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INSOMNIA

CPAP

RESTLESS LEGS

ANSWERS



SLEEP APNEA

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SDA WEBSITE

www.sleepoz.org.au

- Fact Sheets
- List of Sleep Clinics
- Research Summaries
- Sleep in the News

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Are you a new CPAP user, or having trouble adjusting to using your CPAP?

SDA maintains a list of experienced CPAP users who have offered to help new users through the initial period of using a CPAP.

The help consists of support and advice, usually by telephone.

If you think you would like to talk to someone who has **"been there, done that"** then join SDA by completing the application form on page 4 and then contact your local branch for help.

Second Hand CPAP Machines

The SDA website carries member's advertisements for second hand CPAP machines for private sale. If you can't afford a new machine, you might find a solution here. Please note that all second hand CPAP machines should be serviced and calibrated to your prescription by an authorised dealer before use.

DISCLAIMER

Information provided in this booklet is general in content and should not be seen as a substitute for professional medical advice. Concerns about sleep problems or other medical conditions should be discussed with your family doctor.

Message from the Chairman



Joe Soda

Sleep Disorders Australia is a voluntary group offering assistance and support to those persons and their families who are living with sleep disorders throughout Australia. Membership is available to all sufferers, members of their family, medical professionals, and any member of the public who has an interest in the area of sleep disorders.

Sleep Disorders Australia was formed as a national organisation in 1994 when a number of state-based support groups decided to amalgamate. It is run entirely by volunteers and is funded by membership subscriptions and donations. Please consider joining SDA, as we need strong membership numbers to be an effective lobby group on your behalf.

The SDA Board of Directors and the Branch Committees in all states act primarily to assist the members and to promote healthy sleep through sleep awareness programs, Fact Sheet distribution, the SDA website, our Buddy Program, newsletter production, information seminars and fundraising events. We need support from our members and public donations to continue the following activities:

- Support by telephone, mail and e-mail We give non-medical advice to people about sleep disorders, how to get diagnosed, available treatments, and details of Sleep Units in their area. We answer enquiries and send out information brochures.
- **Bi-monthly newsletter** The SDA News contains news about SDA activities, new products and items of interest about sleep research. It is distributed to all members six times per year.
- **Website** We maintain the SDA website at www.sleepoz.org.au to provide on-line access to a variety of information. Our Fact Sheets are particularly popular, and are accessed by people all over the world.
- **Buddy system** A buddy system is maintained in all states to put new CPAP users in contact with more experienced users, for advice and encouragement during the difficult period of initial treatment.
- **Meetings and seminars** These are held on a regular basis in most states to provide members and the public with information on new developments in our understanding of sleep disorders, diagnosis, treatments, and equipment.

Sleep Disorders Australia is registered as a public company, limited by guarantee, incorporated in NSW. It has been endorsed by the ATO as an income tax exempt charity and has endorsement as a Deductible Gift Recipient.

We look forward to welcoming you as a member soon.

APPLICATION FOR MEMBERSHIP

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Of (Address)	Postcode			
Phone: (H) (W)				
Occupation:	Year of Birth:			
Email hereby apply to become a member member, I agree to be bound by th				
Signature Date				
Membership Subscription (GST included)		(Subscription period – 1 July to 30 June)		
	Full Member	Concession*		
Joining Fee (plus choose below)	\$5.00	\$5.00	\$ 5.00	
One Year Membership	\$35.00	\$25.00	\$	
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* Concession Card No: Deduct \$15 from first year if joining between Jan-April. May/June joiners extend through following year.				
Donation – I would like to make a donation to assist the work of Sleep Disorders Australia.				
Donation to the work of S		of SDA - National	\$	
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1. Register my membership with the NSW, QLD, SA, TAS, VIC or WA Branch of SDA.				
2. I prefer to receive my copy of the SDA News in PRINTED or ELECTRONIC format.				
 So that SDA is better able to focus their delivery of services, please indicate your areas of interest. SLEEP 				
APNEA (Adult), SLEEP APNEA (Child), RESTLESS LEGS SYNDROME, INSOMNIA, NARCOLEPSY, OTHER				

(specify): 4. I am willing to offer my support in the areas of: COMMITTEE, SEMINAR/WORKSHOP, FUND RAISING, EDUCATION, PUBLICITY, SUPPORT, ADMINISTRATION.

Please complete all of the above details and forward to:-Sleep Disorders Australia, 165/9 Crofts Ave Hurstville NSW 2220

JOIN SLEEP DISORDERS AUSTRALIA

SDA needs members to enable us to continue to offer advice and support to people who suffer from sleep disorders. We would be delighted if you would consider joining and/or making a charitable donation to SDA.

SDA membership includes:

Copies of the SDA News six times per year, to keep members informed of advances in research and the latest products available.

Eligibility to access the 'Buddy' system, where experienced CPAP users are available to help new users.

Password access to the Members Area of SDA website, which contains additional information including archived newsletter articles, reports on past research, and links to interesting media articles involving sleep.

Reduced rates to place advertisements on the website to sell used CPAP machines.

Therefore the information on upcoming meetings and SDA activities.

SDA uses its funds to support members, maintain activities and increase public awareness about sleep disorders. In some areas, SDA is able to loan equipment to assist members in an emergency.

To join SDA or make a donation:

Complete the form opposite, indicating the state branch with which to associate your membership or donation. This ensures that the major part of your subscription is made available to that branch and that your details are available to its committee when organising branch activities.

SDA has tax deductible gift recipient status from the Australian Tax Office. Donations of \$2 or more can be claimed as a tax deduction.





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SLEEP APNEA

Apnea means absence of breath. Obstructive sleep apnea (often just called sleep apnea, or sometimes OSA) occurs when the airway collapses during sleep and the person stops breathing. The person with sleep apnea may have hundreds of these episodes throughout the night, disrupting their sleep and starving the body of vital oxygen. Fortunately an effective treatment is available which will allow the person to lead a normal healthy life. Obstructive sleep apnea affects more than 5% of the population and is the result of an obstruction to the airway, usually as the result of a narrow airway collapsing or becoming blocked when muscles relax during sleep. (Central Sleep Apnea is a separate disorder due to disruption of the brain signals.)

Symptoms

People with obstructive sleep apnea usually snore loudly and have restless sleep. Often these symptoms are not noticed by the person with sleep apnea. but by their partner, who may also notice frequent pauses in breathing and snoring, lasting between 10 seconds and a minute. Each pause ends with a deep gasping noise and brief awakening as the person struggles to breathe, although the person doesn't usually remember awakening. As a result of the problems during sleep, the person with sleep apnea is usually very tired during the day, and as the day progresses, they may struggle to stay awake. The tiredness can affect the person's ability to concentrate and to function well at work, and it can be extremely dangerous if they become sleepy while driving. Other symptoms which occur in untreated sleep apnea include depression, irritability, personality changes, impotence, memory impairment and increased frequency of urination at night.

Results

Family Problems. Snoring can disrupt the bed partner's sleep, making the partner also irritable. These problems aggravate marital disharmony and family stress. It is made worse by the tiredness and lack of interest in family activities by the person with untreated sleep apnea.

Motor Vehicle Accidents. Research has shown that people with untreated sleep apnea are at least 4 times more likely to have a motor vehicle accident. Their performance is noticeably worse as their disrupted sleep leads to a reduced ability to concentrate and an increased chance of falling asleep at the wheel. When sleep apnea occurs in people whose occupations involve driving or operating machinery, this can be a lethal combination.

Health Problems. There is a clear link between sleep apnea and cardiovascular disease. People with untreated sleep apnea have an increased incidence of high blood pressure, stroke and heart disease and damage to small blood vessels can result in impotence Diabetes and obesity have also been linked to sleep apnea.

Who Gets Sleep Apnea?

Sleep apnea can occur at any age. In childhood, it is commonly the result of enlarged tonsils or adenoids or of some cranio-facial abnormality. In adulthood, it occurs more often in middle age, and is more common in men than in women. It is often associated with being overweight, particular with excess fatty tissue around the neck. In people not overweight, it is likely that they have been born with a narrow airway, or a facial structure which leads to narrowing. Almost everyone who has obstructive sleep apnea will snore, as snoring is also the result of narrow or floppy upper airways.

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Sleep Apnea continued

How Is It Diagnosed?

Sleep apnea is diagnosed from the results of an overnight sleep study. The patient is wired up and attached to computers which measure sleep, breathing rate and oxygen levels. Everyone experiences a small amount of breathing disruption during sleep, but somebody with sleep apnea may have as many as one hundred of these events per hour, and their blood oxygen levels may become quite low.

How Is Sleep Apnea Treated?

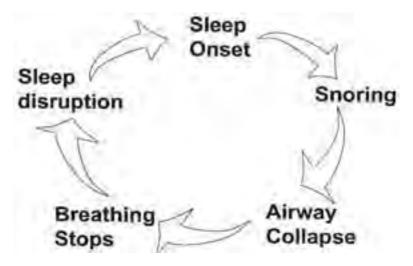
The most effective treatment for OSA is called continuous positive airway pressure or CPAP. This consists of a pump that blows air through a mask at a high enough pressure to keep the airway open. CPAP only needs to be used at night and the treatment is immediately effective at controlling the symptoms and long-term consequences of sleep apnea. Surgical treatments are sometimes tried, but they are not always effective and may have undesirable side effects. Devices that fit inside the mouth and hold the jaw forward may create a larger airway, but these do not work for everyone. There is no effective drug for treating sleep apnea, although a number have been tried. A number of other remedies have been marketed, but none have been shown to be effective.

Things to Avoid

There are things that can make sleep apnea worse, and even if you are on CPAP treatment, they should be avoided. Alcohol relaxes muscles and may worsen apnea, as may sleeping tablets which depress the drive to breathe. A person's normal CPAP pressure may be insufficient if the person is under the effects of alcohol or sleeping tablets. Other things that disrupt sleep such as caffeine or late night eating should also be avoided.

Sources of Information

If you are concerned about sleep apnea, you should consult your family doctor. You will need a referral from your GP before you can consult a sleep specialist. SDA has branches throughout the country and holds information sessions from time to time on sleep apnea and other topics. Fact sheets on a variety of sleep disorders can be found on the SDA website at www.sleepoz.org.au.



GLOSSARY of SLEEP TERMS

APNEA (or **APNOEA**) – Any periodic pause in breathing during sleep lasting more than 10 seconds. Types: a) obstructive, when there are vigorous attempts to breathe, but the airway has collapsed; b) central, when there is no attempt to breathe due to weak muscles or lack of nerve messages; and c) mixed, where there is a combination of both the above.

APNEA HYPOPNEA INDEX (AHI) – This combines the number of apneas and levels of hypopnea and is used to classify the severity of sleep apnea (mild 5-15, moderate 16-30, and severe greater than 30).

AROUSAL – Awakening, total or partial, usually noted by looking at the EEG.

BLOOD GASES – Oxygen and carbon dioxide levels tested from a sample of blood taken from a small artery near the wrist.

BRAINSTEM – The part of the brain at the back which controls breathing.

CARBON DIOXIDE – The gas which the lungs remove from the blood. Abnormally high levels of carbon dioxide can occur in more severe forms of sleep apnea.

CAT SCAN – A computerised X-ray which allows detailed images to be made of different parts of the body such as the brain or upper airway.

CATAPLEXY – Sudden attack of complete or partial muscular paralysis precipitated by strong emotion, usually laughter. One of the cardinal symptoms of narcolepsy.

CIRCADIAN RHYTHM – Biological rhythms which oscillate over a 24 hour period. (Disrupted by jet lag.)

 CO_2 – Abbreviation for carbon dioxide.

CPAP – Continuous Positive Airways Pressure – Treatment for sleep apnea involving the generation of air pressure connected to the a patient via a mask, to keep the upper air passages open during sleep, preventing snoring and apnea and allowing normal breathing to occur.

DELTA SLEEP - See Slow Wave Sleep.

ECG – **E**lectroCardioGram – Tracing of the heart's electrical activity which can indicate abnormalities in heart size, function and blood supply. (or EKG in US)

ECHOCARDIOGRAM – Test using sound waves which are "bounced" off the heart and can clearly show abnormalities of the heart valves and walls.

EEG – **E**lectro**E**ncephalo**G**ram – Tracing of the electrical activity of different parts of the brain. It can be used to diagnose epilepsy but can also be used to work out which stage of sleep a person is in.

ENURESIS – Bed wetting.

HEART SCAN – A scan using a very safe nuclear isotope to work out how well the heart is functioning. In sleep apnea the right side of the heart is sometimes affected and this scan allows assessment of severity and progress of heart failure post treatment.

HOLTER MONITOR – A continuous ECG usually worn for 24 hours to assess any heart rhythm disturbances.

HYPERSOMNIA – Excessive sleepiness.

HYPOPNEA – Lowering of oxygen levels in the blood.

HYPNOTIC – Medication which promotes sleep eg. Mogadon.

INSOMNIA – The inability to fall asleep, or to stay asleep.

MANDIBULAR SPLINT – Also known as Mandibular Advancement Device – a mouth guard worn at night to reposition the jaw in an effort to enlarge the airway space.

MSLT – (Multiple Sleep Latency Test) – Test used to demonstrate excessive daytime sleepiness and narcolepsy during which a patient is given 4-5 opportunities to nap at regular intervals.

NARCOLEPSY – Inherited disorder of REM sleep production characterised by excessive daytime sleepiness and cataplexy.

NASOPHARYNGOSCOPY – Test using a fibre-optic scope to view the upper throat.

NIGHT TERRORS – The sudden arousal from slow wave sleep with a sense of extreme fear or imminent death. Related to sleep walking.

NOCTURIA – The need to get up to urinate in the middle of the night.

NOCTURNAL MYOCLONUS – Having uncontrollable jerks of the lower limbs or body during sleep causing insomnia and excessive daytime sleepiness.

POLYSOMNOGRAM – The record of a patient's sleep pattern, brain waves, breathing, heart rate, limb movements collected during sleep.

PRESCRIPTION – This is issued by a sleep doctor after a sleep study, to specify the required CPAP pressure and any other requirements such as humidification and mask type.

REM – **R**apid **E**ye **M**ovement – the stage of sleep when we dream. The body is paralysed and snoring and sleep apnea are at their worst.

RLS – Restless Legs Syndrome – Condition

where the legs have to keep moving because otherwise they feel very uncomfortable. It can severely disturb sleep and cause insomnia and excessive daytime sleepiness.

SLOW WAVE SLEEP – Deep stage of sleep often missed by patients with sleep apnea due to the disruption of normal sleep by the apnea.

SNORING – The noise produced by the partial closure of the upper throat in sleep.

STRESS TEST – The monitoring of heart and breathing rates during exercise.

TRACHEOSTOMY – An operation that was the main form of treatment for sleep apnea before CPAP was invented. They made a hole in the lower windpipe to bypass the closed upper airway during sleep.

UPPP – (Uvulo**P**alato**P**haryngo**P**lasty) – An operation to treat snoring and mild sleep apnea. It involves removing part of the soft palate at the back of the throat.

VR – (Ventilatory Response) – This is tested to measure how sensitive one is to a lack of oxygen or too much carbon dioxide.



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INSOMNIA

Insomnia is the inability to fall asleep, or to stay asleep. Sleep onset insomnia occurs at the start of the night when the person cannot fall asleep. But just as troubling are problems of waking during the night, which is called maintenance insomnia. Most people experience difficulty sleeping at some time. Almost half of older adults experience insomnia on a few nights each week, but few of them seek help from the doctor.

What is Normal Sleep

Length. Most people sleep between 7 and 9 hours each night. Different people may need different amounts of sleep, but if you sleep less than 7 hours, you may be deprived of adequate sleep.

Falling Asleep. Some people fall asleep within a few minutes of closing their eyes, but others take longer. One third of women and one sixth of men report taking longer than 30 minutes to fall asleep. Some people find this acceptable, but if it is of concern, then it is classed as insomnia.

Waking at Night. Particularly as people get older, sleep becomes more fragmented and waking up briefly during the night is quite normal. If the awakenings are brief, you may not remember them. However, if you wake up and have trouble going back to sleep, then this is insomnia.

Causes of Insomnia

There can be many different causes of insomnia. Some medical conditions may cause insomnia, particularly pain and respiratory problems. Some medications inhibit sleep, as well as drugs such as caffeine (coffee and energy drinks) and nicotine (smoking). Worries or life events such as divorce, death or illness of a family member are also common causes. Conflicts or pressures at work may also be a factor, but when these are resolved, sleep should improve. Insomnia can be a vicious cycle, in that the more you worry about not sleeping, the harder it is to get to sleep.

Seeking Treatment

Just as there are many causes for insomnia, so there are many treatments. In most people, the insomnia will get better by itself. However, if insomnia persists beyond a few weeks, you should seek help from a doctor. If there is an underlying medical or psychological condition, addressing this may cure the insomnia. Psychological assistance with stress management, relaxation exercises and controlling thoughts may be helpful, as may attention to environmental factors such as light, sound and temperature. Attention to simple things such as going to bed at the same time, avoiding naps, caffeine and alcohol, and getting appropriate exercise may also help.

Sleeping Tablets

The main goal of any treatment for insomnia is to break the cycle that maintains the insomnia. Sleeping tablets mav prescribed for short-term be insomnia, but they lose their effectiveness after a few weeks, and are not appropriate in the longer term. When you stop taking sleeping pills, you may have a few nights of worse sleep. This is called rebound insomnia, and is a good reason to avoid prolonged use of sleeping pills. It is usually best to reduce pills gradually rather than stop abruptly. to

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RESTLESS LEGS SYNDROME

RLS, also called Willis-Ekbom Disease, is a movement disorder characterised by uncomfortable sensations in the legs, or sometimes in the arms. It occurs in both genders. Symptoms can begin at any age, but are more common and more severe in older people. As many as 2-5% of the population are affected, with varying degrees of intensity. There is no test for RLS, and there is usually nothing abnormal for a doctor to detect on examination.

Symptoms

People describe the sensations as pulling, drawing, crawling, wormy, boring, tingling, prickly and painful. The sensations occur when the person with RLS sits for prolonged periods, such as at a desk, riding in a car, or watching a movie. They may also occur when the person lies down before sleep. People with RLS describe an irresistible urge to move their legs when the sensations occur. Usually, moving the legs, walking, rubbing or massaging the legs can bring relief, at least briefly. If the legs are not moved, they often jump involuntarily. Symptoms are always worse in the evening, and make falling asleep very difficult. If sufferers do manage to fall asleep, leg movements may lead to frequent awakenings and chronic insomnia.

Causes of RLS

The cause of RLS is unknown in most cases, but certain factors are associated with it:

• If your parents had RLS there is a 30-50% greater chance that you will also have it.

- RLS may occur during pregnancy, and the symptoms usually disappear after delivery.
- Low iron levels or anaemia may cause RLS in some people.
- Chronic diseases, particularly kidney failure, may lead to RLS. Other diseases such as diabetes, rheumatoid arthritis, Parkinson's Disease and peripheral nerve damage have also been associated with RLS.
- High caffeine or nicotine intake may make RLS symptoms worse.
- RLS has been associated with some classes of antidepressant medications.

Treatments

If a cause such as anaemia can be identified, treating this may resolve the RLS. Otherwise, in mild cases, some people find that activities such as taking a hot bath, massaging the legs, using heat pads or ice packs, exercising, and eliminating caffeine help to alleviate symptoms. In more severe cases, medications are prescribed Unfortunately, no one drug is effective for everyone with RLS, and a medication that is initially effective may lose its effectiveness with prolonged use. Symptoms tend to get worse over time, and it may be necessary to change medications to keep symptoms under control. The most commonly used drugs are benzodiazepines (such as Valium) dopaminergic drugs (such as those used for Parkinson's Disease) and opioids (such as codeine). Some newer classes of drugs called alkaloids also show promise. If you have concerns about RLS, vou should discuss them with your family doctor

RELATED RISKS

Sleep disorders have been implicated as risk factors in a number of other health problems. Sleep deprivation, whether due to a reduced quantity of sleep or a disturbed quality of sleep, affects a variety of essential functions and hormone balances, and contributes to an increased risk of heart disease, high blood pressure, obesity and diabetes. It affects general mental functioning, in particular, davtime memory functions. alertness. and decreased learning ability. There is some recent evidence that sleep deprivation also depresses the immune system which means the body is less able to fight off viruses and infections.

Hypertension (High Blood Pressure)

Hypertension is a serious medical condition that adversely affects many systems in the body. It is a major cause of atherosclerosis (thickened artery walls) and may lead to blood clots and strokes. Hypertension can also lead to heart attacks, kidney disease, vascular disease and retinopathy. Research has shown that insomnia sufferers who regularly get less than 5 hours of sleep per night are at a high risk for hypertension. People with untreated sleep apnea are also at risk for hypertension. Research has shown that when sleep apnea patients are treated with CPAP, their blood pressure goes down, not only at night, but during the day as well.

Heart Disease

Sleep apnea starves the body's vital organs of oxygen throughout the night. This puts a strain on the heart as it tries to compensate. Researchers have found sleep apnea to be an independent risk for cardiovascular diseases. When breathing recommences after an apnea the heart muscles are called on for greater exertion, just at a time when their own oxygen supply has been compromised. During recent research studies, when a group of patients with heart failure were tested in a sleep study, approximately half had severe undiagnosed sleep apnea. Research is ongoing, but it seems clear that people with moderate to severe sleep apnea have an increased risk for heart attack, vascular disease and pulmonary hypertension.

Obesity

Obesity contributes to sleep apnea, and sleep apnea contributes to obesity. In fact, most sleep disorders can contribute to obesity. Researchers found that a group of people who were restricted in sleep had falls in their leptin levels, leading to a greater appetite. The same group also produced 30% more insulin to maintain their normal blood sugar levels. Higher insulin levels are associated with higher levels of fat storage. As lack of sleep also results in tiredness and lowered activity rates, so obesity is encouraged on three fronts: higher kilojoules taken in, lower energy given out, and insulin stimulating fat storage. In the case of sleep apnea, the weight gain affects the fat in the neck, and the air passage collapses more easily, leading to a worsening of the sleep apnea. which may lead to further increases in obesity.

Diabetes

Research has shown that short sleep duration has direct effects upon the risk of diabetes, independent of its influence upon body weight and blood pressure. A study by scientists at the University of Chicago found that after restricting 11 healthy young adults to only four hours sleep for six consecutive nights, their ability to process glucose had declined – in some cases to the level of diabetics.

Related Risks continued

Diabetes continued

Other studies have shown that subjects who regularly slept 5 hours or less were twice as likely to develop diabetes over the 10 year follow-up as those who slept 7 hours or more. Research statistics indicate that approximately 50% of men living with diabetes also have sleep apnea, and 50% of sleep apnea patients tested when attending a sleep clinic were shown to have impaired glucose intolerance. Recent studies of young healthy males showed that sleep deprivation for as little as two nights increased insulin levels, increased ghrelin and decreased leptin, translating into decreased glucose tolerance and an increased appetite for carbohydrate-rich foods. One research article concluded that "If short sleep duration increases insulin resistance and decreases glucose tolerance, then interventions that increase the amount and improve the quality of sleep could serve as treatments and primary preventative for measures diabetes".

Brain Functioning

Studies have shown that normal humans require between 7 and 9 hours of sleep each night. There has been a lot of research looking at the effects of sleep deprivation on various brain functions. People asked to perform tasks after spending a night without sleep, had impaired abilities which were comparable to people under the influence of alcohol. A lack of sleep impacts most notably on a person's attention and working memory, which can have disastrous consequences in road accidents, operating machinery, forgetting about fire hazards, etc. People who are sleep deprived have impaired learning abilities, slower reaction times and poorer judgment. Severe sleep deprivation can lead to psychosis and hallucinations.

Sexual Function

Sleep appea has been shown to be associated with impaired sexual function for both men and women. Excessive tiredness can contribute to a low libido, as can a reduction in hormone levels such as testosterone, which can occur as a result of sleep apnea. Many factors can contribute to declining erectile function, one of which is untreated sleep apnea. This can be due to blood vessel walls not expanding as well as they should to allow for increased blood flow, or a decline in testosterone, or impaired night time erections due to broken sleep associated with sleep appea. Treatment of sleep apnea using CPAP has been shown to improve erectile function in about half of men who have both sleep apnea and erectile dysfunction.

Nocturia and Overactive Bladder

Nocturia can be caused by a variety of factors including inadequate functioning of the heart muscle, benign prostate hyperplasia and overactive bladder. Increased nocturia in patients with sleep apnea is believed to be caused by elevated night time excretion of a protein secreted by heart muscle cells in response to high blood pressure. CPAP treatment in sleep apnea patients results in improvements of their nocturia. Researchers found that the overall prevalence of overactive bladder in patients with obstructive sleep apnea was 39%, which is considerably higher than the average. Patients with moderate and severe sleep apnea are more likely to present with symptoms of overactive bladder compared with the average population.

CPAP TREATMENT

If you suffer from sleep apnea, then CPAP (Continuous Positive Airway Pressure) is the most successful treatment. Most sleep doctors will suggest you try CPAP before resorting to other treatments.

CPAP Machines

CPAP is a simple mechanical aid to keep the airway open. It prevents the airway from closing by keeping a positive pressure inside the airway, a bit like blowing up a bicycle's inner-tube that has become deflated. The pressure is created by blowing air through the nose and into the upper airways. This pressure is applied continuously throughout the night, and hence the name. Continuous Positive Airway Pressure. The air flow is generated by a CPAP pump or blower. These machines used to be large and noisy, but huge advances have been made in recent years, and they are now small, quiet and extremely reliable. Most are also able to operate from a car battery.

CPAP Masks

The most commonly used method for applying the pressure is by use of a soft mask that is shaped to fit over the nose and seal against the face. Getting a satisfactory fit of the mask to the face is the most difficult part of CPAP treatment. masks Although have improved dramatically over the years, a number of people still have difficulty finding one that seals well and feels comfortable. It is really important that you find the mask that suits you best.

When pressure is applied through the nose, some air may escape through the mouth. This is called a "mouth leak" and is uncomfortable for the CPAP user. Various devices, such as chin straps, may be used to hold the mouth closed. Some people prefer a full-face mask that covers the mouth as well as the nose.

Side Effects

CPAP is a very safe treatment with few side effects. The most common is nasal irritation due to air blowing into the nose. A mouth leak makes this much worse, as more air rushes through. Other side effects are associated with the mask rubbing, or escaping air blowing into the eyes from a poorly fitting mask.

Using CPAP

CPAP works immediately in stopping your sleep apnea. Some people notice immediate improvement to their daytime symptoms, but others take a while to get used to the CPAP and gain maximum benefit. Unfortunately, CPAP does not cure sleep apnea, it simply controls the symptoms by keeping the airway open. If you stop using the CPAP, the apneas will return. This means that whenever you go to sleep, you should use your CPAP. If you cannot use your CPAP for one or two nights (eg, when you have a cold or flu), it won't cause major problems, but be aware that daytime sleepiness will return, and you should not drive the next day.

Ramp

Most CPAP machines have a "ramp" feature which allows you to start with a lower pressure, which increases gradually over a set period until your required pressure is reached. This is to make it more comfortable to fall asleep.

Humidification

Most CPAP machines have an optional humidifier, which warms and adds moisture to the air. This makes breathing more comfortable for many people.

SDA FACT SHEETS

SDA has a variety of Fact Sheets available, both in tri-fold brochure format if you send us a stamped business size envelope, and in PDF format on the SDA website at

www.sleepoz.org.au

Ageing and Sleep - As we grow older, sleep becomes lighter and more interrupted. There are things you can do to improve this.

Childhood Snoring and Sleep Apnea - This condition can be serious and may lead to health problems such as failure to thrive, developmental delay or behavioural problems.

CPAP - Continuous Positive Airway Pressure - CPAP is the most successful treatment for sleep apnea. Almost all sleep doctors will suggest you try CPAP before resorting to other treatments.

Delayed Sleep Phase Syndrome - People who suffer from this are unable to get their sleep pattern into line with normal hours, and even if they do, they cannot maintain the new pattern.

Drowsy Driving - Have you ever been driving and found your eyelids droop, you can't stop yawning or can't remember driving the last few kilometres? If so you have been a "drowsy driver" and you're not alone!

Good Night's Sleep - The most common sleep complaints are not being able to get enough sleep (insomnia) and not getting refreshing or good quality sleep (a sleep disorder). So how do you know if you have a problem?

Insomnia - Most people experience some difficulty sleeping (insomnia) at some time. However chronic insomnia can have serious effects.

Narcolepsy - Narcolepsy is an uncommon but very debilitating sleep disorder. Usually the most worrying aspect for the sufferer is uncontrollable sleepiness during the day.

Oral Appliances for Sleep Apnea - For patients with mild to moderate OSA who don't tolerate CPAP well, oral appliances

offer an alternative. Also called Mandibular Advancement Devices.

Restless Legs and PLMS - If you suffer from unpleasant creeping sensations or your legs twitch during the night you may have Restless Legs Syndrome (RLS) or Periodic Limb Movements of Sleep (PLMS).

Shift Work - The body has a natural rhythm which helps you sleep at night and stay alert during the day. When you work shift work you must struggle against this.

Sleep Apnea - Obstructive (OSA) - Apnea means absence of breathing. Obstructive sleep apnea (OSA) occurs when the airway collapses during sleep. OSA disrupts sleep and starves the body of vital oxygen.

Sleep Apnea - Central (CSA) - About 10% of patients with sleep apnea have central sleep apnea (CSA), when there is no airflow but there is no respiratory effort to breathe.

Sleep Disorders and Related Risks - Sleep deprivation, whether by reduced quantity or disturbed quality, may be a contributing factor in other diseases, such as High Blood Pressure, Heart Disease, Diabetes, Obesity.

Sleep Hygiene - Sleep hygiene is a term used to describe good sleep habits. "Dos" and "Don'ts" to give yourself the best chance of a good refreshing sleep.

Sleep Study - The best way to diagnose many sleep disorders is with a Sleep Study or Polysomnogram conducted at a specialist Sleep Disorders Laboratory. This fact sheet tells you what to expect from this study.

Snoring - Snoring occurs when air does not flow smoothly through the air passages, or when the soft tissues in your throat vibrate during sleep. Snoring may be associated with long term health problems such as an increased risk of heart attack or stroke.

Travelling With CPAP - CPAP treatment relies on a power source. This sheet has useful information for travelling with your CPAP equipment on a plane, or in foreign countries, or to take it camping.

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