



**Solutions Suite**  
Tools for Health

# Enhancing Your Immune Health

## Facilitator's Guide

### Module 3



**UIC Center on Mental  
Health Services  
Research and Policy**



**Collaborative  
Support Programs of  
New Jersey**

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**University of Illinois at Chicago Center on Mental Health Services Research and Policy and Collaborative Support Programs of New Jersey, Inc.**

**Contributing authors: Jessica A. Jonikas, MA; Margaret (Peggy) Swarbrick, PhD, FAOTA; Kelsey Arnold, MA, MPH; George H. Brice, Jr., MSW, Judith A. Cook, PhD; and Patricia B. Nemec, PsyD, CRC, CPRP**

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# INTRODUCTION

Due to the COVID-19 pandemic, many people are seeking information and tips for enhancing their immune systems. Nobody likes being sick, whatever the cause, so it's natural to look for ways to avoid infection and illness. We want our bodies to be as strong as possible!

It's important to understand that our immune system is not a single organ in our bodies. Instead, it is a complex system that works on many different levels to fight infection. This means that our immune systems cannot technically be boosted, even though many people on TV, the internet, and social media say otherwise. However, we can improve our immune health to feel better and be healthier. Also, we can take precautions to avoid infections and illnesses.

This manual has 5 modules. You can use each one separately to educate about enhancing immune health. Or, you can use all of the modules together to teach a 5-week class on improving immunity. We've designed this material specifically to educate people with lived experience of mental illness, but it can be used by anyone who wishes to understand and enhance their immune health.

The modules are:

Module 1: What is Immune Health?

Module 2: Vaccination & Health Screening for Immunity

Module 3: Adequate Sleep for Immune Health

Module 4: Managing Stress for Stronger Immunity

Module 5: Functional Foods, Immunity Aids, & Credible Health Information

Each module uses an “**Explain, Evaluate, and Engage**” framework. We **explain** the key information to know in each area. Using exploration and activities, we then **evaluate** what participants already know about immune health. This is followed by further information. Each module also includes **engaging activities** to work on improving immunity and health.



# Module 3: Adequate Sleep for Immune Health

## Explain

Our body's **natural immunity** is made up of protective barriers, like skin and mucus, to keep out harmful germs. **Inflammation** is also part of our natural immunity, since it helps our bodies to fight infection.

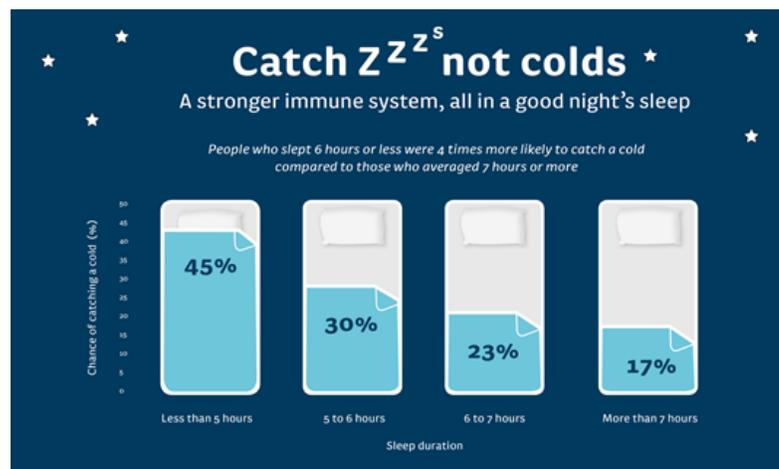
**Learned immunity** is when our bodies learn over time to recognize, and then fight, the germs that cause illnesses.

Sleep allows your body and brain to repair, restore, and reenergize. Research suggests that getting good sleep has a big impact on the strength of our immune systems. For example, we know that people who are exposed to a virus, like the common cold, are more likely to get sick from it when they haven't had enough sleep. A lack of sleep can also affect how quickly you recover when you do become ill.

Sleep helps both the **natural and learned immunity** discussed in Module 1.

Sleep strengthens your "immune memory." It does this by reinforcing your system's ability to remember and destroy harmful bacteria and viruses. Our bodies need energy to do this work. When we sleep, our breathing and muscle activity slow down. This frees up the energy that our immune system needs to do critical tasks.

For example, during sleep, your immune system releases **certain proteins called cytokines**, some of which promote good sleep. Also, when you have an infection, your body needs to produce more cytokines to help you recover. Unfortunately, a lack of sleep can decrease production of these germ-fighting cytokines. Also, your infection-fighting antibodies and cells are reduced when you do not get enough sleep. Believe it or not, one night of poor sleep can significantly reduce your immune response. In short, your body needs regular sleep to fight infectious diseases. You also need sleep to stay healthy in general. Sleep problems increase your risk of obesity, diabetes, and heart and blood vessel diseases.



Eye-opening reasons to get more shut-eye

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## *Evaluate*

Many people don't get enough good quality sleep. So, if this is true for you, you're not alone. Sleep problems are particularly common for people with mental health and substance use conditions, especially people living with anxiety, depression, bipolar disorder, and/or attention deficit hyperactivity disorder (ADHD).

Invite participants to reflect on the importance of sleep.

Here are some sample questions to choose from.

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**What happens when you don't get enough sleep?**

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**How do you feel when you get a good night's sleep?**

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**Have you learned anything new about your own sleep patterns?**

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## *Explain*

Different medical conditions can affect the quality of your sleep. For example, some people who snore have a condition called sleep apnea, where they stop breathing for short periods many times a night. Sleep apnea harms the body by disrupting the supply of oxygen to important organs. People with this condition may need to use a special mouth guard, or a machine called a C-PAP. This stands for Continuous Positive Airway Pressure. Air flowing through the machine keeps them breathing and helps improve their sleep.

Many people have trouble falling asleep. Sometimes, people use drugs and alcohol to help them sleep. While this may help them fall asleep, they don't stay asleep as long and don't sleep as well. The sleep you get after taking drugs and alcohol is poorer quality sleep. This means it is less restful and less helpful for your immune health.

# Explain

The good news is that there are things you can do to improve your sleep to build immune health.

The place where you sleep makes a difference in how you sleep. Many people sleep better in a room that is cool, dark, and quiet. There are other ways to create a restful sleeping environment.

- If you can't control the noise around you, consider earplugs to block the noise. Some people find that a steady sound, like a fan, can help block noises that interrupt sleep.
- Too much light can make it more challenging to fall and stay asleep. Consider room-darkening shades or a sleep mask.
- If you have a TV, smart phone, or tablet, turn it off 30-60 minutes before going to sleep. The light from these screens can make it hard to fall asleep when you use them right before bedtime.
- Try to resolve your worries or concerns before bedtime. One way to do this is to keep a small pad and pen handy to jot down what is on your mind so you can set it aside for tomorrow.

Most of the time, you can change your sleep environment to strengthen your immune health.

## DEEP SLEEP HAS MANY BENEFITS, INCLUDING:



Improved memory



Reduced anxiety & depression



Boosted immune system



Lowered risk of heart disease

# Evaluate

Invite participants to reflect on barriers to sleep by asking them questions like those below.

**What makes it hard for you to fall asleep and stay asleep?**

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**What has helped you sleep better?**

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**Which of these tips might be worth trying?**

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# Explain

Establishing a bedtime or sleep routine can help you to get a good night's sleep. Daily habits most likely to affect the quality and quantity of your sleep include when you eat, your daily activities, and your bedtime routines.

**Our sleep can be affected by what we eat, how much we eat, and when we eat.**

- Nicotine, caffeine, and alcohol can disrupt your sleep schedule. The stimulating effects of nicotine and caffeine take hours to wear off and can greatly interfere with quality sleep. Caffeine is found in many things, like coffee, caffeinated tea, soft drinks like cola, energy drinks, and even chocolate. When possible, try to replace caffeinated drinks with water or another healthy beverage.
- Don't go to bed hungry or stuffed. In particular, avoid eating large meals or heavy foods within a couple of hours of bedtime. Doing so may disrupt your digestion and affect your sleep. Cut back on rich and heavy meals, especially in the evening.

## 5 Tips for Better Sleep

**STICK TO A SCHEDULE**  
Go to sleep at the same time every night and wake up at the same time every day, even on your days off.  
Our bodies really like routine.

**PAY ATTENTION TO WHAT YOU EAT & DRINK**  
Caffeine can stay in your system for up to 8 hours. So if you plan on being in bed by 10, you need to have your last coffee by 2. Don't forget - chocolate contains caffeine too.  
Foods that promote good sleep are nuts, lean protein, spinach & other green veggies.  
Cherries can make a good bedtime snack because they include melatonin.

**PUT AWAY DEVICES**  
Avoid blue light emitting devices such as cellphones, tablets and computers at least two hours before bedtime.  
Blue light ceases the production of melatonin, which is the hormone that promotes sleep.

**MAKE EXERCISE PART OF YOUR ROUTINE**  
Exercise is a good way to wear yourself out and get better sleep.  
However, don't exercise too close to bedtime. It can stimulate you so you won't want to sleep. Give yourself 2-3 hours before you plan to sleep to complete your exercise.

**CREATE AN IDEAL SLEEP ENVIRONMENT**  
Start with something that will help you relax like dimming the lights, taking a warm bath, writing down your thoughts, or meditating.  
Keep your bedroom for sleep only.  
Our bodies are cued by light and darkness, so a little light can affect your circadian rhythm. Face the alarm clock away from you or don't keep it near your bed.

# Explain

**Our daily activities also affect how easily we fall asleep and stay asleep.**

- **Daytime naps can interfere with nighttime sleep. If you choose to nap, limit yourself to 30 minutes or less, and avoid napping late in the day.**
- **Regular physical activity can promote better sleep. It's a good idea to spread your physical activity throughout the day in order to improve sleep and reduce stress. But avoid being active too close to bedtime, which can make it hard to fall asleep.**
- **Spending time outside every day can be good for your sleep. Fresh air triggers a number of bodily changes that can improve your sleep.**

**Having a regular sleep schedule and bedtime routines is helpful.**

- **Set aside no more than eight hours for sleep. The recommended amount of sleep for a healthy adult is at least seven hours.**
- **Plan to go to bed and get up at the same time every day, even on weekends or other days when you could sleep in.**
- **Create a restful nighttime routine. Try calming activities before bedtime, such as taking a bath, deep breathing, or using a relaxation technique. Feeling calm and relaxed might promote better sleep.**
- **If you don't fall asleep within about 20 minutes, leave your bedroom and do something relaxing. Read or listen to soothing music. Go back to bed when you're tired. Repeat as needed.**

**Taking steps to improve your sleep patterns is good for your immune health.**





## *Explain*

Everyone has a sleepless night once in a while, for different reasons. However, if you often have trouble sleeping, contact your medical provider.

- It's important to identify any underlying causes of your sleep problems. Treating these can help you get the better sleep you need.
- Talk with your medical provider about what may be interfering with good sleep, and any recommendations to improve your sleep. Sharing information from a sleep diary (explained below) can help them make suggestions for better sleep.

## *Engage*

You may benefit from learning about how well you are sleeping and how your habits affect your sleep. A sleep diary can help you with this. You use the diary to track when you go to bed, when you wake up, and how much sleep you get. You also can use it to monitor if you wake up during the night and can't get back to sleep immediately. You also can record your daily habits, such as whether you napped or exercised, as well as how much caffeine and alcohol you had. It is helpful to complete the log before bedtime, and then again in the morning to record the quantity and quality of your sleep.

Review the [NIH Sleep Diary Handout](#) with participants and encourage them to complete it during the coming week.

Help participants complete the [Module 3 Review](#) worksheet to reinforce important terms and concepts.

Invite participants to complete the [Sleep Goal Handout](#) to start working towards better sleep, if they wish.

# **MODULE 3 HANDOUTS & WORKSHEETS**



Sleep helps our immune systems.



Why get more sleep?

**DEEP SLEEP HAS MANY BENEFITS, INCLUDING:**

-  Improved memory
-  Reduced anxiety & depression
-  Boosted immune system
-  Lowered risk of heart disease

# Good sleep helps vaccines work better!

**SUPPORT YOUR IMMUNE SYSTEM**

Getting enough good sleep has both positive mental and physical effects. One key benefit of sleep is supporting a well-balanced immune system, which can help you prevent or limit infection in your body.



Vaccinations can be another way to help prevent illness. Getting enough sleep has been shown to help vaccines work in your body.

 NATIONAL SLEEP FOUNDATION

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## 5 Tips for Better Sleep

 <p><b>STICK TO A SCHEDULE</b></p> <p>Go to sleep at the same time every night and wake up at the same time every day, even on your days off.</p> <p>Our bodies really like routine.</p>	 <p><b>PAY ATTENTION TO WHAT YOU EAT &amp; DRINK</b></p> <p>Caffeine can stay in your system for up to 8 hours. So if you plan on being in bed by 10, you need to have your last coffee by 2. Don't forget - chocolate contains caffeine too.</p> <p>Foods that promote good sleep are nuts, lean protein, spinach &amp; other green veggies.</p> <p>Cherries can make a good bedtime snack because they include melatonin.</p>
 <p><b>PUT AWAY DEVICES</b></p> <p>Avoid blue light emitting devices such as cellphones, tablets and computers at least two hours before bedtime.</p> <p>Blue light ceases the production of melatonin, which is the hormone that promotes sleep.</p>	 <p><b>CREATE AN IDEAL SLEEP ENVIRONMENT</b></p> <p>Start with something that will help you relax like dimming the lights, taking a warm bath, writing down your thoughts, or meditating.</p> <p>Keep your bedroom for sleep only.</p> <p>Our bodies are cued by light and darkness, so a little light can affect your circadian rhythm. Face the alarm clock away from you or don't keep it near your bed.</p>
 <p><b>MAKE EXERCISE PART OF YOUR ROUTINE</b></p> <p>Exercise is a good way to wear yourself out and get better sleep.</p> <p>However, don't exercise too close to bedtime. It can stimulate you so you won't want to sleep. Give yourself 2-3 hours before you plan to sleep to complete your exercise.</p>	

# Module 3 Review

2 ways that sleep supports immune health:

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2 or 3 habits that can spoil good sleep:

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2 or 3 habits that support good sleep:

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**My questions or notes**

# Sleep Diary



Use this sleep diary to record the quality and quantity of your sleep; your use of medicines, alcohol, and caffeinated drinks; and how sleepy you feel during the day. Bring the diary with you to review the information with your doctor.

<b>Fill out before going to bed</b>	Today's date:	June 13*							
	Number of caffeinated drinks (coffee, tea, cola) and time when I had them today:	1 drink, 8 p.m.							
	Number of alcoholic drinks (beer, wine, liquor) and time when I had them today:	2 drinks, 9 p.m.							
	Nap times and lengths today:	3:30 p.m., 45 minutes							
	Exercise times and lengths today:	None							
	How sleepy did I feel during the day today? 1—So sleepy I had to struggle to stay awake during much of the day 2—Somewhat tired 3—Fairly alert 4—Alert	1							
<b>Fill out in the morning</b>	Today's date:	June 14*							
	• Time I went to bed last night: • Time I got out of bed this morning: • Hours spent in bed last night:	11 p.m. 7 a.m. 8							
	Number of awakenings and total time awake last night:	5 times, 2 hours							
	How long I took to fall asleep last night:	30 minutes							
	Medicines taken last night:	None							
	How alert did I feel when I got up this morning? 1—Alert 2—Alert but a little tired 3—Sleepy	2							

\* This column shows example diary entries—use as a model for your own diary notes.

## Notes:

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	<ul style="list-style-type: none"> <li>• Time I went to bed last night:</li> <li>• Time I got out of bed this morning:</li> <li>• Hours spent in bed last night:</li> </ul>								
	Number of awakenings and total time awake last night:								
	How long I took to fall asleep last night:								
	Medicines taken last night:								
	How alert did I feel when I got up this morning? 1—Alert 2—Alert but a little tired 3—Sleepy								

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**Notes:**

# My Sleep Goal

01

**Habits or life situations that interfere with my getting good sleep:**

02

**One thing I will change or add to my routine to get better sleep:**

03

**Some steps I can take to work on my goal this week:**

04

**My confidence for making this change or addition, with 1 being not confident and 5 being very confident:**



To succeed, choose something specific, manageable, and measurable. This means saying what you'll do, how often/much, where, and why. For example, "I'll go to sleep in my bed (not on the couch) at 11pm and get up at 7am for 3 nights this week. This will give me more energy and better immune health."

If your confidence is lower than 3, see if you can adjust your goal or steps to be smaller or less frequent to start with.

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## Images

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Deep sleep has many benefits: <https://www.nwpc.com/5-self-care-tips-for-sandwich-generation-caregivers/deep-sleep-benefits/>

