



4-H Get Fit, That's It

Healthy Eating, Active Living (HEAL)

Nutritional Lessons



Lesson 2: Are You Getting Enough Sleep?

Outcome: Students will learn the causes, effects, and solutions to sleep deprivation.

SOL:

9.1.2 The student will recognize how maintenance of health habits promotes personal health. SOL 9.1d

9.1.5 The student will recognize the value of proper rest and regular physical activity. SOL 9.2c

9.1.8 The student will examine family health habits and behaviors as they relate to health promotion. SOL 10.2g

Life Skill: Decision making ability

Time: 45-60 minutes

Grade Level: 9-12

Space: Classroom

Materials Not Included in Kit:

Copies of handouts
Mad-Gab Cards Sheets
Mad-Gab Cards Answers
My Sleep Log
Solutions Charade Sheet
Sleep Is One Thing Missing in Busy Teenage Lives paper
Poster board

Materials Supplied in Kit:

Wrist and ankle weights
Markers
Magazines
Bowl
Glue sticks

Concept/Theme: To introduce the causes of sleep deprivation and ways to alleviate it. To heighten youth awareness of personal sleep habits and how sleep contributes to a healthy active lifestyle .

Discussion:

Effects of Sleep Deprivation

1. Talk with youth about the benefits of getting at least 9 hours of sleep each night. There are many effects of sleep deprivation but most frightening are the long-term effects. Sleep deprivation affects every part of the body. A recent finding of effects of sleep deprivation highlights drowsy driving. Drowsy driving has been shown to be as dangerous as drunk driving. Sleep deprivation can also lead to heart disease, diabetes, depression, and stroke.
2. Read "Sleep Is One Thing Missing in Busy Teenage Lives" to youth. Write the numbers 1-12 on the board. Ask each youth how many hours of sleep they get on an average night. Make tally marks under the corresponding numbers. Add all answers and divide by the number of youth. Now you have the average hours of sleep they are receiving. Explain to them they should be getting at least 9 hours every night.

Activities:

Lack of Sleep

1. Youth will play a game with "Mad-Gab" cards. This game will help youth learn the long term effects of sleep deprivation. It will be difficult for youth to figure out the words at a glance. This difficulty mimics the short term effect of sleep deprivation much like the ability to read and comprehend. Divide the class into pairs. Give each pair a set of six cards. Each member of the pair takes turns sounding out the word or words on the card that give an effect of sleep deprivation. After all pairs have finished, go over the correct answers. Ask if any of the long-term effects were surprising to them.

“Sleep Is One Thing Missing in Busy Teenage Lives” by Denise Grady

Paragraphs to be read for activity:

At 6:30 in the morning, a strapping teenager on the cusp of manhood can look an awful lot like a newborn puppy, with eyes that won't open and a powerful instinct to curl up under something warm.

Is this the same person who swore he wasn't tired at 10:30 the night before while he traded instant messages with six different friends at once, and who will probably do it again tonight?

Parents know the adolescent drill all too well: stay up past 11 or 12 on school nights, stagger out of bed at 6 or 7, shower interminably, eat a token breakfast and bolt. Yawn through school, perk up for sports or clubs, fight sleep while doing homework. Come to life at 9 p.m., deny fatigue and stay up well after parents have collapsed into bed. Holidays and weekends, stay up half the night and then “binge sleep” until noon or beyond. Sunday night, restart the cycle of late to bed and early to rise.

Americans are said to be a sleep-deprived people, and teenagers are the worst of the lot. Most are lucky to get 6, 7 or 8 hours of sleep a night, even though studies have shown repeatedly that people in their teens and possibly even early 20's need 9 to 10 hours. Many live in a state of chronic sleep deficit that can affect mood, behavior, schoolwork and reaction time.

URL for entire article:

<http://www.nytimes.com/2002/11/05/health/children/05SLEE.html>



MadGab Flash Cards

Deep
Russian

Hard
Tis
Ease

High
Pretend
Shin

Slaw
Yours
Peach

Way
To
Gain

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Cant Sir

Bring
Mat
Tour
Deaf

Hawk You
Pay Shun
All- In
Jury

Stir
Oak

Dye
Ab
Eat
Tees

Answer Sheet

MadGab Flash Cards

Deep
Russian

Depression

Hard
Tis
Ease

Heart Disease

Slaw
Yours
Peach

Slows Your Speech

High
Pretend
Shin

Hypertension

Way
To
Gain

Weight Gain

We Kim
You N
Cyst Hem

Weaken Your System

Hi Year
Is Cove
Cant Sir

Higher Risk of Cancer

Bring
Mat
Tour
Deaf

Premature Death

Hawk You
Pay Shun
All- In
Jury

Occupational Injury

Stir
Oak

Stroke

Dye
Ab
Eat
Tees

Diabetes



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My Sleep Log

Name: _____

Date: _____	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
What time did you first go to bed?							
What time did you go to sleep?							
About how many times, if any, did you awaken during the night?							
On a scale of 1 (poor sleep, trouble sleeping at all) to 5 (slept like a baby) how would you rate the quality of your sleep this time?							
Overall, about how many hours did you sleep?							
At what time did you wake up (for the last time) today?							
In general, how did you feel when you woke up?							
How much time, if any, did you spend napping during the day?							

Fact Sheet on Healthy Sleep

The **Northern Virginia Healthy Kids Coalition** is promoting healthy lifestyles for children & youth through the **Tipping the Scales for Better Health Campaign**. In this fact sheet we focus on healthy sleep. Remember healthy sleep is an important part of the **9-5-2-1-0 for Health** message:

- ✓ **9** - Get at least 9 hours of sleep per day
 - ✓ **5** - Eat 5 servings of fruits and vegetables per day
 - ✓ **2** - Limit screen time to no more than 2 hours per day
 - ✓ **1** - Get at least one hour of physical activity per day
 - ✓ **0** - Avoid beverages with added sugar.
-

Can lack of sleep really increase the chances for obesity in children?

Recent research has linked inadequate sleep with a higher risk for childhood obesity:

- Lack of sleep disrupts a child's 'energy balance', or the balance between 'energy in' (calories consumed) and 'energy out' (calories burned). This can cause the body to produce hormones which increase the child's appetite and result in weight gain/obesity.
 - Childhood obesity/overweight puts a child at risk for sleep apnea, a disorder that prevents uninterrupted, deep sleep at night. Children with sleep apnea feel sleepy during the day and have impaired concentration/daytime performance of normal tasks.
 - One study found that for each hour increase of sleep, the risk for childhood obesity/overweight is decreased by 9%.
 - See the references for these studies at www.TippingtheScales.net
-

How much sleep do children & youth need each night?

The National Sleep Foundation recommends these basic daily sleep requirements:

- Preschoolers: 11-13 hours
 - Elementary school students: 10-12 hours
 - Pre-teens: 9 - 11 hours
 - Teens: 8 1/2 - 9 hours
 - See the references at www.TippingtheScales.net.
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What can I do to promote healthy sleep in children & youth?

- ✓ Model the way by getting the appropriate amount of sleep.
 - ✓ Educate kids, parents, & caregivers about the importance of adequate sleep for good health.
 - ✓ Learn more about the **Tipping the Scales for Better Health Campaign** at www.TippingTheScales.net.
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Whose kids? Our kids!

Teens and sleep

AJ Schwichtenberg, Mary Huser, Stephen Small

With all of the demands teens face today, getting enough sleep can be difficult. Inadequate sleep can affect your teen's mood, health and safety. Research has linked poor sleep habits to increased rates of depression and attention deficit disorder. Lack of sleep may change teens' metabolism, putting them at increased risk for obesity. Recent research links a lack of sleep with poor

- ✓ Falls asleep in class
- ✓ Concentrates poorly
- ✓ Becomes irritable, anxious or easily frustrated

Factors that may contribute to your teen's sleep

Early school start times

Middle school and high school generally start earlier than elementary schools, which conflicts with your teen's natural tendency to sleep later.

This conflict has been the

topic of many recent policy debates and today some schools are adopting later start times. If you have a choice, consider a school with a later start time or talk with local school officials about a later start time. An extra hour of sleep in the morning can help teens' memory, attention, mood and concentration throughout the day.

Extracurricular activities

Participating in extracurricular activities is linked to many positive outcomes, but balancing these activities with home life, work and school can put a strain on your teen's sleep. Encourage your teen to find a balance between all of these activities while still promoting sleep as a priority. Teens that are considered "high achievers" or that participate in multiple extracurricular activities are at increased risk for sleep problems.

Drinking caffeine

Drinking caffeinated beverages like soda, coffee or energy drinks is common for teens today. Consuming caffeine anytime after lunch can delay sleep onset at night which leads to less sleep at night and an increased desire for caffeine the following day. Caffeine is a stimulant and it is addictive. Many professionals do not recommend caffeine for teens, but if your teen does drink caffeine, limit consumption to a single serving in the morning. Avoid all sources of caffeine after lunch.

Circadian rhythm shift

One biological factor that influences the times and amount we sleep is our circadian rhythm. Circadian rhythms are 24-

"I can't go to sleep at 10 pm—all I do is lay there wide awake for hours."

school performance. And not getting enough sleep can make driving more dangerous. Teen drivers are one of the groups at highest risk for driving accidents caused by drowsiness or fatigue.

Most professionals recommend that your teen receive 8½ to 9½ hours of sleep per night. But with a tendency to stay up late, early school start times and a busy schedule, it is not surprising that most U.S. teens are not getting enough sleep. The average teen gets 7 hours of sleep per night. For many teens, weekend nights mean even less sleep.

Here are some signs that your teen is not getting enough sleep.

- ✓ Naps for longer than 45 minutes
- ✓ Sleeps-in two or more hours on weekends
- ✓ Wakes up with difficulty in the morning
- ✓ Yawns throughout the day
- ✓ Depends on caffeine

For many teens, weekend nights mean even less sleep.

hour based cycles that dictate when we feel drowsy or awake based on our exposure to light. Recent research has found a circadian rhythm shift in teens. This shift leads teens to stay awake later in the evening and to sleep later in the morning. Many parents have noticed this tendency for generations, but recently researchers have uncovered a biological basis for this change. So, it's natural for your teen to want to sleep later and to stay up later at night, while parents are winding down for the day.

Tips to help your teen get enough sleep

- ✓ Establish consistent bedtimes and waking times throughout the week. Research has shown that sleeping-in on weekend mornings does not erase the negative effects of sleep deficits during the week. The optimal amount of sleep for teens is around 9 hours each night.
- ✓ Pay attention to sleeping-in on weekends. If teens don't stick to within 2 hours of their weekday waking schedule, they can get out of sync, making Monday mornings very difficult.
- ✓ Help your teen wake more easily in the morning by opening window coverings at night or providing gradual light into the room in the morning. This will allow your teen to wake slowly, making morning struggles less difficult.
- ✓ Encourage your teen to exercise. Teens who participate in moderate exercise fall asleep and stay asleep more easily. Moderate exercise is 30–60 minutes of cardiovascular activity 4 to 7 days per week. However, because exercise sessions are often followed by a burst of energy, evening exercise may make it difficult for your teen to fall asleep. Help your teen avoid exercise an hour before bedtime and reserve this time for a quiet activity.
- ✓ Prioritize sleep for your whole family. Often, it's more than just the teenager in the family who is not getting enough sleep. Most adults need about 8 hours of sleep each night. Remember that sleep is not a luxury; it's absolutely vital so the body and mind can function normally.
- ✓ Be patient and expect changes in sleep habits to take some time. Research has shown sleep patterns develop slowly and can be difficult to change, so allow a couple of weeks to adjust to new sleep times or routines.

Teenagers require more sleep than they did when they were 9 and 10 years old, yet most get 1 to 2 hours less!

Parents make a difference!

Parents can promote more sleep for their teens by providing a sleep environment that is cool, quiet and dark at night. Remove all electronic distractions at bedtime. Watching television and having a TV in the bedroom have been linked with sleep difficulties in teens and adolescents. Items like TVs, video game stations, computers, cell phones, stereos or MP3 players are stimulating and can delay falling asleep. Reserve the bedroom for sleeping and quiet activities like reading.

When to contact a pediatrician

Not all teen sleep problems are solved by modifying their sleep environment, cutting back on caffeine or other lifestyle changes. Some sleep problems are symptoms of more serious mood disorders (like depression), breathing abnormalities or medical conditions. If your teen's sleep problem interferes with his or her daily functioning and environmental changes have not helped, ask a medical doctor about the situation. Sometimes, a sleep study can be done to assess his or her breathing airway, body temperature, muscle tone and neurological activity while sleeping. These assessments are used to screen for the most common teen sleep disorders.

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