Why do we sleep? How much sleep is normal? What should I do if I don’t sleep well?

These seem like simple questions, but the answers are more complicated—and more interesting—than you might think. Doctors and researchers at the University of Pittsburgh (Pitt) are working to find answers to these and many other questions related to sleep and sleep disorders.

Getting enough good-quality sleep not only feels good, it is essential for physical and mental health. For example, as shown in Figure 1, researchers at the University of Pittsburgh found that not getting enough sleep leads to greatly reduced performance on taskings in response to psychological stress (the stress used in the study was the preparation and delivery of a speech). Blood pressure readings are lower when research participants are tested following a night of normal sleep. Other studies have shown that not getting enough sleep is associated with all sorts of problems in addition to high blood pressure, such as heart disease, diabetes, depression, and substance use. Even hormones that control appetite are affected by sleep loss, and being overweight is more common in people who don’t sleep enough.

Although sleep loss brings about one-third of their lives sleeping, the amount and the way we sleep change from infancy to old age. Infants spend almost half of their days sleeping, then sleepings, and the usual day-night pattern typically appears at about 3 to 4 months of age. The amount of sleep we get gradually decreases throughout childhood, but children still need about nine to 10 hours in sleep per night.

Most adults need seven to eight hours of sleep, but they fall behind later. That is, in combination with early school start times, often they get fewer than the seven to eight hours they need. Adult sleep needs are similar to that of children. Adults also get fewer than the recommended eight hours of sleep because of jobs, family responsibilities, stress, and other distractions. Sleep loss often becomes longer and more disruptive as you grow older. This is because of medical problems, medications, changes in activity levels, and a general decrease in sleep drive.

Sleep disorders affect about 30 percent of the population in the United States. Insomnia, a sleep disorder, has become the most common sleep disorder. Sleep apnea sleep disorder. Its symptoms are loud snoring, breathing pauses at night, and daytime sleepiness. Other sleep disorders include restless leg syndrome and the sleep-related eating disorder, sleepwalking, and nightmares. Sleep disorders can result from physical or social problems, such as sleepiness and falling asleep at inappropriate times. These problems and their associated health concerns are particularly common in the African American community. For example, insomnia and sleep apnea are more common in African Americans. African-American carers also seem to have fewer hours of sleep than Whites and Asians.

Sleep problems can be treated. Sometimes the solution seems simple, such as making a sleep priority so you can feel as rested as possible. In other cases, the solutions may require evaluation and treatment by a sleep professional. Sleep doctors may want to order an overnight sleep test or other studies to get a better understanding of the patient’s problem. Treatments may involve medications, specific changes to how you sleep, or ways to improve breathing during sleep with the use of a positive airway pressure device or even surgery.

You can’t cheat sleep! It’s a critical aspect of your overall health. Prioritize your sleep, and talk to your doctor if you’re having problems with your sleep or need help during the day. If you have questions about sleep research studies being conducted at the University of Pittsburgh, see the list on this page.

The University of Pittsburgh has many researchers who study sleep, and many other topics. They are always looking for people to participate in studies, especially people from diverse communities who have been historically underrepresented in research. A research study is a scientific way to improve or develop new methods of health care.

There are many types of studies. Some studies, for example, look at surveys to understand health and behavior. Research studies are important because they further knowledge of scientific research and medical care. Research is the fastest and safest way to find treatments that work. By choosing to participate in research, you can learn about ways to properly improve your health, help with the evaluation of medications, tests or procedures that may not be available outside of research and potentially help others. Your participation in research is always voluntary and confidential.

Current studies are listed at right. Researchers are looking for people of all ages who have normal sleep and those who have sleep problems. The investigators and their research teams would be happy to explain the study in more detail and answer any questions you may have. Please call them to read about their study in the New Pittsburgh Courier!