Good Sleep Hygiene May Help Protect Against Infectious Diseases

Public health concerns over the spread of COVID-19 in local communities is causing anxiety on a global scale. It may even be affecting your sleep at night. Anxiety is a leading cause of sleep dysfunction,[1] and not getting enough rest may have negative effects on your health. Sleep plays a powerful role in supporting healthy immune system function; in fact, these two things are closely connected.[2,3,4] A lack of sleep can increase the likelihood of infection.[5,6] Illness can disrupt your sleep further,[7,8] which in turn slows down your recovery time. Consistent sleep better prepares your body to fight off unexpected illness,[9] and getting enough of it supports your overall health and well-being.

Sleep and Immune Function

Sleep is your body's first line of defense against infectious disease. During sleep, your body produces proteins called cytokines that fight inflammation and infection.[10] When you are exposed to infectious pathogens, have inflammation, or experience chronic stress, your body increases production of these cytokines to offset illness. Sleep deprivation hinders this immune response, for instance, by increasing the risk of catching the common cold,[11] so not getting enough sleep impacts your body's ability to naturally fight off infections.

Sleep disturbances are linked with early stages of infection,[5] and irregular sleep patterns could signal that your body is beginning to fight off illness. Lack of sleep could slow down your immune response and allow illness to progress further. If you are already feeling sick, the age-old advice to "get lots of rest" may be the best approach to bolster your immune system response. The benefits of sleep are both preventive and restorative; experts recommend between seven to nine hours of sleep every night for optimal health.[12]

Healthy Sleep Habits

Sleep is critical to healthy immune system function, yet the Centers for Disease Control and Prevention (CDC) estimates that one third of Americans don't get enough sleep every night.[13] For many people, practicing better sleep hygiene is a simple and achievable[14,15,16] way to improve the quality of their sleep.

According to the National Sleep Foundation, sleep hygiene involves routines and practices that lend to quality nighttime sleep

Good sleep hygiene doesn't just mean sleeping with clean sheets, it also involves routines that help facilitate the body's circadian rhythm and reduce environmental stressors that could be affecting your slumber. Simply knowing how certain behaviors affect your sleep patterns may help you adjust your daytime behaviors to improve sleep later.[17] You can support your sleep and your health just by making positive changes in your daily routine.

TIPS FOR IMPROVING YOUR SLEEP HYGIENE

- **Maintain a consistent sleep schedule**. Go to bed and wake up around the same time every day—even on the weekends.

- **Take in more daylight and limit exposure to artificial light**. Daylight reinforces the 'awake' phase of your body's sleep cycle, so spending more time outside during the day can make it easier for you to fall asleep at night.[18,19] If you are inside most of the day, try to sit close to a window or take breaks outside when you can. In the evening, spend less time with electronics.[20,21] Blue light from back-lit devices like cell phones, computer monitors, and tablets mimics daylights and stimulates alertness. Using electronics before bed tricks your body into thinking it's still daytime and can make it harder for you to fall asleep. Limit your use of electronics at least one hour before bedtime.

- **Stay active.** Exercising during the day helps you feel alert and promotes better sleep at night.[22,23,24] Strenuous activity at night, however, can make it harder to fall asleep. Give yourself plenty of time between finishing your workout and winding down before bed.

- **Avoid caffeine, heavy meals, and alcohol before bed**. What you eat and when you eat it could be holding you back from a restful night's sleep. Try to avoid large meals before bed[25,26] and limit your consumption of alcohol. While it may help you fall asleep, alcohol can cause you to wake up more frequently during the night.[27,28] Caffeine may impair sleep if consumed six hours prior to bedtime.

- **Take naps**.[30] Napping can boost your immunity and make you feel more alert, which increases cognitive performance and productivity. Aim for a 20 to 30-minute nap early to mid-afternoon. Napping later in the day could interfere with your ability to fall asleep. While napping can help you catch up on sleep from a restless night, it's no substitute for inadequate nightly sleep.

- **Take time to unwind.** Practice mindfulness[31] or engage in light stretching[32] before bed as a way to reduce stress or anxiety.

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- **Improve your sleep environment**. Your bedroom could be preventing you from quality sleep. Check out the tips below for turning your room into a sleep haven.

Every individual is different, and not all of these tips may work for you. Research on how to best improve sleep is still in progress,[33,34] so for the time being, create a sleep routine that best fits your lifestyle.
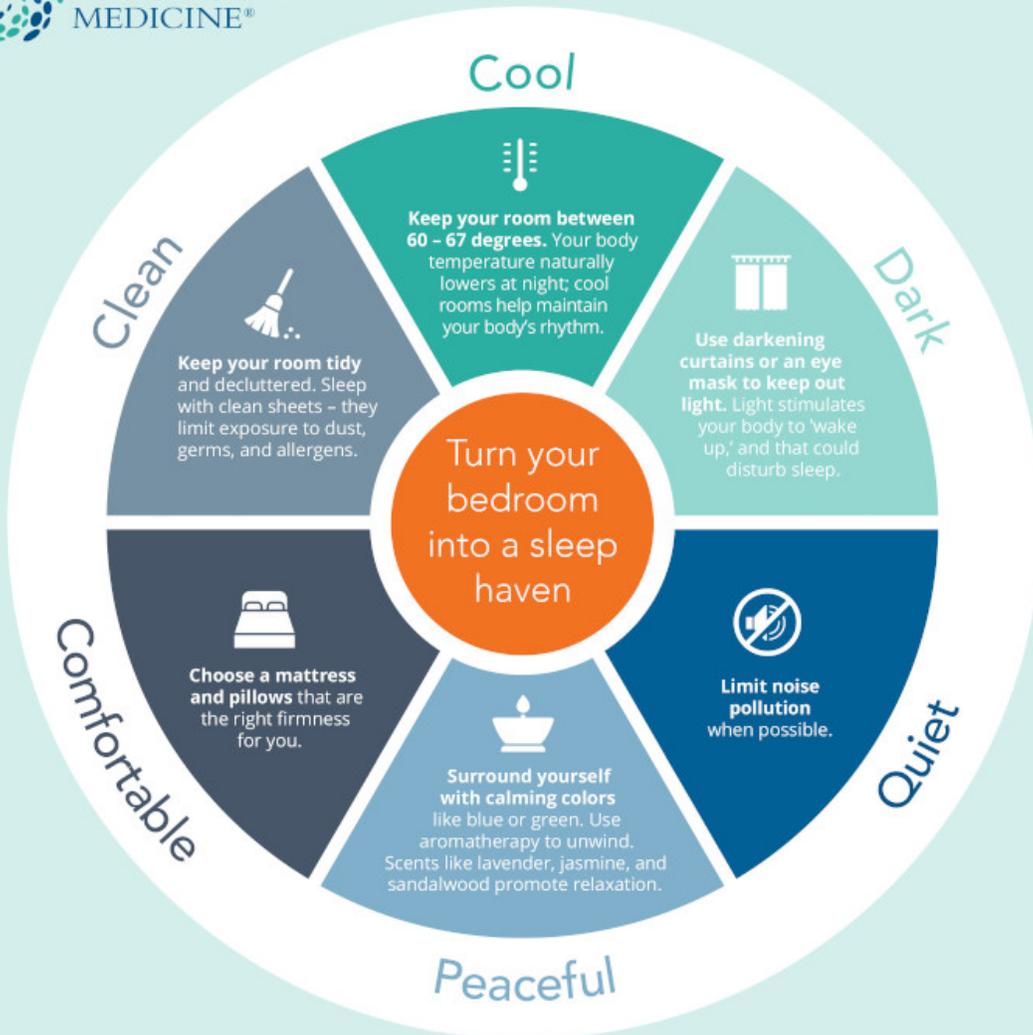
Figure 1 – See References Below

Please note: Due to the novelty of COVID-19, no peer-reviewed research has been published regarding the effectiveness of dietary or lifestyle interventions for its prevention or treatment. These recommendations to improve sleep are not specific to COVID-19 and are not intended to replace medical consultation with your healthcare provider.