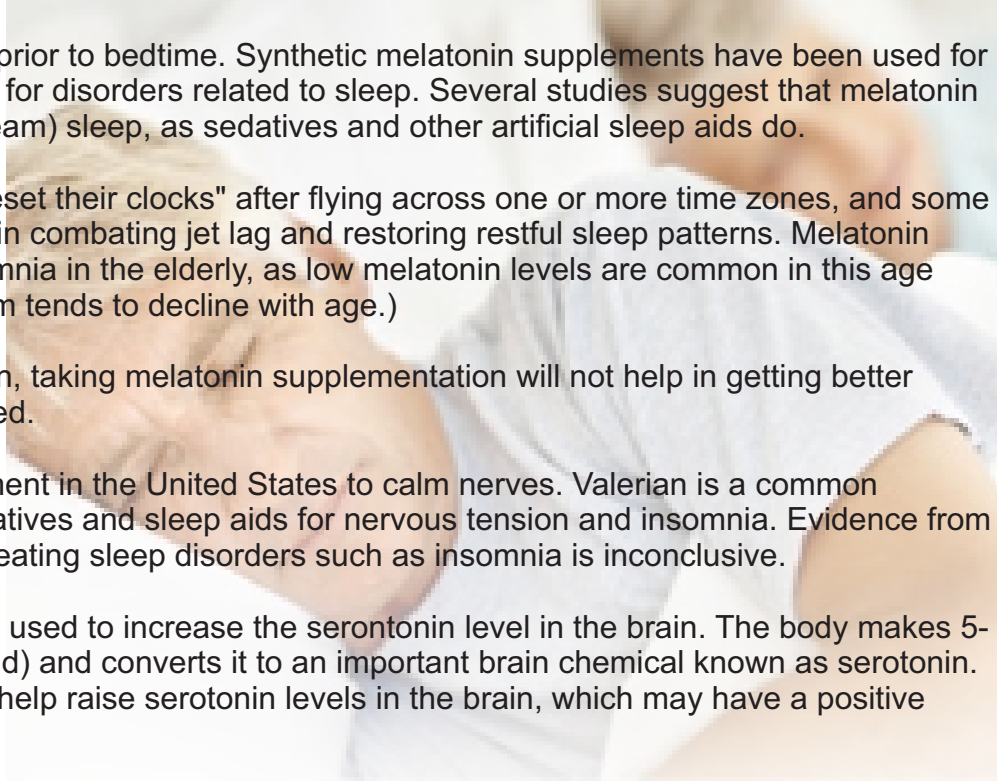
Tinnitus (ringing in the ears) and rarely, hepatitis (liver inflammation) or renal (kidney) damage can also occur with high-dosage aspirin therapy.

To summarize while the use of sleep medicines is a common treatment, it is not a cure for insomnia. Sleep medications can be dangerous when treating sleep disruption that may arise from another disorder, such as a sleep-related breathing disorder. Insomnia needs to be properly diagnosed and treatment options discussed with a healthcare professional before treatment with medications is undertaken.

Alternative Drug Therapies

For Sleep
There are many natural alternatives recently tried to replace the conventional medicines for insomnia. Three touted alternatives include: Melatonin, Valerian and Hydroxytryptophan (5 HTP), can be purchased over the counter and has shown to be effective in treating insomnia.

Melatonin is a hormone produced in the brain by the pineal gland, from the amino acid tryptophan. The synthesis and release of melatonin are stimulated by darkness and suppressed by light, suggesting the involvement of melatonin in circadian rhythm and regulation of diverse body functions.



Levels of melatonin in the blood are highest prior to bedtime. Synthetic melatonin supplements have been used for a variety of medical conditions, most notably for disorders related to sleep. Several studies suggest that melatonin induces sleep without suppressing REM (dream) sleep, as sedatives and other artificial sleep aids do.

Travelers have started using melatonin to "reset their clocks" after flying across one or more time zones, and some studies seem to confirm melatonin's effcacy in combating jet lag and restoring restful sleep patterns. Melatonin appears to be most effective in treating insomnia in the elderly, as low melatonin levels are common in this age group. (The effciency of the melatonin system tends to decline with age.)

If you have normal or high levels of melatonin, taking melatonin supplementation will not help in getting better sleep. Studies of melatonin's safety are limited.

Valerian is an herb sold as a dietary supplement in the United States to calm nerves. Valerian is a common ingredient in products promoted as mild sedatives and sleep aids for nervous tension and insomnia. Evidence from clinical studies of the effcacy of valerian in treating sleep disorders such as insomnia is inconclusive.

Hydroxytryptophan (5-HTP) is an amino acid used to increase the serontonin level in the brain. The body makes 5-HTP from tryptophan (an essential amino acid) and converts it to an important brain chemical known as serotonin. Tryptophan and 5-HTP dietary supplements help raise serotonin levels in the brain, which may have a positive effect on sleep.

Celedrin is one of the newest natural remedies used as an anti-inflammatory for Fibromyalgia and Arthritis. This patented blend of special fatty acids has shown remarkable results in reducing pain and swelling of joints, thus increasing opportunity for better sleep.