Name: _____ Date: _____

Sleep and the Teenage Brain

Circle group

Many teens feel sleepy in first-period class. Late-night phones are not the only cause. In the teen years, the body's inner clock shifts. Scientists call this clock the circadian rhythm. It tells the body when to feel awake and when to feel tired. In teens, it moves later. The brain makes the sleep hormone melatonin later in the evening than it did in childhood. A fourteen-year-old may truly not feel tired at nine o'clock.

Most teens need about eight to ten hours of sleep each night, say health experts. But many schools start early. A teen who falls asleep near midnight and wakes at six cannot get enough. Over time, this shortage is called sleep debt. It can make it harder to pay attention, remember lessons, and manage moods. It can also slow reaction times, which matters for new drivers.

Sleep is not wasted time. While you sleep, your brain sorts through what you learned that day. It stores the important memories. Your body makes hormones that help you grow, and it repairs tissues.

Some habits help you sleep. Keep a steady schedule, even on weekends. This keeps the inner clock on track. Bright screens near bedtime can delay melatonin. So dim the lights and put devices away an hour before bed. A cool, dark room works well. So does skipping caffeine in the afternoon. Some school districts have tried later start times. Studies of these changes have often found that students got more sleep.

Questions

1. What is the circadian rhythm?

_____

_____

2. How many hours of sleep do most teens need each night?

_____

_____

3. What does the brain do with what you learned while you sleep?

_____

_____

4. Why might a teen not feel tired at nine o'clock?

_____

_____

5. Why can bright screens near bedtime make it harder to sleep?

_____

_____

Words to know

circadian: having to do with the body's daily cycle
melatonin: a hormone the brain makes to help the body sleep
hormone: a chemical made in the body that sends messages
shortage: not having as much of something as you need

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Sleep and the Teenage Brain

Triangle group

Many teenagers feel sleepy in first-period class, and the cause is not just late-night phones. During the teenage years, the body's internal clock shifts. Scientists call this clock the circadian rhythm, and it tells the body when to feel alert and when to feel tired. In teens, it moves later, so the brain releases the sleep hormone melatonin later in the evening than it did in childhood. A fourteen-year-old may honestly not feel tired at nine o'clock.

Meanwhile, most teenagers need about eight to ten hours of sleep each night, according to health experts. Yet many schools start early, so teens who fall asleep near midnight and wake up at six cannot get enough. Over time, this shortage, sometimes called sleep debt, can make it harder to pay attention, remember lessons, and manage moods. It can also slow reaction times, which matters for new drivers.

Sleep is not wasted time. While you sleep, your brain sorts through what you learned during the day and stores important memories. Your body releases hormones that help you grow, and it repairs tissues.

Some habits make good sleep easier. Keeping a steady schedule, even on weekends, helps the internal clock stay on track. Bright screens close to bedtime can delay melatonin, so dimming the lights and putting devices away an hour before bed can help. A cool, dark room also works well, and so does avoiding caffeine in the afternoon. Some school districts have tried later start times, and studies of these changes have often found that students got more sleep.

Questions

1. What is the circadian rhythm?

_____

_____

2. About how many hours of sleep do most teenagers need each night?

_____

_____

3. What does the brain do with what you learned while you sleep?

_____

_____

4. Why might a teenager not feel tired at nine o'clock?

_____

_____

5. Why can bright screens near bedtime make sleep harder?

_____

_____

Words to know

circadian: having to do with the body's daily cycle
melatonin: a hormone the brain makes to help the body sleep
hormone: a chemical made in the body that sends messages
alert: awake, watchful, and ready to think
shortage: not having as much of something as you need

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Sleep and the Teenage Brain

Square group

Countless teenagers struggle to stay awake during first-period class, and the explanation involves far more than late-night phone use. Throughout adolescence, the body's internal clock undergoes a significant shift. Scientists refer to this clock as the circadian rhythm, and it signals the body when to feel alert and when to feel drowsy. In teenagers, the rhythm moves later, so the brain releases the sleep hormone melatonin later in the evening than it did during childhood. A fourteen-year-old may sincerely not feel tired at nine o'clock.

Meanwhile, health experts recommend that most teenagers get roughly eight to ten hours of sleep every night. Yet many schools begin early in the morning, so a teen who falls asleep near midnight and wakes at six simply cannot obtain enough rest. Over time, this deficit, sometimes called sleep debt, can make it harder to concentrate, to remember lessons, and to manage emotions. It can also slow reaction times, which is especially important for newly licensed drivers.

Sleep is certainly not wasted time. While you rest, your brain sorts through everything you learned during the day and stores the important memories. Your body releases hormones that support growth, and it also repairs damaged tissues.

Several habits can make healthy sleep easier to achieve. Maintaining a steady schedule, even on weekends, helps the internal clock stay on track. Bright screens close to bedtime can postpone melatonin, so dimming the lights and setting devices aside an hour before bed can be beneficial. A cool, dark room also works well, as does avoiding caffeine in the afternoon. Some school districts have experimented with later start times, and studies of those changes have often found that students got more sleep.

Questions

1. What is the circadian rhythm, according to the passage?

_____

_____

2. How many hours of sleep do health experts recommend for most teenagers?

_____

_____

3. What happens to what you learned during the day while you sleep?

_____

_____

4. What could explain why a fourteen-year-old does not feel tired at nine o'clock?

_____

_____

5. Why can bright screens close to bedtime interfere with sleep?

_____

_____

Words to know

circadian: having to do with the body's daily cycle
melatonin: a hormone the brain makes to help the body sleep
hormone: a chemical made in the body that sends messages
alert: awake, watchful, and ready to think

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: Sleep and the Teenage Brain

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: Sleep and the Teenage Brain

Easier · 249 words · Flesch-Kincaid grade 3.7

1. The body's inner clock, which tells it when to feel awake and when to feel tired.
2. About eight to ten hours.
3. It sorts through it and stores the important memories.
4. The teen body clock moves later, so melatonin comes later in the evening.
5. They can delay melatonin, the hormone that helps the body feel sleepy.

Triangle: Sleep and the Teenage Brain

This passage · 261 words · Flesch-Kincaid grade 7

1. The body's internal clock, which tells it when to feel alert and when to feel tired.
2. About eight to ten hours.
3. It sorts through it and stores important memories.
4. The teenage body clock shifts later, so melatonin is released later in the evening.
5. They can delay melatonin, the hormone that makes the body sleepy.

Square: Sleep and the Teenage Brain

Harder · 285 words · Flesch-Kincaid grade 9.5

1. The body's internal clock, which signals when to feel alert and when to feel drowsy.
2. Roughly eight to ten hours every night.
3. Your brain sorts through it and stores the important memories.
4. The teenage body clock shifts later, so melatonin is released later in the evening.
5. They can postpone melatonin, the hormone that makes the body drowsy.