What Can You Do?

Respiratory protection has been provided to you because your industrial hygiene (IH) survey determined that the air in your working environment contains dusts, fogs, smokes, mists, gases, vapors, fumes, sprays or other toxic materials. Prolonged exposure without personal protective equipment (PPE), such as a respirator, may affect your health (i.e. cause cancer, lung impairment, other diseases, or even death).

If Sailors are not wearing respiratory protection when required, ask questions. Is it available? Does it fit? Is it dirty, scratched or damaged? Can they taste or smell something while wearing their respirator? Is it uncomfortable?

Working as a team will make your overall job easier. Ask your shipmates to come up with a plan for rewarding Sailors who always do right thing by wearing their respirator.

Health Effects

Toxic materials can enter the body through ingestion (eating or drinking), absorption (touch) and inhalation (breathing). Illness can occur immediately (acute) or as a result of being exposed to a small amount of toxic materials every day over a long period of time (chronic).

Further information regarding the health effects from toxic materials may be found on material safety data sheets (MSDS) or at the National Institute for Occupational Safety and Health (NIOSH) website: http://www.cdc.gov/niosh/. Talking with shipmates about the medical dangers that could arise by failing to wear respirators may help save their life and correct behaviors.

Afloat safety officers have a challenging and very important role at their commands. “Safety Training Gouge” briefs help safety officers and division officers meet their bi-monthly training requirements. Modify and use these topics at quarters or muster. You can also check the Naval Safety Center website at www.public.navy.mil/navsafecen/ weekly as we work to develop a series of safety gouge briefs.
Training Tips

- Review your recent IH survey with your respiratory protection program manager (RPPM). It has guidelines that ensure the right Sailors are enrolled in the program. Review the roster of who is authorized to wear respirators. The list should include respirator make, model, size, fit test medium, type of cartridge used in fit testing, training date, fit test date, and medical clearance or current PHA date.
- Review your written standard operating procedure (SOP) that governs the selection, care, issue and use of respirators. If an updated SOP is needed, a generic SOP may be found: http://www-nehc.med.navy.mil/downloads/IH/SOP%20ARTICLE%2010JUNE2009.PDF.
- Have each Sailor demonstrate how to don and wear their respirator properly, including how to perform a seal check.
- Have each sailor demonstrate how to properly clean, store, maintain and inspect the respirator for damage.
- Have your RPPM review your filter change out schedule and the health effects of the specific toxins with which you may be exposed to. Sailors should be trained to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.
- Review OPNAVINST 5100.19E paragraphs B0609 and B0612 for more detailed training tips.

REGULATIONS
1. OPNAVINST 5100.23G W/CH 1: Chapter 15
2. OPNAVINST 5100.19E: Chapter B6

Need to Order Respirators?
- Go to the Naval Safety Center website.
- Click on Afloat, Surface Warfare.
- Click on References (lower right hand box).
- Click on Afloat Shopping Guide 2011.
- This will bring you to the Naval Safety Center’s Shipboard Safety Equipment Shopping Guide.

More Resources

Navy & Marine Corps RPPM Point of Contact:
David L. Spelce, MS, CIH
Navy and Marine Corps Public Health Center, Industrial Hygiene, Acquisition Technical Support Division
(757) 953-0719 (DSN 377), email: david.spelce@med.navy.mil

NAVAL SAFETY CENTER: http://www.public.navy.mil/navsafcen/Pages/home.aspx

NAVAL SAFETY & ENVIRONMENTAL TRAINING CENTER:
http://www.public.navy.mil/navsafcen/navsafenvtracen/Pages/default.aspx

AFLT TRAINING TOOLBOX
**Types of Respirators**

- **Particulate, gas and vapor air-purifying respirator (APR):** This class of respirators includes the filtering face-piece, a ½ mask or full mask. APRs remove air contaminants by filtering out particles or removing gases and vapors. APRs can only be used when adequate oxygen available in the working space (>19.5%). The filtering face pieces are disposable while the filter cartridges are changed according to your command’s respirator change out schedule. Filters and cartridges are color coded according to the contaminant they remove from the air.

- **Supplied-Air:** Takes fresh air from outside the contaminated area and supplies it to the respirator with an air-line hose. Atmosphere-supplying respirators or air-line respirators can be subdivided into demand, pressure demand and continuous flow respirators. These types of respirators are approved for abrasive blasting and spray painting operations.

- **Self-Contained Breathing Apparatus (SCBA):** Worn by firefighters and members of the ship’s damage control team. Provides air for breathing while in a hazardous environment.

- **Gas Mask/Chemical, Biological, Radiological, Nuclear (CBRN):** The negative pressure air-purifying respirator worn in response to CBRN incidents are full face NIOSH CBRN approved respirators. REF: OPNAVINST 5100.19E para B0604

- **Emergency Escape Breathing Device (EEBD):** Provides the wearer with 15 minutes of oxygen for emergency escape only.

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**Issues with Respiratory Protection Programs (RPPs) Seen During INSURV Inspections and Naval Safety Center Afloat Surveys**

1. **Respirator Use:** Sailors wearing respirators they haven’t been trained to use or they aren’t wearing the correct respirator for the job they are doing. When Sailors are given the wrong respirator, this may create a false sense of security. They may think they are protected, when, in fact, they are not.

2. **Fit testing protocols are not followed:** Fit testing records are incomplete. This may result in poorly fitting respirators or sailors not trained in the respirator that has been assigned to them. Fit testing protocols can be found in Appendix B6-C of OPNAVINST 5100.19E.

3. **Training requirements are not met:** The RPPM has not attended the required training. Program managers are required to attend the RPPM course (CIN: A-493-0072). This course is offered by the Naval Safety and Environmental Training Center. You can obtain quotas for the class through the Enterprise Navy Training Reservation System (ENTRS). Another problem is that standard training was not provided during respirator issue. Sailors must be trained prior to initial use and annually thereafter. Required training topics may be found in paragraph B0612 of OPNAVINST 5100.19E.

4. **Respirators are not properly cleaned and stored:** Respirators are required to be cleaned and sanitized after each use and stored flat in a clean, dry, uncontaminated area in a clean plastic zip-lock bag. Improper storage may lead to mildew growth in the respirator and damage to the integrity of the rubber face piece, thus preventing an air tight seal from being formed when it is used. Additional cleaning and storage protocol may be found in paragraph B0609 of OPNAVINST 5100.19E.

5. **Other:** To prevent unauthorized use of respirators, it is critical to have one central control or issue point. Respirators were not approved by ANSI or NIOSH.
Are You Inspection Ready?

Print out the INSURV Checklist for your periodic respirator program review

- **AIRLINE COMPRESSORS & EQUIPMENT**: Airline masks and hoses are from the same manufacturer. Hoses used with masks are less than 300 feet, clean and in good condition. Breathing air compressors are equipped with either high-temperature and/or carbon monoxide monitor and alarm systems. (Ref: OPNAVINST 5100.19E para B0606(b)(1)(b); B0606(a)(8); B0611e; 29 CFR 1910.134)

- **FIT-TESTING**: Documentation includes who was fit tested, who conducted the fit test (including signature), date, name and rank of wearer, their division or department, date, current PHA, fit test medium, type of cartridge/filter and/or complete make, model number and size of respirator fitted. Fit-testing is conducted prior to use and annually thereafter. (Ref: OPNAVINST 5100.19E para B0608; Appendix B6-C; 29 CFR 1910.134)

- **HAZARD EVALUATION**: An evaluation of all health hazards requiring the use of a respirator has been conducted during baseline or follow-up IH survey. (Ref: OPNAVINST 5100.19E para B0605b)

- **RESPIRATOR ISSUE**: The people who issue equipment were trained on respirator selection, fit testing, care and maintenance prior to such assignment and annually thereafter. Respirators are issued only to personnel who are trained, medically qualified and fit-tested. (Ref: OPNAVINST 5100.19E para B0612c; B6002e)

- **MEDICAL EVALUATION**: Respirators are only issued to individuals who have a current annual PHA. (Ref: OPNAVINST 5100.19E para B0613a and b)

- **PROGRAM ROSTER**: The RPM has a roster of personnel enrolled in the respiratory protection program. (Ref: OPNAVINST 5100.19E para B0602b(4)

- **RESPIRATORY PROTECTION PROGRAM MANAGER (RPPM)**: Appointed and designated in writing. Has completed the required training within three months of assuming the position. Has attended RPPM course A-493-0072. Conducts an annual audit of the respirator program. (Ref: OPNAVINST 5100.19E para B0602a; B0601(b)(1); B0602(b)(9); B0603(l))

- **RESPIRATORS**: The ship has enough NIOSH-approved respirators, spare parts and expendable supplies to conduct routine and emergency operations. The ship has a central control point for issuing and maintaining respirators. (Ref: OPNAVINST 5100.19E para B0602(b)(3); B0602(b)(6))

- **STORAGE, CLEANING and MAINTENANCE**: Facepieces are cleaned and sanitized. Spare parts are maintained in order to repair respirator facepieces. Facepieces are stored flat and kept in plastic bags. (Ref: OPNAVINST 5100.19E para B0609b; B0609(b)(6); B0609(b)(7) and B0609(b)(8))

- **SELECTION**: Respirators and cartridges are selected in accordance with the recommendations of the current IH survey. (Ref: OPNAVINST 5100.19E para B0605b)

- **TRAINING**: Personnel who use respirators are trained on respirator selection, proper fit and wear, use, care, cleaning and maintenance prior to initial use and annually thereafter. (Ref: OPNAVINST 5100.19E para B0612a)

- **PROGRAM EVALUATION**: The respirator program is evaluated annually. A checklist is provided in OPNAVINST 5100.19E, APPENDIX B6-A. (Ref: OPNAVINST 5100.19E para B0612a; B0603l)

- **INDUSTRIAL HYGIENE SURVEY**: Has been conducted by the IH office performing periodic baseline or IH surveys (from the local Navy Environmental and Preventive Medicine Unit or the local BUMED support activity, Naval hospital/Naval medical clinic.)
Conducting a correct fit test requires competence, diligence and time. A badly conducted fit test can result in poorly fitting facepieces being used, leading to wearer exposure. Talk with your work center about what can happen when Sailors are not properly fit tested. Using your MSDS as a guide, talk about what types of health effects could occur when Sailors inhale the chemicals around them.