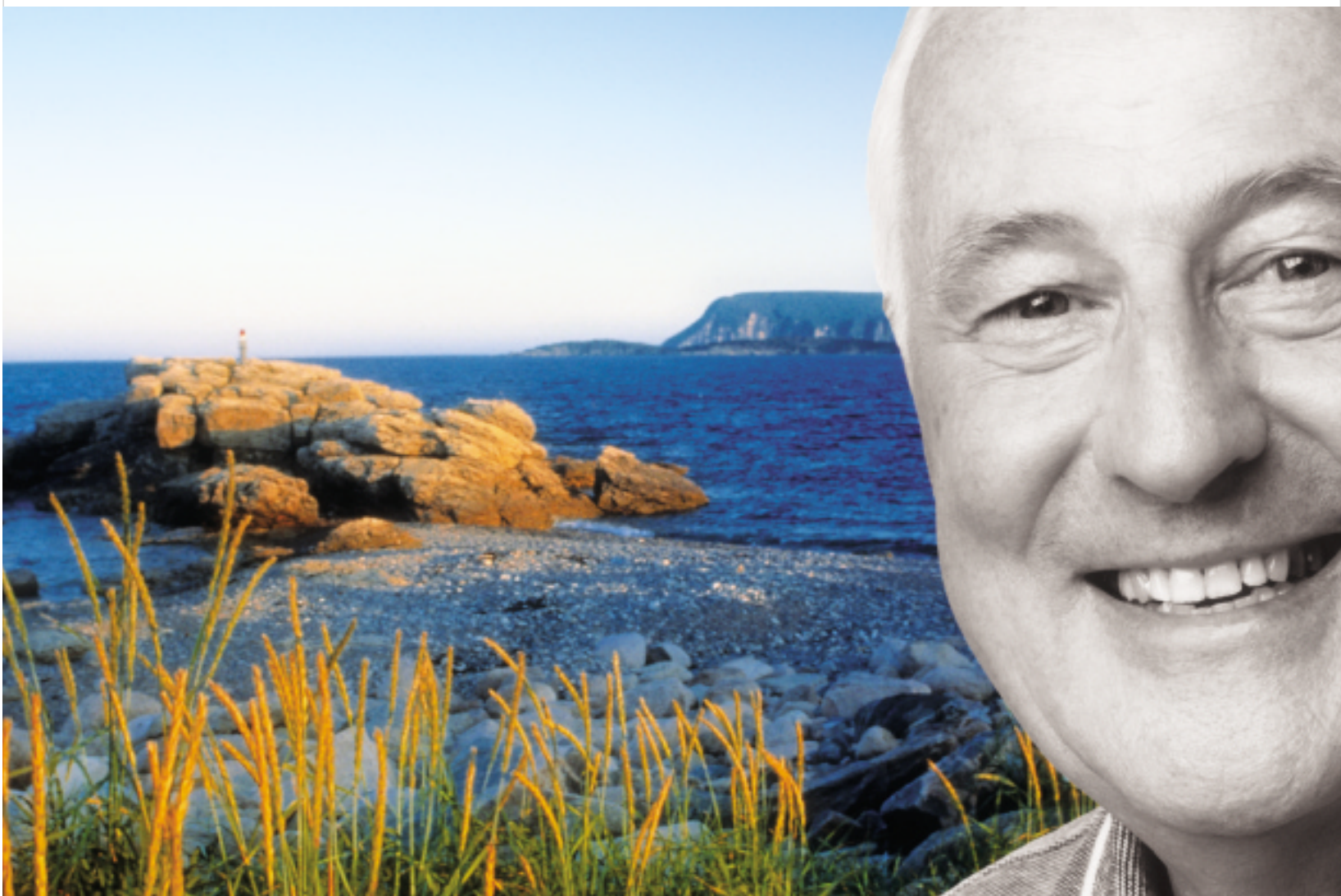


THE  LUNG ASSOCIATION™

SLEEP APNEA ACTION HANDBOOK



The Lung Association's

Sleep Apnea Action Handbook

This educational resource is made available by the Canadian Lung Association Sleep Apnea Working Group.
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See enclosed information for local resources.
Access our website at www.lung.ca

Foreword

This handbook is designed to meet the educational needs of those newly diagnosed with Sleep Apnea. Sleep Apnea is a common disorder which requires accurate diagnosis and effective treatment. Over the past year the Sleep Apnea Working Group recognized the need for increased access to information concerning diagnosis and treatment. We, the Working Group members, are dedicated to ensuring accessibility to information resources throughout Canada for those living with Sleep Apnea.

Dr. John Fleetham, MD, FRCPC

“The Canadian Lung Association Sleep Apnea Education Handbook...is very beautifully written and illustrated and yet is remarkably comprehensive. I think that it is a gem that every sleep apneic patient should have access to.”

Dr. Michael Fitzpatrick, MD, FRCPC
Division of Respiratory & Critical Care Medicine
Queen’s University, Kingston, ON

How This Sleep Apnea Handbook Can Help You

Because more information is becoming available about Sleep Apnea and its treatment you should be able to live a better life and manage your Sleep Apnea so it does not affect your lifestyle. This handbook may help with some of your questions. Success with your treatment depends on your thorough understanding of Sleep Apnea and C.P.A.P. (Continuous Positive Airway Pressure—see glossary of terms at the back of this handbook)

1. You need to have a close partnership with your doctor so you can talk openly about your health problem/sleep disorder and understand why he prescribed the treatment.
2. You may want to take the sample Sleep Apnea Action Plan with you to your doctor for further discussion.
3. It's important to learn:
 - a) how to have success with the treatment.
 - b) what happens if you stop your C.P.A.P. Therapy.
 - c) what to do if you have problems.

History

Sleep Apnea has been recorded as far back as Charles Dickens' time in England when he described Sleep Apnea in the character of Joe the fat boy (in the Pickwick Papers). Joe would often be found asleep and is shown as having a short thick neck and a round middle. For this reason, the disorder was known as Pickwickian Syndrome.

In the 1970s, there was more focus on sleep apnea and its problems. In the early 1980s, Colin Sullivan developed the first C.P.A.P. unit to treat Sleep Apnea. The C.P.A.P. units have changed since that time and are now smaller and quieter than ever.

Sleep Disorders and You

What is Obstructive Sleep Apnea (O.S.A.)?

- Obstructive Sleep Apnea (O.S.A.) is a breathing problem that occurs during sleep. It can be life-threatening.
- The upper airway keeps blocking because the tongue and muscles in the throat relax, causing pauses in breathing (apnea) or shallow breathing (hypopnea) and poor sleep.
- Lack of sleep results in chronic daytime sleepiness.

Who has Sleep Apnea?

- 4% of men and 2% of women have O.S.A. with daytime sleepiness. Often the person with O.S.A. is the last person to know they have it because they think they have slept all night.
- Most people with O.S.A. don't know they have it and are not being treated for it.

Obstructive Sleep Apnea is a serious problem that is easy to detect and treat.



Do I have O.S.A.?

Some of the signs and symptoms include:

- Snoring with pauses in breathing (apnea)
- Excess daytime sleepiness
- Gasping or choking during sleep
- Restless sleep
- Problem with mental function
- Poor judgement/can't focus
- Memory loss
- Quick to anger
- High blood pressure
- Nighttime chest pain
- Depression
- Problem with excess weight
- Large neck (>17" around in men, >16" around in women)
- Airway crowding
- Morning headaches
- Sexual problems
- Frequent trips to the bathroom at night

Try this simple test to see how sleepy you are...

The Epworth Sleepiness Scale

Today's date _____
Name _____
Your age (years) _____ Male _____ Female _____

How likely are you to doze off or fall asleep in the following situations, in contrast to feeling just tired? This refers to your usual way of life in recent times. Even if you have not done some of these things recently, try to work out how they would affect you.

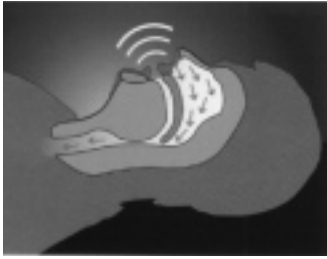
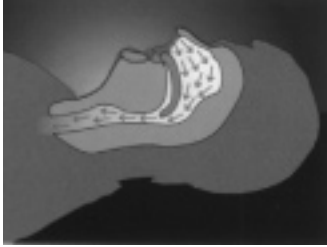
Use the following scale to choose the most appropriate number for each situation:

- 0 would never doze 1 slight chance of dozing
- 2 moderate chance of dozing 3 high chance of dozing

Situation	Chance of dozing
Sitting and reading	_____
Watching TV	_____
Sitting, inactive in a public place (eg. a theatre or a meeting)	_____
As a passenger in a car for an hour without a break	_____
Lying down to rest in the afternoon when circumstances permit	_____
Sitting and talking to someone	_____
Sitting quietly after a lunch without alcohol	_____
In a car, while stopped for a few minutes in traffic	_____

If your score on this test is greater than 10, discuss it with your doctor.

Try this test after you are treated for Sleep Apnea to see if the treatment is helping. If you are snoring with the C.P.A.P. on or your mouth drops open during sleep, check with your doctor to determine how to solve these problems.



What Happens to You?

1. During normal sleep, the muscles that control the tongue and soft palate hold the airway open.

2. If these muscles relax, the airway narrows, partly blocking the passage.

As you breathe in, the soft or floppy part of the throat vibrates and the noise of snoring results.

3. If the throat is already narrow, or the muscles relax too much, the airway can become fully blocked, and breathing stops.

You can often tell when someone has O.S.A. If you listen while the person sleeps you will hear snoring followed by silence. There may be a loud snort or a gasp as he or she starts breathing again.

Results if Left Untreated

- High blood pressure
- Heart problems
- Heart attack
- Stroke
- Car accidents and work-related accidents due to sleepiness
- Poor quality of life
- O.S.A. patients, prior to diagnosis and treatment, use 2.5 times more health care money than patients without O.S.A. (have more doctor visits)

A Word to the Partner

Maybe the loud snoring kept you awake at night and now the C.P.A.P. lulls you to sleep. Maybe you were sleeping in separate rooms and now you can be together again. You can rest assured that your partner is getting restful sleep and will enjoy better health. The quality of life for the whole family is often improved when the person with sleep apnea has a better sleep.

You can help your partner be successful with the treatment for sleep apnea. The following are a few ways to help:

1. Reassure your partner that using C.P.A.P. does not affect how you feel about him or her.
2. Encourage your partner to keep up the treatment even though it's not always easy.
3. Offer to attend meetings, support groups or doctor's appointments with your partner to learn more about sleep apnea.
4. Enjoy your partner's extra energy by planning activities together.
5. Support your partner's efforts to lose weight or exercise.



Mild sleep apnea

If you have mild sleep apnea, the doctor may suggest:

- Weight loss
- No alcohol
- No caffeine
- No sleeping pills

In some people the apneas only occur when they are on their back. Pillows or any object that keeps you on your side can be helpful.

Diagnosis: Polysomnography

What Is It?

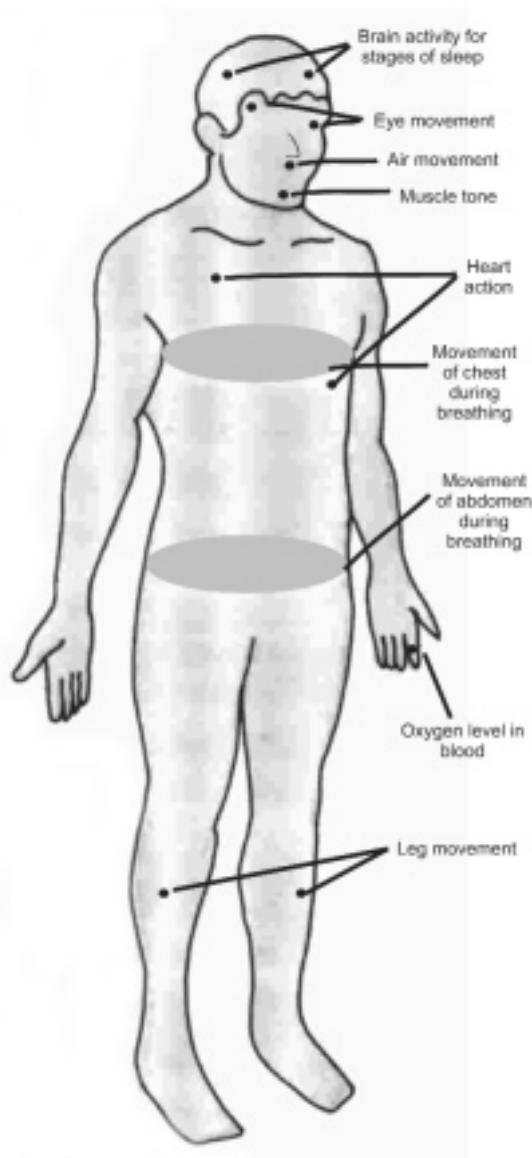
Polysomnography refers to the test done at the sleep disorders centre. The test involves sleeping overnight with various leads or wires attached to your head, face, chest and legs. Stretchy bands are placed around your chest and stomach to detect breathing effort. All the leads will detect how you are breathing and sleeping. Leads and bands gather information to assist the doctor in making the diagnosis. A video camera assists the doctor or his tester in knowing your sleeping position. While you sleep, data is gathered about the number and length of apneas or other problems that disturb your sleep. The next morning the doctor explains the results of the test and suggests the best treatment.

Moderate to severe sleep apnea

If you have moderate to severe sleep apnea, treatment is needed to control the symptoms. Your doctor can

prescribe the treatment that is best for you. C.P.A.P. is the treatment of choice at this time.

Medications are not often effective for sleep apnea although research may uncover future options.



In some Sleep Disorder Centres, a “split night” study is done when continuous positive airway pressure (C.P.A.P.) is placed on you at some point during the night. The tester explains before you go to sleep what will happen and fits the mask before the test begins.

- None of the leads hurt
- You can sleep in any position
- You can go to the bathroom
- Sleep is disturbed as little as possible by the test itself

Factors That Affect Sleep Apnea

Some factors that *cannot* be changed are:

- Facial structure
- Airway size

Some factors that *can* be changed are:

- Weight
- Alcohol use
- Medication use

The following topics are lifestyle choices that may help you:

Diet and Weight Control

A high number of those dealing with sleep apnea have problems with excess weight.

In mild sleep apnea, a weight loss in excess of thirty pounds can reverse sleep apnea symptoms for some people. Check with your doctor to see if this is an option for you. Your C.P.A.P. unit pressure may need to be changed with weight loss or gain of more than thirty pounds. If this occurs, check with the sleep specialist who will adjust the pressure if needed.

With sleep apnea you may have a hard time losing weight. You may snack when you feel tired or sleepy to increase your energy. Due to a lack of energy, it is easy to avoid exercise and healthy food choices. You can gain excess weight over time. Along with the added weight come feelings of failure, poor self-image and depression.

Any weight loss will help you feel better about yourself and help you be more active. Some people find it easier to lose weight once C.P.A.P. therapy is started.

Your doctor can refer you to a dietitian to assist you with a weight loss program.

Reading food labels

Reading food labels can be one way to ensure informed food choices:

- Ingredient listing—in descending order of the amount by weight
- Nutritional information panel—lists calories, fat, carbohydrate and protein
- Nutrition claims (eg. low fat) can be helpful when used with the above

Benefit from healthy eating

- Better energy level
- More desire/drive to be active
- More interest in relationships
- Better self-image
- Higher mental function
- Weight control
- Improved blood pressure

Who are Dietitians/ Nutritionists?

Guided by a code of ethics that ensures your right to safe, reliable information, a dietitian/nutritionist can provide healthy eating advice tailored to your own needs and lifestyle. For information, contact a dietitian/nutritionist in your region through your local health department.

Small changes make a big difference

- Keep food portions smaller and use a smaller plate
- Read labels for fat and calorie content
- Cut back without cutting out. A single cheeseburger rather than double saves 20 gm fat and 200 calories.
- Snack on veggies with low-fat dip, air-popped popcorn, or fat-reduced crackers and chips.
- Don't skip breakfast. Try cereal, yogurt, fruit or a bran muffin to start your day.
- Prepare double portions when you cook and freeze the extra so you can heat and eat later.
- Make sure you drink 6-8 cups of water each day.

Nutrition away from home

Most of us lead very busy lives. Making healthy choices can, at times, seem too hard or time consuming. The principles of healthy eating apply wherever you eat.

Choose foods from the four food groups, increase your grains, fruits and vegetables, choose leaner meats and lower-fat dairy products, and select foods prepared using little or no fat. A little planning can help you make healthy food choices away from home.

Test your Fat I.Q.

Which of the following meals is the lowest in fat?

Rank these dinner items with 1 having the least fat:

- a) Lean grilled sirloin steak (180g)
- b) Mushroom quiche (individual size), sliced tomatoes and cucumbers
- c) Poached salmon (100g), rice (125mL), green bean (125mL) with butter (5mL)
- d) Macaroni and cheese (250mL), garden salad (250mL) with Italian dressing (15mL)
- e) Large caesar salad (500mL) and 1 piece garlic bread

(See next page for answers.)

Test your Fat I.Q.

Answers:

1 a)

5 b)

2 c)

3 d)

4 e)

Snacking

Eating small meals or snacks during the day can bring nutrition into a busy life. Have “grazing foods” handy for hectic days when you don’t have time for “sit-down meals”. Long times between meals and meal skipping can increase impulse eating.

Exercise and Sleep Apnea:

Exercise has many benefits to those with sleep apnea including:

- Improved endurance
- Improved muscle tone
- More energy
- Helps with weight control
- More relaxed
- Improved sleep
- Lowered blood pressure
- Improved circulation
- Reduced risk for heart attack or stroke

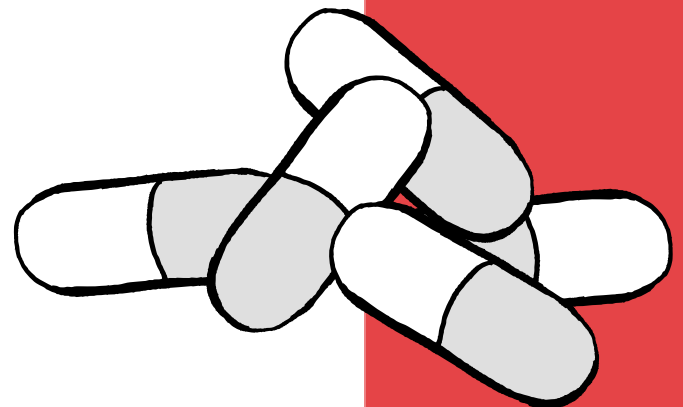
Your doctor can suggest a fitness program in the community suited to your needs. Research shows that those who exercise feel better about themselves and feel less tension, depression and anxiety.

Small changes can make a difference so try these hints:

- Walk daily (even short walks are helpful)
- Park a distance from the store and walk across the parking lot
- Join an exercise program
- Play an active game or go biking with friends
- Check out community programs for activities that interest you (ie. swimming pool, golf course)

Medications

Discuss all your medications with your sleep doctor. Sometimes medications such as tranquilizers or muscle relaxants can make the Sleep Apnea worse. Be sure to tell your doctor if you are using herbal remedies as some don’t mix well with other pills and may cause serious medical problems.





Alcohol and Caffeine

Both alcohol and caffeine can cause problems with sleep if used within four hours of bedtime. Caffeine is found in coffee, tea, soft drinks and chocolate. Read labels to find out if the foods you like contain caffeine. Some soft drinks, coffee or teas, for instance, are available without caffeine. If you want to have a drink of wine, beer, coffee, etc., consider having it at meals rather than later in the evening.

Shift Work

Working various shifts or even straight night shifts can be hard at any time and is more so with Sleep Apnea. Shift workers often get fewer hours sleep overall and never really catch up so they are always in sleep debt.

Sleep Hints:

- Use your bedroom only for sleeping
- Relax and unwind before going to bed
- Keep the bedroom dark and at a comfortable temperature
- Eat only light snacks before bedtime
- Avoid caffeine, alcohol and smoking before bedtime
- Exercise regularly but not before bedtime
- If possible, work shifts rotating clockwise (ie. days, then evenings, then nights)

These sleep hints are helpful for anyone, not only shift workers. If you are having problems with pain during the night (ie. arthritis, fibromyalgia), discuss pain management with your doctor (see page 20).

Nasal Stuffiness and Dryness

Nasal stuffiness and dryness cause breathing problems especially at night. Nasal stuffiness may be caused by sinusitis, allergies or rhinitis. If you have any of these conditions it is important to get the medication that works for you so you can breathe easier. It is very difficult to use C.P.A.P. when you have trouble breathing. Over-the-counter nasal sprays are not recommended as some cause the condition to worsen after they wear off. As always your doctor is the best source of information and treatment. Your doctor may treat you with a steroid nasal spray for stuffiness. This type of steroid is quite safe to use. These sprays are intended for daily use and it takes a few days before you notice a difference, so continue to use the spray even though you may not notice an immediate change. Stuffiness or problems with breathing at night may be worse if there is a growth in the nose or throat such as nasal polyps or enlarged tonsils. If you broke your nose you may have a narrow opening caused by the break. Any of these conditions are easy for your doctor to see and they may be corrected by surgery.

Nasal dryness is more of a problem in dry climates and in winter during the indoor heating season. Using a humidifier attached to the C.P.A.P. unit increases the moisture and will help you feel more comfortable. A room air humidifier is not useful if you are using C.P.A.P. because the humidified air from the room is drawn into the C.P.A.P. unit and may cause a build-up of particles that can damage the inside of the unit.

Allergies, Rhinitis, Sinusitis and Asthma

These conditions may be constant or seasonal. Allergies can be treated with non-drowsy type antihistamines, so ask your doctor for recommendations. Try blowing your nose before bed to clear the passage. With rhinitis, your doctor can recommend something to dry the dripping nose. Sinusitis can also be treated to reduce the stuffiness and if your sinuses are infected the doctor may give you antibiotics.



Some simple things you can do to control allergies:

- Remove allergens from your home such as animals or birds.
- Use micro-filter vacuum bags to reduce dust.
- For indoor mould use a dehumidifier in the basement and regular cleaning to remove mold from kitchen and bathroom.

Asthma

Is a cough, chest tightness, wheezing or shortness of breath causing a problem with your activities? These are some signs of asthma and it is very important to get a correct diagnosis and treatment.

Bill, a 39-year-old office worker was having problems staying awake during meetings at work and was so tired all the time he could not join in family activities. His co-workers laughed and nudged him when he started snoring during a meeting. After a few embarrassments, Bill went to see his family doctor. The doctor referred him to a Respiriologist for an exam and overnight testing in the Sleep Disorders Centre. The test showed that Bill had Sleep Apnea and he was prescribed C.P.A.P. Bill felt much better after the first night on C.P.A.P. He felt more alert at work and was ready to join in family functions after work rather than falling asleep on the sofa. Bill said that he couldn't believe how the C.P.A.P. changed his life and he felt more like his old self.

Lifestyle

Tobacco Use

Current cigarette smokers are at greater risk for sleep-disordered breathing than non-smokers. Heavy smokers have the greatest risk while former smokers are not at increased risk for sleep-disordered breathing.

Smoking cessation should be considered in the treatment and prevention of sleep-disordered breathing.

In one study, healthy non-smoking adults were exposed to tobacco smoke at increasing levels. The group showed a significant response to tobacco smoke with eye irritation, headache and nose irritation in the initial stages. With added exposure the subjects experience nasal congestion, runny nose and cough.

NOTE: These symptoms due to tobacco smoke exposure cause difficulties when using C.P.A.P. because of the nasal swelling and irritation.

Risk factors for obstructive sleep apnea include:

- Over age 50
- Male
- Excess weight
- Presence of respiratory symptoms
- Tobacco smoking
- Alcohol consumption
- Use of hypnotic drugs ie. sleeping medication, sedatives, muscle relaxants

Those with untreated sleep apnea usually have a drop in oxygen level during the night due to the apneas. Low oxygen levels can lead to heart rhythm problems, heart attack, stroke or high blood pressure. Because of the potential for severe consequences and availability of effective treatment, those affected by sleep apnea should seek medical help.

Relationships

Marriage can be challenging at the best of times, but these same challenges can be too much when trying to cope with a sleep disorder. It is easy to become overburdened and exhausted and to get so wrapped up in his or her own problems that the disorder can begin to separate couples.

The person with Sleep Apnea may feel alone and isolated—often feeling frustration and guilt that he or she may have caused marital disharmony by having Sleep Apnea. They may feel misunderstood, afraid and angry. Some get wrapped up in self-pity and begin to shut down from the world.

The healthy spouse often shares similar feelings but from a different view. Some feel guilt for their own wellness or feel pity towards the ill spouse, and they take on more and more jobs to compensate. Some feel anger at the illness and the burden it has become in their lives. Some feel frightened and confused at the idea of having to be the responsible, healthy caregiver in the relationship.



Whatever couples may be feeling, the most important thing is to keep communication lines open. Involve your spouse in your feelings and challenge one another to be open and honest. Share hurts and pains as well as strengths. Be supportive to your spouse. Learn together about the disorder, and develop ways of coping to help you through rough times. Become involved in the disorder by showing compassion, concern and caring. Be kind to one another keeping in mind that no one wanted this disorder to come into your lives. Remember to enjoy the important things in life like memories shared, time spent together, and continue to dream and plan for the future adjusting to the disorder.

Ten Tips For a Healthy Relationship

1. Talk to each other about *feelings*.
2. Make time for each other when you are feeling rested.
3. Romance each other through small, thoughtful acts of kindness.
4. Remember to take time for touching and cuddling.
5. Heal each other's hurts and feelings of isolation by communicating.
6. Hold hands when you go for a walk.
7. Recall the special qualities that attracted you to each other in the beginning of your relationship.
8. Good relationships don't just happen—they need both partners to work toward making it happen.
9. Draw support from friends and family with common ideals.
10. Have fun together!

Depression/Stress:

Signs and Symptoms

Often the person who is suffering from depression may not realize what is happening to them. Your family may see changes in your behavior and help you recognize some of the symptoms mentioned below:

- Feeling sad or irritable for more than two weeks
- Loss of interest in activities, hobbies or sex
- Weight increase or loss and changes in eating habits
- Sleep changes such as oversleeping or problems getting to sleep or waking very early
- Fatigue and inability to concentrate
- Feeling worthless or helpless
- Thoughts of suicide
- Feeling hopeless or negative

If you think you may be depressed, seek medical advice so you can receive proper treatment. Several kinds of treatment are available including counselling, psychotherapy, medication such as antidepressants and light therapy. Your doctor can also refer you to a Mood Disorder Education Program in your area for further assessment and treatment. With all the help available to you there is no need to suffer. Seeking treatment is the first step to feeling better.

Impotence

If a man cannot get or keep an erection long enough to have sex, he has “erectile dysfunction” or impotence. For most men this may happen every once in awhile but if it becomes a pattern talk to a doctor to find out what is causing the impotence. One of the symptoms of sleep apnea is impotence. Once the sleep apnea is treated and you are getting better sleep, impotence may not persist. If it does, get help.

About 34% of men in Canada have impotence regularly; that percentage is higher for those with sleep apnea.

For mild temporary blue moods you may want to try some of the following:

- Regular exercise like walking, swimming, biking (in winter check out local recreation centre schedules for activities)
- Talk over your problems with a trusted friend or family member
- Get out of the house every day, weather permitting
- Mix with other people and avoid withdrawing into yourself
- Eat healthy foods and get adequate rest

Factors that affect impotence

- Alcohol use
- Medications such as tranquilizers and high blood pressure pills
- Fatigue or being overtired
- Other diseases such as diabetes, spinal cord injury, stroke, multiple sclerosis and Parkinson's

Treatment

Counselling can help to overcome impotence because impotence affects how you feel about yourself and how you relate to your partner.

Changing present medications that have the side effects of impotence to one without this side effect can easily resolve impotence. Discuss this with your doctor.

Your doctor can advise you in the correct treatment of impotence and whether the cause is emotional, physical, or medication related.

Pain

Arthritis

What is it?

Arthritis means inflammation of the joints. Osteoarthritis is the most common type of arthritis and causes pain and limited movement in the joint. The cause is unknown although arthritis runs in families and osteoarthritis is related to wear and tear of the joints over time. Older people, athletes, and those who have repeated tasks stressing a joint are more at risk for arthritis.

What happens?

Cartilage acts as a pad at the end of the bone and cushions movement of joints. If cartilage is worn away bones rub against bones causing pain, swelling and stiffness.

What is the treatment?

There is no cure at this time for arthritis but it can be treated to help you stay active and pain free. New medications are available that control pain without causing stomach problems. Your doctor can help you find the right one in the right amount so you can sleep well and be active during the day. Overweight causes added stress especially in the spine, knees and hips.

To lessen your symptoms:

- Lose weight if you are overweight
- Try mild exercise on a regular basis (i.e. swimming or aquacise)
- See a physiotherapist
- Avoid overuse of your joints
- Take your medication as your doctor advises
- Try heat/cold on the sore area to reduce pain or stiffness

Call the Arthritis Society for information at 1-800-321-1433. Refer to the website www.arthritis.ca for more information on Arthritis & Fibromyalgia.

Fibromyalgia

What is it?

Fibromyalgia is a chronic condition which affects 2 – 4% of the population, women more than men. People who have fibromyalgia ache all over, sleep poorly, experience stiffness when waking up in the morning and generally feel tired during the day.

Chronic pain worsens sleep difficulties and disturbed sleep is a way of life for those with chronic pain. It takes 4–6 weeks of getting enough sleep to recover from chronic sleep debt.

Adequate sleep is essential in the treatment of fibromyalgia and it may flare up during times of sleep disruption. Up to 25% of those with fibromyalgia are also affected by sleep apnea.



Here are a few simple ways to help:

- Keep regular sleeping and waking times
- Unwind and let go of problems and worries
- Avoid violent TV programs
- Avoid stimulants like coffee, tea, chocolate, alcohol or tobacco
- Eat a light supper to avoid heartburn or indigestion
- Use relaxation or meditation techniques
- Try a warm bath or shower before bed
- Make a list of what you need to do tomorrow, and put it away for the night
- Try replacing your uncomfortable mattress with one that suits your needs (many people find a warm waterbed or egg crate foam pad helps)

Driving Tips:

- Avoid alcohol, tranquilizers and other medications that cause you to be drowsy
- Travel with a friend who can take over driving while you rest ! Pull over when you feel tired and take a nap, stretch, and take a short walk
- Plan your trip so you are not over tired or stressed
- Drive in daylight hours if possible
- Drive during hours when you are most alert

In restoring sleep the body renews, regenerates and repairs itself. Most people with fibromyalgia experience non-restoring sleep which fails to relieve fatigue or pain. REM or rapid eye movement sleep is when most dreaming occurs. REM is also believed to have a role in storage of information in the long-term memory. Although REM comprises only about 20% of total sleep time, it is the restoring part of your sleep which helps you wake refreshed and ready for the day.

Talk to your doctor about a care plan tailored to your needs and if you have a C.P.A.P. unit be sure to use it every night. If you have problems with C.P.A.P. therapy or pain, get them solved as soon as you can either through your doctor or health care provider.

You may not be able to solve all your problems, but you can decrease some of them and decrease the amount of your chronic pain. Check for local fibromyalgia support groups.

Driving & Sleep Apnea

Many people think that they have slept well and yet they fall asleep in front of the TV or doze behind the wheel. Those with untreated sleep apnea are up to fifteen times greater risk of traffic or work-related accidents due to daytime sleepiness.

The rules for reporting medical conditions to the licence agency varies from one province to the next across Canada. Check with your province to see if sleep apnea is a reportable condition. Generally, if you are using the treatment, you are considered to be a fit driver. Your insurance may be void if you are not using your treatment and are involved in an accident because of sleepiness or fatigue.

Sleep Apnea Treatments

Continuous Positive Airway Pressure

The treatment of choice at this time is continuous positive airway pressure (C.P.A.P.). The C.P.A.P. unit pressure is set specific to each person's needs to prevent collapse of the airway or throat.

A C.P.A.P. mask is held in place by a head strap; tubing goes from the mask to the C.P.A.P. unit. The C.P.A.P. unit is plugged into the electrical outlet and provides a constant flow of air to the mask.

This treatment keeps the throat open and prevents snoring and apnea. It is a treatment and not a cure so you will feel better only as long as you use it. If you stop using the C.P.A.P.—YOUR SYMPTOMS WILL RETURN.

Please do not stop C.P.A.P. without talking to your doctor who can help you with other treatments if you are unable to use C.P.A.P.

C.P.A.P. is the treatment of choice for sleep apnea. C.P.A.P. is not an easy therapy to use and people tend to give up if they do not notice a big change right away. Education and follow-up are very important to keeping up with your C.P.A.P. treatment. Problems such as mask fit, sores or redness around the nose and dryness or nasal stuffiness can result in giving up. When problems are solved, you begin to feel rested and have more energy.

Weight Loss

Sleep Apnea is worse if you are overweight and your doctor may suggest a weight reduction diet as part of your treatment plan. Weight loss of more than 35 pounds (16 kg) can reduce the sleep apnea symptoms and help you feel better. If you are very overweight and lose a lot of weight, the doctor may want you retested in the Sleep Disorder Centre to see if there is a change in your Sleep Apnea.



What is the job of the soft palate?

The soft palate rises to close off the throat when we swallow. After surgery some people have problems with swallowing. (To test this on yourself, try to breathe and swallow at the same time.)



Dental Devices

Your doctor may prescribe a dental device. The dental device (airway dilator) is molded by the dentist and placed in the mouth at night to hold the lower jaw and tongue forward. This device is available in either a fixed type or an adjustable type. The adjustable type has a higher success rate than the fixed type. Some dentists have special training in fitting and adjusting dental appliances. If you need more information on dental appliances, talk to your sleep doctor for a referral.

Radio Frequency Procedure

Radio waves are used to shrink the tissue in the throat or tongue making more space in the throat. The tongue, throat, or soft palate is pierced with a special needle (electrode) connected to a radio frequency generator. The inner tissue is heated to 158–176 degrees fahrenheit, which takes about 30 minutes. The inner tissue shrinks while the outer tissue stays the same. Several treatments are needed to complete the process.

This is a new treatment and not available in all areas. The success rate for treating sleep apnea is vague because the procedure is fairly new.

Surgery for Sleep Apnea

Some newer surgery is in the early stages of development and shows promise for the future. Before you consider surgery, talk to your doctor to see if it would help in your case.

Two common types of surgery are:

CONVENTIONAL OR REGULAR SURGERY—performed by a surgeon, usually in an operating room of a hospital or clinic. The surgeon uses general anaesthetic or local freezing to control any pain for the patient. There may be some pain after the surgery which can be controlled by medication.

U.P.P.P. (see Fig. 1 and 2): the surgeon cuts away the uvula and part of the soft tissue at the back of the throat. This may change or reduce loud snoring but has limited success in treating sleep apnea. Often with sleep apnea the throat is blocked by the tongue.

LASER SURGERY (see Fig. 3 and 4): this procedure can be done in the doctor's office but takes between one and seven visits to complete. There is some pain and swelling after the laser surgery that usually goes away in a few days. This surgery may reduce or change loud snoring but has limited success in treating sleep apnea. A sleep test (polysomnograph) is needed after surgery to see if the sleep apnea is reduced. Laser is used to remove the uvula and soft tissue at the back of the throat.

C.P.A.P. Mask Fitting

Do you have problems with your C.P.A.P. mask?

Does it leak?

Does it cause irritation on your skin?

Do you have pressure marks on the bridge of your nose when you wake up?

Many of these problems can be overcome with a properly fitting mask. Take a look at the mask you are presently using and check for fit: the top of your mask should be at the bridge of your nose; the bottom about half way between the bottom of your nose and the top of your upper lip. Now take a look at the sides—the edge



Fig. 1



Fig. 2



Fig. 3



Fig. 4

of the mask should be close to the sides of your nose without actually touching it. If your mask is too big you may have leaking or pressure sores because you have to tighten it too much.

WHEN YOU TRY A MASK ON YOU SHOULD FEEL COMFORTABLE WITH IT FROM THE FIRST TIME AND NOT HAVE TO GET USED TO IT. With all masks, the *smallest* one that *fits* you is the way to go.

One of the most common mistakes is to choose a mask which is larger than you require. The other most common mistake is to pull your headgear too tight. A small leak is acceptable except if the leak is blowing air into your eyes which may cause irritation and dryness.

Your health care professional is trained to fit C.P.A.P. masks and can help you choose the best product for you.

Your mask and headgear wear over a period of time when you are using it every night. Regular washing with a mild soap can prolong the life of your mask. Even with good care, the manufacturers recommend replacing the mask and headgear once a year.

New products are being developed for greater comfort and fit so be sure you try out the new ones. Also ask about warranties and pricing when you are ready to purchase.

Chin Strap

The chin strap was designed to help prevent some of the nasal and oral dryness that can occur while breathing on C.P.A.P. Usually the pressure of the C.P.A.P. causes you to keep your mouth closed. If you find your mouth is frequently dropping open and dryness is a problem, the chin strap may help but does not work for everyone. The chin strap either attaches to your present headgear, or it wraps around your chin and attaches to itself with a velcro tab on top of your head. Various models are available so check with your supplier for one that best meets your need.

Tubing

If you need more tubing to allow greater movement, or if you want to move your C.P.A.P. unit further away due to the noise, you can join two lengths of tubing. However, the total overall length recommended by the manufacturer should not exceed twelve feet. A tubing connector is needed to join the two lengths.

Problem-Solving Hints

Dry nose.

Try a nasal spray or water soluble gel to prevent nasal dryness. Check with your supplier for information on humidifiers that attach to the C.P.A.P. unit.

Nasal stuffiness.

This is a common problem for those using C.P.A.P. or those who have allergies. Ask your doctor. Your doctor may recommend a steroid nasal spray such as Nasonex, Nasacort or Flonase.

Air leak around mask.

Do not over-tighten the C.P.A.P. mask as this may cause a leak. A leak into the eye can cause drying and irritation of the eye and must be corrected. Make sure you have a good fitting mask to prevent leaks.

Sores or red areas.

Sores on the bridge of the nose are caused from poor fitting or an over-tightened mask. The mask should be tight enough to seal without leaving red marks when you wake up.

Mouth leaks.

If you are using a nasal mask and your mouth drops open when you relax during sleep, you can try a chin strap or talk to your doctor about a full face mask.

Travel With C.P.A.P.

During the milder weather, our thoughts turn to vacations, trips to the lake or perhaps visits with friends or relatives.

Even though you are using C.P.A.P., when driving your car you may still experience the tendency to fall asleep at the wheel. To minimize this possibility you may want to stop frequently or change drivers so you can have a break. If you feel drowsy or hypnotized by the road ahead, stop at a rest area for a brief nap to refresh yourself. When you are away from home, it is important to continue with your C.P.A.P. therapy. If you are travelling abroad, check with your travel agent to see if you need an electrical

converter for small appliances. The instruction manual that came with your C.P.A.P. unit may provide some information on use in foreign countries. Also you may wish to purchase additional health insurance for the time you will be away from home. It is a good idea to take a written medical history, a list of any prescription medications you are taking, and your doctor's name and phone number in case of a medical emergency. A Medic Alert bracelet is available to those with Sleep Apnea. For air travel, you may need a doctor's letter so you can take the C.P.A.P. unit as carry-on luggage. Chances are, your vacation will go smoothly and without any medical problems; but if the information is needed, you are prepared.

CAREFUL planning can give you peace of mind and CAREFREE travel. ENJOY!



Sullivan Mirage Ultra Mask

C.P.A.P. Products

The following pages show some of the wide range of C.P.A.P. products that are available at your supplier. Ask for an appointment so there is a health professional on hand to help you choose the products that are right for you.

Nasal C.P.A.P. Masks

Be a wise consumer and shop for the mask that fits best.

Sullivan Mirage Ultra Mask

One of the smallest, lightest and quietest masks around, the Mirage is designed for maximum patient comfort.

ResMed's Mirage uses a revolutionary nasal cushion, specially contoured to fit a wide range of nose shapes.

Respironics Profile Lite Custom Nasal Mask

The Profile Lite is latex-free and designed to be lighter weight and conform to the shape of your face. The mask can be worn as is or heated in boiling water for a custom fit. It has an integrated flap which prevents leaking around the eyes and the mask contains a solid gel. A soft cushion conforms to contour of forehead.



**Respironics Profile Lite
Custom Nasal Mask**

Respironics Comfort Classic Nasal Mask

This nasal mask has a two-position gel spacer that molds to the wearer's forehead for comfort and stability. The Comfort Classic has an easy-to-maintain three-piece design and a built-in "silent" exhalation valve for quiet operation.

Breeze

The Breeze is an alternative to nasal masks and is sometimes preferred by those who have a moustache or are claustrophobic. The hard plastic shell is held in place by the Velcro headgear and the soft nasal pillows are inserted in the shell and may be rotated to fit the contour of the nostril. The Breeze also has a nasal mask as an alternative to the nasal pillows.

Full Face Masks

Innomed NasalAire

The NasalAire is designed to fit any face with no leaks. This lightweight, small, comfortable interface requires no headgear and is available in five sizes. The NasalAire is extremely soft and comfortable and easily cleaned with soap and water.

Mirage Full Face Mask

This mask is suitable for those who have problems with their mouth dropping open when they sleep. Mouth breathing can lead to ineffective therapy. The full face mask counteracts mouth leak problems by delivering pressure through both the nose and mouth. The mask is light weight, contoured to the face for better fit and is available in three sizes.

The Series 2 has a forehead tab for stability and improved seal.

These pages show examples of masks that are available for purchase. For a full line of mask products, see your local supplier.



**Respironics Comfort
Classic Nasal Mask**



Breeze



Innomed NasalAire



Mirage Full Face Mask



**Sullivan HumidAire
Heated Humidifier**

Humidifiers

Sullivan HumidAire Heated Humidifier

The HumidAire is a self-contained unit, safely housing the water chamber and heater base under a protective lid. The heater can be purchased separately so it can also be used as a cold humidifier. Setup is easy and the water chamber easily lifts out for cleaning and refilling. A dial control allows adjustment of temperature and humidity for maximum comfort. All electronic parts are isolated from the water chamber for maximum safety. In addition, an automatic cut-out feature turns the HumidAire off if the temperature exceeds 75 degrees celsius (167 degrees Fahrenheit).

The Fisher & Paykel Hc100 Heated

The Fisher & Paykel Hc100 Heated Humidifier provides comfort and relief for users experiencing nasal symptoms caused by C.P.A.P. The Hc100 is compatible with most models of C.P.A.P., and simple controls allow patients to adjust humidity levels for maximum effectiveness. The heater can be purchased separately so it can be used as a cold humidifier.

Respironics Oasis Cold Humidifier

Patented baffle and tower design increases humidity output beyond traditional pass-over humidifiers. Two-part design can be taken apart for easy cleaning and disinfecting; no water traps. Rounded corners are easy to clean. Oasis's humidity output surpasses traditional pass-over humidifiers and is roughly equivalent to a heated humidifier at the medium setting.



**The Fisher & Paykel
Humidifier Heated
Humidifier**



**Respironics Oasis
Cold Humidifier**

Glossary of Terms

ALLERGEN substance which causes a reaction in the immune system

ALLERGY a sensitivity to a certain substance (allergen) which, in similar quantity, is tolerated by non-allergic people

APNEA temporary pause in breathing

ASTHMA a chronic lung condition that causes difficulty breathing; for example—wheezing, coughing, chest tightness or shortness of breath

CENTRAL SLEEP APNEA the breathing centre of the brain fails to send a message to breathe. Commonly seen in people with head injury, stroke, or premature babies

C.P.A.P. continuous positive airway pressure, the most common treatment for sleep apnea

DEPRESSION altered mood, loss of interest in life, poor appetite, weight loss or gain, changes in sleep patterns, feelings of self-worthlessness, thoughts of suicide

DIABETES a disorder of sugar metabolism resulting from a lack of insulin produced by the body

DIAGNOSIS the use of scientific and skillful methods to find out the cause or nature of a person's illness

EGG CRATE FOAM PAD a layer of foam shaped like an egg carton that is used as a cushion for added comfort (ie. on a bed)

ELECTRODE a lead or wire which is attached to the body and hooked up to a monitor

FIBROMYALGIA is widespread pain in the muscles, ligaments, and tendons that causes people to have trouble sleeping and chronic tiredness

HYPOPNEA decreased rate and depth of breathing

IMPOTENCE (ERECTILE DYSFUNCTION) inability of a man to have or maintain an erection

LASER a beam of light which has special properties. The light is focused so all the rays are travelling in the same direction. It is similar to using a magnifying glass to focus rays of sunlight to a point. Medical lasers cut tissue and are used by surgeons for precise cuts with decreased bleeding

LIGHT THERAPY used in the treatment of some types of depression. Bright, intense lights are used by the affected person, especially at dawn and dusk

MOOD DISORDERS EDUCATION PROGRAM a program to help those who have altered moods or emotional difficulties

O.S.A. Obstructive Sleep Apnea. A disorder in which the throat is blocked by the tongue many times during sleep

- OSTEOARTHRITIS** inflammation, redness and swelling of joints, especially weight-bearing joints. Often called “wear and tear” arthritis
- PHARYNGOMETER** device to see inside the throat (used to adjust dental devices)
- POLYPS** small tumours that bleed easily and are sometimes found in the nose. Polyps in the nose may have to be surgically removed
- POLYSOMNOGRAPHY (POLLY-SOM-NAH-GRA-FEE)** a test to find out if you have a sleep disorder
- RADIO FREQUENCY PROCEDURE** an electrode is placed in human tissue and produces heat that shrinks the tissue
- REM Sleep**—rapid eye movement sleep is the dreaming stage of sleep
- RESPIROLOGIST** a doctor who is trained to treat lung disease and breathing problems
- RHINITIS** inflamed tissue in the nose, often with increased mucous. Allergic rhinitis is caused by breathing allergens such as pollen, grasses, molds or pets
- SINUSITIS** inflamed tissue in the hollow areas within the bone in the head. Swelling and inflammation is caused by allergies, bacteria or viruses
- SOFT PALATE** the back portion of the roof of the mouth partly separating the mouth and the throat
- SLEEP APNEA** the three main types include obstructive sleep apnea, central sleep apnea, and a combination of obstructive and central
- SLEEP DEBT** lack of sleep over a period of time
- SLEEP DISORDERED BREATHING** a general term for abnormal breathing during sleep
- SLEEP DISORDER CENTRE** a facility for monitoring and testing people with sleep disturbance
- U.P.P.P.** a surgical procedure involving shortening of the soft palate, and removal of the uvula and tonsils
- UVULA** the soft flap of skin that hangs down at the back of the throat

Common Questions and Answers

Q. HOW CAN I BE SURE I HAVE SLEEP APNEA?

A. Diagnosis is certain with the overnight testing in the Sleep Disorders Centre. Your doctor will discuss the results of your overnight test and may show you some of those results.

Q. WILL I ALWAYS NEED THE TREATMENT?

A. At this time there is no cure for sleep apnea. Using the C.P.A.P. treatment for sleep apnea will stop the snoring and apneas and help you feel better. Research is ongoing and may improve the treatment over the next few years.

Q. DOES SLEEP APNEA RUN IN THE FAMILY?

A. There is a strong family tendency. This can be accounted for because of the family nature of obesity, snoring and shape of the face and throat. The likelihood of having sleep apnea increases when there is a history in the family with this condition.

Q. IS THERE A CURE FOR SLEEP APNEA?

A. Research including improvements in surgical techniques may result in a cure in the future, but at this time there is no cure. Some people who were overweight and lost a large amount of weight have reduced symptoms and in some cases the sleep apnea was reversed. A doctor must monitor weight loss and test for sleep apnea after the loss.

Q. CAN SLEEP APNEA CAUSE MEMORY PROBLEMS?

A. Neuropsychological testing indicates that patients with sleep apnea have impairments in non-verbal memory, immediate recall and tests of executive function as well as in tests of manual dexterity. These impairments worsen with increasing severity of sleep apnea.

Q. WHAT ABOUT DRYNESS/NASAL STUFFINESS?

A. Many people suffer from nasal dryness especially in dry climates. A humidifier attached to the C.P.A.P. unit may help. Nasal stuffiness may be caused by allergies so it is important to get treatment so you can breathe easier.

Q. WHAT ABOUT MY DRIVER'S LICENCE AND SLEEP APNEA?

A. Driving with untreated sleep apnea is dangerous to you and your family, as well as other drivers. Check with your provincial licensing agency for regulations. Usually a driver using treatment for sleep apnea is considered fit to drive.

Q. WHAT HAPPENS IF I STOP TREATMENT?

A. Your sleep apnea symptoms will return. You will feel tired and begin to snore and have apneas again. The treatment only works if you use it.

Q. HOW LONG WILL IT TAKE TO GET USED TO C.P.A.P.?

A. Some people benefit the first night they use C.P.A.P. and are motivated because of the difference in their lives. Others have more subtle changes and have problems getting used to the mask. It may take about six weeks to gradually get used to sleeping with C.P.A.P. Keep trying—don't give up!

Q. WILL THE C.P.A.P. PRESSURE EVER NEED TO BE CHANGED?

A. Weight loss or gain of more than 35 pounds may change the pressure needed to keep your throat open. Check with your doctor if you have weight loss or gain.

Action Plan

How to use the Sleep Apnea Action Plan

Fill in the Action plan on the next page and keep it on your notice board or near your phone. The Action Plan will remind you of your next doctor's appointment and when to change your filters or have your C.P.A.P. unit checked. If you follow the plan it will help you to get the most from your treatment. Time passes quickly and its easy to forget to care for yourself and your C.P.A.P. unit.

Remember when you are having problems with the therapy to get help from your contact person or your doctor. The right treatment can make a big change in your life and your family's. By taking care of yourself, you are preventing other medical problems and improving your life. With treatment you will have a longer life and a better quality of life. You will have more energy to do the things you want to do.

Did you know?

- Sleep Apnea is becoming more common than diabetes or asthma
- Stroke can cause Sleep Apnea
- Regular bedtimes each day are important (ie. for each hour you stay up past your regular bedtime, it takes an extra day to get back to normal)
- Driving while very sleepy can be as dangerous as driving drunk

Sleep Apnea Action Plan

Your Name _____

Respirologist _____ Phone _____

Follow up visit with sleep doctor _____ Date and time _____

Sleep Apnea Education: Contact person _____ Phone _____

C.P.A.P. pressure _____ cmH2O C.P.A.P. model/serial # _____

Mask type and size _____ Date purchased _____

Checklist for C.P.A.P. unit

Check and clean/replace filters every 2 months.

• Date last checked _____ Date cleaned/replaced _____

Annual preventative maintenance

• Date last checked _____ Due next year on _____

• Contact for C.P.A.P. unit _____ Phone _____

Checklist for C.P.A.P. mask, tubing, headgear

- Clean mask daily with mild soap and warm water, rinse and air dry
- Clean tubing and headgear weekly with mild soap and warm water, rinse and air dry. DO NOT use bleach or harsh cleaning products as this will damage the mask, tubing and headgear. Vinegar in the rinse water will reduce odour and germs.
- Replace mask, tubing and headgear once a year as they become worn with constant use.
- Check with your insurer for replacement coverage.
- Do not stop using C.P.A.P. without consulting your doctor.
- If you have problems keeping the mask on at first, be sure to persevere and gradually increase the time until you wear it all night
- Contact your supplier if you are having problems with the mask.

Contact your doctor if you:

- Are having problems with the C.P.A.P. therapy
- Have discontinued using C.P.A.P.
- Have lost/gained more than 30 pounds since starting C.P.A.P.
- Are experiencing depression.
- Notice that the C.P.A.P. is not helping you

www.lung.ca