

Sleep Deprivation Among Teens

Do you ever have trouble staying awake in class? If so, you are not alone. According to researchers, teens need as much as nine to ten hours of sleep a night to stay wide awake all day long, yet few get that much sleep. Repeated failure to get enough sleep leads to *sleep deprivation*. This can have very serious consequences.

CONTRIBUTING FACTORS

Part of the problem is biological. Teens need so much sleep because of the rapid growth and change taking place in their bodies. At the same time, their “internal clocks” are shifting so they tend to fall asleep later and want to wake up later. Studies have shown that most high school students fall asleep naturally at 11:00 p.m. or later.

Busy schedules are another part of the problem. Many teens juggle school, homework, extracurricular activities, and part-time jobs during the school week. They often stay up late to fit everything in. On weekend nights, they may get to bed even later. Many try to make up for this sleep deficit by sleeping in on Saturday and Sunday mornings, but this may actually make the problem worse. Those who do so often find it even harder to fall asleep Sunday night and get up Monday morning.

Some researchers say that school start times contribute to the problem. They believe that many schools simply start too early. If a student must get up at 6:00 a.m. to have time to get dressed, eat breakfast, and get to school on time, it would require an 8:00 p.m. bedtime in order to get ten hours of sleep. For most teens, that is just not possible.

CONSEQUENCES

There is clear evidence that sleep deprivation has negative effects, especially for teens. Some common problems include:

- **Reduced coping skills.** Lack of sleep makes people more irritable and less able to control their emotions. For teens, this may lead to behavior problems at school, on the job, or at home with their families.
- **Increased risk of depression.** Some researchers believe that there is a link between poor sleep patterns and depression in teens.
- **Problems concentrating.** Lack of concentration may lead to poor academic performance in school and lower grades. Scores on high-stakes standardized tests may also be negatively affected.
- **Problems driving.** Sleep deprivation affects reaction time, coordination, and judgment. All can make driving less safe. According to one study, drivers under age 26 caused 55 percent of car crashes in which the driver fell asleep at the wheel.
- **Weight gain.** Lack of sleep can increase the probability of choosing high-calorie foods, such as sweets and fried foods, over more nutritious ones. Sleep-deprived people also often tend to overeat.
- **Reduced athletic performance.** The combination of fatigue and poor concentration caused by insufficient sleep cuts into physical performance.

WAYS TO GET ENOUGH SLEEP

There are ways to get more and better sleep:

- Aim for a more regular sleep schedule. Going to bed and getting up at about the same time every day promotes better sleep.
- Keep the room dark during sleep. Even the flickering light of a TV can disturb sleep patterns.

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- Get more light in the morning. Light helps increase alertness.
- Decide how many outside activities you can really handle. By avoiding an overload, it is easier to get to bed on time. Limiting part-time job hours primarily to weekends also helps.
- Eat nutritiously and avoid eating late at night. Good nourishment helps fight fatigue and also encourages sleep. However, eating a late meal or large snack near bedtime can make it harder to go to sleep and sleep well.

Taking Action

Make a chart to record the time you wake up each morning and the time you go to bed at night. Also record how alert you feel at that time, using a scale of 1 to 5, with 1 being extremely sleepy and 5 being wide awake. Then use your chart to answer the questions.

1. How many hours of sleep do you average a night? _____
2. What was your average alertness score in the morning? _____ At night? _____
3. If you routinely do not get enough sleep or do not awaken refreshed, how do you think this problem negatively affects you?

4. What changes would you need to make to your schedule to get more sleep?

5. How could schools help teens find solutions to sleep deprivation problems?

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Helping Teens Cope with Stress

Teens suffer from stress, just as adults do. Many people think of stress as something that *happens* to them, such as an unpleasant event. However, it is not the events themselves, but how people *react* to events, that causes stress.

A certain amount of stress in life is actually helpful. It motivates people to accomplish more and adds excitement to life. However, when stress is extreme or lasts a long time, it can have harmful effects, both physically and emotionally.

CAUSES OF STRESS

Experts have identified five main causes of stress in teens:

- **Lack of order and control over themselves and their lives.** Hormones produce physical and emotional changes in adolescents that can leave them feeling unable to control their bodies or feelings. Puberty also makes teens think about who they are and what their place in the world is, which can often be uncomfortable.
- **Worries about family.** Teens may have frequent disagreements with their parents or siblings. Family problems, such as moving, someone having health problems, or a divorce, can also cause great anxiety.
- **Peer relationships.** Both peer pressure or lack of friends can cause feelings of insecurity.
- **School pressure.** Many teens worry about doing well in school. They may fear that they will get in trouble, or that they will be unable to meet deadlines or fulfill responsibilities. They may feel that the expectations of their parents or teachers are too high. The pressure to make decisions about what they will do after high school can also cause stress.

- **Social and political problems.** Although they may not always seem to be paying attention, teens are conscious of what they hear on the news or in adult conversations. Worries over crime, environmental problems, natural disasters, and wars can leave them feeling helpless and afraid.

Some stress is only temporary, such as the stress that a student may feel before and during a test. This form of stress is often called *test anxiety*. Test anxiety may be caused by poor preparation or lack of time. It can also be caused by fear of failure or concern about how other students are doing on the same test.

Though short-lived, test anxiety can interfere with a student's ability to perform well. A student who is anxious may have trouble reading and understanding test questions. Test anxiety can also cause a student's mind to go blank even when he or she actually knows the answer to a question.

SYMPTOMS OF STRESS

Stress can produce a number of physical symptoms, such as headaches, stomachaches, or trouble sleeping. Under stress, some people develop unconscious habits, such as biting fingernails, twirling hair, or jiggling a leg. Long-term stress can affect the immune system and increase the chance of illness.

Stress can also produce emotional problems. Teens who are stressed may be irritable or moody. They may withdraw from activities that they used to enjoy. They may be unable to concentrate or focus on a task, which can lead to a cycle of stress. Prolonged stress can even lead to depression.

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COPING WITH STRESS

Some teens try to cope with stress by overeating, smoking, or using drugs or alcohol. Although these behaviors may seem to relieve the stress temporarily, they eventually make the stress worse and can cause serious health problems. There are other, better ways for teens to cope with stress. These include:

- Exercising.
- Practicing relaxation techniques, such as deep breathing or visualizing being in a relaxing place.
- Talking with a close friend.
- Taking time for rest and fun.
- Being well prepared for school and tests.
- Learning to be organized and making lists of responsibilities.
- Eating nutritious foods.

Parents can help teens cope with stress by providing support during stressful times and by following these tips:

- Allow the teen to describe his or her feelings or simply “let off steam.”
- Come up with solutions together and help the teen put them into practice.
- Help the teen prepare ahead for stressful situations, such as tests.

Sometimes teens need additional help to cope with stress. It is important that they get the support they need. Family doctors, counselors, or religious leaders can provide assistance in times of stress.

Teens will continue to face stressful situations throughout the rest of their lives. Understanding the symptoms of stress and learning ways to cope with stress will help them, not only while they are teens, but also later in life.

Taking Action

Identify five to ten common causes of stress among teens you know. Choose one cause and circle it on your list. Then describe preventive measures and coping strategies for that stressor.

Common causes of stress:

Prevention ideas:

Coping strategies:

Substance Abuse by Teens

As teens become more independent from their parents, they want to try new things. Many forms of independence, such as learning to drive, are a normal part of growing up. Others, such as consuming drugs and alcohol, can have very serious, long-term, negative consequences.

It is not unusual for a teen to rationalize experimenting with alcohol or other drugs thinking, “I’ll just try it. I can keep things under control.” However, an addiction can begin quickly, or so gradually that a person does not notice. Even a single experience can cause a lifetime of regret. Addiction harms not just the addicted person, but also family, friends, and many others.

REASONS FOR SUBSTANCE ABUSE

Teens may use drugs and alcohol for many different reasons. Some may simply be curious about how it feels. Others may be trying to fit in. In many cases, even teens who know the risks give in to peer pressure to try drugs, alcohol, or both. Some teens think such substances can provide an escape from stress or depression. In reality, the problems they cause are far worse.

Certain teens are more likely to become dependent on drugs or alcohol than others. Some common risk factors include low self-esteem, depression, or a family history of substance abuse. Teens who smoke cigarettes are more likely than nonsmokers to drink alcohol or use marijuana or cocaine. However, teens who have none of these risk factors may still experiment with drugs and become addicted to them.

FORMS OF SUBSTANCE ABUSE

Teens may experiment with legal or illegal substances or both. Alcohol, prescription medications, over the counter medications, inhalants, and nico-

tine, are examples of “legal” substances. However, even legal substances are illegal if used improperly. For example, it is illegal for anyone under the age of 21 to drink alcohol in many states. Some examples of illegal drugs include marijuana, cocaine, crack, LSD, heroin, and ecstasy.

WARNING SIGNS

There are many warning signs that a teen may be dependent on drugs or alcohol. These include:

- Difficulty sleeping.
- Red and glazed eyes.
- Being moody or withdrawn.
- Consistently using bad judgment.
- Breaking family rules, causing more arguments, or withdrawing from the family altogether.
- Getting into trouble at school, being absent frequently, and earning poorer grades.
- Constantly seeking money.

These signs do not always mean that a teen is using drugs or alcohol, but they should be a cause for concern. Whatever the reasons for such behavior, they are indications that some problem exists and needs to be solved.

CONSEQUENCES

Substance abuse is harmful to anyone, but especially to a teen.

- Teens who use drugs or alcohol are more likely to become dependent or remain dependent on those substances as adults.
- Substance abuse by teens can lead to failure in school and can prevent the teens from achieving their career goals.

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- With substance abuse comes an increased risk of violence, sexual activity, and suicide.
- Teens who use illegal drugs may be arrested and punished by the law.
- Teens with an addiction may steal to finance their habit.
- Teens who use drugs may seriously damage their health. For example, the use of inhalants can cause serious respiratory damage, brain damage, or even death. Death rates are much higher for teens who use drugs than for those who do not use them.

TREATMENT

Some teenagers who develop a drug or alcohol addiction may need to take part in a substance abuse program. There are many different types of treatment programs, and no single treatment will help all teens. An effective program treats the person, not just the drug or alcohol problem, by addressing the underlying cause for the addiction.

Families need to seek the help of a doctor or a mental health professional to make decisions about the best form of treatment. Once an addiction occurs, a person often must continue to fight the urge for the substance for life.

PREVENTION

Parents and teachers can help by educating their children and students about the dangers of substance abuse before the teen years. Research shows that teens whose parents talk to them about the dangers of drug use are over 40 percent less likely to use drugs. Yet only one in four teens say that their parents have discussed the dangers of drug abuse with them.

Adults who are willing to serve as mentors and positive role models can help teens remain free of substance abuse. Teens are more likely to adopt the values of people whom they respect and admire. Teens with strong value systems are better able to resist the temptation to experiment with drugs and alcohol.

Taking Action

Read more about ways to “get clean” from a substance abuse habit. Create a flyer that lists places where people in your community could go for help.

Brain Development in Teens

Until fairly recently, scientists believed that the human brain was fully developed by adolescence. They now know that the brain continues to change and develop well into a person’s twenties. Scientists now believe that many of the behavioral and emotional changes that occur during adolescence are not caused just by hormonal shifts, but are related to brain development as well.

USING A DIFFERENT PART OF THE BRAIN

Scans using magnetic resonance imaging (MRI) have shown that the brains of teens work differently than the brains of adults. Researchers have learned that teens’ brains organize and interpret information differently from the way that more mature brains do. For example, research shows that the teen brain does not process and interpret emotions the same way an adult brain does.

As part of this research, teens were shown pictures of people’s facial expressions. In one study, teens could only identify expressions of fear about 50 percent the time, while adults could interpret fear correctly 100 percent of the time. Brain scans taken while teens and adults were studying such pictures showed that teens were using a different part of their brains to interpret the pictures.

Scientists have learned that the frontal lobes in a teen’s brain do not operate the same way that they do in an adult’s brain. This is because the frontal region of the brain is one of the last areas to develop. Myelin also forms more slowly in the frontal lobes. These findings are significant because the frontal lobes regulate aggression, long-range planning, and abstract thinking, and they may also control moral judgment.

Until the frontal region is fully developed, teens are more likely to use another part of the brain, the amygdala. This part of the brain controls emotional reactions. Using this part of the brain, rather than

the frontal lobes, to make decisions may cause teens to act impulsively.

DEVELOPING BRAIN CONNECTIONS

Research has shown that the number of brain cells and connections greatly increase just before puberty. Then, during adolescence, the brain begins to reduce, or “prune” the unused cells and connections. This is similar to what happens during brain development in prenatal development and infancy.

Because unused brain connections eventually stop functioning, how teens use their brains during adolescence may ultimately determine how strong their brain connections become. By using their brains in a variety of ways, teens may be able to make their brains stronger and increase their intellectual abilities.

For preteens and younger teens, this increase in brain connections may have a down side, however. Scientists believe that preteens and younger teens solve emotion-related tasks more slowly because of the increase in brain cells and connections. However, this speed gradually increases and then stabilizes around the age of fifteen, as the brain begins to reduce the unused cells and connections.

IMPLICATIONS

There is still much to be learned about teen’s brains and brain development. However, scientists have drawn some conclusions from their studies of the teen brain.

- Because they use a different part of the brain to interpret emotions, teens may have more trouble perceiving emotions and body language accurately. This may create communication and relationship problems, especially between teens and adults.

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- Because the frontal region is not fully developed in teens, their decision-making ability and reaction time may be affected. In calm situations, researchers believe that teens can reason about as well as adults. Under stress, however, teens seem to have a more difficulty making decisions.
- Because teens use the amygdala more than the frontal region of their brains, they may not think as carefully about the consequences of their actions and may take more risks than adults would.
- Teens may also differ from adults in the area of motivation. The amount of brain stimulation required to motivate adults is far less than that needed by teens. As a result, teens may look for additional stimulation by experimenting with risky behaviors.

There has been much debate over the implications of this brain research. For parents, the research may provide insights into adolescent behavior. By understanding that teens do not organize and understand information the same way that adults do, parents may be able to prevent some communication problems or at least better understand what is going on when miscommunications do occur.

Some of the research also has legal implications. If teens' brains are not fully developed, how accountable should teens be for their actions? If young people have slower reaction times and are less able to assess risks, at what age should they be allowed to drive? Brain research may eventually change the way we view adulthood and when it begins.

Taking Action

Should brain research be used to determine the minimum age for driving, voting, drinking alcohol, or even the death penalty? Write a letter to the editor of a newspaper giving your point of view about the current minimum age in one or more of these areas. Be persuasive and use facts to support your argument. Include brain research as appropriate.