



## Grade 9 Sample Lesson Plan: Protecting Vision, Hearing, and Dental Health

### SOLs

- Determine strategies to protect vision, hearing, and dental health.

### Objectives/Goals

- Students will identify actions that they can take to protect their vision, hearing, and dental health.

### Materials

- Internet access and referenced handouts.

### Procedure

- Show videos about hearing, vision, and oral health (e.g. see references)
- Have students visit health information sites such as the National Eye Institute and the National Institutes on Deafness and Communications Disorders. These sites provide a variety of information tips and resources including an Interactive Sound Ruler <https://www.nidcd.nih.gov/health/interactive-sound-ruler-how-loud-too-loud> ; information on noise induced hearing loss <https://www.nidcd.nih.gov/health/hearing-ear-infections-deafness>.
- Provide students with the handouts – *Taking Care of Your Vision*, *Taking Care of Your Teeth*, *Tips to Protect Your Hearing*, and *Earbuds -How Earbuds Damage Ears*. Have them review and discuss the information in groups, summarize the key points, and share with the entire class.
- Assign students to write a paragraph on key strategies to protect vision, hearing, and dental health and to identify one or more changes they will make in their lives to protect their vision, hearing, and dental health.
- Discuss the importance of preventive health screenings to identify any concerns early, promote preventive behaviors (e.g. improved oral hygiene), or implement corrective measures (e.g., fillings, hearing aids, glasses).
- Share information on free or reduced price health care options to obtain screenings and preventive health care including information on FAMIS, Virginia’s health insurance

- program for children and teens which covers vision care, dental care, and other health care ([https://www.coverva.org/programs\\_famis.cfm](https://www.coverva.org/programs_famis.cfm) )

### Assessment Idea

- Did students actively participate in group discussion?
- Were students able to identify key strategies?
- Were students able to identify personal behavior changes to protect health?

### References

- American Speech Language Hearing Association (ASHA) Resources for Educators <http://www.asha.org/Buds/Information-for-Educators/>
- ASHA Protect Your Hearing Powerpoint Presentation <http://www.asha.org/uploadedFiles/Protect-Your-Hearing-Presentation.pdf>
- Earbuds <http://kidshealth.org/en/teens/earbuds.html?view=ptr&WT.ac=t-ptr>
- FAMIS, Virginia's Health Insurance Program for Children [https://www.coverva.org/programs\\_famis.cfm](https://www.coverva.org/programs_famis.cfm)
- National Eye Institute (NEI)- Ask a Scientist: Perfect Vision and Glasses [https://youtu.be/\\_sjrU\\_9emwM](https://youtu.be/_sjrU_9emwM)
- NEI for Kids – All About Vision <https://nei.nih.gov/kids>
- NEI Healthy Vision Tips [https://nei.nih.gov/kids/healthy\\_vision\\_tips](https://nei.nih.gov/kids/healthy_vision_tips)
- National Institutes on Deafness and Communications Disorders (NIDCD) <https://www.nidcd.nih.gov/health/hearing-ear-infections-deafness>
- NIDCD - Interactive Sound Ruler – How Loud Is Too Loud <https://www.nidcd.nih.gov/health/interactive-sound-ruler-how-loud-too-loud>
- Taking Care of Your Vision <http://kidshealth.org/en/teens/vision-care.html>
- Taking Care of Your Teeth <http://kidshealth.org/en/teens/teeth.html?ref=search>
- Tips to Protect Your Hearing - <http://www.massgeneral.org/children/assets/pdf/adolescent-medicine-protect-your-hearing.pdf>
- VDH Saving Smiles Oral Health Curriculum Grades 6-10 [http://www.vdh.virginia.gov/content/uploads/sites/30/2016/08/Saving\\_Smiles\\_Series.pdf](http://www.vdh.virginia.gov/content/uploads/sites/30/2016/08/Saving_Smiles_Series.pdf)
- Videos
  - Dental Health for Teens and Tweens <https://www.youtube.com/watch?v=SND1o6GKnE8>
  - How Your Eyes Work – NIH [https://www.youtube.com/watch?v=i3\\_n3lbfm1c](https://www.youtube.com/watch?v=i3_n3lbfm1c)

- What are Cavities  
<https://www.youtube.com/watch?v=PqMEunuM54&index=68&list=PLgVW4hDBH0pe1XHkzmcjwsyORJfkldp2C>
- Protecting Your Ears <https://www.youtube.com/watch?v=MjdVP9hIaa4>
- Hearing and Balance – Crash Course  
<https://www.youtube.com/watch?v=Ie2j7GpC4JU>
- Vision- Crash Course <https://www.youtube.com/watch?v=o0DYP-u1rNM>

**Handout**

The next page includes a handout for the lesson. The handout is designed for print use only.

## Earbuds

Chances are that all you know about earbuds is that they're easy to carry around and they sound good. Earbuds are useful little devices as long as they're used at low volumes. But they're basically a pair of tiny speakers that you wear inside your ears. And loud music playing that close to your eardrum can cause permanent hearing loss.

### How Earbuds Damage the Ears

Believe it or not, earbuds can damage your hearing in the same way that things like chainsaws and motorcycles can. That may seem weird because earbuds are so small. But the damage is all in the volume.

Chainsaws and motorcycle engines create about 100 decibels of sound. That much sound can start to damage a person's ears after less than half an hour. An MP3 player at 70% of its top volume is about 85 decibels. Turning the volume up and listening for long periods of time can put you in real danger of permanent hearing loss.

Hearing loss from earbuds is an example of a condition called noise-induced hearing loss (NIHL). This kind of hearing loss is becoming more of a problem among kids and teens.

### How Does Noise Cause Hearing Loss?

The ear is made up of three parts that work together to process sounds: the outer ear, the middle ear, and the inner ear. Part of the inner ear called the cochlea contains tiny hair cells. These hair cells help send sound messages to the brain. But loud noise can damage the hair cells. When this happens, the cochlea can't relay sound messages to the brain as well.

Unlike damage to other parts of your body, inner ear damage never heals. Over time, as more and more hair cells get damaged, your hearing will get worse and worse.

### What to Do

Noise-induced hearing loss from using earbuds usually takes a while. Because it happens gradually, a lot of people don't know they have a problem until it's too late.

Signs you may have hearing loss are:

- ringing, buzzing, or roaring in your ears after hearing a loud noise
- muffling or distortion of sounds

What should you do if you think you have signs of hearing loss? Call your doctor. The doctor may examine you and send you to see an audiologist. The audiologist will most likely give you a series of tests to determine how much your hearing has been affected.

The audiologist can also answer any questions you might have about using earbuds and about protecting your hearing.

### Using Earbuds the Right Way

Noise-induced hearing loss due to earbuds is 100% preventable if you use them in moderation.

You've probably heard the saying, "All things in moderation." Not overdoing things is true whether you're eating



#### Top Things to Know About Earbuds

- **You're more at risk of hearing loss if you use earbuds than if you use over-the-ear headphones.**
- **Because earbuds play in your ear canal they can increase a sound's volume by several decibels.**
- **To stay safe, follow the 60/60 rule: No more than 60% of maximum volume for no more than 60 minutes.**
- **If you're using earbuds and people around you can hear your music, it's loud enough to be causing permanent hearing loss!**

chocolate cake or using earbuds. The more cake you eat, the faster you'll gain weight. The louder the volume, the faster hearing loss can happen.

So what does moderation mean when it comes to using earbuds? Doctors recommend the 60%/60-minute rule:

- Listen to music or play a movie or video game at no more than 60% of the maximum volume.
- Limit the amount of time you spend with earbuds in your ears to 60 minutes.

Here's another trick you can use to find out if your earbuds are at a safe volume: Ask people sitting near you if they can hear your music. If they can, it's a sign that your hearing is being damaged. Turn the volume down until other people can no longer hear it.

Hearing loss isn't the only problem that earbuds can cause. Listening to music at a loud volume can make you unaware of what's going on around you. That increases your chances of an accident. If you're running on a bike path, for example, it's hard to hear a cyclist shout, "Heads up!" when your music drowns out all other sounds.

### **Are There Other Options?**

It might feel like every phone or music player comes packaged with a tiny pair of earbuds. After all, they're cheap to manufacture and easy to use.

So what can you do? Go retro with headphones. There's a reason they're making a comeback. Sometimes old-school is better.

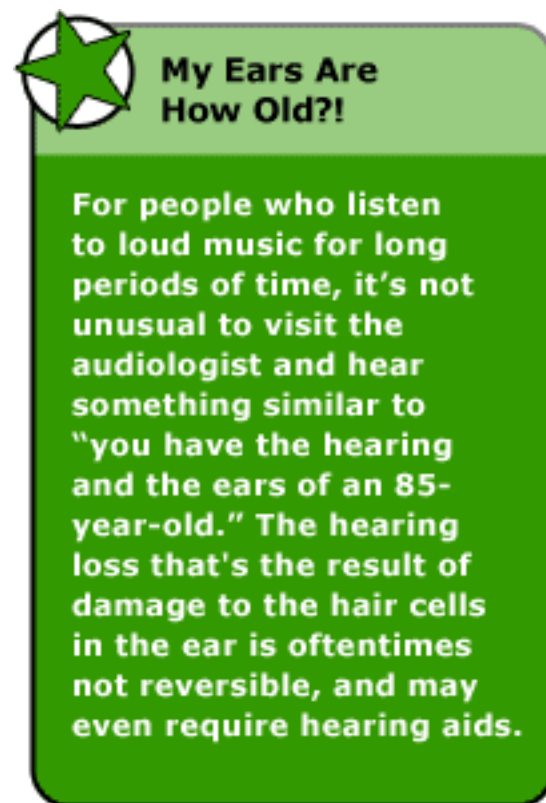
Most electronics stores have entire sections devoted to headphones. The best headphones, noise-canceling headphones, help block out other noises. That way, you don't have to turn up the volume on your music as loud to hear it well. Noise-canceling headphones may be good for staying focused on studying or homework, but they're not great choices if you need to hear the world around you.

Headphones that go over your ears can also damage your hearing if you use them too long or play music too loudly. They're just not as much of a risk as earbuds are: Having the source of the sound in your ear canal can increase a sound's volume by 6 to 9 decibels — enough to cause some serious problems.

Earbuds exist because so many of us love music. So you probably want to protect your hearing so you can continue to appreciate music. That's why it helps to know about the risks of earbuds (and other noise hazards) so you can take steps to be safe.

Reviewed by: Danielle Inverso, AuD, PhD

Date reviewed: January 2015



**My Ears Are How Old?!**

For people who listen to loud music for long periods of time, it's not unusual to visit the audiologist and hear something similar to "you have the hearing and the ears of an 85-year-old." The hearing loss that's the result of damage to the hair cells in the ear is oftentimes not reversible, and may even require hearing aids.

Note: All information on TeensHealth® is for educational purposes only. For specific medical advice, diagnoses, and treatment, consult your doctor.

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Nemours.



# Protect Your Hearing!

**One person's music is another person's  
noise.**

# What is noise?

- Loud sounds if they are over 85 dB can be damaging.
- How do I know if I am listening to levels above 85dB?
- It is invisible, tasteless, odorless, and **IGNORED** as a form of pollution.

# NOISE LEVELS

## for Everyday Sounds



dB  
140

### PAINFUL

- firecrackers - 140
- jackhammer - 130
- jet plane takeoff - 120



130  
120  
110

### EXTREMELY LOUD

- rock concert - 110
- snowmobile, chain saw - 100
- lawn mower, motorcycle - 90



100  
90  
80

### VERY LOUD

- alarm clock - 80
- busy traffic, vacuum cleaner - 70



70  
60  
50

### MODERATE

- normal conversation - 60
- moderate rainfall - 50
- quiet room - 40



40  
30

### FAINT

- whisper - 30

Noise levels can vary depending on closeness to the sound.



Limit your exposure time to noisy activities and wear adequate hearing protection. For more information, call 1-800-438-8255 or visit [www.asha.org](http://www.asha.org)

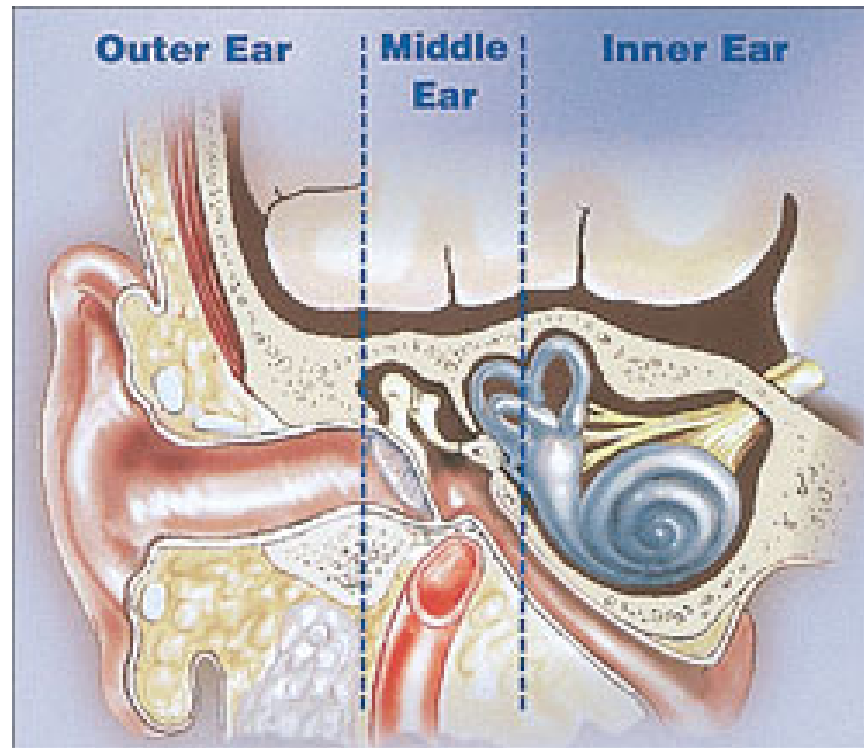




# ***DID YOU KNOW?***

- Noise-induced hearing loss is 100% preventable.
- Approximately 5.2 million children and adolescents aged 6–19 years have noise-induced hearing loss (CDC, retrieved 2013).
- 26 million adults aged 20–69 years have suffered permanent damage to their hearing from excessive exposure to noise (CDC, retrieved 2013).
- An MP3 player at maximum volume is roughly 105 decibels.
- Noise-induced hearing loss is:
  - cumulative
  - invisible
  - permanent

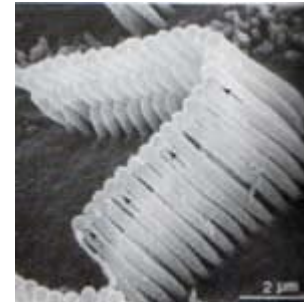
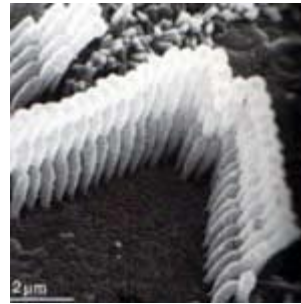
# How we hear...



# What is noise-induced hearing loss?

Damage to the hearing system can be caused by a one-time exposure to an intense “impulse” sound, such as an explosion, or by continuous exposure to loud sounds or noise over an extended period of time.

These are pictures of normal healthy hair cells.



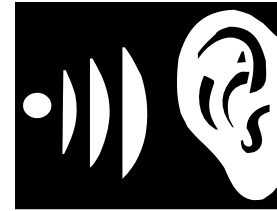
These are pictures of hair cells that have been exposed to very loud noise. Notice how they are bent over.



Retrieved from Dangerous Decibels, 2013

# Listen to the warnings from your ears....

## How loud is too loud?



- You have to raise your voice to be understood by someone standing nearby.
- The noise hurts your ears.
- You develop a buzzing or ringing sound in your ears, even temporarily.
- You don't hear as well as you normally do until several hours after you get away from the noise.

# How do you protect your hearing?

Block the noise (use earplugs)  
Avoid the noise  
Turn down the sound



**CAUTION**

**HEARING  
PROTECTION  
REQUIRED**

# Ways to protect your hearing

- Know which noises cause damage (at or above 85 decibels).
- Avoid hazardous sound environments.
- Wear hearing protection.
- Move away from the sound source.
- Make family, friends, and colleagues aware of the hazards of noise.
- Have your hearing tested if you suspect hearing loss or notice sudden changes in your hearing.

# How does hearing protection work?

- Hearing protectors work by reducing the level of sound that reaches our inner ear.
- All hearing protectors have a Noise Reduction Rating, or NRR.
- If a hearing protector has an NRR of 25, it can reduce a potentially harmful noise by 25 decibels.
  - *A 100-decibel noise will be reduced to a safe level of 75 decibels ( $100 - 25 = 75$ ).*



# Types of hearing protection

- Ear plugs



- Custom made ear plugs



- Ear muffs





# Help educate your children about safe listening.

1. Start early
2. Learn together about the ear
3. Discuss the fact that hearing loss can occur when we listen to loud sounds for long periods of time.
4. Model good behaviors
5. Be sure that everyone in the family is wearing hearing protection when attending noisy events.

# Tips on using personal audio devices safely

- 1) Turn down the volume to a reasonable level.
- 2) Limit listening time to an hour before taking a long break.
- 3) Talk to your kids about noise and hearing loss.
- 4) If your child cannot hear you talking when you are standing an arm's length away, then tell him or her to turn down the volume.
- 5) If the device has volume-limiting software, use it!
- 6) Use sound-isolating or noise-cancelling earphones when listening in a noisy environment.
- 7) Teach your kids to start with the volume low and turn it up only loud enough to hear the music comfortably.

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## Lesson Plans & Classroom Activities

**How Your Brain Understands What Your Ear Hears**  
*National Institute on Deafness and Other Communication Disorders*  
 Curriculum supplement for grades 7-8. Lessons are designed to help students understand the interrelationship of hearing, language, and human communication, as well as to develop the healthy hearing habits necessary to avoid Noise-Induced Hearing Loss.

**I Love What I Hear!**  
*National Institute on Deafness and Other Communication Disorders*  
 Classroom activities about hearing for grades 3-6. The activities are designed to: help students build awareness of the importance of hearing conservation and the problem of Noise-Induced Hearing Loss; introduce and reinforce scientific understanding of hearing and the science of sound; and provide opportunities for children to influence the awareness and understanding of others.

**Noise-Induced Hearing Loss Teacher Resource Guide**  
*Dangerous Decibels*  
 A K-8 curriculum supplement with hands-on science activities about the anatomy and physiology of hearing, the physics of sound, and health-related behaviors for prevention of Noise-Induced Hearing Loss.


**Questions and Answers About Hearing**  
*National Institute on Deafness and Other Communication Disorders*  
 Interactive quiz with factoids about hearing and hearing loss.

**Operation BANG: Be Aware of Noise Generation**  
*Military Audiology Association*  
 Three-day (1 hour per day) hearing loss prevention campaign for 5th graders. The curriculum focuses on teaching children about noise and hearing loss and also tries to enhance students' appreciation of good hearing and motivate them to protect it.

**Know Noise**  
*Sight and Hearing Association*  
 Comprehensive education program for grades 3-6.

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Visit [www.listentoyourbuds.org](http://www.listentoyourbuds.org) for additional information on noise-induced hearing loss, activities for kids, and lesson plans for teachers.

[www.asha.org](http://www.asha.org)



# Concerned about hearing?

We're here to help. For more information  
contact:

American Speech-Language Hearing Association  
2200 Research Boulevard  
Rockville, MD 20850

E-mail: [audiology@asha.org](mailto:audiology@asha.org)

Website: [www.asha.org](http://www.asha.org)

# Protect Your Hearing

## Presentation Notes

### Slide 1

No commentary

### Slide 2

Just as the presentation opens: one person's music is another person's noise. No matter what the sound source is...if the loudness of the sound is over 85dB there is potential danger for NIHL.

### Slide 3

Children and young adults frequently participate in activities involving potentially damaging noise levels: playing with noisy toys, band instruments, and video games; listening to personal music players and stereos at high volumes; attending concerts and movies; operating lawn mowers, leaf blowers, and power tools; and riding off-road vehicles and snowmobiles.

The loudness of sound is measured in decibels (dB). Noise-induced hearing loss can be caused by prolonged exposure to any loud noise over 85 (dB).

### Slide 4

It's cumulative because the damage can start when we are young and get worse over time. It's invisible because it can happen without our even noticing it, until it's too late. And it's permanent because, unlike a broken arm that gets better over time, we can't "heal" our hearing. Once it's damaged, it's damaged for good.

<http://www.cdc.gov/healthyyouth/noise/>

### Slide 5

The ear can be divided into three parts leading up to the brain—the outer ear, the middle ear, and the inner ear.

- The outer ear consists of the ear canal and eardrum. Sound travels down the ear canal, striking the eardrum and causing it to move or vibrate.
- The middle ear is a space behind the eardrum that contains three small bones called ossicles. This chain of tiny bones is connected to the eardrum at one end and to an opening to the inner ear at the other end. Vibrations from the eardrum cause the ossicles to vibrate, which, in turn, creates movement of the fluid in the inner ear.
- Movement of the fluid in the inner ear, or cochlea, causes changes in tiny structures called hair cells. This movement of the hair cells sends electrical signals from the inner ear up the auditory nerve (also known as the hearing nerve) to the brain.

The brain then interprets these electrical signals as sound.

#### **Slide 6**

The loud sound is collected by the ear as sound waves.

The sound travels down the ear canal to the eardrum. The loud sound passes through the middle ear into the inner ear, also known as the cochlea. The tiny hair cells lining the fluid-filled cochlea can be damaged by loud sound.

Only healthy hair cells can send complete electric signals to the brain for interpretation and understanding. If the hair cells are damaged by loud noise, the signals cannot be correctly interpreted by the brain.

Once hair cells are damaged, there is no current treatment to repair them. The resulting hearing loss is permanent.

#### **Slide 7**

If you think it is too loud, you are probably right!

#### **Slide 8**

No commentary

#### **Slide 9**

No commentary

#### **Slide 10**

(Refer back to the noise level poster.)

Hazardous sound environments are typically work related and usually workers in a loud noisy environment will be given hearing protection by the employer. Non-work related noisy environments can be loud clubs and concerts, hunting, auto races, etc.

#### **Slide 11**

They do not block out all noise, but just make all noises sound softer.

The higher the NRR, the more protection they offer.

#### **Slide 12**

- Formable or foam ear plugs will expand to fill the ear canal and seal against the walls. They come in various pre-made shapes and sizes.
- Custom made ear plugs are made to fit individual ears and offer increased comfort for longer wearing time. They come in many different colors.
- Ear muffs fit completely over both ears. They must fit tightly so that sound is blocked from entering the ears.

- YouTube video on how to correctly insert foam ear plugs:  
[www.youtube.com/watch?v=5QZ7o9KAH4I](http://www.youtube.com/watch?v=5QZ7o9KAH4I)

### **Slide 13**

1. Have conversations with your kids about the importance of maintaining good hearing.
2. Learn how the ear works and what happens when it is damaged.
4. Model behaviors such as wearing earplugs when you are blow-drying your hair or mowing the lawn.
5. Auto races, football games

### **Slide 14**

The risk of hearing loss from personal audio devices is based on the volume of the sound and the time spent listening.

1. A good rule of thumb for young children is about 60%.
3. Discuss the fact that hearing loss can occur when we listen to loud sounds for long periods of time.
4. Long listening times can still be risky.
5. When the surrounding environment is loud, we tend to turn audio devices up to compensate.

### **Slide 15**

Search term to get to this page: Lesson plans & classroom activities

### **Slide 16**

No commentary



# Tips to Protect Your Hearing

Teens are exposed to lots of noise, whether it's from listening to music, mowing the lawn or playing in a band. It's important to protect your hearing now so you don't have hearing loss now or as you get older. In this handout, you will learn tips to protect your hearing so you can keep doing the things you love.

## WHY SHOULD I PROTECT MY HEARING NOW?

You should protect your hearing in your teen years for 2 reasons. First, protecting your hearing now lets you keep doing the things you love, like listening to music, playing sports, driving or talking with your friends. Second, it sets you up for better hearing as you get older.

## WHAT IS NOISE-INDUCED HEARING LOSS?

Teens have a high risk of developing noise-induced hearing loss. **Noise-induced hearing loss** is when you lose some of your hearing after hearing loud noises. This can be **temporary** (go away after a little while) or **permanent** (won't go away).

## WHAT ARE THE SIGNS OF NOISE-INDUCED HEARING LOSS?

For some teens, there are no signs of noise-induced hearing loss other than they can't hear as well as they used to. Other signs include:

- Ringing in your ears after hearing loud noises
- A roaring sound in your ears after hearing loud noises
- Buzzing in your ears after hearing loud noises

**Tell your doctor if you have any of these signs of noise-induced hearing loss.** He/she can help you get the right treatment and come up with ways to help protect your ears from more hearing loss.



### *Did you know?*

At least 1 out of every 8 teens in the United States has some form of hearing loss in 1 or both ears. This number is growing in teens, according to the National Institute on Deafness and Other Communication Disorders.

## HOW CAN I PROTECT MY HEARING?

- **Turn down the volume.** If you wear earbuds while listening to music, take out your earbuds and hold them 3 feet (1 meter) away from your ear. If you can hear your music from 3 feet away, it's time to turn down the volume.
- **Set your music to a safe level.** An easy way to do this is to turn your music all the way up, then back down to the halfway mark. Listening to music higher than the halfway mark can cause noise-induced hearing loss.
- **Spend less time with earbuds in.** You can still listen to your music, play games or watch shows on your device. Earbuds send noise directly into your ears and can cause hearing loss. Spending time without earbuds lets you listen while still protecting your hearing.
- **Take a break from loud noises.** This lets your ears recover from loud noises you've been listening to. It also helps ease ringing or buzzing in your ears.
- **Sit in the middle of the room at a concert.** This helps protect your hearing and you can still listen to and see your favorite artists in concert.
- **Buy noise-cancelling headphones.** These protect your ears and let you tune out extra noise when you need to focus, like when you're doing homework.
- **Bring earplugs or protective earmuffs to places with loud noises.**
- **Buy custom-molded musicians or high-decibel protection earplugs if you're in a band or work around musicians.** These might cost a little more, but they will let you keep playing and listening to your music now and as you get older.

### ***A note for your parents...***

**The most important thing you can do to protect your teen's hearing is to set a good example yourself.** If you mow the lawn, wear noise-cancelling headphones. When you listen to music, keep the volume low.

If you can hear your teen's music from his/her earbuds or headphones from 3 feet (1 meter) away, tell him/her to turn the volume down.

## Adolescent and Young Adult Medicine

Mass General Hospital for Children  
55 Fruit Street, Suite 6D  
Boston, MA 02114

[www.massgeneralforchildren.org/adolescent](http://www.massgeneralforchildren.org/adolescent)

For more information please call

**617-643-1201**



*Saving Smiles Series*  
*Oral Health Education Curriculum*

*“Give Teens Something to Smile About”*  
*Grades 6-10*



**Division of Dental Health**

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# **Curriculum Overview**

**“Give Teens Something to Smile About”**

## **"Give Teens Something to Smile About"**

The Division of Dental Health, Virginia Department of Health, has developed an oral health education curriculum for middle and high school students that complement the Health Education Standards of Learning (SOLs). The Health Education Standards of Learning provide the framework for instruction of the knowledge and skills needed for students to lead healthy lives. The goal of this oral health curriculum is to educate adolescent students about the impact of health behaviors on oral and overall health. This curriculum provides Health/PE teachers, School Nurses, School Staff, and School Health Advisory Boards with oral health information and training materials to promote integration of oral health into school curriculums.

This oral health curriculum was developed in a "ready to go" format. Each of the six modules has complete lesson plan(s) including:

- discussion information for the teacher
- leading questions for the classroom
- activities to assess student knowledge
- additional resource information
- Sample Pre/Post test for each module
- power point (cd-rom) for each module

**Teacher/Evaluation/Feedback forms** are also included for school staff using the module with students. These can be faxed to the Division of Dental Health at: **(804) 864-7783**. We look forward to receiving feedback on the "Give Teens Something to Smile About" oral health education curriculum.

The following modules are included in "Give Teens Something to Smile About:"

- Keep Your Teeth and Gums Fit for Life
- Diet, Oral Health and Wellness Sports/Injury Prevention
- Oral Health and Tobacco Use
- Sports/Injury Prevention
- Oral Fads-It's Not as Simple as You Think!
- Careers in Dentistry

**Forms- Marketing/Evaluation/  
Educational Materials  
Ordering**



## Training Opportunities for Oral Health Education

The Division of Dental Health, Virginia Department of Health, has developed oral health curriculums for middle, and high school students. The Health Education Standards of Learning (SOLs) for the Virginia Public Schools provide the framework for instruction of the knowledge and skills needed for students to lead healthy lives. The goal of these oral health curriculums is to educate students about the impact of health behaviors on oral and overall health.

The "Saving Smiles Series," Healthy Mouth, Healthy Body (K-5), and the "Give Teens Something to Smile About" (6-10) is designed to be used by school administrators, teachers, or school nurses for integrating oral health into the school curriculum, and was developed to positively influence oral health and total health.

Listed below are training opportunities for an orientation regarding using these oral health education curriculums. Please check all that you are interested in:

- This in-depth training, one to two hours, provides orientation to the "Saving Smiles Series," Healthy Mouth, Healthy Body for kindergarten through fifth grade. These modules include grade appropriate lesson plans, discussion items for the presenter, and activities to assess knowledge and resources.
- This in-depth training, one to two hours, provides orientation to all six modules in the "Give Teens Something to Smile About" oral health curriculum. Each module contains lesson plans with goals and objectives, discussion for the presenter, power point presentations, and evaluation tools. These modules include:
  - Keep Your Teeth and Gums Fit for Life
  - Diet, Oral Health and Wellness
  - Oral Health and Tobacco Use
  - Sports/Injury Prevention
  - Mouth Jewelry-It's Not as Simple as You Think!
  - Careers in Dentistry
- A shorter training is available for orientation to one or more specific modules in the above teen curriculum. Please indicate below which module(s) you are interested in:  
\_\_\_\_\_

**Please complete and fax to the attention of JoAnn Wells @ (804) 864-7783.**

If you have questions about these trainings please email: [joann.wells@vdh.virginia.gov](mailto:joann.wells@vdh.virginia.gov)

Name: \_\_\_\_\_

School District/School/Phone Number: \_\_\_\_\_

Email: \_\_\_\_\_



**Saving Smile Series**  
**Oral Health Education Curriculum**  
**Give Teens Something to Smile About**  
**Grades 6-10**

Module Evaluation Form

Presenter Name \_\_\_\_\_

School \_\_\_\_\_

County \_\_\_\_\_

Date of Presentation \_\_\_\_\_

Grade \_\_\_\_\_

List Topics/SOLs covered in presentation:

\_\_\_\_\_

\_\_\_\_\_

List activities used:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Comments:

**Please mail or FAX completed form to:**

***FAX 804-864-7783***

**JoAnn Wells, RDH**

**Virginia Department of Health/Division of Dental Health**

**109 Governor St., 9<sup>th</sup> Floor**

**Richmond, Virginia 23219**

## VDH, Division of Dental Health - Educational Material Order Form for School Age Populations

The following oral health educational materials are available to school nurses, school teachers, and health/PE teacher to use with classroom education. Please place the number of materials needed beside your choices. Fill in all mailing information and fax or mail the form to VDH.

Mail to: _____ Organization Name _____ Attention To _____ Street Address for Shipping _____ City/County _____ VA _____ Zip Code _____	What is your professional role or job title? _____ What type of event will these materials be used for? _____ How many people will be attending? _____ By what date are materials needed? _____ Phone #: _____	FAX to: 804-864-7783 Attn: ORDERS Mail to: VDH - Division of Dental Health 109 Governor Street, 9 <sup>th</sup> Floor Richmond, VA 23219
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<p style="text-align: center;"><b>VDH Material — 100 Maximum</b></p> <p>___ *Smile For Good Health ___ English ___ Spanish                  ___ Urdu ___ Korean ___ Vietnamese</p> <p>___ Smile for Good Health Tabletop display ( 24"x18") 1 copy</p> <p>___ *How To Brush ___ English ___ Spanish                  ___ Urdu ___ Korean ___ Vietnamese</p> <p>___ *How To Floss ___ English ___ Spanish                  ___ Urdu ___ Korean ___ Vietnamese</p> <p>___ *A Healthy Diet Is Something To Smile About (English &amp; Spanish)                  ___ Urdu ___ Korean ___ Vietnamese</p> <p>___ A Healthy Diet - Tabletop display (24"x18") 1 copy</p> <p>___ Whatever You Play...Protect Your Teeth</p> <p>___ Oral Piercing, It's Not as Simple as You Think</p> <p>___ The First Thing They Notice is Your Smile</p> <p>___ Self Exam For Oral Cancer (Teens) ___ English ___ Spanish</p> <p>___ *Seal Away Tooth Decay ___ English ___ Spanish                  ___ Urdu ___ Korean ___ Vietnamese</p> <p>___ *Swish Away Tooth Decay ___ English ___ Spanish                  ___ Urdu ___ Korean ___ Vietnamese</p>	<p style="text-align: center;"><b>ADA/CB Material — 25 Maximum</b></p> <p>___ Oral Piercing: Is It Worth It?</p> <p>___ Mouth guards: A Cool Thing</p> <p>___ Think Before You Chew</p> <p>___ Quitting Smoking While You're Still A Teen-C.B.</p> <p>___ Dental Emergencies</p> <p>___ Snack &amp; Sip All Day- Risk Decay</p> <p>___ Diet and Tooth Decay</p> <p>___ Going To The Dentist Coloring Book - C.B.</p> <p style="text-align: center;"><b>Posters (indicate # needed)</b></p> <p>___ Flossing</p> <p>___ Dental Sealants</p> <p>___ Protect Your Smile (Use a mouth guard when playing these sports)</p> <p>___ Dental Emergencies (Are you in a tooth pickle?)</p>
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**\*Material available in Spanish, Urdu, Korean, and Vietnamese**

Office Use Only - DE \_\_\_ RI \_\_\_ RD \_\_\_ OFAR \_\_\_ OFWM \_\_\_ PRA \_\_\_ DM \_\_\_

**“Keep Your Teeth and Gums Fit for Life”**

**“Keep Your Teeth and Gums Fit for Life”**  
**SOL(s) 6.2 b, c; 6.4 a; 9.1 d; 10.2 g**

The goal of this section is to promote the importance of optimum periodontal health and overall health.

Upon completion of this section the learner will be able to:

1. Define plaque and explain its role in gingivitis and periodontal disease.
2. Describe appropriate oral hygiene techniques to remove plaque including tooth brushing and flossing.
3. Discuss the role of mouthwash in oral health.
4. Discuss the importance of tongue brushing.
5. Describe brushing and flossing techniques to remove food and plaque from orthodontic braces.
6. Discuss the role of periodontal health in overall health.
7. Discuss pros and cons of cosmetically whitening teeth.

**“Diet, Oral Health, and Wellness”**  
**SOL(s) 6.2 a; 7.2 a; 8.1 g; 8.3 a; 9.1 a & d; 9.2 c; 10.1 a; 10.4 a**

The goal of this section is to teach positive dietary and lifestyle habits to improve oral health and maintain a healthy weight.

Upon completion of this section, the learner will be able to:

1. Discuss the role that diet can play in preventing dental decay.
2. Describe health habits to prevent dental decay.
3. Discuss the health benefits of drinking water daily.
4. Describe the impact of eating disorders on oral health and overall health.
5. Describe the benefits of fluoride as a nutrient on oral health.

### **“Oral Health and Tobacco Use”**

**SOL(s) 6.1 d, 6.2 b, c, & d; 6.6 b; 7.2 c; 7.3 a; 7.5 a; 8.1 c; 8.4 b; 8.5 b;  
9.1 c & d; 10.1 c; 10.2 g**

The goal of this section is to educate the student about tobacco products and the potential health consequences associated with tobacco use.

Upon completion of this section the learner will be able to:

1. Discuss the different types of tobacco products and the carcinogenic ingredients they contain.
2. Describe the relationship of tobacco use to overall health, including oral health.
3. Describe the short- and long- term health issues related to tobacco use.
4. Interpret and evaluate how tobacco product information is targeted to impact adolescents.
5. List suggestions to deal with peer pressure and tobacco use.
6. Demonstrate how to do an oral cancer self-exam.

**“Sports/Injury Prevention”**  
**SOL (s) 6.4 e; 6.5 c, d**

The goal of this section is to provide strategies to prevent injuries to the face and mouth during physical activities, and to provide strategies to respond to injuries at school and at home.

Upon completion of this section the learner will be able to:

1. Discuss the health benefits of wearing a mouthguard.
2. List the types of mouthguards available.
3. Discuss safety rules to follow at home and at school.
4. Describe the contents of a dental emergency kit.
5. Be familiar with how to handle a dental emergency.

**“Mouth Jewelry- It's Not as Simple As You Think!”**  
**SOL(s) 7.1b; 8.1 a, b; 9.3 a**

The goal of this section is to provide knowledge to the student regarding the risk involved with oral piercing

Upon completion of this section the learner will be able to:

1. List common health complications that can occur with oral fads.
2. List serious health complications that can occur with oral fads.
3. Describe reasons why an infection may occur with oral piercings.



**“Careers in Dentistry”**  
**SOL(s) 7.4 c; 9.5 a, c; 10.4 e**

The goal of this section is to educate students regarding careers in the dental profession.

Upon completion of the section the learner will be able to:

1. List the roles of dental professional in the community.
2. Describe the specific functions of each dental professional.
3. Describe educational requirements for each of the dental professions.

**“Keep Your Teeth and Gums Fit for Life”**  
**SOLs 6.2 b & c, 7.5 a, 8.1 a & b, 9.1 d, 10.2 g**

**Lesson Plan:** Discuss the etiology of gingivitis and periodontal disease and the oral hygiene techniques to prevent these diseases.

**Standard of Learning:**

**6.2** The student will use knowledge of the body's structure and function to make sound decisions related to personal health.

Key concepts/skills include:

- b) the interconnection of the body system
- c) the effects of disease on the functions of the body

**7.5** The student will work cooperatively with others to support and promote healthy schools, families, and communities.

Key concepts include:

- a) implementation of appropriate health practices and behavior

**8.1** The student will analyze and evaluate the relationship between health-risk behaviors and the onset of health problems that can impact health and well-being during the adolescent years.

Key concepts include:

- a) the pathogenic, genetic, age, cultural, environmental, and behavioral factors that influence the degree of risk for contracting specific diseases
- b) the roles of preventative health measures, immunization, and treatment in disease prevention

**9.1** The student will apply health knowledge and skill to the development and analysis of personal goals to achieve and maintain long-term health and well-being.

Key concepts include:

- d) maintenance of health habits that promote personal wellness

**10.2** The student will analyze, synthesize, and evaluate the protective factors related to achieving and maintaining a sound mind and healthy body throughout life.

Key concepts include:

- g) family health habits and behaviors as they relate to health promotion

**Discussion Information for Teacher:**

A healthy mouth is an important part of total health. Oral health includes teeth, gums, tongue, oral tissues, lips and throat. Dental decay is the most common chronic childhood disease. Decay involves a susceptible tooth, fermentable carbohydrate and bacterial plaque. Leaving carbohydrates on the teeth in the presence of bacteria results in acid formation. The acid demineralizes the enamel surface and a cavity occurs. Limiting the frequency that sugary foods and beverages are eaten is important. Other risk factors for decay include inadequate brushing and flossing and too little fluoride for the teeth. Saliva naturally neutralizes the acid in the mouth, so a student with a dry mouth is at more risk for decay.

As students mature into adolescents, gingivitis (first stage of periodontal disease) can be a common occurrence. With gingivitis, gums are red, swollen and bleed easily. A student can prevent gingivitis by daily toothbrushing and flossing. If left untreated, gingivitis may progress to periodontal disease involving surrounding bone and tissue. Other factors which may increase a student's chance of getting periodontal disease including: tobacco use, genetics, systemic conditions such as and diabetes, and hormonal changes related to puberty.

Not only does bacterial plaque and food need to be removed from the teeth, but also bacterial plaque needs to be removed from the gum line. Using a soft-bristle toothbrush gently clean at the gum line to remove bacterial plaque. To clean at the gum line, place the bristles of the toothbrush at a 45-degree angle. You do not need a lot of pressure along the gum line. Use short circular strokes. Brush all surfaces of teeth inside and outside, including the chewing surfaces. Brush the teeth and gums twice a day.

Remember to brush the top of the tongue, to remove bacterial plaque. Cleaning the tongue is also important for fresh breath.

Dental floss removes food and bacterial plaque from between the teeth and under the gums. Bacterial plaque left between the teeth and under the gum line contributes to gingivitis. Wrapping the floss around the middle fingers, gently guide the floss between the teeth using the thumbs and forefingers. Keep the floss wrapped against the tooth as you slide the floss under the gum line. Floss once a day. Mouthwash does not take the place of flossing. Mouthwashes freshen the breath for only a few minutes, while flossing removes old food and bacterial plaque from between the teeth that can lead to bad breath.

Students who wear orthodontic appliances will need to spend more time with their daily oral hygiene. There are adapted toothbrushes and floss aids available to clean around braces.

Adolescents are often interested about the appearance of their teeth. Bleaching and whitening techniques need to be discussed with their dentist. Some individuals may experience increased tooth sensitivity after using bleaching and whitening products. Remember that it is important for adolescents to have regular dental visits every year including a periodontal examination.

### **Leading Questions:**

1. How often should you brush your teeth?
2. Is the purpose of flossing to remove food that is stuck in-between the teeth?
3. Why do people use mouthwash?
4. What happens if you don't learn how to use dental floss?
5. Why is brushing at the gum line important?

### **Possible Activities:**

1. Research an oral health topic on the American Dental Association's website and write an essay.
2. Participate in a flossing challenge.
3. Write a paper about your family's dental history.
4. Pick a new over-the-counter dental product and research the claims made about this product (bleaching or whitening products, toothpaste, electric toothbrushes, etc.)

### **Estimated Time for Presentation:**

A minimum of 30 minutes to maximum of 45 minutes is needed depending on the number of activities included.

### **Resources:**

-Power point available from Virginia Department of Health, Division of Dental Health website at: [www.vahealth.org/teeth](http://www.vahealth.org/teeth)

-Flossing Challenge, Go to the Virginia Department of Health, Division of Dental Health website at: [www.vahealth.org/teeth](http://www.vahealth.org/teeth)

-American Academy of Periodontology at:  
<http://www.perio.org/consumer/mbc.top2.htm>

**PRE-TEST- "Keep Your Teeth and Gums Fit for Life"**

**LOCATION:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

1. You are more likely to get cavities if you:
  - a. Brush and floss daily
  - b. Use a fluoride toothpaste
  - c. Frequently drink soda pop
  - d. Eat fresh fruit and vegetables
  
2. If you wear orthodontic braces you need to:
  - a. Avoid using dental floss because it will get stuck
  - b. Spend less time brushing
  - c. Look for floss aids available in stores
  - d. Spend more time brushing
  - e. c and d
  
3. Bacterial plaque can cause the following:
  - a. Tooth decay
  - b. Gingivitis
  - c. Bad breath
  - d. a and c
  - e. All of the above
  
4. What factor can contribute to gum disease?
  - a. Poor oral hygiene
  - b. Smoking
  - c. Poor diet
  - d. Genetics
  - e. All of the above

Teachers-please send all completed PRE & POST Tests to:

JoAnn Wells, RDH  
School Age Oral Health Education Coordinator  
Virginia Department of Health  
109 Governor Street, 9<sup>th</sup> Floor  
Richmond, Virginia 23219  
Phone: (804) 864-7777  
Fax: (804) 864-7783  
Email: [joann.wells@vdh.virginia.gov](mailto:joann.wells@vdh.virginia.gov)

NUMBER\_\_\_\_\_ (VDH Staff only)

**POST-TEST- "Keep Your Teeth and Gums Fit for Life"**

**LOCATION:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

1. You are more likely to get cavities if you:
  - a. Brush and floss daily
  - b. Use a fluoride toothpaste
  - c. Frequently drink soda pop
  - d. Eat fresh fruit and vegetables
  
2. If you wear orthodontic braces you need to:
  - a. Avoid using dental floss because it will get stuck
  - b. Spend less time brushing
  - c. Look for floss aids available in stores
  - d. Spend more time brushing
  - e. c and d
  
3. Bacterial plaque can cause the following:
  - a. Tooth decay
  - b. Gingivitis
  - c. Bad breath
  - d. a and c
  - e. All of the above
  
4. What factor can contribute to gum disease?
  - a. Poor oral hygiene
  - b. Smoking
  - c. Poor diet
  - d. Genetics
  - e. All of the above

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NUMBER\_\_\_\_\_ (VDH Staff only)

# **“Diet, Oral Health and Wellness”**



### **"Diet, Oral Health and Wellness"**

**SOL(s) 6.2 a; 7.2 a; 8.1 g; 8.3 a; 9.1 a & d; 9.2 c; 10.1 a; 10.4 a**

The goal of this section is to teach positive dietary and lifestyle habits to improve oral health and maintain a healthy weight.

Upon completion of this section, the learner will be able to:

1. Discuss the role that diet can play in preventing dental decay.
2. Describe health habits to prevent dental decay.
3. Discuss the health benefits of drinking water daily.
4. Describe the impact of eating disorders on oral health and overall health.
5. Describe the benefits of fluoride as a nutrient on oral health.

## **“Diet, Oral Health and Wellness”**

**SOL(s) 6.2 a; 7.2 a; 7.5 a; 8.1 g; 8.3 a; 9.1 a & d; 9.2 c;  
10.1 a; 10.4 a**

**Lesson Plan:** Identify positive dietary and lifestyle habits to improve oral health and maintain a healthy weight.

### **Standard of Learning:**

**6.2** The student will use knowledge of the body structure and function to make sound decisions related to personal health.

Key concepts include:

- a)** relationships of dietary guidelines to eating habits

**7.2** The student will describe and exhibit behaviors associated with a physically active and healthy lifestyle.

Key concepts include:

- a)** the effects of dietary habits on daily performance

**7.5** The student will work cooperatively with others to support and promote healthy schools, families, and communities.

Key concepts include:

- a)** implementation of appropriate health practices and behaviors

**8.1** The students will analyze and evaluate the relationship between health-risk behaviors and the onset of health problems that can impact health and well-being during the adolescent years.

Key concepts include:

- g)** the results of a sedentary lifestyle

**8.3** The student will make choices that demonstrate an understanding of the relationship among dietary habits and emotional and physical health.

Key concepts include:

- a)** causes and effects of compulsive behaviors such as eating disorders

**9.1** The students will apply health knowledge and skills to the development and analysis of personal goals to achieve and maintain long-term health and well-being.

Key concepts include:

- a) the use of current research and scientific study to interpret dietary principles
- d) maintenance of health habits that promote personal wellness

9.2 The student will analyze and evaluate the relationship among healthy behaviors, disease prevention and control, and comprehensive wellness.

Key concepts include:

- c) recognition of the value of proper nutrition, rest and regular activity

10.1 The student will demonstrate an understanding of health concepts, behaviors and skills that reduce health risks and enhance the health and well-being of self and others.

Key concepts include:

- a) the impact of poor dietary choices

10.4 The student will synthesize and evaluate available health information, products, and services for the value and potential impact on his/her well-being throughout life

Key concepts include:

- a) marketing and advertising techniques to promote health

### **Discussion Information for Teacher:**

Adolescents have increased personal independence about health habits including dietary choices. Teens spend more time eating with friends and less time eating with their family. Healthy diets can help prevent dental diseases and contribute to overall well-being. Poor dietary habits developed during teenage years can impact personal wellness into adulthood.

Choosing the correct foods, beverages and snacks is a learned skill and is essential in reducing the risk for both dental decay and obesity. Teens are influenced by media and celebrity news and may try the latest fad diet, which could compromise overall health. The eating disorders, bulimia and anorexia nervosa, can impact oral health. Frequent vomiting (purging) may cause enamel erosion because of acid content. Starvation diets can rob the body of essential nutrients needed for optimal oral health and general health.

Diet, nutrition and oral health are closely related in that pain-free teeth are needed to chew nutritious foods. Carbohydrates are nutrients that supply energy for the body keeping the mind and muscles working everyday. Carbohydrates combined with bacteria left on the teeth lead to dental decay. Sugars in foods and beverages are used by bacterial plaque to create acid that dissolves tooth enamel. All carbohydrates have the potential to demineralize enamel. Factors to consider about between meal snacks are the simple sugar content, the frequency it is eaten, the texture of the food and the nutritional content.

Complex carbohydrates found in fruits, vegetables and whole grains should be eaten frequently. Simple carbohydrates found in sugar, honey and fruit juices need to be eaten in limited amounts. Fresh fruits and vegetables do not have a sticky texture that will adhere to the teeth. Whole fresh foods contain fiber, vitamins and minerals needed for healthy bodies. Snacking with nutritious low-fat choices will contribute to overall health. As with any food or beverage eaten, appropriate portion sizes of foods need to be followed.

Adolescents often choose flavored drinks or soda pop when thirsty. These sweetened beverages usually do not contain essential nutrients but do increase calorie intake. By age fourteen many adolescents are consuming three or more 8-ounce servings of sweetened soft drinks daily. Most regular 12-ounce sodas contain 10-12 teaspoons of added sugar.

Teens should be encouraged to drink water when thirsty. Water is not only calorie-free but provides additional fluoride if the community has fluoridated water. Most bottled water does not contain enough fluoride to prevent tooth decay. Too many calorie-containing beverages (milk and fruit juice) between meals may contribute excess calories. Other important factors for reducing the risk for tooth decay include daily brushing, flossing and using fluoride toothpaste.

### Leading Questions:

1. How many soft drinks do you have every week?
2. Do you think sport drinks or fruit punches can cause tooth decay?

3. What do you like to snack on between meals or late at night?
4. How many glasses of water do you drink per day?
5. How many of you have followed a new diet recently?
6. Have you ever known someone dealing with an eating disorder?
7. Does bottled water contain fluoride?

**Possible Activities to Assess Students' Knowledge/Skills:**

1. Keep a diet diary for several days and bring in for class discussion.
2. Try to monitor/increase daily water intake by keeping a record.
3. Agree to bring in all empty soda cans and see how many the class drinks on an average.
4. Read nutrition labels and calculate the amount of sugar in favorite foods and beverages.
5. Have the students write an essay about the benefits of fluoride in preventing tooth decay and describe some sources of fluoride.
6. Have the students write an essay about a healthy diet that would maintain a healthy body weight and also promote good oral health.

**Estimated Time for Presentation:**

A minimum of 30 minutes to maximum of 45 minutes is needed depending on the number of activities included.

**Resources:**

-Power point available from the Virginia Department of Health, Division of Dental Health website at: [www.vahealth.org/teeth](http://www.vahealth.org/teeth)

-Nutrition and Oral Health Brochures from the Virginia Department of Health, Division of Dental Health - (look under section 2 of the educational materials order form)

-Food models, posters and pamphlets form National Dairy Council

-Visit <http://www.mypyramid.gov>

**PRE-TEST - "Diet, Oral Health and Wellness"**

**LOCATION:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

1. What is an important consideration for choosing a healthy snack for your teeth?
  - a) Nutritional content
  - b) Food texture
  - c) Frequency eaten
  - d) Simple sugar content
  - e) All of the above
  
2. Most 12 ounce sodas contain:
  - a) 2 teaspoons of added sugar
  - b) 4 teaspoons of added sugar
  - c) 8 teaspoons of added sugar
  - d) 10 teaspoons of added sugar
  
3. When you are physically active and thirsty the best beverage to choose for overall health and dental health is:
  - a) Sports drink
  - b) Water
  - c) Fruit punch
  - d) Orange juice
  
4. Which factor may contribute to poor oral health?
  - a) High sugar diet
  - b) Using fluoride toothpaste
  - c) Eating disorders
  - d) a and c
  - e) All of the above

Teachers-please send all completed Pre & Post Tests to:

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Phone: (804) 864-7777  
Fax: (804) 864-7783  
Email: joann.wells@vdh.virginia.gov

NUMBER\_\_\_\_\_ (VDH Staff only)

**POST-TEST - "Diet, Oral Health and Wellness"**

**LOCATION:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

1. What is an important consideration for choosing a healthy snack for your teeth?
  - a) Nutritional content
  - b) Food texture
  - c) Frequency eaten
  - d) Simple sugar content
  - e) All of the above
  
2. Most 12 ounce sodas contain:
  - a) 2 teaspoons of added sugar
  - b) 4 teaspoons of added sugar
  - c) 8 teaspoons of added sugar
  - d) 10 teaspoons of added sugar
  
3. When you are physically active and thirsty the best beverage to choose for overall health and dental health is:
  - a) Sports drink
  - b) Water
  - c) Fruit punch
  - d) Orange juice
  
4. Which factor may contribute to poor oral health?
  - a) High sugar diet
  - b) Using fluoride toothpaste
  - c) Eating disorders
  - d) a and c
  - e) All of the above

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NUMBER\_\_\_\_\_ (VDH Staff only)



# **“Oral Health and Tobacco Use”**

# **“Oral Health and Tobacco Use”**

## **Unit 1-**

### **Tobacco Use and Health Effects**

## **“Oral Health and Tobacco Use”**

### **Unit 1-Tobacco Use and Health Effects**

**SOL(s) 6.1 d, 6.2 b, c, & d; 6.6 b; 7.2 c; 7.3 a; 7.5 a; 8.1 c; 8.4 b; 8.5 b; 9.1 c & d; 10.1 c; 10.2 g**

The goal of this section is to educate the student about tobacco products and the potential health consequences associated with tobacco use.

Upon completion of this section the learner will be able to:

1. Discuss the different types of tobacco products and the carcinogenic ingredients they contain.
2. Describe the relationship of tobacco use to overall health, including oral health.
3. Describe the short- and long- term health issues related to tobacco use.
4. Interpret and evaluate how tobacco product information is targeted to impact adolescents.
5. List suggestions to deal with peer pressure and tobacco use.
6. Demonstrate how to do an oral cancer self-exam.

**“Oral Health and Tobacco Use”**  
**Unit 1-Tobacco Use and Health Effects**  
**SOLs 6.2b, c, d; 8.1 c; 10.1 c**

**Lesson Plan:** Identify the different forms of tobacco, their cariogenic potential and the relationship between them.

**Standard of Learning:**

**6.2** The student will demonstrate knowledge of the relationship between tobacco and how it affects the health of the body, including oral health.

Key concepts include:

- b) the interconnection of the body systems
- c) how tobacco-related disease affects body function
- d) the relationship between drugs, alcohol, tobacco and inhalants and how they affect the functioning of the body

**8.1** The student will demonstrate knowledge of the short and long term health issues related to the use of tobacco and identify its forms and carcinogenic ingredients.

Key concepts include:

- c) short and long-term health issues related to alcohol abuse and tobacco abuse

**10.1** The student will demonstrate an understanding of health concepts, behaviors and skills that reduce health risks and enhance the health and well-being of self and others throughout life.

Key concepts include:

- c) the effects of tobacco, alcohol, inhalants and other types of drugs

**Discussion Information for Teacher:**

Tobacco forms include cigarettes, cigars, chewing tobacco, and snuff. Nicotine sources also include nicotine gum, lozenges and the nicotine patch. It is important to educate school-aged children on the negative effects of both long-term and short-term affects of tobacco, alcohol and drug use.

Cigarette smoke contains over 4,800 harmful and toxic chemicals. It is known that 69 of these chemicals cause cancer.

Short-term effects include yellowed teeth; bad breath; loss of oxygen to the mouth tissues; and loss of smell and taste.

Long-term effects include addiction, increased occurrence of illnesses, difficulty breathing, lung diseases including cancer, coughing, loss of teeth, and increase of aged appearance, yellowed and brown teeth.

Many diseases such as heart disease, stroke and lung cancer are associated with tobacco use throughout the body. Children who live in smoke-filled homes exhibit a wide range of effects including asthma and more colds.

### **Leading Questions:**

1. How many different types of tobacco products are there?
2. Do you know that tobacco products have both immediate and long-term effects on the body?
3. What are the effects of tobacco products on our mouth?
4. Do you know how many toxic and harmful chemicals are in one cigarette?
5. Did you know that you find some of these toxic and poisonous chemicals in products that probably have in your home?
6. Do tobacco products affect only our lungs?

### **Possible Activities to Assess Students' Knowledge:**

1. Have each student write a different body organ or body system on a piece of paper and share the effects of tobacco products on that organ or organ system with the class.
2. Have students discuss what effects they have noticed associated with smoking in either a family member or someone they know (appearance, health, psychological effects).

3. Take an anonymous, written survey in the classroom. Ask students to write the answer to these questions on a small piece of paper, fold it up and place it in a container. 1) Have you tried any tobacco products? (Cigarettes, snuff, chew, cigar). 2) Do you have any friends that use tobacco products? Tally up the numbers post-class and discuss the results the following day. Ask for student input and responses. Were you or they surprised at the results? How do they feel about the results?
4. A variety of household items contain toxic and poisonous chemicals noted in the media presentation are also found in tobacco products. Have students match the chemicals found in tobacco products with the household item that contains the chemical.
5. Have a small group of students list short-term and long-term health problems associated with tobacco and then present their information to the class.

**Estimated Time for Presentation:**

30-45 minutes depending on the number of activities incorporated.

**Resources:**

U.S. Department of Education (2005). Tobacco Information and Prevention Source. <http://www.cdc.gov/tobacco/pubs1.htm#posters>.

Centers for Disease Control and Prevention. Guidelines for school health programs to prevent tobacco use and addiction. MMWR 1994; 43(No. RR-2).

Center for Disease Control (2004). National Center for Chronic Disease Prevention and Health Promotion. Tobacco Information and Prevention Source (TIPS). Available at [www.cdc.gov](http://www.cdc.gov).

National Institute of Drug Abuse (2005). Nicotine Addiction. <http://www.nida.nih.gov/researchreports/nicotine/nicotine3.html>

American Lung Association (2005). Smoking 101 Fact Sheet. Available at <http://www.lungusa.org>

**PRE-TEST - "Tobacco Use and Health Effects"**

**LOCATION:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

1. Using tobacco products can:
  - a. Cause cancer
  - b. Lead to heart disease
  - c. Cause more colds and illness
  - d. Cause breathing problems
  - e. All of these
  
2. Nicotine does what to the body?
  - a. Causes faster breathing and the heart to beat faster
  - b. Causes the heart to beat slower
  - c. Only a and e
  - d. Makes one sleepy and tired
  - e. Can cause addiction
  
3. When one area of our body is unhealthy:
  - a. It is okay because the rest of our body is okay
  - b. Our whole body is not affected
  - c. The rest of our body will ignore it
  - d. It can cause our whole body to be unhealthy
  - e. We should ignore the problem.
  
4. Smoking causes all of these except:
  - a. Yellow, stained teeth
  - b. Bad breath
  - c. A healthier body
  - d. Greater risk of getting cancer
  - e. Breathing problems
  
5. Nicotine can be found in these products:
  - a. Snuff
  - b. Cigarettes
  - c. Cigars
  - d. Gum
  - e. All of the above

Teachers-please send all completed Pre & Post Tests to:

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NUMBER \_\_\_\_\_ (VDH Staff only)

**POST-TEST - "Tobacco Use and Health Effects"**

**LOCATION:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

1. Using tobacco products can:
  - a. Cause cancer
  - b. Lead to heart disease
  - c. Cause more colds and illness
  - d. Cause breathing problems
  - e. All of these
  
2. Nicotine does what to the body?
  - a. Causes faster breathing and the heart to beat faster
  - b. Causes the heart to beat slower
  - c. Only a and e
  - d. Makes one sleepy and tired
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  - a. It is okay because the rest of our body is okay
  - b. Our whole body is not affected
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  - d. It can cause our whole body to be unhealthy
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5. Nicotine can be found in these products:
  - a. Snuff
  - b. Cigarettes
  - c. Cigars
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  - e. All of the above

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# **“Oral Health and Tobacco Use”**

## **Unit 2-**

### **Marketing/Peer Pressure, Promoting Healthy Habits and Behaviors**

## **“Oral Health and Tobacco Use”**

**Unit 2-Marketing/Peer Pressure, Promoting Healthy Habits and Behaviors**  
**SOLs 6.1 d, 6.6 b; 7.2 c; 7.3 a; 7.5 a; 8.4 b; 8.5 b; 9.1 c, d; 10.2. g**

**Lesson Plan:** Identify and evaluate how tobacco products are marketed to reach the adolescent population and discuss strategies to deal with tobacco-related peer pressure. Discuss and implement healthy habits and behaviors that promote wellness including an oral cancer self-exam.

### **Standard of Learning:**

- 6.1** The student will apply critical thinking skills and personal management strategies to address issues and concerns related to personal health and well being.  
Key concepts include:  
d) refusal strategies related to alcohol, tobacco, and other drugs
- 6.6** The student will access and analyze information for the purpose of improving personal and family health.  
Key concepts include:  
b) recognition of the persuasive tactics used by various types of media
- 7.2** The student will describe and exhibit the behaviors associated with a physically active and healthy lifestyle.  
Key concepts include:  
c) strategies for avoiding drugs, alcohol, tobacco, and inhalants
- 7.3** The student will investigate and analyze the various factors that guide an individual's decisions about health and well-being.  
Key concepts include:  
a) the types of advertising techniques used to influence adolescents' decisions
- 7.5** The student will work cooperatively with others to support and promote healthy schools, families, and communities.  
Key concept include:  
a) implementation of appropriate health practices and behaviors

**8.4** The student will interpret and evaluate how health information, products, services, and agencies are targeted to impact adolescents.

Key concepts include:

b) the influence of multiple media resources on personal choices

**8.5** The student will investigate and evaluate ways in which peers, families, and other community groups can work together to build a safe and healthy community.

Key concepts include:

b) the health risks associated with yielding to peer pressure

**9.1** The student will apply health knowledge and skills to the development and analysis of personal goals to achieve and maintain long-term health and well-being.

Key concepts include:

c) application of personal standards regarding the use of alcohol, tobacco, and other controlled substances

d) maintenance of health habits that promote personal wellness

**10.2** The student will analyze, synthesize, and evaluate the protective factors related to achieving and maintaining a sound mind and healthy body throughout life.

Key concepts include:

g) family health habits and behaviors as they relate to health promotion

### **Discussion Information for Teacher:**

A national survey revealed that 18% of teenagers have tried one cigarette or more by their thirteenth birthday. Tobacco companies play a large role in advertising tobacco products to teenagers. Ads often show young and hip teenagers smoking, surrounded by friends.

Tobacco exposure in movies also influences teenagers to start the habit. Exposure to smoking in movies is associated with about half of the teenagers that start smoking per year. Movies are considered to be more influential to teenagers than advertisements.

Peer pressure is also a very large force on young smokers. Close to 66% of teenager's state that they received their first cigarette from a friend. Out of those teenagers that have friends who smoke, 43% also reported smoking. In contrast, 99% of teenagers whose friends did not smoke also did not smoke themselves.

Our overall health is affected by our habits and behaviors either positively or negatively. Positive habits and behaviors include following a healthy diet, getting the recommended amounts of sleep, and exercising regularly. Additionally, visiting our doctor and dentist regularly can help us to remain healthy.

Cancer is uncontrollable growth of mutated cells that enter and damage our surrounding cells and tissues. Oral cancer usually first shows up as a sore or growth that does not heal. It is important to catch oral cancer as early as possible as it can be life-threatening if not diagnosed and treated early. Seventy-five percent of the cancers located in the mouth, throat, nose, and voice box have been associated with the use of smokeless tobacco products.

An oral cancer self-exam should be performed about once a month and can help detect cancer in its early stages. If caught early, 90% can be treated; however, if not caught early, it can be deadly.

Check in order to ensure consistency and thoroughness. Look for unusual appearances of white, red or dark patches or sores that do not heal within two weeks. Feel for lumps, bumps or any areas that are painful. In the throat, cancer may make it difficult to swallow or speak.

Check:

- 1) Appearance of head and neck
- 2) Skin
- 3) Feel neck
- 4) Lips
- 5) Cheeks
- 6) Roof of mouth
- 7) Tongue

### **Leading Questions:**

1. Can you remember a recent movie that you saw that contained someone using tobacco products?
2. Have you seen advertisements in magazines/newspapers for tobacco products that had young kids in them?
3. Do you know anyone that has felt peer pressure to use tobacco products?
4. Why do you think that peer pressure exists?
5. What can be done in response to peer pressure?
6. Do you know what habits and behaviors are considered healthy?
7. Did you know that you could get cancer in your mouth?
8. At your last dental visit, did the dentist or dental hygienist look for cancer in your mouth?

### **Possible Activities to Assess Student's knowledge:**

1. Start a discussion on peer pressure and solicit the different ways to say "no" if offered tobacco product by friends, acquaintances and strangers (e.g., from a simple "no thanks" to stating "I would be grounded for a month if my parents smelled smoke on me").
2. Have the student collect a variety of tobacco advertisements from magazines they have access to. Ask them to show their ad to the class and discuss the ways that the advertisement influences their age group (e.g., smokers in the ad are young, dressed "cool," shown having fun with many friends. Also, celebrities are often used to market products). Tobacco ads available at <http://www.tobaccofreekids.org/adgallery/>.
3. Have students write a "hypothetical" story about a teenager in a peer pressure situation. Have them describe the circumstances and have them walk through the situation and form an ending to the story. Did

the teenager succumb to peer pressure or face it? They can also write about the teenager's life five years after the situation.

4. Have students get in small groups and demonstrate an oral cancer self-exam.
5. Have small groups of students get together to discuss and record 3 healthy behaviors that they can incorporate into their lifestyle as well as 3 unhealthy behaviors that they want to avoid.

**Estimated Time for Presentation:**

30-45 minutes depending on the number of activities incorporated.

**Resources:**

Campaign for Tobacco-Free Kids (2005). Available at <http://www.tobaccofreekids>. American Lung Association (2005). Smoking 101 Fact Sheet. Available at <http://www.lungusa.org>

National Institute of Dental and Craniofacial Research's (NIDCR). National Oral health Information Clearinghouse. Want Some Life Saving Advice; Ask Your Dental Hygienist about Oral Cancer. Available at [http://www/adha.org/downloads/oral\\_cancer.pdf](http://www/adha.org/downloads/oral_cancer.pdf)

Virginia Department of Health, Division of Dental Health, "How to do an Oral Cancer Exam" (look under section 2 of the educational materials order form).

**PRE-TEST-“MARKETING/PEER PRESSURE, PROMOTING HEALTHY HABITS AND BEHAVIORS”**

**LOCATION:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

1. Which tobacco product is healthier/safer than the others?
  - a) “Low tar” cigarettes
  - b) Chewing tobacco
  - c) Cigars
  - d) None of these products are healthy
  - e) Snuff
  
2. Tobacco advertising can be seen:
  - a) In movies
  - b) In magazines
  - c) On billboards
  - d) In newspapers
  - e) All of these
  
3. A healthy habit or behavior is anything that we do to help keep our bodies healthy?
  - a) True
  - b) False
  
4. An oral cancer self-exam is performed in the mirror and includes the:
  - a) Head and neck
  - b) Skin
  - c) Lips, cheeks, and tongue
  - d) Roof of the mouth
  - e) All of these
  
5. How can you effectively reduce your risk of oral cancer?
  - a) Oral cancer screening with regular dental visits
  - b) Regular brushing and flossing
  - c) Not using tobacco products
  - d) a and c
  - e) All of the above

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**POST-TEST-"MARKETING/PEER PRESSURE, PROMOTING HEALTHY HABITS AND BEHAVIORS"**

**LOCATION:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

1. Which tobacco product is healthier/safer than the others?
  - a) "Low tar" cigarettes
  - b) Chewing tobacco
  - c) Cigars
  - d) None of these products are healthy
  - e) Snuff
  
2. Tobacco advertising can be seen:
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# **“Sports and Injury Prevention”**

## **Unit 1-Preventing Injuries**

## **"Sports/Injury Prevention"**

### **SOL (s) 6.4 e; 6.5 c, d**

The goal of this section is to provide strategies to prevent injuries to the face and mouth during physical activities, and to provide strategies to respond to injuries at school and at home.

Upon completion of this section the learner will be able to:

1. Discuss the health benefits of wearing a mouthguard.
2. List the types of mouthguards available.
3. Discuss safety rules to follow at home and at school.
4. Describe the contents of a dental emergency kit.
5. Be familiar with how to handle a dental emergency.

**"Sports Injury/Prevention"**  
**Unit 2-Preventing Injuries**  
**SOLs 6.4 e & 6.5 c**

**Lesson Plan:**

Discuss safety rules to follow at home and at school and be familiar with how to handle a dental emergency

**Standard of Learning:**

**6.4** The student will analyze the consequences of personal choices on health and well-being.

Key concepts include:

e) strategies for preventing and responding to injuries

**6.5** The student will demonstrate injury prevention and management skills to promote personal and family health.

Key concepts include:

c) strategies to avoid accidents

**Discussion Information for Teachers:**

Injuries can happen at school and at home. It is important to learn about safety and preventive behaviors in both environments. For example, seat belts are mandated by law to prevent injuries in car accidents. At school you can avoid an accident by not pushing anyone at the water fountain or anywhere! A dental emergency, such as a toothache, can be prevented by regular dental visits and by good oral hygiene at home.

Common dental emergencies that can occur are:

- Bitten lip/tongue
- Broken/cracked tooth
- Broken jaw
- Knocked out tooth
- Toothache

An example of how to handle one dental emergency is: if a permanent tooth is knocked out, first find the tooth. Don't try to wash it off. Put the tooth in a cup of milk and get to a dentist as soon as possible.

Many of you may have a first aid kit at school or at home. For a dental emergency include the following items: cold compresses, waxed dental floss and plastic cups.

(For teachers, please see Virginia Department of Health, Division of Dental Health, "Are you in a tooth pickle?" "Dental Emergency" poster).

### **Leading Questions:**

1. Have you ever knocked out a tooth or bitten your lip? What did you do?
2. What do you do at home to prevent accidents or injuries? Do you have safety rules at home?
3. Do you have a first aid kit? Does it include waxed dental floss?

### **Possible Activities to Assess Students' Knowledge/Skills:**

1. Have student's list safety precautions that can be done at home or at school to prevent injuries to the mouth and teeth.
2. List contents of a first aid kit that they have at home.
3. Have students make a personal behavior contract of one new safety measure that they are willing to do at home or at school.

### **Estimated Time for Presentation:**

A minimum of 30 minutes to maximum of 45 minutes is needed depending on the number of activities included.

**Resources:**

-Power point available from the Virginia Department of Health, Division of Dental Health website at: [www.vahealth.org/teeth](http://www.vahealth.org/teeth)

-Mouthguard brochure and poster on "Whatever you Play, Protect your Teeth" from the Virginia Department of Health, Division of Dental Health (look under section 2 of the educational materials order form).

-"Are You in a Tooth Pickle?" "Dental Emergency poster"  
from the Virginia Department of Health, Division of Dental Health  
(look under section 2 of the educational materials order form).

# **“Sports and Injury Prevention”**

## **Unit 2-Mouthguards**

# **"Sports/Injury Prevention"**

## **Unit 2-Mouthguards**

### **(SOL 6.5 c, d)**

**Lesson Plan:** Discuss the health benefits wearing a mouthguard and list the types of mouthguards available.

**Standard of Learning:**

**6.5** The student will demonstrate injury prevention and management skills to promote personal and family health.

Key concepts include:

- c) strategies to avoid accidents
- d) the need for and use of protective gear

**Discussion Information for Teachers:**

This year, ten million dental injuries will occur, and four to five million teeth will be knocked out while playing sports. In nearly every sport, a blow to your face can injure your teeth, lips, cheeks and tongue. Even though mouthguards have commonly been used in contact sports, dentists now recommend wearing mouthguards for non-contact sports such as: inline skating, gymnastics or martial arts.

Mouthguards generally cover the upper teeth to minimize the risk of a blow to the face causing broken teeth. They also protect the soft tissues of the mouth. Even if you wear braces, the dentist can recommend a mouthguard to protect your teeth. Mouthguards should fit properly, feel comfortable and not restrict speech and breathing. A properly fitted mouthguard should be worn during sport practice sessions as well as during games.

There are three types of mouthguards:

1. Store bought
2. Boil and bite
3. Custom-made by the dentist

(These are discussed in the power point presentation)

### **Leading Questions:**

1. Who wears a mouthguard now? For what sport do you wear one?
2. What athletes on televised sports have you seen wearing a mouthguard?
3. If you have a mouthguard, did you get it from the dentist?
4. Can you wear a mouthguard if you have braces?
5. How many of you have had an injury to your face or teeth?

### **Possible Activities to Assess Students' Knowledge/Skills:**

1. Have students fill out the mouthguard survey.
2. Have Health/PE teachers/coaches monitor or track how many times students wear their mouthguards during practice or games.
3. Have students write an essay about "why is it important to wear a mouthguard?"
4. Work with the PTA and local dentists to provide access to custom fitted mouthguards.

### **Estimated Time for Presentation**

A minimum of 30 minutes to maximum of 45 minutes is needed depending on the number of activities included.



## **Resources**

-Power point available from the Virginia Department of Health, Division of Dental Health website at: [www.vahealth.org/teeth](http://www.vahealth.org/teeth)

-Mouthguard brochure and poster on "Whatever you Play, Protect your Teeth" for the Virginia Department of Health, Division of Dental Health from the Virginia Department of Health, Division of Dental Health (look under section 2 of the educational materials order form).

**PRE-TEST- "Sports/Injury Prevention"**

**LOCATION:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

1. Mouthguards are effective in protecting:
  - a) Teeth
  - b) Lips
  - c) Cheeks
  - d) Tongue
  - e) All of the Above
  
2. What type of mouthguard provides the best protection against injuries to the mouth?
  - a) Stock
  - b) Mouth formed
  - c) Custom-made
  - d) b and c
  - e) All types
  
3. Dentist currently recommend that mouthguards be worn for the following activities:
  - a) Contact sports (football, hockey, etc.)
  - b) Non-contact sports (inline skating, biking, gymnastics)
  - c) Contact and non-contact sports
  - d) Not necessary for any type of activity
  
4. What are some precautions for preventing injuries to the mouth and face?
  - a) Not pushing at the water fountain
  - b) Walking-not running on stairs
  - c) Wearing a seatbelt in a vehicle
  - d) b and c
  - e) All of the above
  
5. All of the following are included in a dental emergency kit except:
  - a) Cold compresses
  - b) Band aids
  - c) Waxed dental floss
  - d) Plastic cups

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NUMBER\_\_\_\_\_ (VDH Staff only)

**POST-TEST- "Sports/Injury Prevention"**

**LOCATION:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

1. Mouthguards are effective in protecting:
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  - b) Lips
  - c) Cheeks
  - d) Tongue
  - e) All of the Above
  
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## **Sports/Injury Prevention**

### **STRATEGIES FOR PREVENTING INJURIES TO THE MOUTH AND TEETH AT SCHOOL AND AT HOME**

1. WALK; don't run on stairs in buildings.
2. Always wear a seatbelt when riding in a vehicle.
3. No pushing in line at a water fountain.
4. Don't chew on sharp objects like pens or pencils.
5. No throwing baseballs or slinging other sports equipment intentionally at others.
6. Avoid fighting. Try to talk it out or just walk away.

### **STRATEGIES FOR RESPONDING TO INJURIES TO THE MOUTH AND TEETH**

1. Prepare a dental emergency kit containing the following:
  - Cotton swabs to clean an injury
  - Dental floss to remove a wedged item from between teeth
  - Candle wax to cover an orthodontic wire
  - Handkerchief/towel to immobilize a broken jaw
  - Ice pack to reduce swelling
  - Container to hold milk for a knocked out tooth
2. Virginia Department of Health, Division of Dental Health, "Are you in a in a tooth pickle?" (How to handle a dental emergency- poster).

## **Sport/Injury Prevention**

### **"WHATEVER YOU PLAY, PROTECT YOUR TEETH"**

Have you ever broken or knocked out a tooth? Don't wait until you have an accident. Protect your teeth and mouth from a preventable injury by wearing a mouthguard.

**What type of mouth guard is the best choice for you?**

- **Stock (ready-made)**

This type of mouthguard offers the least protection, is the least expensive and can be bought at a sporting goods store. It is not a good choice if you wear braces.

- **Mouth-formed ("Boil and Bite")**

This type of mouthguard is available in sporting goods stores, and is less expensive than a custom-made mouthguard. This soft preformed guard is shaped to your teeth and allowed to harden. It is difficult to fit around braces.

- **Custom-made**

This type of mouthguard is the most expensive but will provide the best protection and comfort for your teeth. Your dentist will take a mouth impression and fit this mouthguard specifically for you.

**Remember a mouthguard is an important piece of your athletic gear. Check its condition each year to make sure it hasn't worn out.**

**“Mouth Jewelry-It’s Not as Simple as You Think!”**

**"Mouth Jewelry- It's Not as Simple As You Think!"**  
**SOL(s) 7.1b; 8.1 a, b; 9.3 a**

The goal of this section is to provide knowledge to the student regarding the risk involved with oral piercing.

Upon completion of this section the learner will be able to:

1. List common health complications that can occur with oral fads.
2. List serious health complications that can occur with oral fads.
3. Describe reasons why an infection may occur with oral piercing.

## **"Mouth Jewelry- "It's Not as Simple as You Think" SOL 7.1 b, 8.1 a & b, 9.3 a**

**Lesson Plan:** List the common and serious health complications that can occur with mouth jewelry.

### **Standard of Learning:**

**7.1** The student will use knowledge of health concepts to make decisions related to personal safety and wellness.

Key concepts include:

- b)** recognition of harmful and risky behaviors

**8.1** The student will analyze and evaluate the relationship between health-risk behaviors and the onset of health problems that can impact health and well-being during the adolescent years.

Key concepts include:

- a)** the pathogenic, genetic, age, cultural, environmental, and behavioral factors that influence the degree of risk for contracting specific diseases
- b)** the roles of preventive health measures, immunizations, and treatment in disease prevention.

**9.3** The student will analyze, synthesize, and evaluate the relationship between positive health behaviors and the prevention of injury and premature death.

Key concepts include:

- a)** risky behaviors that may result in permanent disability for self or others.

### **Discussion Information for Teacher:**

Teens should think twice before adding jewelry to their mouth. Mouth Jewelry is becoming a more prevalent form of body art and self-expression in today's society. Adolescents use mouth jewelry a fashion statement, and as a sign of their independence.



The widespread use of "grillz" is very popular among teens. In dental terminology, the grill spans on the six upper teeth, from cuspid to cuspid. Customized dental jewelry known as "grillz" are made from a mold of the wearer's mouth. They are cast in precious metal and fit over the teeth like a mouthguard. The American Dental Association warns that grillz made of non-precious metals such as iron and nickel can cause allergic reactions. In addition, grillz can cause problems with tooth decay and poor oral hygiene since they are kept in the mouth for long periods of time. Food and bacterial plaque left on the teeth can create acids and lead to tooth decay.

Oral piercing is becoming a more prevalent form of body art and self-expression in today's society. Adolescents use oral piercing as a fashion statement, and as a sign of their independence. Oral piercing involves the tongue (the most common site), lips, cheeks, uvula, or a combination of sites. Oral piercing has been implicated in a number of adverse oral and systemic conditions. A less common form of body modification is tongue splitting. It involves a bisected tongue creating a forked appearance.

Common complications following oral piercing and tongue splitting include pain, swelling, infection, and increased salivary flow. Infection is more likely to occur after oral piercing because the mouth contains millions of bacteria. Other problems include gum recession, broken teeth and fillings, interference with speech and eating, scar tissue formation, and the development of metal allergies. There is always a possibility that jewelry can come loose and be aspirated or swallowed.

The more serious health complications of oral piercing can include bacterial endocarditis. When you puncture any part of the oral cavity, the bacteria can enter the bloodstream and reach the heart. Additionally, another serious complication that can occur is hemorrhaging, or a brain abscess. If non-sterile instruments are used for piercing, there is a risk of transmission of communicable diseases. Side effects of tongue splitting can include serious infections with damage to speech, taste, and nerves or to blood vessels in the tongue.

### **Leading Questions:**

1. Are there any dangers in piercing your tongue?
2. Do you know anyone who has had his or her tongue or lip pierced?
3. Is there a safer way of making a fashion statement other than oral piercing?
4. How could an oral piercing affect your oral health?
5. Have you ever been pressured to get a body piercing?

### **Possible Activities to Assess Students' Knowledge/Skills:**

1. Have the student collect pictures from magazines, or other media and create a poster about the health risks involved with oral piercing. Ask them to show their poster to the class and discuss the ways that oral piercing influences their age group.
2. Have students write an essay about "what are the health complications that could happen after oral piercing?"
3. Have the students write a "hypothetical" story about a teenager being pressured to get his tongue pierced. Have them describe the circumstances and have them walk through the situation and form an ending to the story. How did the teenager handle the peer pressure? They can also write about "how choices that we make today can affect us tomorrow."

### **Estimated Time for Presentation:**

A minimum of 30 minutes to maximum of 45 minutes is needed depending on the number of activities included.

**Resources:**

-Power point available from the Virginia Department of Health, Division of Dental Health website at: [www.vahealth.org/teeth](http://www.vahealth.org/teeth)

-Student brochure on "Oral Piercing" by the Virginia Department of Health, Division of Dental Health (look under section 2 of the educational materials order form).

**PRE-TEST "MOUTH JEWELRY-IT'S NOT AS SIMPLE AS YOU THINK"**

**LOCATION:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

1. All of the following are common complications of oral (tongue, lips, cheek) piercing **except:**
  - a. Interference with speech
  - b. Chipped teeth
  - c. Lung damage
  - d. Swelling of the tongue
  - e. Allergic reaction to the metals
  
2. What is/are possible serious complication(s) of oral piercing?
  - a. Heart complications
  - b. Nerve damage to the tongue
  - c. Brain abscess
  - d. a and b
  - e. All of the above
  
3. The reason(s) you may get an infection from an oral piercing is/are:
  - a. Your mouth contains millions of bacteria
  - b. Instruments used to pierce may not be clean
  - c. Bacteria may enter your blood stream
  - d. a and c
  - e. All of the above
  
4. You have an oral piercing, what precaution should you take to avoid infection?
  - a. Remove jewelry
  - b. Clean the piercing site
  - c. Maintain good oral hygiene habits
  - d. b and c
  - e. All of the above

Teachers-please send all completed Pre & Post Tests to:

JoAnn Wells, RDH

School Age Oral Health Education Coordinator

Virginia Department of Health

109 Governor Street, 9<sup>th</sup> Floor

Richmond, Virginia 23219

Phone: (804) 864-7777

Fax: (804) 864-7783

Email: joann.wells@vdh.virginia.gov

NUMBER\_\_\_\_\_ (VDH Staff only)

**POST-TEST “MOUTH JEWELRY-IT’S NOT AS SIMPLE AS YOU THINK”**

**LOCATION:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

1. All of the following are common complications of oral (tongue, lips, cheek) piercing **except**:
  - a. Interference with speech
  - b. Chipped teeth
  - c. Lung damage
  - d. Swelling of the tongue
  - e. Allergic reaction to the metals
  
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NUMBER\_\_\_\_\_(VDH Staff only)

# **“Careers in Dentistry”**

**"Careers in Dentistry"**  
**SOL(s) 7.4 c; 9.5 a, c; 10.4 e**

The goal of this section is to educate students regarding careers in the dental profession.

Upon completion of the section the learner will be able to:

1. List the roles of dental professional in the community.
2. Describe the specific functions of each dental professional.
3. Describe educational requirements for each of the dental professions.

## **"Careers in Dentistry"** **(SOL(s) 7.4 c, 9.5 a, c, 10.4 e)**

### **Lesson Plan:**

Identify the members of the dental health team and discuss their roles. Discuss how dental professionals improve the oral health of citizens and their communities.

### **Standard of Learning:**

**7.4** The student will describe how family and community priorities influence an individual's ability to reduce diseases and other health problems.

Key concepts include:

- c) the community's support of health services and partnerships

**9.5** The student will evaluate the benefits of collaboration in relation to community health and wellness initiatives.

Key concepts include:

- a) the impact of developing positive relationships among health professionals for promotion of healthy communities
- c) the development of school and community health programs

**10.4** The student will synthesize and evaluate available health information, products, and services for the value and potential impact on his/her well-being throughout life.

Key concepts include:

- e) employment opportunities in health-related careers and professions

### **Discussion Information for Teacher:**

The members of the Dental Health team include a licensed dentist, licensed dental hygienist, dental assistant (certification optional) and a dental laboratory technician (certification optional)



- The dentist examines and treats the patient for dental disease including gum disease and dental decay. Teeth are repaired/replaced with fillings, crowns, bridges, partials or dentures. Preventive oral health services can be performed by the dentist or delegated to a licensed dental hygienist.
- The dental hygienist provides patient treatment prescribed by the dentist. Dental Hygienist examines teeth and gums and treatment plan for periodontal therapy. The dental hygienist removes deposits and stains on teeth, and can apply preventive agents such as fluorides or dental sealants. The dental hygienist is an oral health educator providing professional oral hygiene instructions.
- The dental assistant works with the dentist at the dental chair to assist during dental procedures. The assistant may take patient x-rays, perform some laboratory procedures, give oral hygiene instructions, or help with office management.
- The dental laboratory technician is specially trained to make and repair dental crowns, bridges, dentures, and braces. The laboratory technician works with different materials including ceramics, metals, and acrylics. Dental laboratory technicians may work in commercial laboratories, dental schools, or private dental offices.

Members of the dental team may choose to work in different settings. Dental careers are available in private settings, public health clinics, military bases, hospital dental departments, and in schools. Dental professionals can improve the oral health of citizens through direct patient care, community preventive programs, and in oral health promotional campaigns.

Dental health is an important part of total health. The dental team treats the whole person, not just the teeth and gums. Dental professional organizations are available. For more information on these careers, see the website section.

### **Leading Questions:**

1. What are the roles of each professional on the dental health team?
2. Which of these dental team members work at your dental office?
3. Have you observed dental professionals in a role outside the dental office?

### **Possible Activities to Assess Students' Knowledge/Skills:**

1. Invite a dental professional to the classroom.
2. Organize a wellness career event at the school.
3. Have a student interview a dental professional about their career choice.
4. Plan a field trip to a dental auxiliary education program or to a dental school.

### **Estimated Time for Presentation:**

A minimum of 30 minutes to maximum of 45 minutes is needed depending on the number of activities included.

### **Resources:**

- Power point available from the Virginia Department of Health, Division of Dental Health
- “Dental Careers in Virginia” handout by the Virginia Department of Health, Division of Dental Health
- The place to discover your career  
<http://www.knowhowvirginia.org/>
- American Dental Association (ADA) Career Resources  
<http://www.ada.org/public/careers/index.asp>

- Virginia Commonwealth School of Dentistry  
<http://www.dentistry.vcu.edu/>
- Virginia Dental Hygienist Association  
<http://www.rdh-vdha.org/vdha.asp>
- J. Sargeant Reynolds Community College, Dental Assisting Program-  
[http://www.jsr.vccs.edu/jsr\\_hmt/Nursing%20Information/packets/DNA/DNA.pdf](http://www.jsr.vccs.edu/jsr_hmt/Nursing%20Information/packets/DNA/DNA.pdf)
- Tidewater Tech, Dental Assisting Program-  
<http://www.tidewatertech.edu/career/dental-assistant-career.asp>
- J. Sargeant Reynolds Community College, Dental Laboratory Program-  
[http://www.jsr.vccs.edu/jsr\\_hmt/Nursing%20Information/packets/DNL/Dental\\_Laboratory\\_T.pdf](http://www.jsr.vccs.edu/jsr_hmt/Nursing%20Information/packets/DNL/Dental_Laboratory_T.pdf)

**PRE-TEST - "CAREERS IN DENTISTRY"**

**LOCATION:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

1. The licensed members of the dental team are:
  - a. Dentist
  - b. Dental Hygienist
  - c. Dental Laboratory Technician
  - d. a and b
  
2. Members of the dental team may work in which of the following settings:
  - a. Private settings
  - b. Public Health clinics
  - c. Military Bases
  - d. Hospital Dental Programs
  - e. Schools
  - f. All of the above
  
3. The \_\_\_\_\_ examines and treats the patient for dental disease including gum disease and dental decay?
  - a. Dentist
  - b. Dental Hygienist
  - c. Dental Assistant
  - d. Dental Laboratory Technician
  
4. Which dental team member examines the teeth and gums and provides treatment plans for periodontal therapy?
  - a. Dental Assistant
  - b. Dental Hygienist
  - c. Dental Laboratory Technician
  - d. None of the above
  
5. This dental team member is specifically trained to make and repair dental crowns, bridges, dentures, and braces?
  - a. Dental Hygienist
  - b. Dental Assistant
  - c. Dental Laboratory Technician
  - d. None of the above

Teachers—please send all completed PRE & POST Test to:

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School Age Oral Health Education Coordinator

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Number \_\_\_\_\_ (VDH Staff only)

**POST-TEST -"CAREERS IN DENTISTRY"**

**LOCATION:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

1. The licensed members of the dental team are:
  - a. Dentist
  - b. Dental Hygienist
  - c. Dental Laboratory Technician
  - d. a and b
  
2. Members of the dental team may work in which of the following settings:
  - a. Private settings
  - b. Public Health clinics
  - c. Military Bases
  - d. Hospital Dental Programs
  - e. Schools
  - f. All of the above
  
3. The \_\_\_\_\_ examines and treats the patient for dental disease including gum disease and dental decay?
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  - b. Dental Hygienist
  - c. Dental Assistant
  - d. Dental Laboratory Technician
  
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  - a. Dental Hygienist
  - b. Dental Assistant
  - c. Dental Laboratory Technician
  - d. None of the above

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## DENTAL CAREERS IN VIRGINIA

Careers	Functions	Academic Requirements	Educational Institutions In Virginia
<b>Dentist: Private Practice</b>	The private practice dentist is a licensed professional who specializes for the teeth, gums and other tissues in the mouth. The dentist examines patients and makes diagnoses, restores teeth and treats gum disease.	Minimum of 90 semester hrs. of accredited college	Virginia Commonwealth University (VCU) - School of Dentistry Richmond, Virginia
<b>Dentist: Public Health</b>	The public health dentist examines the dental needs of people in the community. A clinical public health dentist can provide the services stated above. A public health dentists in a non-clinical position plans community education programs to prevent dental disease.	Minimum of 90 semester hrs. of accredited college	VCU-School of Dentistry Richmond, Virginia
<b>Dental Hygienist: Private Practice</b>	The dental hygienist is a licensed professional that takes patient histories, examines teeth/gums, takes x-rays, removes plaque/calculus, and applies sealants. Hygienists also provide health education about oral hygiene, fluoride and nutrition to individual patients.	High School Graduate	Old Dominion University, VCU-School of Dentistry - Division of Dental Hygiene, Wytheville Community College (C.C.); Northern Virginia C.C. (main campus) and its Distance Education Program (Germana C.C.); and Virginia Western C.C. (main campus) and its Distance Education Programs (Lord Fairfax C.C., Danville, C.C.) Programs (Lord Fairfax C.C., Danville C.C.)
<b>Dental Hygienist: Public Health</b>	The public health dental hygienist plans and implements oral health education and preventive programs for communities. A public health dental hygienist may provide clinical care.	High School Graduate	See list of educational institutions listed for Dental Hygienists in Private Practice
<b>Dental Assistant: Private Practice</b>	The dental assistant assists the dentists at chairside, take and develop x-rays, sterilize instruments, and some laboratory procedures. Dental assistants may be certified through accredited dental assistant programs or be trained on the job.	High School Graduate	J. Sargeant Reynolds Community College, Wytheville Community College
<b>Dental Assistant: Public Health</b>	Along with the above, the public health dental assistant provides health education/promotion in the community.	High School Graduate	J. Sargeant Reynolds Community College, Wytheville Community College
<b>Dental Laboratory Technician</b>	Dental laboratory technicians make and repair dentures, dental crowns, braces and other dental appliances. Laboratory technicians are certified by the National Association of Dental Laboratories.	High School Graduate	J. Sargeant Reynolds Community College

## **“Activities for Dental Health Month/Glossary”**

## **February Dental Health Month Activities**

- Plan a February Dental Health Month activity
- Include oral health in a PTA/PTO wellness event
- Integrate "Give Teens Something to Smile About" Oral Health Curriculum-Grades 6-10 (Division of Dental Health)
- Involve Health/PE/Science teachers in oral health education programs
- Reinforce healthy food/beverage choices in school vending machines
- Plan a career day to include dental professionals
- Display oral health posters/bulletin boards
- Encourage local dentists, dental hygienists and dental assistants to volunteer for classroom presentations



## Glossary

<b>Acid</b>	A compound produced by the action of bacteria on carbohydrates having the ability to cause tooth decay.
<b>Bacterial Endocarditis</b>	An infection of the heart's inner lining (Endocardium) or the heart valves.
<b>Bacterial Plaque</b>	Microorganisms found in the mouth, commonly referred to as germs, which can cause dental decay and gum disease.
<b>Braces</b>	Braces are a dental device consisting of a wire arrangement worn on the teeth to force irregularly aligned teeth into their proper places.
<b>Brain Encephalitis</b>	Inflammation or swelling of the brain.
<b>Carbohydrates</b>	A classification of foods represented by sugars, starches, and fiber that supply energy.
<b>Cavity</b>	Hole in a tooth caused by decay.
<b>Chew (tobacco)</b>	Loose-leaf tobacco placed between the cheek and teeth.
<b>Communicable</b>	Capable of being transmitted from one person to another.
<b>Decay</b>	A disease process of the tooth, which destroys the structure of the tooth and produces a cavity.
<b>Dental Assistant</b>	A person who is trained to help the dentist at the chair.
<b>Dentist</b>	A licensed professional who examines and treats dental diseases including gum disease and dental

decay. Teeth are repaired/replaced with fillings, crowns, bridges, partials or dentures.

**Dental Hygienist**

A licensed professional who provides patient treatment prescribed by the dentist. The dental hygienist removes deposits and stains on the teeth, applies preventive agents such as fluorides and sealants, and is an oral health educator providing professional oral hygiene instruction.

**Dental Floss**

Nylon or silk thread used to remove bacterial plaque from in between the teeth.

**Dental Health**

Absence of diseases of the teeth and their supporting structures.

**Dental Laboratory Technician**

A person trained and skilled to make and repair dental crowns, bridges, dentures, and braces. The laboratory technician works with different materials including ceramics, metals, and acrylics

**Digestion**

The process of breaking down food for absorption in the body.

**Enamel**

The hard, glossy, white covering of the crown of the tooth; enamel is the hardest substance in the body.

**Filling**

A material (usually gold, silver alloy, or plastic) inserted in a prepared cavity in a tooth.

**Fluoridation**

An adjustment of the fluoride content in the public water supply to prevent or reduce tooth decay.

**Fluoride**

A compound of fluorine and one or more elements; valuable in the reduction of tooth decay.

<b>Fluoride Treatment</b>	The application of fluoride to the surfaces of the teeth, maybe a liquid, gel or foam.
<b>Frenum</b>	A band of fibrous tissue attaching the inner surface of the upper and lower lip and the gums between the central incisors.
<b>Gingiva</b>	The gum tissue that surrounds the teeth.
<b>Gingivitis</b>	Inflammation of the gums, characterized by pain, redness, swelling and tendency to bleed.
<b>Grill</b>	A grill (pl. "grills," or "grillz," or "fronts" in slang) is a dental apparatus worn over the teeth.
<b>Gum Recession</b>	Exposure of the roots of the teeth; with recession the teeth may become sensitive to heat and cold. This may be a sign of periodontal disease.
<b>Malocclusion</b>	Irregularity of alignment of the teeth to the extent that the teeth fit together poorly when the mouth is closed.
<b>Mouthguard</b>	Used to prevent oral injuries. A molded piece of plastic that fits over the teeth.
<b>Mouth Wash</b>	Liquid used to rinse the mouth; helpful if it contains fluoride.
<b>Oral Hygiene</b>	Cleanliness or proper care of the mouth and teeth.
<b>Periodontal Disease</b>	Infection of the supporting structure of the teeth, which if left untreated eventually destroys the tissues that hold the teeth in their sockets causing loss of teeth.
<b>Permanent Teeth</b>	The second set of teeth or those that follow the primary teeth.

<b>Saliva</b>	The mixed secretions of the glands of the mouth.
<b>Sealant</b>	A plastic coating applied to biting surfaces of teeth; especially back teeth, to prevent dental caries.
<b>Smokeless Tobacco</b>	Chewing tobacco or snuff that is held in the mouth so that nicotine is absorbed into the bloodstream through the oral mucosa.
<b>Snuff</b>	Fine tobacco that is placed between the lower lip and the teeth.
<b>Starch</b>	A polysaccharide (a complex carbohydrate) from various plants foods.
<b>Systemic Fluoride</b>	Fluoride that is swallowed enters the bloodstream and is deposited in developing teeth. (e.g., fluoridated water)
<b>Topical Fluoride</b>	Fluoride that is applied to the surfaces of the teeth by the dentist, dental hygienist, or the patient, and is not intended to be swallowed. (e.g., fluoride toothpaste, rinses)

## **Section Power Points on a CD Rom**

## Taking Care of Your Teeth

Dentists say that the most important part of tooth care happens at home. Brushing and flossing properly, along with regular dental checkups, can help prevent tooth decay and gum disease.

If you're like most people, you don't exactly look forward to facing a dentist's drill. So wouldn't it be better to prevent cavities before they begin?

### Giving Plaque the Brush-Off

To prevent cavities, you need to remove **plaque**, the transparent layer of bacteria that coats the teeth. The best way to do this is by brushing your teeth twice a day and flossing at least once a day. Brushing also stimulates the gums, which helps to keep them healthy and prevent gum disease. Brushing and flossing are the most important things that you can do to keep your teeth and gums healthy.

Toothpastes contain abrasives, detergents, and foaming agents. Fluoride, the most common active ingredient in toothpaste, is what prevents cavities. So you should always be sure your toothpaste contains fluoride.


About 1 person in 10 has a tendency to accumulate **tartar** quickly. Tartar is plaque in a hardened form that is more damaging and difficult to remove. Using anti-tartar toothpastes and mouthwashes, as well as spending extra time brushing the teeth near the salivary glands (the inside of the lower front teeth and the outside of the upper back teeth) may slow the development of new tartar.

If you have teeth that are sensitive to heat, cold, and pressure, you may want to try a special toothpaste for sensitive teeth. But you'll still need to talk to your dentist about your sensitivity because it may indicate a more serious problem, such as a cavity or nerve inflammation (irritation).

### Tips on Proper Brushing

Dentists say that the minimum time you should spend brushing your teeth is 2 minutes twice a day. Here are some tips on how to brush properly:

- Hold your brush at a 45-degree angle against your gumline. Gently brush from where the tooth and gum meet to the chewing surface in short (about half-a-tooth-wide) strokes. Brushing too hard can cause receding gums, tooth sensitivity, and, over time, loose teeth.
- Use the same method to brush all outside and inside surfaces of your teeth.
- To clean the chewing surfaces of your teeth, use short sweeping strokes, tipping the bristles into the pits and crevices.
- To clean the inside surfaces of your top and bottom front teeth and gums, hold the brush almost vertical. With back and forth motions, bring the front part of the brush over the teeth and gums.
- Using a forward-sweeping motion, gently brush your tongue and the roof of your mouth to remove the decay-causing bacteria that exist in these places.
- Use an egg timer or play a favorite song while brushing your teeth to



#### Drink Away Your Cavities?

Fluoride helps keep teeth strong, especially in kids and teens. Many towns add fluoride to drinking water, but not all do. If you live in an area where there's not enough fluoride in the water, your dentist will probably recommend that you take a supplement. Using a mouthwash that contains fluoride can help somewhat.



#### Brushing Up

The toothbrush was invented by the Chinese in 1000 AD. We now have lots of choices in toothbrushes. Your dentist can tell you which brush is the right size and shape for you. Most dentists recommend a soft-bristled brush to minimize damage to teeth and gums.

get used to brushing for a full 2 to 3 minutes. Some electronic toothbrushes have timers that let you know when 2 minutes are up.

## Facts on Flossing

Brushing is important but it won't remove the plaque and particles of food between your teeth, under the gumline, or under braces. You'll need to floss these spaces at least once a day.

The type of floss you choose depends on how much space you have between your teeth. Dentists usually recommend unwaxed floss because it's thinner and easier to slide through small spaces. However, studies have shown that there is no major difference in the effectiveness based on the type of floss used.

With any floss, you should be careful to avoid injuring your gums. Follow these instructions:

- Carefully insert the floss between two teeth, using a back and forth motion. Gently bring the floss to the gumline, but don't force it under the gums. Curve the floss around the edge of your tooth in the shape of the letter "C" and slide it up and down the side of each tooth.
- Repeat this process between all your teeth, and remember to floss the back sides of your back teeth.

## Tooth-Whitening Products

Some toothpastes claim to whiten teeth. There's nothing wrong with using whitening toothpastes as long as they also contain fluoride and ingredients that fight plaque and tartar. But these toothpastes alone don't contain much in the way of whitening ingredients and probably won't noticeably change the color of your teeth.

It's easy to be lured by ads telling people they need gleaming white teeth. But these ads are really targeted to older people. The truth is that most teens don't need tooth whitening because teeth usually yellow as a person gets older.

If you think your teeth aren't white enough, though, talk to your dentist before you try any over-the-counter whitening products. Your dentist may be able to offer you professional treatment, which will be suited to your unique needs and will work better than over-the-counter products.

Be careful when buying over-the-counter whitening products. Some bleaching agents may damage your gums and mouth. So always follow the instructions on any whitening product you use.

## The Nutrition Connection

Eating sugar, as you probably already know, is a major cause of tooth decay. But it's not just how much sugar you eat — when and how you eat it can be just as important to keeping teeth healthy.

When you eat sugary foods or drink sodas frequently throughout the day, the enamel that protects your teeth is constantly exposed to acids. Hard candies, cough drops, and breath mints that contain sugar are especially harmful because they dissolve slowly in your mouth. Many experts suggest that you take a 3-hour break between eating foods containing sugar.

Sugary or starchy foods eaten with a meal are less harmful to your teeth than when they're eaten alone, possibly because the production of saliva, which washes away the sugar and bacteria, is increased. Eating sugary foods before you go to bed can be the most damaging (especially if you don't brush your teeth afterward) because you don't produce as much saliva when you sleep.

For most people, it's hard to cut out sweets completely, so try to follow these more realistic guidelines:

- Eat carbohydrates (sugars and starches) with a meal.
- If you can't brush your teeth after eating, rinse your mouth with water or mouthwash, or chew sugarless gum.
- Don't eat sugary foods between meals.
- If you snack, eat nonsugary foods, such as cheese, popcorn, raw veggies, or yogurt.

## Going to the Dentist

The main reason for going to the dentist regularly — every 6 months — is **prevention**. The goal is to prevent tooth decay, gum disease, and other disorders that put the health of your teeth and mouth at risk.

Your first consultation with a dentist will probably consist of three main parts: a dental and medical history (where the dentist or dental hygienist asks you questions about your tooth care and reviews any dental records), a dental examination, and a professional cleaning.

The dentist will examine your teeth, gums, and other mouth tissues. He or she may also examine the joints of your jaws. The dentist will use a mirror and probe (a metal pick-like instrument) to check the crown (visible part) of each tooth for plaque and evidence of looseness or decay. The dentist also will check your bite and the way your teeth fit together (called **occlusion**).

Your dentist will examine the general condition of your gums, which should be firm and pink, not soft, swollen, or inflamed. He or she (or an assistant) will use the probe to check the depth of the **sulcus**, the slight depression where each tooth meets the gum. Deep depressions, called pockets, are evidence of gum disease.

After examining the visible parts of your teeth and mouth, your dentist will take X-rays that might reveal tooth decay, abscesses (collections of pus surrounded by swollen tissue), or impacted wisdom teeth.

Professional cleaning is usually performed by a dental hygienist, a specially trained and licensed dental professional. Cleaning consists mainly of removing hard deposits using a scaler (a scraping instrument) or an ultrasonic machine, which uses high-frequency sound waves to loosen plaque deposits. The particles are then rinsed off with water.

After cleaning, the dental hygienist will polish your teeth. The process cleans and smoothes the surfaces of the teeth, removing stains and making it harder for plaque to stick to the teeth. Finally, the hygienist may treat your teeth with a fluoride compound or a sealant to help prevent decay.

At the end of your visit, the dentist will let you know if you need to return to fill a cavity. Your dentist also may refer you to an orthodontist if he or she thinks you may need braces or have other issues.

## More Dental Problems

**Dental caries** (tooth decay) can attack the teeth at any age. In fact, 84% of 17-year-olds have the disease. Left untreated, caries can cause severe pain and result in tooth loss. Losing teeth affects how you look and feel about yourself as well as your ability to chew and speak. Treating caries is also expensive. So prevention and early treatment are important.

It may surprise you to know that 60% of 15-year-olds experience **gingivitis**, the first stage of gum disease. Gingivitis, which involves the gums but not the underlying bone and ligament, is almost always caused by an accumulation of plaque. As with caries, treatment can be expensive.

If you remove plaque regularly and follow good oral hygiene habits, your gums usually will return to their healthy state. However, more serious gum disease can cause gums to swell, turn red, and bleed, and sometimes causes discomfort. How dentists treat gum disease depends on the extent of the disease.

Reviewed by: Steven Dowshen, MD  
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## Taking Care of Your Vision

Even if you're lucky enough to have perfect 20/20 vision, taking care of your eyes and protecting them against injury or infection are important parts of keeping your peepers perfect.

### Vision Basics

One of the best things you can do for your baby blues (or greens, or browns, or hazels, or whatever color your eyes are) is to have them checked by your doctor whenever you have a physical examination. If you're having trouble seeing or if your eyes have been hurting or bothering you, tell a parent so that you can have your eyes examined by an eye specialist.

An ophthalmologist (pronounced: ahf-theh-MAH-luh-jist) is a medical doctor who specializes in examining, diagnosing, and treating eyes and eye diseases. An optometrist is not a medical doctor, but has been trained to diagnose and treat many of the same eye conditions as ophthalmologists, except for treatments involving surgery.

It's a good idea to have your eyes checked at least every 2 years or even more often if you have a family history of eye problems such as glaucoma or early cataracts.

### Common Vision Problems

Have you ever wondered whether there's any truth in some of the stuff you may have been told about how to treat your eyes? For example, you may have been warned that sitting too close to the TV or computer can ruin your eyes. But that's not true. You also may have heard that using a night-light (instead of bright light) to read will cause nearsightedness, but there's no clear scientific evidence to support this. You can strain your eyes if you don't have enough light when you read, but it won't ruin your vision.

So what's the cause of many common vision problems? Often, eye shape and size. Someone with perfect 20/20 vision has eyes that are basically round like a baseball. Someone who needs corrective lenses to see usually has eyes that are shaped differently.

**Myopia** (pronounced: my-OH-pee-uh), or nearsightedness, is one of the most common problems teens have with their eyes. When a teen has myopia, he or she is unable to focus properly on things that are far away. People with myopia have eyes that are a little longer than normal, measuring from the front of the eyeball to the back. This extra length means that light focuses in front of the retina (the part of the eye that receives images and sends them to the brain) instead of on it, and that affects vision. Glasses or contacts can easily correct this problem.

**Hyperopia** (pronounced: hy-per-OH-pee-uh), or farsightedness, is another vision problem. People with hyperopia have trouble focusing on things close up because their eyes are too "short" from front to back. In people with hyperopia, light focuses behind the retina instead of on it, causing blurry vision. Someone with significant farsightedness will need glasses to correct his or her vision. But here's an interesting fact: Many babies are born farsighted! Their eyeballs get longer as they grow, and most of them outgrow the condition.

Another condition where the eye is differently shaped is **astigmatism**. Here, the cornea isn't perfectly round. To be able to see well — either close up or far away — the person needs contact lenses or glasses.

Once people reach 18 and their eyes are fully grown and less likely to change, some people choose to have refractive surgery to correct myopia, hyperopia, or astigmatism so they don't have to wear contacts or glasses anymore. Refractive surgery is a procedure — usually done with a laser — that reshapes the eye to change the way light enters it and forms an image, allowing a person to see better.

### Dealing With Common Eye Problems and Injuries

The best rule of thumb for when to see an eye specialist if you injure your eyes is "when in doubt, check it out!"

- If you have a red eye, pain in an eye that doesn't go away within a short period of time, or at any time have

had changes in your vision, then it's time to have your eyes checked.

- If you get any small foreign objects in your eye, such as sand or sawdust or metal shavings, don't rub it. Flush your eye for several minutes with lukewarm water (it may be easiest to do this in the shower). If it still feels as though there is something in your eye, then be sure to see an eye specialist.
- If you've been hit in the eye and it looks strange or appears to be bleeding, or if you have changes in or lose your vision, go to a hospital emergency department right away to be checked out.

One of the most common eye injuries for teens is a scratched cornea, which is often related to wearing contact lenses or playing sports. With a scratched cornea, it may feel like something is in your eye when there's really nothing there. Your eye may get red and irritated, produce lots of tears, and be overly sensitive to light.

If you think you have any kind of eye injury and you wear contact lenses, stop wearing your contacts until you see an eye specialist. Wearing contact lenses if you have an eye injury could damage your eyes more or cause an infection to develop. Don't worry — if your cornea is scratched, it usually will heal quickly and may require a week or two of medicated eye drops and not wearing your contacts. You may hate wearing your old glasses, but it's just for a little while — and it beats permanently damaging your eyes!

## Caring for Your Eyes

Just as you wear a seatbelt to protect yourself when you're in a car, it's wise to protect your eyes before something happens to them.

Wearing sunglasses is high on the list of ways to care for your vision. UV light causes long-term damage to the inner structures of the eye, so wear a pair of sunglasses with ultraviolet (UV) protection whenever you're in the sun. This can help prevent conditions linked to UV exposure, such as cataracts and macular degeneration:

- A **cataract** is an eye condition in which the lens of the eye becomes clouded, impairing vision.
- **Macular degeneration** is an eye disease in which the macula (a structure within the eye that allows you to see) gradually deteriorates, leading to decreased vision or blindness. (Need one more reason not to smoke? Smoking puts you at greater risk for developing macular degeneration.)

You also can care for your eyes by putting on protective eyewear whenever you play sports like racquetball or when you're doing projects in shop class or the science lab. It only takes a second for something to hit an unprotected eye and cause serious damage. And avoid being near fireworks that could explode and harm your eyes. Why take chances with your vision?

Although steering clear of fireworks probably seems like an obvious way to protect your eyes, you may not think about protecting them around the house. Yet something you might do every day — staring at a computer screen for a long time — can strain your eyes. That's because most people blink about 10 times per minute. But when you stare, your blink rate can go down to two or three times per minute. The best thing you can do is to blink more! It also helps to change your focus often. Look at something across the room for a few moments and then go back to looking at the computer screen.

If your eyes feel dry and irritated when you use the computer, use artificial tears. Don't use products that remove the red from your eyes, though, because they may contain a chemical that eliminates redness temporarily but actually makes your eyes look worse later.

You should take special care of your eyes if you have a medical condition such as diabetes or juvenile rheumatoid arthritis because they put you at an increased risk of developing serious eye disease. Be sure to see your doctor at least once a year if you have any medical condition that can affect your eyes. Depending on your situation, your doctor may need to check your eyes as often as every 3 months.

## Preventing Eye Infections

You can also protect your eyes by preventing infections that could harm them. **Conjunctivitis**, also called pinkeye, is an eye infection that can be caused by a virus, bacteria, an allergic reaction, a chemical, or an irritant (something that gets in the eye).

Conjunctivitis caused by germs like viruses and bacteria can easily pass from person to person. After you shake hands with someone who has a bad cold and pinkeye, for instance, you could spread the infection to your own eye by touching it with your hand.

To avoid spreading the germs that can cause eye infections:

- Don't share eye makeup or drops with anyone else.
- Don't touch the tip of a bottle of eye drops with your hands or your eyes because that can contaminate it with germs.
- Never put contact lenses in your mouth to wet them. Many bacteria and viruses — maybe even the virus that causes cold sores — are present in your mouth and could easily spread to your eyes.
- Wash your hands regularly!

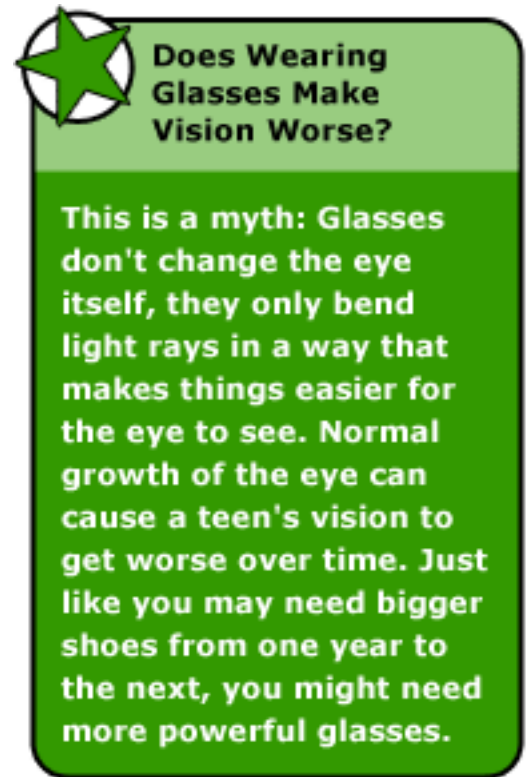
## Glasses and Contacts

If you need glasses or contact lenses, follow a few tips for the best results. When you pick out glasses, remember as a general rule that smaller frames will probably suit you better. The larger the frame, the more distortion you'll have, and you may not be able to see as well.

If you get contact lenses, follow your doctor's orders exactly when it comes to cleaning them, how many hours you can safely wear them, and when you should replace them. If you don't, you could develop serious infections or ulcers in your eye that are painful, difficult to treat, and may need months of medication or even surgery.

Eyes and vision are something no one wants to be without. To keep them working for you for many years to come, protect them now and take the best care of them that you can.

Reviewed by: Jonathan H. Salvin, MD  
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**Does Wearing Glasses Make Vision Worse?**

**This is a myth: Glasses don't change the eye itself, they only bend light rays in a way that makes things easier for the eye to see. Normal growth of the eye can cause a teen's vision to get worse over time. Just like you may need bigger shoes from one year to the next, you might need more powerful glasses.**

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