

CLE 10

SLEEP

NAME: _____



WHY YOU NEED IT

THE IMPORTANCE OF SLEEP



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Are you getting enough sleep? Many Americans ^{and Canadians} do not obtain enough sleep. A third of U.S. adults obtain less than the recommended amount of sleep. Not getting enough sleep may seem like a small problem, but the consequences are serious. A lack of sleep can be dangerous and unhealthy; it is linked to many chronic diseases. A lack of sleep is also a leading cause of many types of accidents and injuries. In fact, in some cases, being sleep-deprived can lead to death. Therefore, in order to ensure a healthy lifestyle, we need to make sure we all obtain the necessary amount of quality sleep each night.

WHY DO WE NEED SLEEP?

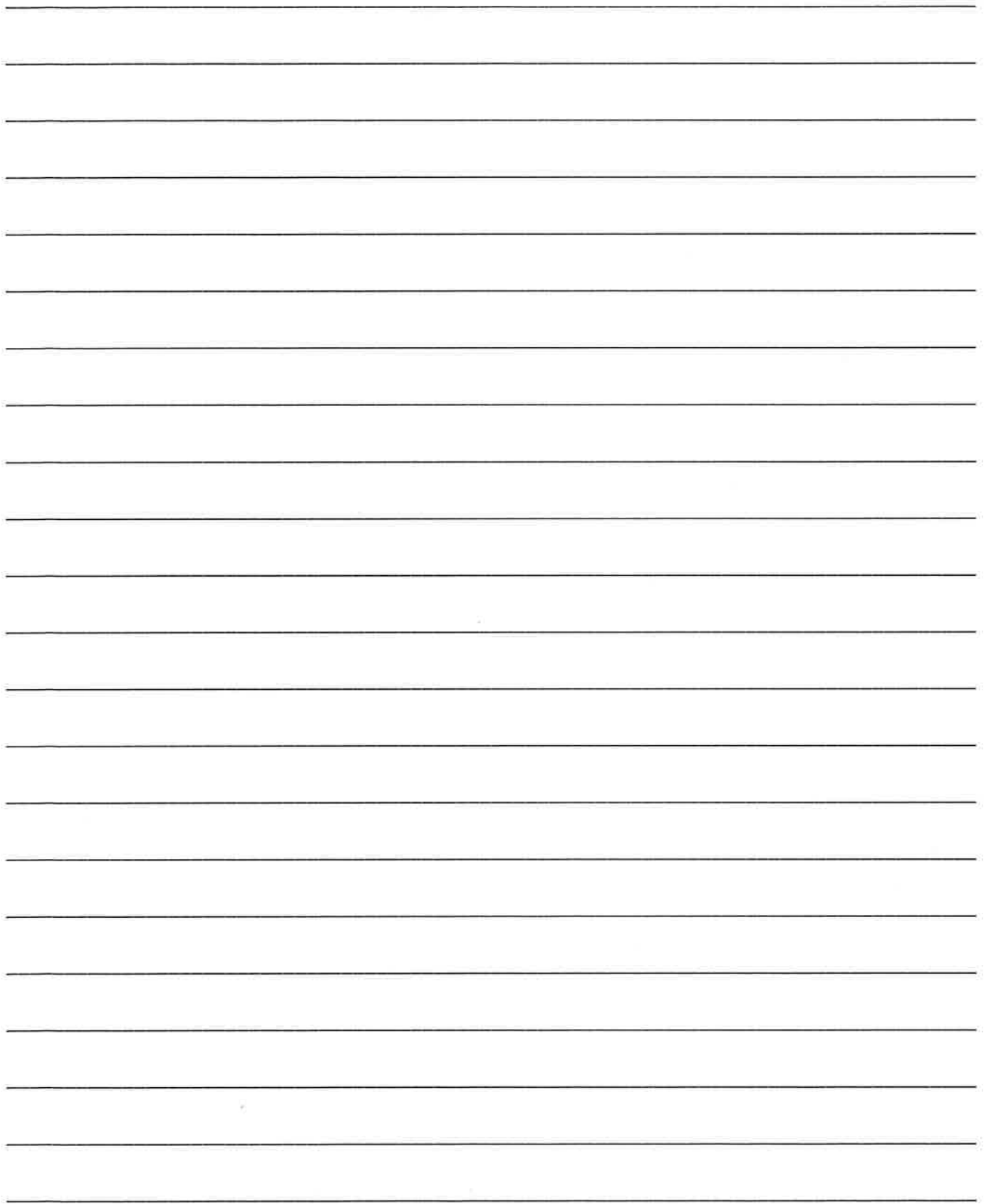
Our body and mind require sleep, we can't survive without it. During deep sleep, our bodies release hormones in the blood stream that are essential for the health of our body and mind. The body also repairs muscle and tissues and strengthens our immune system while we sleep. During sleep, our mind organizes and links memories.

WHAT IS QUALITY SLEEP AND THE STAGES OF SLEEP?

During the night we go through different stages of sleep; this is known as the **sleep cycle**. Our quality of sleep depends on the ability to properly go through the different stages of sleep without being interrupted. There are two main types of sleep which make up the sleep cycle: non-rapid eye movement (NREM) and rapid eye-movement (REM) sleep. Though we spend 75 percent of our sleep in the first stage, REM tends to be the most important stage. REM is when the body restores itself and important hormones are released. We spend only about 25% of our sleep in REM. During this stage, our eye darts rapidly back and forth, and we experience dreams. REM sleep does not occur until about 90 minutes after we fall sleep, it lasts a short period of time, and repeats several times throughout the night.

Answer each question with a complete sentence on a separate piece of paper.

1. How many U.S. adults are not obtaining enough sleep?
2. What is a lack of sleep linked to?
3. What is needed to live a healthy lifestyle?
4. During deep-sleep, what does the body release?
5. During sleep, what does the body repair and strengthen?
6. What are the two stages of sleep?
7. What happens during REM sleep?



The Stages of Sleep

As you slide into sleep, your brain goes into action, telling your body **how** to sleep. As you slowly fall asleep, you begin to enter the five stages of sleep:



Stage 1

In this stage of light sleep, your body starts to feel a bit drowsy. You can still be woken up easily during this stage by a noise or a shake.

Stage 2

After sleeping a little while, you enter stage 2, which is a slightly deeper sleep. Your brain gives the signal to your muscles to relax. It tells your heart to beat a little slower, your breathing slows down, and your body temperature to drop.

Stage 3 and 4

In this stage, you're in an even deeper sleep, also called slow-wave sleep. Your brain sends a message to your blood pressure to get lower. Your body won't notice if it's a little hot or cold in your room. It's much harder to be awakened when you're in this stage. Some people might talk in their sleep at this stage. You lay still and don't move much, if at all.

R.E.M.

R.E.M. stands for rapid eye movement. Even though the muscles in the rest of your body are totally relaxed, your eyes move back and forth very quickly beneath your eyelids. The R.E.M. stage is when your heart beats faster and your breathing is less regular. This is also the stage when people dream! While you're asleep, you repeat stages 2, 3, 4, and R.E.M. about every 90 minutes until you wake up. For most kids, that's about four or five times a night.



WHAT STAGE OF SLEEP ARE YOU IN IF YOU DO THE FOLLOWING?



Actions during sleep

Stage

1. Deeper sleep, also called slow-wave sleep

2. Your body starts to feel a bit drowsy.

3. Your eyes move back and forth very quickly

4. Slightly deeper sleep

5. Brain gives the signal to your muscles to relax

6. You won't notice if it is hot or cold

7. You can be woken up easily

Stage 1, Stage 2, Stage 3, Stage 4, REM

THE DANGERS OF A LACK OF SLEEP

Our overall quality of life can be affected by a lack of quality sleep. Sleep influences how we behave, perform, feel, and even how we look. For good health, getting enough sleep is essential. A lack of sleep can increase your risk of several chronic diseases. This is because quality sleep not only helps repair the body, but it also helps your body to regulate several important hormones, lowers stress levels, and helps maintain a healthy immune system. Several studies have linked sleep deficiency to an increased risk of heart disease, kidney disease, high blood pressure, diabetes, and stroke. Interestingly, a shortage of sleep also increases one's appetite and can lead to a higher risk of becoming overweight or obese.



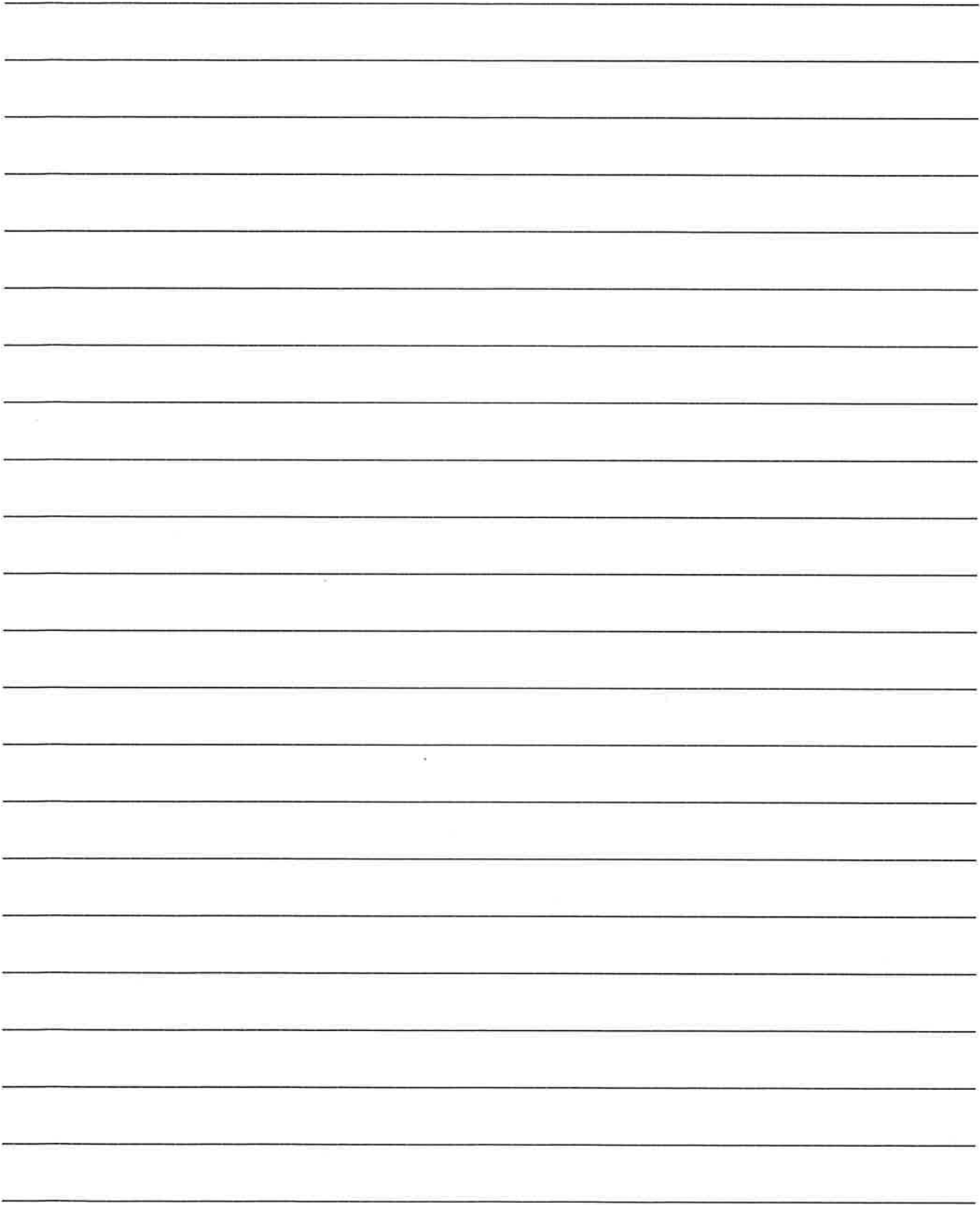
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Sleep is also important for your mental health. Sleep helps to regulate mood and process emotional information and experiences into memory. Generally, you are more likely to feel irritable, grumpy and have a shorter temper when you are tired. A lack of sleep can increase your risk of depression and other serious mental health issues. On the other hand, when we obtain a proper amount of sleep it helps with creating a good mood.

Furthermore, when we lack sleep, it can have a negative impact on our ability to function during the day as well as put us at risk of accidents. When we lack sleep, our overall brain functions are reduced; this can make it more difficult for us to concentrate, pay attention, and learn. Also, when we are tired, our problem-solving and decision-making skills are less effective making it more likely for us to make mistakes. Though a lack of sleep may seem harmless, it is not. A lack of sleep can be dangerous and at times deadly. Being sleep-deprived affects our alertness. When you are not alert, you are more likely to make mistakes and/or cause accidents. For instance, each year 40,000 car accidents and 1,550 fatalities are linked to tired-driving. In the workplace, tired workers are a hazard. Last year, there were about 270,000 workplace accidents because of people not getting enough sleep.

Answer each question with a complete sentence on a separate piece of paper.

- 8. What does sleep influence?**
- 9. What disease does a lack of sleep increase your risk of getting?**
- 10. How can sleep affect your weight?**
- 11. What does sleep help regulate and process?**
- 12. What mental illness can sleep increase your risk of?**
- 13. Because of a lack of sleep affecting brain functions, what can it be more difficult to do during the day?**
- 14. When we are sleep deprived, what are we more likely to do or cause?**



How Much Sleep Do We Need?

Different people need different amounts of sleep and at different times in their lives. Your optimal sleep time may vary from that of other people. In general, most adults require between 7 and 9 hours of sleep in a 24 hour period. Infants, children, and teenagers need more sleep than adults. Teenagers generally require about 8 to 10 hours of sleep.

Sleep Needs by Age Group:

Adult: 7 – 9 hours

Teenager: 8 – 10 hours

Child 6 – 12 years: 9-12 hours

Child 3 – 5 years: 10 – 13 hours (including naps)

Child 1 – 2 years: 11 – 14 hours (including naps)

Infants 4 -12 months: 12 – 16 hours (including naps)

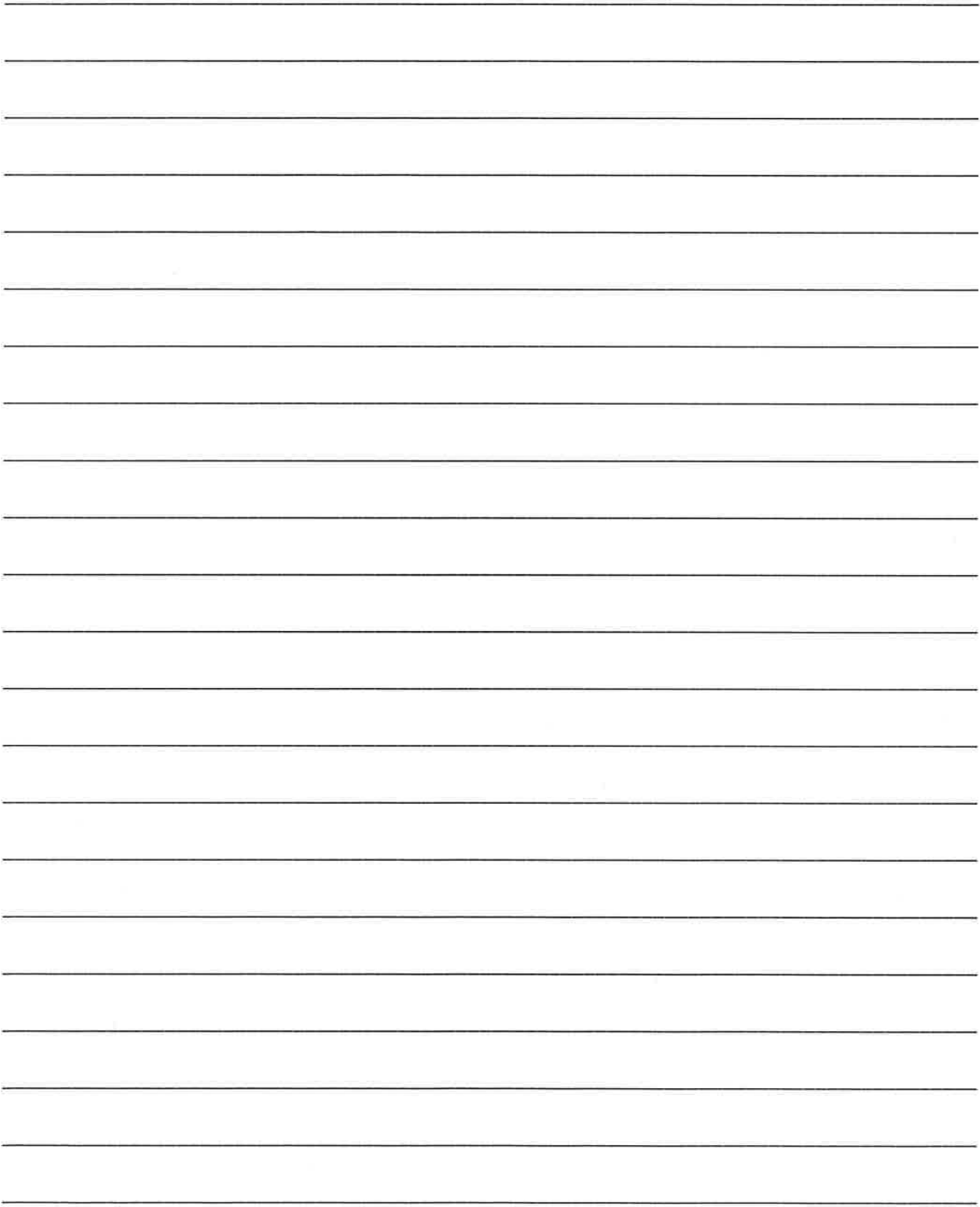
Promoting Good 'Sleep'

In order to obtain quality sleep there are things that you can and should do. Below is a list of suggested tips. Find out what works for you. However, if you regularly have problems falling asleep or wake frequently during the night, seek professional advice from your doctor. Sleep disorders are not uncommon and should not be left undiagnosed.

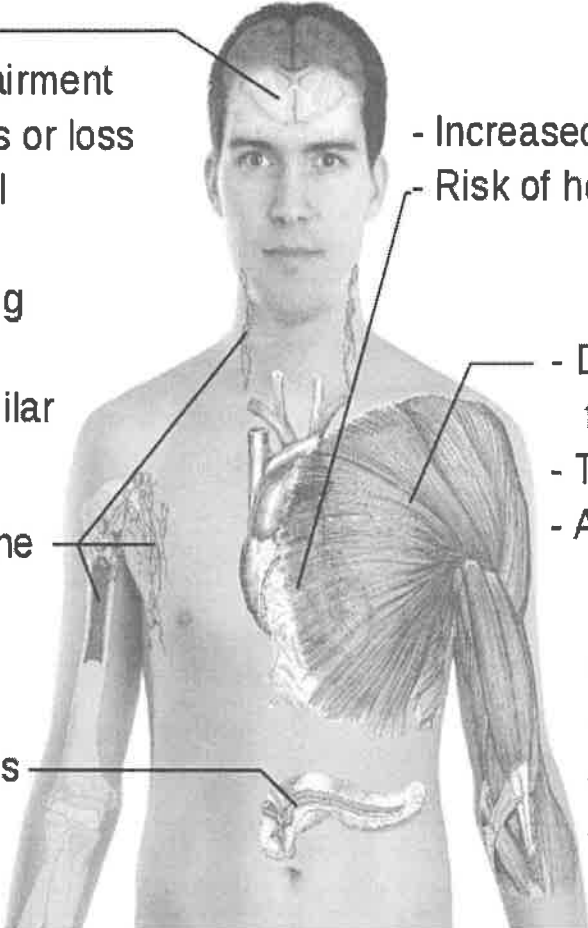
- **Stick to a routine and make enough time for sleep.** We sleep best when we follow patterns or routines. Try to keep bedtimes and wake-up times consistent. Also, allow enough time for your sleep.
- **Avoid big meals before bedtime or eating too late.** Although eating a large meal can make us feel tired, it can also make us feel uncomfortable and prevent us from falling asleep.
- **Avoid caffeine drinks.** Caffeine is stimulant and will prevent sleep.
- **Avoid using a computer, tablet, smart phone, or playing video games immediately before bed.** These devices act like stimulants making it difficult to sleep after immediate use. An hour before you are scheduled to sleep, you should stop using any of these devices.
- **Avoid physical activities or exercise close to sleep-time.** Physical exercise can help promote good sleep as well as many other benefits to health and well-being. However, if you exercise close to sleep time, you will struggle to fall asleep.
- **Relax.** Get in a habit of learning to relax, at least 30 minutes before you intend to sleep. Try reading something easy or listening to relaxing music.

Answer each question with a complete sentence on a separate piece of paper.

15. How many hours of sleep do most adults need?
16. How many hours of sleep do teenagers need?
17. If you have problems falling to sleep or waking frequently what should you do?
18. We sleep best when we follow what?
19. What should you avoid eating before going to bed?
20. What should you avoid using before going to sleep?
21. When should you avoid exercise?
22. What should you get in the habit of doing in order to help you sleep better?



Effects of Sleep deprivation

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- The diagram shows a human torso with various internal organs and muscles highlighted. Lines connect these areas to a list of effects of sleep deprivation. The effects are listed as follows:
- Irritability
 - Cognitive impairment
 - Memory lapses or loss
 - Impaired moral judgement
 - Severe yawning
 - Hallucinations
 - Symptoms similar to ADHD
 - Impaired immune system
 - Risk of diabetes Type 2
 - Increased heart rate variability
 - Risk of heart disease
 - Decreased reaction time and accuracy
 - Tremors
 - Aches
- Other:*
- Growth suppression
 - Risk of obesity
 - Decreased temperature