

Now Hear This . . .



Volume 12, No. 3

Fall 2009



Jobs that Require a Minimum Level of Hearing



There are a few occupations that by law require a minimum level of hearing for an individual to be allowed to perform the job.

Airplane pilots
Merchant seaman
Police officers
Truck and bus drivers

Only the regulations for police officers require that all individuals must have audiometric testing. The regulations for the other occupations require audiometric testing if the examining health care provider determines such testing is indicated. Only the audiometric testing for police officers defines the credentials for who is allowed to do the audiometric testing.

This newsletter summarizes these requirements.

AIRLINE PILOTS (<http://ecfr.gpoaccess.gov/cgi/text/text-idx?c=ecfr&sid=90f17ad58c27eda492335457e7404a2a&rgn=div8&view=text&node=14:2.0.1.1.5.2.1.3&idno=14>)

The Federal Aviation Administration requires medical exams that include an evaluation of hearing for a First-Class, Second-Class or Third-Class Airman Medical Certificate:

“Ear, nose, throat, and equilibrium standards are:

a) The person shall demonstrate acceptable hearing by at least one of the following tests:

(1) Demonstrate an ability to hear an average conversational voice in a quiet room, using both

ears, at a distance of 6 feet from the examiner, with the back turned to the examiner.

(2) Demonstrate an acceptable understanding of speech as determined by audiometric speech discrimination testing to a score of at least 70 percent obtained in one ear or in a sound field environment.

(3) Provide acceptable results of pure tone audiometric testing of unaided hearing acuity according to the following table of worst acceptable thresholds, using the calibration standards of the American National Standards Institute, 1969 (11 West 42d Street, New York, NY 10036):

Frequency (Hz)	500 Hz	1000 Hz	2000 Hz	3000 Hz
Better ear (Db)	35	30	30	40
Poorer ear (Db)	35	50	50	60

b) No disease or condition of the middle or internal ear, nose, oral cavity, pharynx, or larynx that—

(1) Interferes with, or is aggravated by, flying or may reasonably be expected to do so; or

(2) Interferes with, or may reasonably be expected to interfere with, clear and effective speech communication.

c) No disease or condition manifested by, or that may reasonably be expected to be manifested by, vertigo or a disturbance of equilibrium.”

The evaluation must be performed when initially obtaining an airman medical certificate. The frequency of subsequent testing varies from six months to five years, depending on the person's age and whether the individual has a certificate for airline transport (First-Class), commercial non-airline (Second-Class) or private pilot (Third-Class).

MERCHANT SEAMAN (www.uscg.mil/nmc/medical.asp)

Deck, engineering and radio officers are required to have medical examinations that include the following evaluation of hearing:

- A. *“Applicants for any credential (original, renewal or raise in grade) should have adequate hearing.*
- B. *If the examining medical practitioner has concerns regarding the applicant's ability to adequately hear, the examining medical practitioner should refer the applicant to an audiologist or other hearing specialist to conduct an audiometer test and/or a speech discrimination test. Applicants should advise medical practitioners of any auditory concerns that they are aware of at the time of the medical examination as long as the test results will be no more than 12 months old on the date of credential application. The documented results of the test(s) should be provided to the examining medical practitioner for review and attached to the completed credential application.*
- C. *The audiometer test should include testing at the following thresholds: 500 Hz; 1,000 Hz; 2,000 Hz; and 3,000 Hz. The frequency responses for each ear are averaged to determine the measure of an applicant's hearing ability. Applicants should demonstrate an unaided threshold of 30 decibels or less in their best ear. If the applicant only has hearing in one ear, the unaided threshold should be 30 decibels or less in that ear.*
- D. *The functional speech discrimination test is carried out at a level of 55 decibels. For issuance of an original license, qualification, or certificate the applicant should demonstrate functional speech discrimination of at least 90%. For renewal or raise in grade of any credential, the applicant should demonstrate functional speech discrimination of at least 80%. An appli-*

cant who is unable to meet the standards of the audiometer test, but who can pass the functional speech discrimination test, may be eligible for a waiver.

- E. *A hearing aid may be used by applicants for an original, renewal, or upgrade of any credential. When a hearing aid is used, the aided threshold should be at least 20 decibels in each ear and functional speech discrimination should be at least 90% at 55 decibels. An applicant who requires the use of a hearing aid to meet the hearing standards should have a notation of that fact on his or her credential(s) along with a requirement that spare batteries are to be available, and that the applicant must use the hearing aid in an operational mode while acting under the authority of the credential.”*

The hearing evaluation must be done at the time the initial certificate is obtained and then every five years. No evaluation of hearing is required as part of the medical evaluation of other categories of seamen.

POLICE OFFICERS (www.mi.gov/mcoles/0,1607,7-229-41624-150169--00.html)

Police officers are required at the time of hire to have medical examinations that include audiometric testing and must meet specific criteria on the results.

“Initial unaided testing involves pure tone air conduction thresholds for each ear, as shown on the pure tone audiogram, shall not exceed a hearing level of 25 decibels at any of the following frequencies: 500, 1000, 2,000, 3,000; and 45 decibels at 4000 Hertz.”

*“Initial testing may be performed by a certified hearing conservationist, a licensed hearing aid specialist or a licensed audiologist. See Note for individuals requiring additional unaided or aided testing requirements by a licensed audiologist.”**

**Agencies with a applicant who fails the initial hearing standard should contact the MCOLES Standards Compliance Section for additional unaided and aided hearing criteria as well as testing protocols.”*

No further testing is required once an individual becomes a police officer.

TRUCK AND BUS DRIVERS (http://www.fmcsa.dot.gov/rules-regulations/administration/fmcsr/fmcsrguidedetails.aspx?rule_toc=760§ion_toc=760)

If an individual drives a vehicle with a gross vehicle weight rating (GVWR) of 26,001 pounds or more, a vehicle towing another vehicle with a GVWR over 10,000 pounds, a vehicle designed to carry 15 or more passengers, or a vehicle requiring placarding for hazardous materials they are required to have a commercial driver's license. Individuals with a commercial driver's license or individuals who drive a vehicle or vehicle and towed vehicle

with more than 10,000 but less than 26,001 pounds GVWR are required to have a medical examination which includes a hearing evaluation:

“First perceives a forced whispered voice in the better ear not less than 5 feet with or without the use of a hearing aid, or, if tested by use of an audiometric device, does not have an average hearing loss in the better ear greater than 40 decibels at 500 Hz, 1,000 Hz and 2,000 Hz with or without a hearing device when the audiometric device is calibrated to the American National Standard (formerly ASA Standard) Z24.5-1951.”

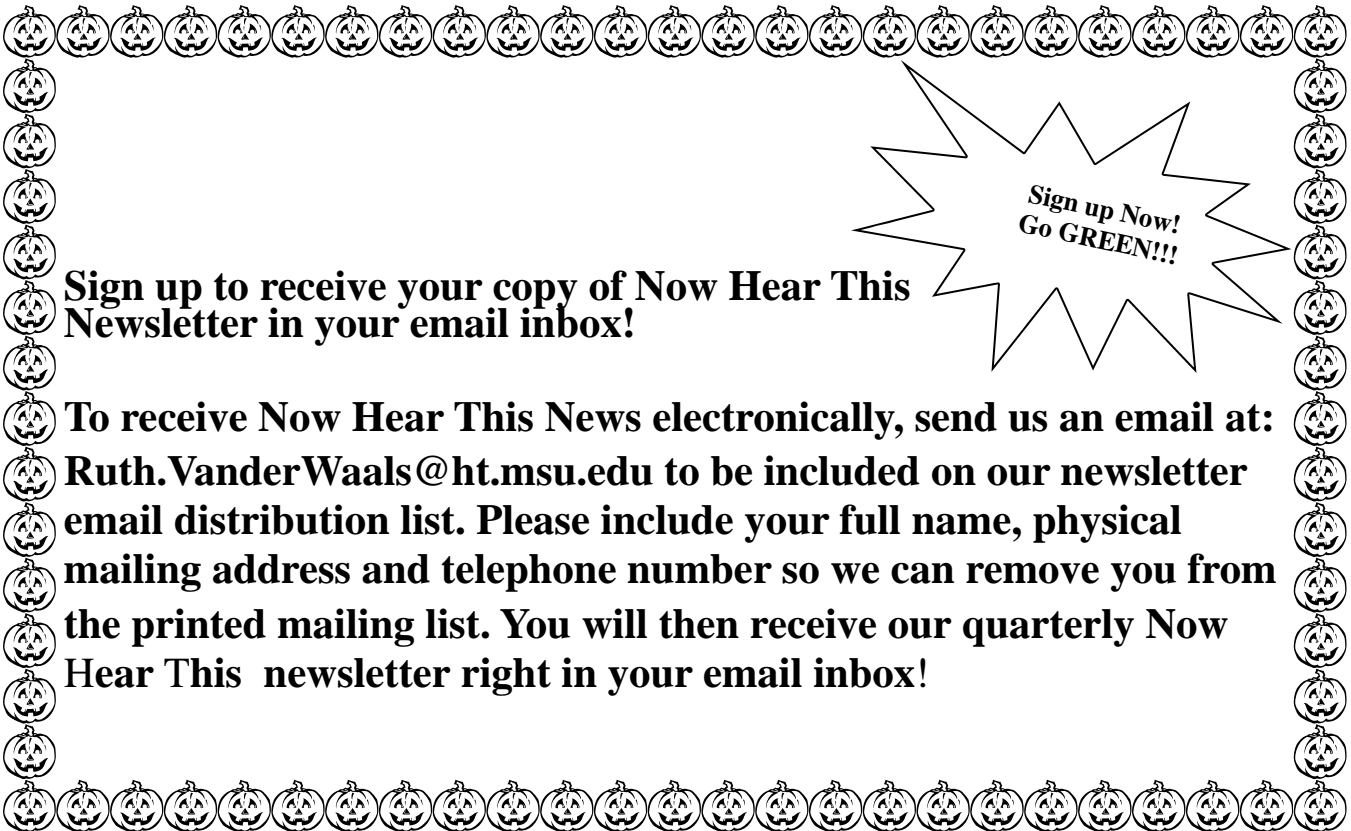
This evaluation must be conducted initially and then every two years.



Sign up to receive your copy of Now Hear This Newsletter in your email inbox!

To receive Now Hear This News electronically, send us an email at: Ruth.VanderWaals@ht.msu.edu to be included on our newsletter email distribution list. Please include your full name, physical mailing address and telephone number so we can remove you from the printed mailing list. You will then receive our quarterly Now Hear This newsletter right in your email inbox!

**Sign up Now!
Go GREEN!!!**

A decorative border made of a repeating pattern of small, stylized jack-o'-lanterns with carved faces, surrounding the central text and starburst.

Now Hear This...

Michigan State University
College of Human Medicine
117 West Fee Hall
East Lansing, MI 48824-1316
Phone (517) 353-1846

Address service requested.

In this issue: v12n3: Jobs that Require a Minimum Level of Hearing

Printed on recycled paper.

1. A history of significant exposure to noise at work; AND
2. A STS of 10 dB or more in either ear at an average of 2000, 3000 & 4000 Hz. And the employee's total hearing level is 25 dB or more at the same three frequencies. OR
3. A fixed loss.*
*Suggested definitions: a 25 dB or greater loss in either ear at an average of: 500, 1000 & 2000 Hz; or 1000, 2000 & 3000 Hz; or 3000, 4000 & 6000 Hz; or a 15 dB or greater loss in either ear at an average of 3000 & 4000 Hz.

Suggested Criteria for Reporting Occupational NIHL

Internet
www.oem.msu.edu
E-Mail
ODREPORT@ht.msu.edu
FAX
517-432-3606
Telephone
1-800-446-7805
Mail
MIOSHA-MTS Division
P.O. Box 30649
Lansing, MI 48909-8149

Michigan Law Requires the Reporting of Known or Suspected Occupational NIHL
Reporting can be done by:

Project SENSOR Staff
At the Michigan Occupational Safety & Health Administration (MIOSHA)
Douglas J. Kalinowski, M.S., C.I.H., Director MIOSHA, Project SENSOR, Co-Director
John Peck, M.S., Director MTS Division
Byron Panasuk, C.I.H., C.S.F., Project SENSOR Specialist
College of Human Medicine
Kenneth D. Rosenman, M.D., Professor of Medicine
Project SENSOR, Co-Director
Mary Jo Reilly, M.S., Project SENSOR Coordinator
Amy Krizek
Project SENSOR NIHLS Surveillance Coordinator
Melissa May, Ph.D., Project SENSOR Office Staff
Tracy Carey
Ruth VanderWals
Patient Interviewers:
Mario Espindola
Meena Hasam
Brandon Lawrence
Steven Moyo
Maureen O'Brien

Now Hear This is published quarterly by Michigan State University-College of Human Medicine with funding from the Michigan Occupational Safety & Health Administration (MIOSHA) and is available at no cost. Suggestions and comments are welcome.
(517) 353-1846
MSU-CHM
117 West Fee Hall
East Lansing, MI 48824-1316

Advisory Board
Phyllis Berryman, R.N., Michigan Occupational Nurses' Association
Greg Flamme, Ph.D., Representative Michigan Speech-Language Hearing Association
Jerry Punch, Ph.D., Michigan State University
Constance Spak, M.A., CCC-A, University of Michigan
Michael Stewart, Ph.D., Central Michigan University
Jeffrey Weingarten, M.D., Michigan Oto-Laryngological Society