Cut Trees....Not Hearing

Robin Tutor-Marcom, MPH, OTR
Logging Equipment Operator Program
Noise levels or the intensity of sound is measured in:

a. Amps  
b. Hertz  
c. Kilograms  
d. Decibels
Noise levels of logging equipment can be expected to be in the following ranges at full power:

a. 80-95 decibels
b. 90—105 decibels
c. 100-110 decibels
d. 105-120 decibels
Hearing Protection is required by OSHA when noise levels are above:

a. 75 decibels  
b. 85 decibels  
c. 95 decibels  
d. 105 decibels
In addition to hearing protection, OSHA requires employers to:

- Measure sound levels
- Provide annual audiometric (hearing) testing and evaluation
- Provide hearing protection
- Maintain records
- Only b and c
- Only a, c, and d
- All of the above
True or False?

Hearing loss:

a. Is preventable
b. Is reversible
c. Can happen gradually
d. Can happen suddenly
e. Is painful
To Protect Hearing on the Job, OSHA requires:

• Sound level measurements
• Audiometric (hearing) testing and evaluation
• Hearing protection
• Education
• Recordkeeping
Noise Levels

• Measured in decibels using a sound level meter or dosimeter
Noise levels expected at full power

- Chain saw (105-110db)
- Skidder (100-105db)
- Loader (100-105db)
- Chipper (100-110db)
- Grinder (100-110db)
- Feller buncher (100-110db)
Audiometric (hearing) Test

• Conducted annually
• 1st test is baseline or hearing threshold at different frequencies
• Annual test results compared to baseline to determine changes in hearing
• Recommendation by professional:
  – Change in hearing protection
  – Re-training on proper fit of hearing protection
  – Medical referral
Hearing protection is required for noise levels over 85 decibels

- Moldable inserts (foam or plastic ear plugs)
- Ear muffs attached to hardhats
- Ear muffs attached to headband
- Each have an NRR

- The Noise Reduction Rating (NRR) is a single number indicator developed by the Environmental Protection Agency to assess the adequacy of noise attenuation or change of particular hearing-protective devices (ex. NRR 29)

- NRRs are based on data under laboratory conditions - so a correction factor (7 dB) must be applied (ex. NRR 29-7 = 22 decibel change)
Types of Hearing Protection

The best hearing protection device is the one that the individual will wear correctly, consistently and comfortably!
Wear It Right
NC Department of Labor requires:

- hearing conservation as a part of annual safety training
- Written records that prove audiometric testing and training was conducted
Do you have..........

– Difficulty understanding women and children (higher pitch sounds)

– Difficulty understanding speech especially in the higher tones

– Difficulty hearing in a room with noise interferences e.g. people talking, noisy restaurant, etc.

– Ringing in ears (tinnitus)

.......then you may have hearing loss!
So Why Care?

Hearing loss:
• is preventable
• can’t be reversed
• can happen gradually
• can happen suddenly
• is usually painless – you don’t know it’s gone until it’s gone!
Noise levels or the intensity of sound is measured in:

a. Amps
b. Hertz
c. Kilograms
d. Decibels
Noise levels of logging equipment can be expected to be in the following ranges at full power:

a. 80-95 decibels
b. 90—105 decibels
c. 100-110 decibels
d. 105-120 decibels
Hearing Protection is required by OSHA when noise levels are above:

a. 75 decibels
b. 85 decibels
c. 95 decibels
d. 105 decibels
In addition to hearing protection, OSHA requires employers to:

a. Measure sound levels
b. Provide annual audiometric (hearing) testing and evaluation
c. Provide hearing protection
d. Maintain records
e. Only b and c
f. Only a, c, and d
g. All of the above
True or False?

Hearing loss:

a. Is preventable
b. Is reversible
c. Can happen gradually
d. Can happen suddenly
e. Is painful