Diabetes and Sleep Problems

Sleep Study

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Diabetes and Sleep Problems

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Introduction

Approximately one in three Americans do not get enough quality sleep on a regular basis. A lack of sleep can affect your health, your mood and your quality of life. Ideally, we should spend about 8 hours a day sleeping. Unfortunately, in today’s world, getting enough good quality sleep can be hard.

Sleep difficulties are even more common for people with diabetes. Having diabetes increases the risk for sleep disorders such as sleep apnea and restless legs syndrome. Both high and low blood glucose levels can also disrupt sleep. Other medical problems common to people with diabetes, such as heartburn, heart disease, chronic pain and depression, can interfere with sleep as well.

This booklet will discuss some of the more common causes of sleep problems as they relate to diabetes, and describe treatment options.
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This booklet will discuss some of the more common causes of sleep problems as they relate to diabetes, and describe treatment options.

People with diabetes are more likely to have sleep problems than those without diabetes.

The authors wish to thank the ResMed Foundation for its support in the development of this book.

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Note: This book is not intended to encourage the treatment of illness, disease or any other medical problem by the layperson. Any application of the recommendations set forth in the following pages is at the reader’s discretion and sole risk. Laypersons are strongly advised to consult a physician or other healthcare professional before altering or undertaking any exercise or nutritional program or before taking any medication or supplement referred to in this book.
A Lot Happens During Sleep

Sleep is important for your physical and mental health, as well as your quality of life. When one is sleeping, the brain and the body can recover from the day and get ready for the next day. Any learning that took place during the day is reinforced. In addition, research shows that the process of dreaming during rapid eye movement (REM) sleep can be important for learning new things.

Stress hormone levels are low during sleep, and this lowers blood pressure and allows the heart to relax. Growth hormone, which helps muscles and other parts of the body recover from the wear and tear that occurs during the day, is released during deep sleep.

Not Getting Enough Sleep

Not getting enough sleep, or enough quality sleep, for a few nights can lead to:

- feeling tired or sleepy
- feeling irritable
- trouble paying attention and learning new things
- higher blood pressure
- higher blood glucose levels

People who have poor sleep over many years are at higher risk of:

- gaining weight
- developing diabetes
- developing heart disease
- getting sick more often
- having a shorter life expectancy

In addition, being sleep deprived can affect your safety and the safety of others, especially if you are driving or operating machinery.
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Most people who have sleep apnea don’t know they have it because it occurs while they’re sleeping. Often, a partner or family member is the first to notice signs of sleep apnea. Healthcare providers may not pick up on sleep apnea during routine office visits. There is no blood test to diagnose sleep apnea.

Sleep apnea causes oxygen levels to drop. This puts stress on the heart and other parts of the body. As a result, people with sleep apnea are at higher risk for heart disease and stroke. Some studies suggest sleep apnea may also increase the risk for diabetes and worsen the effect of diabetes on the eyes and kidneys.

### Risk Factors for Sleep Apnea

You’re more likely to have sleep apnea if you:
- Are overweight
- Are male
- Are over the age of 40
- Have a family history of sleep apnea
- Smoke
- Have gastroesophageal reflux or GERD
- Have nasal or sinus problems

### Causes of Poor Sleep

For people with diabetes, there are several common causes of poor sleep. These include sleep apnea, restless legs syndrome (RLS), peripheral neuropathy, high and low blood glucose, depression, anxiety, and stress.

### Obstructive Sleep Apnea (OSA)

Sleep apnea is one of the most common sleep disorders, and can affect both adults and children. People with sleep apnea stop breathing for short periods of time while they are asleep. When they stop breathing, their brain detects something wrong and they wake up. Once they wake up, their breathing returns to normal. The most common type of sleep apnea is called “obstructive sleep apnea” (OSA). With OSA, the airway becomes blocked or collapses during sleep, which causes shallow breathing or breathing pauses.

Common symptoms of sleep apnea include:
- snoring
- waking up many times during the night
- morning headaches
- feeling irritable or depressed
- feeling tired during the day
- falling asleep during the day
- high blood pressure
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Treatment for Sleep Apnea

The treatment for OSA includes eating healthfully, being physically active, and losing weight. In fact, losing just 10 percent of your body weight if you are overweight can have a big effect on relieving your sleep apnea symptoms. Other helpful steps include:

- not drinking alcohol close to bedtime
- sleeping on your side or stomach rather than on your back
- preventing a stuffy nose by treating allergies or other nasal problems

If you have severe sleep apnea, you may be treated with “continuous positive airway pressure,” or “CPAP.” A CPAP machine blows air under pressure through a hose and into a mask that you wear over your nose and/or mouth. Using CPAP raises the pressure of air inside your throat so that your throat will not close off when you sleep. CPAP is very effective and can reduce daytime sleepiness and improve blood pressure.

It may take some time to get used to wearing the CPAP mask and breathing through it. Let your healthcare provider know if you are having any problems so he or she can help you find ways to make CPAP more comfortable.

Another treatment option is an oral appliance. The oral appliance pulls your lower jaw forward and opens up your throat while you sleep. It is somewhat less effective than CPAP, but it can be more comfortable. It is also easier to take with you when you travel.

Restless Legs Syndrome (RLS)

Restless legs syndrome (RLS) is a condition that causes unusual feelings in one’s legs, typically at night. Common symptoms of RLS include sensations in the legs that are:

- creepy-crawly
- twitchy
- achy
- electrical

These symptoms cause a strong urge to move the legs. RLS symptoms can also occur in the arms or other parts of the body. Symptoms tend to go away once you move around.
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What causes RLS?
The exact cause of RLS is unknown. It can run in families and may occur due to problems with a substance called “dopamine” in the nervous system and brain. Other common medical conditions linked with RLS are low iron stores and anemia. Certain medicines can also bring on or worsen RLS symptoms. People with diabetes are more likely to have RLS, especially if they have complications from diabetes, such as peripheral neuropathy or kidney disease.

Treatment for Restless Legs Syndrome (RLS)
There are different lifestyle treatments and medicines that can help improve RLS symptoms, including:

- reducing caffeine, alcohol and tobacco
- getting up and moving around when you have symptoms (Leave small chores, such as ironing or cleaning for the early evening, when symptoms may be at their worst.)
- stretching your legs before you get into bed
- exercising during the day
- avoiding medicines that may worsen RLS, such as diphenhydramine (Benadryl), anti-depressants, and some anti-nausea medicine. (Be sure to talk to your healthcare provider before stopping any medicines.)

If your symptoms are severe, make it hard for you to get to sleep or stay asleep, or happen most days of the week, you may want to talk to your provider about taking medicines for RLS.

Peripheral Neuropathy
Diabetes can cause nerve damage called “diabetic neuropathy.” The most common type, peripheral neuropathy, causes numbness, tingling, and pain in the feet and hands. If you have neuropathy, you may feel pain from things that would not normally cause pain, such as a bed sheet touching your feet. Peripheral neuropathy can make it difficult to fall asleep and/or stay asleep.

There are other causes of neuropathy besides diabetes, including chemotherapy, infections and autoimmune disorders such as lupus. Whatever the cause, some neuropathic pain can be treated with medicine. Your provider can help you find the best medicine to help you relieve pain and sleep better.

Ask your provider about using capsaicin cream which may help relieve neuropathy symptoms.

High and Low Blood Glucose
Even when diabetes is well controlled, blood glucose levels are sometimes high. When diabetes is not well controlled, blood glucose may be high all the time. If your blood glucose levels are high (above 180 mg/dl), you may feel thirsty and drink a lot. As a result, you may have to urinate often. You may get up several times during the night to use the bathroom, and this can prevent you from getting a good night’s sleep.
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Lifestyle changes, such as cutting back on caffeine and alcohol, can help reduce symptoms of RLS.
Low blood glucose, which is a blood glucose level of less than 70 mg/dl, can also disrupt sleep. Certain types of diabetes medicines, such as insulin and pills called sulfonylureas, raise the risk of low blood glucose. Symptoms of low blood glucose include feeling nervous, sweaty, shaky, or confused. These symptoms can be unpleasant, and they can interfere with sleep. If you have symptoms of low blood glucose, check your blood glucose with your meter. If your blood glucose is low, eat or drink something that contains carbohydrate, such as glucose tablets or juice, to raise your blood glucose to above 80 mg/dl.

The good news is that treating OSA can help improve depression.

Stress is a part of everyone’s life, but too much stress can lead to high or low blood glucose levels, depression, anxiety and other health problems. Stress can also cause sleep problems.

Depression, Anxiety and Stress

Depression, anxiety and stress are common for people with diabetes, and can affect blood glucose control. The challenges of taking care of diabetes can lead to stress, anxiety and depression. These feelings of depression, anxiety and stress can also cause sleep problems, and sleep problems, in turn, can worsen these three conditions. For example, people who are depressed often have insomnia. And people who have insomnia are much more likely to be depressed than those who don’t have insomnia.

Talk with your provider about changing your treatment plan if your blood glucose levels are too high or too low.

People with obstructive sleep apnea (OSA) are also more likely to suffer from depression. If you think you may be depressed, talk with your healthcare provider. Depression can be treated with therapy and medicine.

Ways to Manage Stress

- Eating healthfully and getting regular physical activity
- Making time for yourself to do activities that you enjoy
- Getting enough sleep
- Learning how to relax through deep breathing, visualization, meditation or yoga
- Talking to friends, family or a counselor
- Joining a support group
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Sleep Better

Sleep is essential for health and well-being. Most people need between 7 and 9 hours of sleep each night. If you have trouble sleeping, here are some suggestions:

- Get up at the same time every day, even on days when you are not working. Sleeping in too late can change your body clock and make it hard to sleep the next night.
- Stay off personal electronic devices such as your phone, tablet, and computer for at least 2 hours before you go to bed.
- Exercise during the daytime, but not too close to bedtime.
- Limit naps during the daytime.
- Sleep in a cool, dark room. Wear an eye mask and earplugs, if necessary.
- Keep pets out of the bedroom.
- Do not drink caffeine past noon.
- Avoid alcohol late into the evening.
- Go to bed when you are sleepy.

If you still have difficulty falling or staying asleep, or have trouble staying awake during the daytime, talk with your healthcare provider. Treatment is available to help improve your sleep.

Aim to get between 7 and 9 hours of sleep every night.
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- Keep pets out of the bedroom.
- Do not drink caffeine past noon.
- Avoid alcohol late into the evening.
- Go to bed when you are sleepy.
- Stay in bed only if you are sleeping. You should get out of bed if you can’t fall asleep or can’t stay asleep for more than 20 minutes.

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About Joslin Diabetes Center

Joslin Diabetes Center is the world’s preeminent diabetes clinic, diabetes research center and provider of diabetes education. Joslin is dedicated to ensuring that people with diabetes live long, healthy lives and offers real hope and progress toward diabetes prevention and a cure for the disease. Founded in 1898 by Elliott P. Joslin, M.D., Joslin is an independent, nonprofit institution affiliated with Harvard Medical School.

For more information about Joslin, call 1-800-JOSLIN-1 or visit www.joslin.org

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