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BE STRONG-HEARTED

YOUR GUIDE TO SLEEP AND YOUR HEART

If you sleep poorly, you risk more than crankiness in the morning: You risk your heart. Studies show that even if you are at a healthy weight, get exercise and don't smoke, too little sleep can increase your risk for heart disease.

That's because **good sleep** does more than leave us feeling refreshed in the morning. **It lowers our blood pressure, regulates our metabolism and insulin uptake and reduces inflammation** — all critical influencers of heart disease.

Some sleep deficiencies are worse than others. Take sleep apnea. It increases your risk for heart disease independent of your age, race or gender and regardless of your weight, tobacco and alcohol use and co-morbidities like diabetes, high cholesterol, obesity and hypertension. The association between sleep apnea and heart disease is complex, but researchers are getting a better handle on it. In fact, recent studies indicate that controlling sleep apnea can help patients better manage blood pressure, how much blood your heart pumps on a single beat, vascular health and arrhythmias. **(How do you know if you have sleep apnea? There's a questionnaire in this guide — fill it out and take it to your MDVIP-affiliated doctor so they can help you.)**

But even if you don't have sleep apnea, poor sleep habits increase your risk for heart disease through three main routes:

Higher blood pressure: When you sleep, your body takes a break, cardiovascularly speaking. Your blood pressure drops. This is called "nocturnal



dipping." People with less dipping have a higher risk of heart disease.

Type 2 diabetes: When you go without or go with less sleep, you can throw off the carefully choreographed dance your hormones do. Even one night of sleep deprivation can result in insulin resistance. How? **When you are sleep deprived, your body produces less of the hormone insulin**, which means you have more sugar in your blood, a risk for type 2 diabetes. At the same time, your body produces more cortisol, a hormone that helps you stay awake but makes it harder for you to use insulin. Why is this important? The top complication of diabetes is heart disease.

Obesity: Sleep also does amazing things for your metabolism — it regulates production of key hormones like insulin, mentioned above, leptin and ghrelin. Leptin and ghrelin can cause you to gain weight. Leptin, for example, tells your brain it has all the fat it needs, while ghrelin stimulates your appetite. When you get plenty of sleep, your body produces the right amount of both — but when you miss, it produces less leptin and more ghrelin. That's why **lack of**

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sleep is likely to make you eat even when you don't need it, which can lead to obesity.

How big of a problem is this? In one large study, women who slept five hours or less per night had a 15 percent higher risk of becoming obese. And being obese puts you at risk for heart disease.

While poor sleep may increase your heart disease risk, solving sleep problems can lower your risk and help you **Be Strong-Hearted**. As part of our Year of Cardiovascular Health, we've pulled together tools that, along with the advice of your MDVIP-affiliated physician, can help identify whether you're sleeping enough (at least seven hours a night) and help you get enough sleep if you're not. In this guide you'll find:

- a **sleep hygiene checklist** to help you catch your ZZZs;
- tips for getting a **good night's sleep**
- the facts about **sleep supplements** and other **natural remedies**;
- Lifestyle modification tips through our health risk assessment on MDVIP Connect;
- and much more!

SHOULD YOU BE TESTED FOR SLEEP APNEA?

Sleep apnea is a big deal — for you and your heart. In obstructive sleep apnea, the most common type, you actually temporarily stop breathing as you sleep. When that happens, your body responds to the lack of oxygen by producing adrenaline, a stress hormone, which elevates your blood pressure and heart rate. If this happens repeatedly, it can put unnecessary stress on your cardiovascular system and lead to complications like heart attack or stroke.

But how do you know if you or someone you love is among the 25 million Americans estimated to have sleep apnea?

Signs of Sleep Apnea

There are recognizable signs and symptoms, including¹:

- Reduced or absent breathing, known as apnea events during sleep
- Frequent, loud snoring
- Gasping for air during sleep
- Excessive daytime sleepiness and fatigue
- Decreases in attention, vigilance, concentration, motor skills and memory
- Dry mouth or headaches after waking
- Decreased libido
- Waking up often during the night to urinate

If you or a loved one is experiencing any of these, talk to your MDVIP-affiliated doctor. The questionnaire on this page can also help you assess your risk. Diagnosing sleep apnea requires a sleep study.



Apnea Questionnaire

Answer the following questions below to determine if you might be at risk. If you answer “yes” to three or more of these questions, you may be at moderate to high risk for sleep apnea². Take these results to your MDVIP-affiliated physician, who may suggest further evaluation.

Do you snore loudly (loud enough to be heard through closed doors or your bed-partner to elbow you for snoring at night)?

Yes No

Do you often feel tired, fatigued or sleepy during the daytime (such as falling asleep while driving or talking to someone)?

Yes No

Has anyone observed you stop breathing, choke or gasp while you slept?

Yes No

Do you have or are you being treated for high blood pressure?

Yes No

Do you have a Body Mass Index greater than 35?

Yes No

Age older than 50?

Yes No

If male, is your shirt collar 17 inches or larger? If female, is it 16 inches or larger?

Yes No

Gender = Male ?

Yes No

1. National Institutes of Health: National Heart, Lung and Blood Institute; <https://www.nhlbi.nih.gov/health-topics/sleep-apnea>

2. STOP-Bang Questionnaire: A Practical Approach to Screen for Obstructive Sleep Apnea.; Chest. 2016 Mar;149(3):631-8. doi: 10.1378/chest.15-0903. Epub 2016 Jan 12.

23 TIPS FOR GETTING MORE SLEEP

If you're having trouble sleeping, try the following tips to help you get seven to eight hours of sleep each night.

A lot of surprising things can affect your sleep. For example, what you drink and when you drink it, electronic devices like your phone or tablet, the temperature of the room, how much you exercise — even when you go to bed each night.

Together, these things are called sleep hygiene and practicing good sleep hygiene can help you get consistent, healthy sleep — and help your heart at the same time.

Here are some proven tips that can help you get more sleep:

GOOD SLEEP HYGIENE

Avoid eating/drinking, watching television, doing work or even reading in bed because you'll associate your bedroom with activities other than sleep and intimacy.

Set wake time and bedtime; follow it every day, including weekends.

Get up every day at the same time regardless of the number of hours you slept and avoid napping if possible.

If you're a clock watcher, **face the clock in the opposite direction.**

Set your bedroom thermostat at a comfortably cool temp.

Tidy your room so it doesn't distract you as you try to fall asleep.

Start a relaxation routine about one hour before bedtime.



Turn off all unnecessary electronic devices or remove them from the bedroom.

Add a blue light filter to electronic devices that you need to keep in your bedroom.

Use ear plugs and eye shades if necessary.

Use shades on your windows.

Lock your room so you feel safe.

FOOD AND DRINK

Limit alcoholic beverages throughout the day and avoid them after 5 pm. Alcohol interferes with sleeping.*

Avoid caffeinated beverages and foods like tea, coffee, cola and chocolate, particularly after 4 p.m.*

Avoid nicotine; if you are not ready to quit smoking yet, at least limit your smoking after 4 p.m.

Limit your fluid intake two hours before bedtime.

Don't go to bed hungry. Hunger pangs

can keep you awake.

Limit spicy foods, particularly after dinner, as they can cause indigestion and interfere with sleep.

EXERCISE

Get at least 30 minutes of aerobic activity several times a week at least four hours before bedtime.*

PREP FOR BED

Relax one hour before your bedtime. Meditation, reading or listening to relaxing music can help.

If you wake during the night and can't fall back to sleep, get out of bed and **sit in a chair until you feel you can fall asleep.**

Don't force sleep; sleep only as much as necessary to feel rested.

Discuss all sleeping supplements and over-the-counter medications with your MDVIP-affiliated doctor before using.

** Go to connect.MDVIP.com, sign in and take our Health Assessment to see how you stack up against people your age.*



4 NATURAL SLEEP REMEDIES

If you're having trouble sleeping, discuss these natural remedies with your doctor

Studies suggest that some natural remedies can work for mild insomnia. If you aren't getting enough zzz's, discuss the following options with your MDVIP-affiliated physician.

Acupuncture – may provide modest improvements in sleep quality when it's combined with good sleep hygiene and/or prescription medication. Acupuncture works by easing anxiety, stimulating melatonin production and reducing sleep disruption. It also helps ease pain, a common cause of sleeplessness.

Light therapy – may ease sleep-wake cycle disturbances when using between 3K and 10K lux (a measure of illumination). Light therapy involves sitting near a special type of light box each day for a specific time. The light mimics outdoor light, helping regulate your circadian rhythm, so that you can fall asleep earlier at night and/or sleep later in the morning. You can purchase light boxes and light therapy lamps at

pharmacies, houseware stores and large chain retail stores.

Music therapy – may help improve sleep quality and relieve insomnia. Studies have found that listening to soft music at naptime or bedtime can help improve sleep quality.

Martin Reed, creator of Insomnia Land, a website dedicated to helping people get over insomnia, suggests choosing music that has a slow rhythm between 50 and 60 beats per minute (BPM). You can figure out the BPM of a song simply by listening to the song and counting the number beats for 60 seconds. Music that imitates the sound of ocean or has a lullaby-like quality also works well, Reed says. New Age or classical music, or music with a positive association also seems to help.

Supplements – can be helpful, but might cause interactions with other medications. That's why it's important to

discuss them with your doctor before taking them.

- Melatonin – is a hormone that can be taken as a supplement. It may help ease insomnia, beta-blocker insomnia, delayed sleep phase syndrome and non-24-hour sleep wake disorder by helping regulate your circadian rhythm.
- Valerian – also known as valerian root, is an herb that comes in supplement form. It contains compounds that work with neurotransmitters to create a feeling of tranquility and reduce anxiety, which may help you fall asleep.

It's important to keep a sleep log (see next page), particularly when trying different strategies to improve your sleep. If lifestyle changes or natural remedies don't work, talk to your doctor, who may order tests, prescribe medication or refer you to a specialist.

SLEEP LOG

This log can help you and your doctor identify potential sleep disrupters

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
MORNING QUESTIONS							
Wake-up time							
Length of time to fall asleep							
Times awoken							
Times out of bed							
Total hours of sleep last night							
EVENING QUESTIONS							
Did you nap today? How long?							
Did dinner have spicy foods?							
# of caffeinated drinks							
# of alcoholic beverages							
Did you go to bed hungry?							
Minutes of exercise							
Mood before bed							
Activities 1 hr. before bed							
Bedtime							

Find more tools and resources at MDVIP.com/bestronghearted