You have problems in sleep?  Do you want to have a good sleep like you used to?  Are you sleepy all day and can't concentrate at work?
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Foreword

This guide is designed to educate the sleep apnea sufferer and the public alike, and contains the basic information to understanding sleep apnea.

Sleep-Apnea-Guide.com recommend this handbook to all those who suspect they have sleep apnea, for people who have been diagnosed, for their friends and families.

What follows is an overview as to how Sleep Apnea works on your body. Be free to print this handbook and read it at home, in train, in the park, anywhere.
What this handbook will do for you

This book is written for people with symptoms of sleep apnea, for their spouses and families, to help them understand sleep apnea and lead them toward more timely diagnosis and successful treatment.

If you know that you have problems in sleep, you will have some questions that needs to be answered:

- *What happens when I don’t get enough sleep?*
- *Why can’t I sleep like I used to?*
- *Why do I snore in my sleep?*
- *Why I am so sleepy at work or while driving?*
- *How can I tell if I have a sleep disorder?*

In this handbook you can find the answers to these question and you will understand better why sleep is so necessary.
Understanding Sleep Apnea

What is Sleep Apnea?

Sleep Apnea is a potentially life-threatening breathing problem that occurs during sleep.

It owes its name to the Greek word apnea, meaning “want of breath”.

In Obstructive Sleep Apnea, sleep induces muscle relaxation, which in turn allows throat structures to vibrate, causing snoring. In serious cases, breathing stops (apnea), however, the brain detects a problem, and triggers an arousal from sleep.

In Central Sleep Apnea, breathing interruptions during sleep are caused by problems with the brain mechanisms that control breathing.

Although a person may be unaware that he is experiencing frequent arousals from sleep, they may wake up feeling unrefreshed.
Who gets Sleep Apnea?

Sleep Apnea is fairly common

- It’s more common in African-Americans and Hispanics than in Caucasians.
- It affects one in ten middle-aged men, and it is slightly less common in women. Half of apnea patients are overweight and most snore heavily.
- Most of the people with sleep apnea don’t know they have it and are not being treated for it.
- People who are overweight (Body Mass Index of 25 to 29) and obese (BMI of 30 and above)
- Men and women with large neck size: 17 inches or more for men, 16 inches or more for women.
- Middle-aged and older men, and post-menopausal women.
- People with abnormalities of the soft tissue structure of the head and neck.
- Children with large tonsils and adenoids.
- People with Down Syndrome.
- Anyone who has a family member with obstructive sleep apnea.
- Those suffering from nocturnal nasal congestion due to abnormal morphology, rhinitis or both.
- Smokers
Do I have Sleep Apnea?

A person with sleep apnea usually do not remember waking up during the night. He and his bed-partner may see the following symptoms:

- Loud and irregular snoring
- Choking or gasping during sleep
- Awakening with a dry mouth or sore throat
- Long pauses in breathing during sleep
- Restless sleep
- Morning headaches
- Excessive daytime sleepiness
- Memory loss
- Irritability, quick to anger
- High blood pressure
- Clinical depression
- Uncontrollable weight gain
- Large neck (>16” around in women, >17” around in men)
- Impotence
- Bed-wetting or frequent trips to the bathroom at night
Do you snore more than three time per week?
  a) yes    b) no   c) uncertain

Don’t you feel frequently well rested despite spending 7-8 hours or more asleep at night?
  a) yes    b) no   c) uncertain

Do you experience breathing pauses during sleep that wake you up or that others notice?
  a) yes    b) no   c) uncertain

Is your snoring loud (can it be heard from other rooms)?
  a) yes    b) no   c) uncertain

Do you have difficulty staying awake during the day?
  a) yes    b) no   c) uncertain

Do you fall asleep at inappropriate times during the day?
  a) yes    b) no   c) uncertain

Your bed partner notes that your legs or arms moves often during your sleep?
  a) yes    b) no   c) uncertain

Do you have trouble waking too early?
  a) yes    b) no   c) uncertain

If you are a Man, your collar size is…
  a) >17 inches  b) <17 inches

If you are a Woman, your collar size is…
  a) >16 inches  b) <16 inches

Have you experienced an unexplained decrease in physical or mental performance?
  a) yes    b) no   c) uncertain

Do you need to use stimulants to stay awake during the day?
  a) yes    b) no   c) uncertain
What Happens when I have Symptoms of OSA (Obstructive Sleep Apnea)

1. your throat muscles and tongue relax more than is normal, causing the airway to narrow.
2. the small amount of airway narrowing at the onset of sleep causes snoring.
3. the more the airway narrows, the harder it is to get a normal breath and the greater the effort needed to breath.
4. as breath size gets smaller, blood oxygen levels drop and carbon dioxide builds up.
5. if your throat is already narrow, or the muscles relax too much, the airway closes completely and no air gets in at all.
6. eventually, you wake up gasping loudly for air, or you can even die in sleep.
**What Happens if I don’t treat Sleep Apnea?**

If sleep apnea effects were not so serious, many people would be happy to go to sleep. But it’s not so easy to sleep when you know that you have a real problem with sleep apnea.

As time passes, sleep apnea becomes more serious and dangerous to your life. All aspects of your life will be affected by this sleep disorder.

You will start with a very bad sleep, with nights struggling to breathe and noisy snoring that probably makes your partner to wonder about you and your future together.

You will have negative changes in personality, a poor work performance and a continuous decrease of quality of life.

Let’s suppose that you avoid to treat sleep apnea for a period of time. What will happen to you?

- Heart failure
- High blood pressure
- Stroke
- Heart attack
- Diabetes type II
- Car accidents due to sleepiness
- Poor quality of life
- Clinical depression
- Sudden death
Diagnosing Sleep Apnea

A sleep apnea test, or sleep study, is recommended if you have the following problems:

- trouble getting restful sleep for more than a month.
- feeling drowsy despite getting more sleep than the amount that used to make you feel rested.
- falling asleep at inappropriate times during the day
- being told you snore loudly and gasp or stop breathing in your sleep

If you have symptoms suggestive of sleep apnea, then it is worthwhile having a sleep study.

Sleep study may take the form of a portable monitor (home testing), or a visit to the sleep centre for an overnight sleep study or polysomnogram (PSG). Both of these tests measure your breathing and oxygen level in the blood.

The PSG is a more sophisticated test which monitors brain wave (EEG) activity, eye movements (EOG), muscle activity (EMG), and breathing effort. It can also be used to diagnose sleep disorders other than sleep apnea, and can be used to guide therapy.

Patients suspected of having severe sleep apnea, or an underlying heart or lung condition, are best evaluated with a PSG in a sleep centre setting.
Why do I have Sleep Apnea?

If you wonder what are the causes of sleep apnea, here is a list of factors that affect your sleep disorder:

- **Male gender** – men have greater chances to have sleep apnea than women.
- **Facial structure**
- **Family history**
- **Airway size**
- **Obesity**
- **Alcohol use**
- **Medication use, such as narcotics, benzodiazepines.**

As you can see from the list, almost anyone can suffer from sleep apnea, at any age, but is most common in men, and especially obese middle-aged men.

There is a strong relationship between weight and obstructive sleep apnea: your neck gets thicker as you gain weight, and this increases the level of fat in the back of the throat, narrowing the airway.

The more fat in the throat, the more likely the airway is to become blocked.

You can improve your symptoms by eliminating the causes of sleep apnea.

Do you like to drink alcohol in the week as well as at the weekend? You should avoid alcohol, because it can increase the number of apnea events.

Smoking is common factor that can decrease the amount of oxygen in your blood. It’s wise to stop smoking if you care about your health.

Avoid narcotics in the evening.
Obesity and weight loss

Many patients with sleep apnea have overweight problems.

As long as you gain weight, your neck gets thicker. When the level of fat from the throat increases, your airway is getting smaller. The more fat in the throat, the more likely the airway is in danger to become blocked.

With sleep apnea you will realize that is difficult to loose 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.

Doctors know that CPAP is an effective treatment for sleep apnea. You will have a more restful sleep and better energy level in day time. Some people find it easier to lose weight once CPAP therapy is started.

Of course, not everyone who is obese has sleep apnea, but chances are high.

In overweight people, the excess of fatty tissue on the abdomen causes abnormal weight that can interfere with the normal breathing.

So, the more overweight you are, the more difficult is to breath in sleep and you will worsen sleep apnea.

When sleep apnea is aggravated, you may feel more drowsy during the day. So, the excessive daytime sleepiness - an important symptom of sleep apnea - is getting worse, too.

If we sleep all day, we don't consume enough energy and so we become less active and gain more weight. In this way we aggravate our health situation harder.
What should I do to fight obesity?

As obesity is the most important risk factor of apnea episodes, sleep apnea weight loss would be expected to lead to an increase in upper airway dimensions and an improvement in sleep breathing disorder.

This is an amazing good news!

It has been shown that weight loss can lead to an improved sleep efficiency, decreased snoring and improved oxygenation of the blood.

- You should be very motivated, not only to start you sleep apnea weight loss program, but to continue and make a habit from it.
- You must understand that if you have sleep apnea, it’s not enough just to eat less. It’s important how, when and what you eat.
- The only way to lose weight safely and effectively is through diet and exercise.
- Read labels for fat and calorie content.
- Try cereal, yogurt, fruit or a bran muffin to start your day.
- Drink at least 6 cups of water each day.
Loosing weight begins with a change of mentality. You must understand that if you have sleep apnea, it's not enough just to eat less. It's important how, when and what you eat.

Today, there are millions of different products that claim to help you lose weight quickly and easily. There is no miracle weight-loss cure, however. The only way to lose weight safely and effectively is through diet and exercise.

- Eat plenty of fruit and vegetables
- Eat more starchy foods such as rice, pasta and bread – choose wholegrain when you can.
- Cut down on fat – especially saturates.
- Cut down on salt and sugar
- Go for a walk – a brisk walk can make you feel good and it's free.
- Take the stairs – is a great way to tone your legs.
- Swimming is great exercise for all ages.
- Do something active every day, and aim for at least 30 minutes of moderate intensity activity five times a week.
- Research shows that those who exercise feel better about themselves and feel less tension, depression and anxiety.
Influence of Medications
in Sleep Apnea

MEDICATION is an additional option to complete the treatment for your sleep disorder. Unfortunately, most of the medications are not ideal for you and may have undesirable side effects.

Some medications may cause apnea episodes in your sleep. Discuss all your medications with your sleep doctor. Sometimes medications such as tranquilizers or muscle relaxants can make your sleep apnea worse.

Some herbal remedies don’t mix well with other medication and may cause serious health problems. Be sure to tell your doctor about this.

THEOPHYLLINE is a drug that can reduce sleep fragmentation due to nocturnal asthma. The side effect of theophylline is insomnia.

MODAFINIL is used in patients who have partially responded to CPAP. It can reduce the number of daytime naps and improve the quality of life. You must respect the treatment duration and dosage prescribed by the doctor to feel better, or it could be worse.

The patients treated with modafinil may feel better, but it is advised to consistently use CPAP. Taking modafinil without CPAP is a risk for cardiovascular side effects.

Remember that modafinil does not treat sleep apnea, but it only treats the symptoms.

Regular use of modafinil may cause headache, dizziness, nervousness, chest pain and insomnia.

ACETAZOLAMIDE is a respiratory stimulant and it is used by mountain climbers to prevent altitude sickness. The research showed that this medicine can decrease the number of apnea events and can decrease the daytime sleepiness.

There is a study that shows a dose-dependent effect. A lower dose of acetazolamide can improve central apnea events, and a higher dose can decrease obstructive apnea events.

However, long-term studies are necessary to determine if therapy has a positive effect on sleep apnea. We need more evidence to trust this medications.
### Things to avoid if you have Sleep Apnea:

- *Alcohol* – its muscle relaxing proprieties may worsen this condition. Mild sleep apnea can become severe after three to four standard drinks.
- Sleeping tablets may also worsen sleep apnea by depressing the drive to breathe.
- Sleep deprivation
- Caffeine can cause problems with sleep if used within four hours of bedtime.
- Eating late at night.

### Things to consider if you have Sleep Apnea:

- Try sleeping on your side rather than sleeping on your back as it can produce loud snores because of blockages.
- Elevate the head when you sleep. This measure can alleviate snoring and make breathing easier.
- Use an air humidifier at nighttime to make the air moister.
- Don’t smoke for at least several hours prior to bedtime. Doing so, the smoke can cause the airways to tighten in the neck, worsening sleep apnea.
- Maintain regular sleep hours. In my case, I had to quit my shift work job, to have a normal sleep.
- Use a nasal dilator, saline nasal spray or breathe right strips to help open nasal passages.
Shift Work and Sleep Apnea

Anything that interferes with the amount and quality of sleep, as shift work does, can worsen sleep apnea symptoms. Shift workers often get fewer hours sleep overall and never really catch up so they are always in sleep debt.

Besides worsen sleep apnea, night shift work and the inversion of sleep-wake schedules has a variety of disruptive effects on the life styles, sleep and general health, such as:

- Diabetes
- Cardiovascular disturbances
- Peptic ulcer
- Hypertension
- Myocardial infarction
- Breast cancer

Regarding this health problems, shift work and sleep apnea are the worst possible combination.
10 Tips for Better Sleep

1. Don’t eat or drink large amounts before bedtime.

2. Avoid nicotine, caffeine and alcohol in the evening.

3. Exercise regularly.

4. Go to bed and get up at about the same time every day, even on the weekends.

5. Make your bedroom cool, dark, quite and comfortable.

6. Sleep primarily at night. Daytime naps may steal hours from nighttime slumber.

7. Choose a comfortable mattress and pillow.

8. Start a relaxing bedtime routine. Do the same things each night to tell your body it’s time to wind down.

9. Go to bed when you’re tired and turn out the lights. If you don’t fall asleep within 15 to 20 minutes, get up and do something else. Go back to bed when you’re tired.

10. Use sleeping pills only as a last resort. Check with your doctor before taking any sleep medications.
8 Depression and Sleep Apnea

Just knowing you have a deadly sleep disorder that you can’t control without a proper treatment, it makes you feel depressed.

The severity and duration of the person’s depression depend on family support and on the individual. And you need lot’s of positive thoughts to continue sleep apnea therapy.

The main symptoms of depression are:

- Pessimism
- Fatigue
- Decreased energy
- Poor self-esteem

People with sleep apnea tend to become social isolated from their partners and children because of their fatigue and sleepiness.

They will tend to stay less with their family and relationships and to spend more time sleeping.

Family or friends will be for him more like a burden than a source of support.

From your inactivity in the social life of the family to negative attitude, all this will affect your home life and social life. These problems may contribute to marital conflict and divorce.

In this case, the solution is to start the treatment of sleep apnea before all this problems arise. You need all the support of the family and friends to continue the therapy.

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.
9 Driving and Sleep Apnea

Most people with symptoms of sleep apnea fall asleep at work, at movies and even while driving.

Those with untreated sleep apnea are up to fifteen times greater risk of traffic or work-related accidents due to daytime sleepiness. In fact, it is so common that car accident is one of the most important cause of death in drivers with sleep apnea.

You don’t need to have a severe sleep apnea to sleep behind the wheel. A simple mild sleep apnea can makes you feel sleepy enough to be a drowsy driver.

Generally, if you are using the treatment, such as CPAP therapy, 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.
10 Treatments for Sleep Apnea

Continuous Positive Airway Pressure (CPAP)

CPAP is a treatment and not a cure, so you will feel better only as long as you use it. If you stop using the CPAP your sleep apnea symptoms will return.

- Is the most common treatment for adults with sleep apnea.
- CPAP treat sleep apnea by using air pressure to keep the airways more open while you sleep.
- The CPAP unit pressure is set specific to each person’s needs to prevent collapse of the airway or throat.
- Because is extremely effective, CPAP has become the number one treatment of most sleep centers.
- This treatment prevents also snoring and apnea episodes.

Many people with CPAP problems quit their treatment for sleep apnea and try to find something else, due to some problems:

- Irritation of the bridge of the nose
- Air leakage around the mask
- Mask discomfort

I recommend to speak with your doctor if you want to stop using CPAP. If you are unable to use CPAP, he can help you with other treatments.
Many people with CPAP problems quit their treatment for sleep apnea and try to find something else.

Something... alternative.

If you are one of this people, I want to encourage you to educate yourself about these problems and to continue using CPAP treatment.

By reducing CPAP side effects and other difficulties, you can remove the barriers to use CPAP regularly.

Ok, let’s speak about this difficulties and their solutions.

The most common CPAP problems are:

- irritation of the bridge of the nose
- air leakage around the mask
- mask discomfort

The most problems with CPAP appear when you choose a mask size or type that does not match your face, or because the headgear is too tight.

The mask is the most important part in CPAP therapy, and getting the mask to fit properly is maybe the biggest challenge for a CPAP buyer. You must try the mask with your CPAP running to find if it has a leak.

When you try a mask on you should feel comfortable with it from the first time and not have to get used to it. In general, the smallest one that fits you is the way to go.

If your mask fits properly, you don’t need to tighten the straps every night to irritate the bridge of the nose. If you still have a leak, you might try putting a soft material between your skin and your mask, or you can use a special tape that can be taped on the mask.

If you have a silicone mask, don’t forget to change it every time you will feel the mask fits poorly or leaking. With an old mask, your skin’s health may be in danger, because skin abrasions from an old mask are difficult to heal.
**Tips for safe use of your CPAP equipment**

- **Never immerse the CPAP unit in water** – the electrical components will be damaged and this can create shock to the user the next time it is plugged into an electrical outlet.

- **Never plug in the unit if it is wet or damp** – moisture always increases the potential of electrical shock.

- **Do not plug your unit into an electrical being used to supply electricity to other major appliances.**

- **Don't try to repair your CPAP unit** – your unit is considered medical equipment and needs to be worked on by a professional.
A dental device is used to relieve upper airway obstruction and snoring, by modifying the position of the mandible, tongue, and other structures from your mouth.

The device is molded by the dentist and placed in the mouth at night to hold the lower jaw and tongue forward.

There are two types of dental devices:

- **Mandibular advancement appliances** — works by altering the position of the lower jaw or mandible.

- **Tongue retaining devices** — this device reposition the tongue in an anterior position by securing it with negative pressure in a soft plastic bulb that directly contacts the base of the tongue.
The most common types of surgery are:

- **UPPP** – the surgeon cuts away the uvula and part of the soft tissue at the back of the throat. This may improve snoring, but has limited success in treating sleep apnea.

- **Laser-assisted Uvulopalatoplasty** – is a harmless way to treat snoring, but takes in general several visits to the doctor to complete.

- **Gastric bypass surgery** – it prevents eating a lot of food, making your stomach smaller. This surgery is used when the patient has problem with obesity.

- **Tonsillectomy** – the tonsils are removed from either side of the throat. Sometimes the adenoids are removed at the same time, a procedure called adenoidectomy.

- **Radio Frequency Ablation (Somnoplasty)** – is an outpatient procedure uses low power, low temperature radio frequency energy to shrink tissues that may be obstructing the nasal or oral airway. This may include the turbinates for those with chronic allergies, or the soft palate, uvula and base of the tongue for snoring and mild apnea.
Behavioral changes are an important part of the treatment program, and in mild cases behavioral therapy may be all that is needed.

The individual should avoid the use of alcohol, tobacco, and sleeping pills, which make the airway more likely to collapse during sleep and prolong the apneic periods.

Overweight persons can benefit from losing weight. Even a 10 percent weight loss can reduce the number of apneic events for most patients.

In some patients with mild sleep apnea, breathing pauses occur only when they sleep on their backs. In such cases, using pillows and other devices that help them sleep in a side position is often helpful.
Alternative Treatments

If you have a problem with traditional methods of treatment, such as:

- fear of surgery
- problems with CPAP therapy
- you don’t have a health insurance for sleep apnea treatment
- you can’t afford the treatment
- too risky for you
- too complicated

...then you maybe think of different solutions for sleep apnea treatment.

In searching for another cure, you should know that a new field of medicine offers fertile ground for scams. Shameless people are quick to exploit people’s hopes and fears. Claims of miracle cures for sleep apnea are already germinating on internet.

Sleep apnea is a complicated disorder, and the choice of the correct treatment depends on many factors. The treatment should be chosen on the basis of the kind of apnea, how severe it is, and your overall health.

If you have a mild sleep apnea, or your main cause is obesity, you can combine the following types of alternative treatment and have very good results:

- alternatives to cpap
- sleep apnea weight loss
- sleep apnea exercises
- natural remedies for sleep apnea
- sleep apnea products

Take into consideration the options available to those suffering from sleep apnea, because anything that can help your natural remedy can improve your disorder:

- try sleeping on your side rather than sleeping on your back as it can produces loud snores because of blockages.
- elevate the head when you sleep. This measure can alleviate snoring and make breathing easier.
- Use an air humidifier at nighttime to make the air moister.
- don’t smoke for at least several hours prior to bedtime. Doing so, the smoke can cause the airways to tighten in the neck, worsening sleep apnea.
- maintain regular sleep hours. In my case, I had to quit my shift work job, to have a normal sleep.
- use a nasal dilator, saline nasal spray or breathe right strips to help open nasal passages.
NOTE: Some of these treatments are not suitable for everyone. Your health care provider can discuss these options with you and recommend a suitable treatment option.
If you have any questions, please feel free to contact the author of this handbook at the following email address: sleep-guide@sleep-apnea-guide.com, or visit our site at www.sleep-apnea-guide.com.