

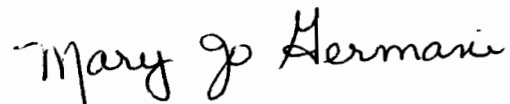
Vocal Hygiene and Hearing Loss for the At-risk and Average College Student

An Honors Thesis (HONRS 499)

by

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Thesis Advisor
Annemarie Devery

A handwritten signature in black ink that reads "Mary Jo Hermarie". The signature is written in a cursive style with a large initial 'M' and 'J'.

Ball State University
Muncie, Indiana

May 2008

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Abstract

Voice and hearing problems are two of the most common complaints of college students visiting the Ball State University Speech-Language Clinic and the Audiology Clinic. However the student population as a whole lacks general knowledge on the maintenance of vocal hygiene and hearing protection. In order to address these issues and educate the college student population, we created education materials to be used for the general population and those identified as being at-risk for voice and hearing problems.

Acknowledgements

- We would like to thank Annemarie Devery for advising us through this creative project. She was very supportive and helpful with both the brainstorming and fine-tuning of our project.
- We would also like to thank the participants of our thirty-minute presentation.

Artist Statement

Throughout our undergrad in the Speech Pathology and Audiology program at Ball State University, we've gained a wealth of information on hearing and voice health and protection as it directly relates to common problems found in clients who seek help from those in my future profession. However, many within the college population have very little knowledge of the general risks to hearing and voice health or with the specific risks associated with their future professions. For this reason, we were very interested in a way to provide this information for this at-risk population in an appealing manner that would hopefully inspire life-long changes.

The greatest challenge in creating a project like this was condensing difficult and abstract information to be consumed by the average college student without a background in this field. Our materials had to be visually appealing and relevant to their daily lives. We also had to create these materials in a form which would be easily accessible for this population. For this reason, we narrowed our scope of materials to bulletin boards, pamphlets, and advertisements.

On April 19, 2008, we facilitated a trial seminar using our materials. Using the venue of a floor program in Park Hall, we advertised the program through email, Facebook, and posters. Our participants included a mix of Park Hall residents and off-campus students; musicians, professional voice users, and general population were represented. We presented the material and provided pamphlets at the end of the presentations. To support the ideas of vocal hygiene, we provided refreshments promoting vocal hygiene and education. Students were invited to participate in a massage exercise to promote vocal efficiency. To support the ideas of hearing protection,

we provided ear plugs and instructed the students on the proper use of these protection devices. We also conducted a question and answer session following the presentation. The entire event lasted thirty minutes.

How Can NIHL Be Prevented?

Everyone should know the simple ways to practice good hearing health. To protect your hearing:

- Know which noises can cause damage
- Wear earplugs or special earmuffs during harmful noise exposure
- Be alert to hazardous noise
- Have your hearing checked regularly
- Know that NIHL is virtually 100%



Special Hearing Protection for Musicians

- While practicing, mutes can be used to prevent long-term exposure
- Special musicians' earplugs and earmuffs designed for certain instruments
- Use Plexiglas baffles to reduce the noise from other instruments
- Use ear monitors to electronically protect hearing



For more information, check out:

www.american-hearing.org

www.hei.org

<http://www.nidcd.nih.gov/health/hearing/noise.asp>

Musicians and Noise-Induced Hearing Loss



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NOISE-INDUCED HEARING LOSS

Blindness separates us from things but deafness separates us from people.

Helen Keller



For more information on good hearing health, you can visit one of the following websites:

- www.hel.org
- www.american-hearing.org
- <http://www.nidcd.nih.gov/health/hearing/noise.asp>



Recovery

If your experiencing voice that sounds breathy, raspy, strained, etc. it's time to allow yourself to recover your voice back.

When your voice is not at it's best, there are ways to help a speedy recovery and prevent further damage:

- Avoid whispering. Contrary to popular belief, whispering puts more strain on your vocal cords. Speak in a "quiet confidential tone."
- Hydrate frequently.
- Rest your voice as much as possible.
- Don't clear your throat, it puts strain on your vocal cords. Instead, sip water to move mucus out.

If these symptoms persist for more than **two weeks**, well after any illness would have resolved itself, you need to see a **speech language pathologist**.

References and Resources

www.voicepromblem.org "Prevention:

Comprehensive Model for Voice Disorder Prevention"

The Voice and Swallowing Institute, "Voice Conservation & Vocal Hygiene: Tips for a Healthy Voice"



Caring for your voice...

Lifelong habits for everyone



What is “vocal hygiene?”

Like any other muscle in your body, your vocal cords can be over worked, injured, or become impaired. And considering how small these muscles are, they do a great deal of work. You need to protect them as best you can. We protect our voice using vocal hygiene.

Think of vocal hygiene like dental hygiene. There are steps you take every day to prevent damage and, like when you have a toothache, steps you take to help you recover. Luckily, vocal hygiene is simple and once you get into the habit, is often second nature.

The essential part of vocal hygiene is keeping the vocal cords moist, like your eyes. By avoiding chemicals and environments that dehydrate, and hydrating frequently with water, half the battle to protect your vocal cords is already won.

Preventing the Loss

Everyone can benefit from taking simple tips to prevent loosing your voice.

- Warm up your voice, hum “Twinkle Twinkle” or the scale before you start speaking.
- Hydrate frequently with water. If you can’t give up substances that dry out the vocal cords, like caffeine and alcohol, make sure that you replace those cups of coffee with equal part of water.
- Breathe deeply and use good posture. Stretch a little if you carry tension in your neck/shoulder area.
- Don’t smoke, and avoid smoky areas.
- Humidify your home and workspace. Thirty percent humidity is ideal.



Vocal Hygiene Questionnaire:

Do you smoke? Y N

Do you hydrate with alcohol or caffeine products frequently? Y N

Are you around second hand smoke frequently? Y N

Do you use slouch, or forget to breathe deeply when you speak? Y N

Do you live/work in a dry or air conditioned environment Y N

Do you allow yourself complete vocal rest (no talking) after using your voice for long periods of time? Y N

Did you answer yes to any of these questions? These factors can affect your vocal hygiene and change the quality of your voice.

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Caring for your voice....

For professional voice users

Teachers

Singers

Actors

Lawyers

Tour Guides

and others

Why am I “at risk?”

Almost everyone has experienced voice loss at one point or another because of illness or injury. However, you have identified as someone who is a professional voice user. This means that, more than the average person, you will or do use your voice to fill the requirements of your profession. This includes teachers, lawyers, receptionists, and others. The professional voice user often works in environments that places them at risk for vocal fatigue or even voice disorders. Air conditioned rooms, noisy classrooms, smoky, dry, or dusty environments often cause extra strain on the voice.

Your vocal hygiene—the care of your voice—is very important for your health and profession. There are many things you can do right now to allow you the maximum enjoyment of your voice for years to come.

Preventing the Loss

As someone who uses their voice frequently, practicing good habits is key.

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Noise-Induced Hearing Loss

Risk Factors

- **Single or lengthy exposure to sounds >85 decibels (dB)**
 - Gunshot 140-170 dB
 - Rock concert 110-120+ dB
 - Stereo headphones 110-120 dB
 - Motorcycle 90 dB
 - Lawnmower 90 dB

Symptoms

- Sounds appear distorted or muffled
- Difficult to understand speech
- Tinnitus- ringing or buzzing in the ears
- Pain after noise exposure
- Difficulty hearing in noise

Prevention

- Know which noises can cause damage
- Wear earplugs or special earmuffs during harmful noise exposure
- Be alert to hazardous noise
- Have your hearing checked regularly
- Know that NIHL is virtually 100% preventable

Noise-Induced Hearing Loss

What is it?

Normally, we hear sounds within our environment at safe levels that do not affect our hearing. When we are exposed to *harmful noise* (sounds that are **too loud** or **loud sounds** that last a **long time**) sensitive structures in our ear can be damaged, which cause a noise-induced hearing loss (NIHL).

Once harmed, the damage is usually irreversible.

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**Lost your
voice?**

What it is

- Almost everyone loses their voice from illness or injury at one time or another
 - Hoarse, raspy breath
 - Itchy throat
 - Breathy sound
 - Hurts to talk
 - Takes more effort to speak

Are you at risk?

- Do you need to take extra precautions?
 - Teachers - Actors
 - Coaches - Singers
 - Lawyers - Cheerleaders
 - Receptionists - Tour Guides
 - Sales/Marketing Representatives

When it's already gone...

- **DO NOT WHISPER...**
 - Your vocal cords work too hard when you whisper or clear your throat
- Speak in a “quiet confidential tone” instead
- **Water, water, water**
- **If you must talk, change your environment so you don't have to strain**

Prevention

- Hydrate with water frequently
- Avoid smoking or smoky areas
- Use a microphone whenever available
- Don't clear your throat before speaking
- Make your environment quieter- turn off the fan, close a window, etc.

**FACT: Most college students have already
lost half of their hearing.**

How are you going to save the rest?

**You've been identified as an at-risk
individual for hearing loss. Please
attend this seminar to get the facts.**



Do you know how to prevent the
Silence?

Your career will never be the same without your voice.

You've been identified as an at risk individual for a voice disorder. Consider attending this free seminar to get the facts.

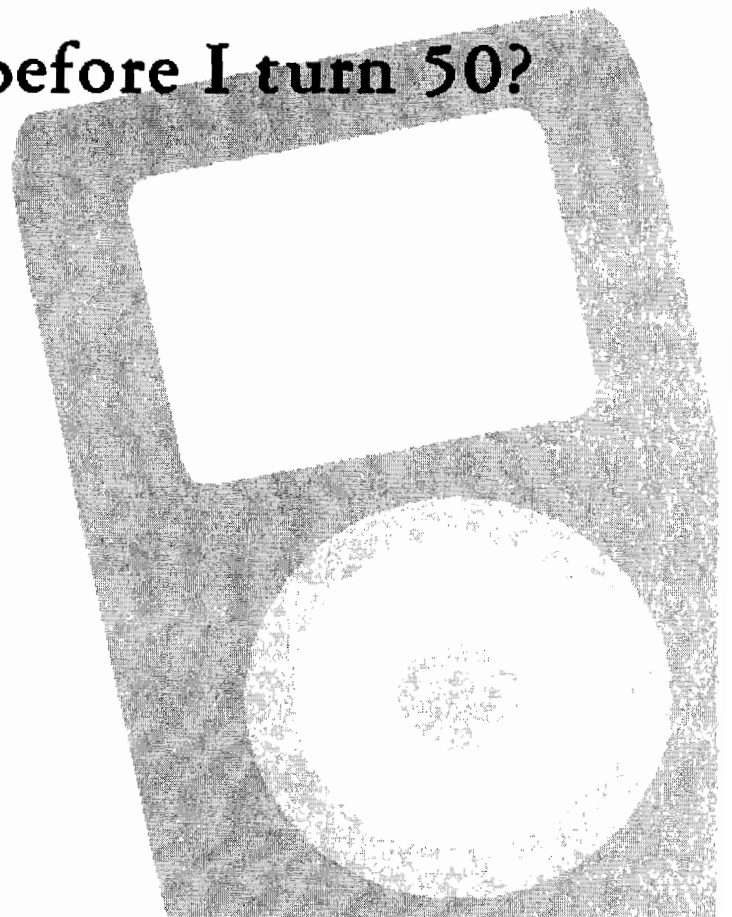
CAN YOU HEAR ME NOW?

Are iPods going to ruin your hearing?

Are cellphones burning holes in your brain?

Will I be deaf before I turn 50?

Get the facts.



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