Respiratory Protection Newsletter - March 2021

Featured Courses: **Respirator Selection & Cartridge Change Out Schedules:** May 18-19, 2021
Fit Testing Refresher & Advanced Topics: May 20, 2021

In the this issue:

COVID-19 and Respirator Change-out Schedules

OSHA does **not** permit the detection of odor or taste to be the sole basis for determination of a cartridge change-out policy. Instead, OSHA requires employers to implement change schedules based on objective information or data to ensure cartridges are changed before the end of their service life. Unfortunately, very few respirator program administrators, working on behalf of their employers, have had any formal training on this topic. Consequently, many workers still rely on odor or taste to determine when it's necessary to change a respirator cartridge. In the midst of COVID-19, this unacceptable practice becomes even more important. One of the most common symptoms associated with COVID-19 is the loss of smell and taste, which can persist long after the individual recovers. If an individual develops COVID-induced loss of smell, a respirator wearer relying on odor, rather than an appropriately developed change schedule, could be over-exposed. Alternatively, employees without a sense of taste or smell could be issued atmosphere supplying respirators. Of course, this would require additional training and perhaps additional fit testing, and would still be at risk of not recognizing respirator failure. COVID-19 is just one example where a change in a persons medical condition can alter a previously "safe" practice and/or require a change in respirator selection..

Let's Think About This: CDC Travel Restrictions

Recently, a CDC employee wanted to enroll in my Respirator Selection and Cartridge Change Out class. Unfortunately, this employee subsequently learned **CDC has "*travel restrictions for training until at least Fall of this year*"**.

Let's Think About This.

Apparently CDC believes it's an unnecessary risk or unsafe for their employees to travel due to COVID-19. If true, shouldn't this apply to everyone else?

We know airlines and hotels have implemented procedures for travel and lodging based primarily on CDC recommendations. If CDC believes these are inadequate, shouldn't they say so?

CDC has published extensive guidelines explaining how the general population and workplaces can protect themselves from coronavirus. Rather than restricting CDC employees from travel, maybe they should encourage it. CDC employees could be traveling ambassadors demonstrating to the public how the proper combination of ventilation, distance, time, use of personal protective equipment (PPE), respirator, mask, and/or barrier face coverings can be protective. Imagine observing a CDC employee traveling safely. This would give the public an opportunity to observe proper procedures and even ask the CDC employee a question, rather than submitting it online.

NIOSH & NPPTL are CDC sister organizations. NIOSH & NPPTL, are experts in protecting people (workers) from hazardous environments and are extremely good at doing this. They develop guidelines and procedures that allow workers to safely enter, stay, and leave hazardous environments on a regular basis. Protecting people/workers isn't anything new. During this pandemic, I've traveled safely and have conducted respirator fit testing and training to high risk populations. It's possible to do

this safely.

CDC shouldn't just tell us how to protect ourselves and others, they should show us. CDC should expand their travel opportunities. Send your employees to my May 18-19 Respirator Selection and Cartridge Change-out class. Send them to my May 20 Fit Testing Refresher and Advanced Topics course. Show America how it's possible to travel safely. Be the shining light for the world to follow.

CDC, if you need help with respiratory protection, you know how to contact me.

Note: "Let's Think About This" is intended to provide readers information "outside the box" of traditional thinking. The content may at times be funny, light-hearted, spirited or identify unusual observations. It's tongue and cheek and does not necessarily represent the views of Dr. McKay.

Counterfeit Respirators
Since the beginning of the COVID-19 pandemic, U.S. Customs and Border Protection (CBP) personnel throughout the nation have seized more than 14 million counterfeit face masks, nearly 180,000 FDA-prohibited COVID-19 test kits, and tens of thousands of FDA-prohibited pharmaceuticals.

For example, back in December of 2020, U.S. Customs and Border Protection Officers at John F. Kennedy International Airport seized approximately 144,000 counterfeit 3M N95 masks in two shipments from Hong Kong.

Be careful what you buy. Use the NIOSH website to help identify counterfeit respirators.

The HPAE has developed an excellent guide to help it's members identify counterfeit 3M respirators. Their guide has great pictures and tips. For example, if the respirator has an unusual odor, missing print on the bottom of the box, lot numbers on the facepiece that don't match the box, staples in the wrong location, an unusual size, internal material having fabric that looks like a paper towel, etc., are some of the characteristics of a fake respirator. To down load the HPAE guide, use the following link, but don't forget to use the NIOSH website to identify counterfeit and fake respirators:
https://www.hpae.org/resources/fake-face-mask-guide-for-hpae-members/

Review: Decontamination Methods for Filtering Facepiece Respirators

NIOSH published a comprehensive review of the many decontamination methods proposed for re-use of N95 filtering facepiece respirators (FFRs).

Details regarding decontamination methods, pros and cons are included in the report. It's too lengthy to fairly summarize each of the methods in this newsletter, so if this topic is of interest to you, go to the source:
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7707143/pdf/nihms-1640891.pdf

Currently, the need to decontaminate N95 FFRs has changed significantly, since supplies have increased. We can thank American companies for increasing production and new companies that began production of N95 FFRs for the very first time. Despite the increase in N95 FFR production, supply chain issues remain and many hospitals are reluctant to switch to readily available respirators, due to the need to fit test respirators when switching to another model. Consequently, decontamination still exists. Below is the abstract from this NIOSH publication, along with a few excepts from this document.

Abstract
During the current COVID-19 infectious disease pandemic, the demand for NIOSH-approved filtering facepiece respirators (FFR) has exceeded supplies and decontamination and reuse of FFRs has been implemented by various user groups. FFR decontamination and reuse is only intended to be implemented as a crisis capacity strategy. This paper provides a review of decontamination procedures in the published literature and calls attention to their benefits and limitations. In most cases, the data are limited to a few FFR models and a limited number of decontamination cycles. Institutions planning to implement a decontamination method must understand its limitations in terms of the degree of inactivation of the intended microorganisms and the treatment's effects on the fit and filtration of the device.

Here's some excerpts:

> The CDC has posted guidance for decontamination and reuse of FFRs (Centers for Disease Control and Prevention, 2020a). While disposable FFRs are **not** approved by NIOSH to be decontaminated, FFR decontamination and reuse is currently being performed by some organizations.

Decontamination and subsequent reuse of FFRs should only be practiced when an FFR shortage exists. At present, FFRs are considered single-use devices in healthcare and there are no manufacturer authorized methods for FFR decontamination for reuse.

While decontamination and reuse of FFRs is **not** consistent with NIOSH-approved usage, this option is a crisis capacity strategy for supply conservation.

The NIOSH review is comprehensive and covers methods that may be used by large institutions. Unfortunately, it does not include methods that may be used by individuals. Lastly, the need to decontaminate FFRs has decreased substantially. One of the largest, if not the largest, decontamination systems used throughout the United States is run by Battelle. Their CCDS system (Critical Care Decontamination System™) for decontaminating filtering facepiece respirators for COVID-19 is scheduled to end on March 31, 2021. The last day for current customers to send facepieces for decontamination to Battelle is March 18, 2021.

If this topic is of interest to you, go to the source: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7707143/pdf/nihms-1640891.pdf

Update on Re-Use of N95 FFRs

A 2020 study by Duncan evaluated quantitatively fitted surgical style N95 filtering facepiece respirator (3M 1870) device to extreme reuse and extended wear conditions (up to 19 uses over a duration of 5 days) and measured its protective performance at regular intervals, including simulated workplace protection factor measurements using total inward leakage. With this respirator, it was shown to be possible to maintain protection corresponding to an assigned protection factor greater than 10 under what they consider to be extreme usage conditions, provided an individual is properly trained in the use of, and expertly fitted in, the respirator. Other factors such as hygiene and strap breakage are likely to place limits on reuse.

Subjects in this study inspected the respirator for obvious defects before donning and continued to wear the respirator for the remainder of the day, removing for 15–30 min at approximately 1.5 hour intervals to simulate reuse. These times were based on discussions with health care workers on the use of N95 respirators in health care settings, giving 3–4 reuses per day, for a total over 5 days (up to 19 uses over a duration of 5 days). The respirator was handled as though contaminated, and hung to dry between donnings, according to instructions currently given to health care workers.

This is good news for workers who need to re-use their respirator. However, it's important to remember that these findings represent a single make and model respirator. While these results are helpful, they are not transferrable to other make and model respirators.

For additional information, go to the source:
2020 Duncan S, Bodurtha C, Dickson E, et al. The impact of extreme reuse and extended wear conditions on protection provided by a surgical-style N95 filtering facepiece respirator. JOEH 17, 546-559, 2020.

Fast Fit Protocols: Not for QLFT

It's come to my attention some healthcare facilities are using fast fit exercise protocols for qualitative fit testing. It's important to recognize fast fit protocols are **not permitted** to be used with qualitative fit test methods, such as Saccharin (sweet) and/or Bitrex (bitter) aerosol solutions. Doing so would be a **violation** of the OSHA respiratory protection standard. In addition, there are no studies suggesting these fast protocols identify poorly fitting respirators when qualitative fit testing is conducted. Likewise, these protocols are **not permitted** when using irritant smoke or banana oil fit test methods. They're **only permitted** when conducting quantitative respirator fit testing, such as when using the TSI PortaCount or AccuFit 9000. **QualFit** software was developed to help ensure proper qualitative fit test protocols are followed. **QualFit** software ensures the correct exercises are conducted using the correct number of squeezes for each exercise, at the proper time, and in the proper order.

Fit Testing Refresher & Advanced Topics

This 1-day course is specifically designed for the person who has been conducting fit testing, but needs a better understanding as to why poorly fitting respirators pass can pass a fit test and why good fitting respirators fail. This class provides an opportunity to discuss advanced topics not covered during a typical 2-day fit testing workshop due to time limitations. This course is also valuable for respirator program administrators who need a better understanding of fit testing procedures and assurance that their fit testing program is being run properly. **This program identifies tricks and omissions some fit test operators use to allow poorly fitting respirators to pass fit testing (QLFT & QNFT).**

Next course date is May 20, 2021

New ASTM Barrier Face Covering Specification F3502-21

This specification establishes guidelines for barrier face coverings (i.e., masks) used for source control. The guideline specifies minimum design, performance, and testing requirements. The focus of this specification is to identify how the face covering should perform in terms of source control/protection, comfort, and re-use potential. Key requirements for this specification are minimum criteria for:

Filtration efficiency, and
Airflow resistance

In actuality, there are two (2) levels of performance criteria for filter efficiency and airflow resistance. The filtration efficiency criteria provide a greater challenge than most other particulate filtration tests, including ASTM's own bacterial filtration efficiency test (BFE), because it uses a smaller particle size and more rigorous test conditions. However, it is **not** as stringent as the NIOSH filter efficiency tests used for filtering facepiece respirators. To pass the filter efficiency test, the barrier face covering must have a filter efficiency of at least 20% to pass a "Level 1" criterion, and at least 50% for the more stringent level 2 criterion. This specification also has non-mandatory criteria for quantifying faceseal leakage.

For additional details, go to the ASTM website or use this link: https://www.astm.org

A better to administer qualitative respirator fit testing using sweet or bitter fit test methods.

QualFit software automates and records qualitative respirator fit testing using Saccharin and/or Bitrex aerosol solutions. The software prompts the operator to deliver the aerosol solution with the correct number of squeezes for each exercise, at the proper time, and in the proper order. This improves fit testing accuracy. The software displays the current exercise in progress, automates the timing sequence and calculates the number of squeezes to be administered, based on threshold screening results. Visual and audible prompts allow the operator to focus their attention on the respirator wearer. The entire procedure becomes less frustrating for the operator and subject being tested. The software tracks each step of the fit testing procedure required in mandatory Appendix A of the OSHA Respirator Standard. **Qual**Fit software improves the quality and efficiency of respirator fit testing. The employer benefits by knowing the test procedure was properly administered and provides written documentation for compliance with record keeping requirements specified in paragraph "m" of the OSHA standard. The employee benefits by knowing a standardized procedure was followed, rather than what often appears to be a random procedure.

For Information visit: www.QualFit.net
To place a secure online credit card order visit: https://qualfit-software.square.site/

OSHA News

Two Workers Die Inhaling Toxic "Vapors"

On Feb 10, 2021 OSHA published a National News Release citing a Rail and Maintenance Service company $419,347 for a fatality investigation conducted August 2020. According to the report, a worker became unresponsive after entering a natural gasoline rail car with the intent of cleaning the space. A second employee entered the rail car and was also overcome after attempting to rescue the fallen worker (sound familiar?). Both workers were pronounced dead at a local hospital.

Dr. McKay's Comment:

There's another lesson to be learned. OSHA specifically said:

"Two workers succumbed to natural gasoline fumes in attempt to clean tanker car."

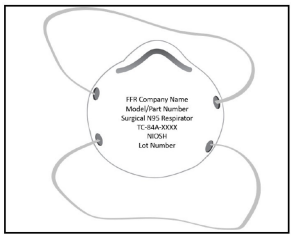
However, when gasoline evaporates it does **not** produce "fumes". Rather, it releases a vapor. A respirator effective for fumes will **not** be effective for vapors, unless an atmosphere supplying respirator was selected. With respect to respirator selection, terminology is important. OSHA should know better.

Respirator Selection & Development of Cartridge Change Out Schedules
May 18-19, 2021 in Cincinnati
Go to www.DrMcKay.com for details.

NIOSH News

Announcements from NIOSH

Surgical N95 FFR Conformity Assessment
Since August 24, 2020, NIOSH has accepted and prioritized approval applications for surgical N95 filtering facepiece respirators (surgical N95s) and has approved eight to date, with more expected in the future. Since NIOSH-approved surgical N95s are also regulated by the Food and Drug Administration (FDA) under product code MSH and 21 CFR 878.4040, this notice informs users about a subset of surgical N95s, exempted by regulation from the FDA's 510(k) premarket clearance process. This subset of NIOSH-approved surgical N95s are easily identified by the NIOSH approval labels.



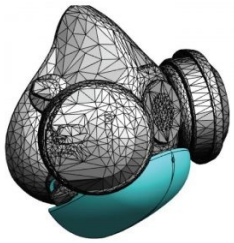
NIOSH Approved surgical N95s offer the same level of respiratory protection as a NIOSH Approved N95 filtering facepiece respirator (FFR). Additionally, the surgical N95 has demonstrated conformance to FDA specified flammability, fluid resistance, and biocompatibility requirements and is intended for use in all healthcare settings and for all medical purposes in which an N95 level of respiratory protection is needed to protect the wearer.

Users can recognize a NIOSH Approved surgical N95 by the abbreviated label, which is printed on each respirator. The surgical N95 abbreviated label includes the name of the approval holder (i.e., name of the company that was issued NIOSH approval), the model or part number, the approval number assigned by NIOSH (e.g., TC-84A-XXXX), "Surgical N95 Respirator," "NIOSH," and the lot number. An example of a NIOSH Approved surgical N95 label is provided on their website (see link below)

Read the full Conformity Assessment Notice for more information and examples of the approval labels.

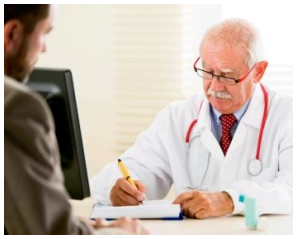
Spirometry Refresher:
May 11, 2021
September 21, 2021
Interpretation of Spirometry: Beyond the Numbers
September 22, 2021
Go to www.DrMcKay.com for details.

Elastomeric Respirators for Source Control
On March 1, 2021 NIOSH announced information regarding innovations for using elastomeric respirators for source control. In their blog, they report that respirator design is constantly improving and evolving to meet new challenges. Manufacturers have recently developed innovative NIOSH-approved elastomeric half mask respirator designs that both protect the wearer as well as provide adequate source control. In addition to the role of testing and certifying the effectiveness of these respirators for occupational use, NIOSH is contributing to this area and fulfilling critical research needs to determine the potential for respirators with exhalation valve to be used as source control.



Read about Advancements in Elastomeric Respirator Technology for Use as Source Control on the NIOSH science blog.

Medical Complications from Respirator Use
OSHA requires respirator medical clearance for persons required to wear respiratory protection. Researchers at the University of Cincinnati are collecting information on persons who:



1) Developed a medical complication while wearing a respirator, and
2) Identify pre-existing medical conditions causally related to the complication that developed.

If you have information (published or un-published) that establishes a link between a specific medical condition and a complication that developed as a result from wearing a respirator or during fit testing, please share this information with us. We're particularly interested in cases where a medical complication was induced by respirator use. Information such as the specific type of respirator worn, work environment, duration of use, level of physical exertion, underlying medical conditions that contributed to the complication, etc., is needed. You can send this information to:
info@DrMcKay.com

Respirator Program Administrator Training

Attend at least four days of respirator training from three different training categories and earn a certificate for Respirator Program Administrators.

This program can be given onsite.

For additional information, email us at info@DrMcKay.com

Share Your Respirator Experience

Here's an opportunity to contribute your knowledge and experience to others. If you have an interesting respirator selection or other challenging respirator problem (and solution), please submit it to info@DrMcKay.com. I may use your real-life problem to help train students in our graduate and continuing education programs in respiratory protection. This transfer of information will benefit others, maybe even your children or grandchildren.

Wanted: Damaged Fit Test Adapters

Rather than throwing away damaged fit test adapters, consider donating them to our fit testing workshops. We strive to make our fit testing workshops as realistic as possible. Incorporating damaged along with good fit testing adapters can provide a valuable training experience. If you wish to send a damaged fit test adapter or a damaged facepiece with unusual or difficult to find leakage for our respirator inspection workshops, send us an email at info@DrMcKay.com and we'll provide shipping information.

Undamaged fit test adapters are also needed. On average, we lose one (1) fit test adapter every workshop due to wear and tear, poor adapter design, improper student use and other causes.

New Video

Respirator Fit Testing Errors and Solutions - new video (21 minutes)
https://youtu.be/0RsQEeOcS7o

Fit testing errors can cause poorly fitting respirators to pass a fit test. These common mistakes and solutions are explained. Examples include improper squeezing of the nebulizer bulb, excessive tilting, incorrect direction, skipping exercises, incorrect length of time, etc. Solutions for each of these errors are provided.

Respirator Training Courses:

Dr. McKay and the University of Cincinnati is pleased to announce the following programs on Respiratory Protection and Fit Testing to your staff. They are:

Overview of Respiratory Protection:
http://www.drmckay.com/rtc-overview.shtml
April 20, 2021
October 19, 2021

Fit Testing Workshop (2-day):
http://www.drmckay.com/rtc-workshop.shtml
April 21-22, 2021 **(1-spot available)**
October 20-21, 2021

Respirator Selection & Cartridge Change Out Schedule Workshop.
http://www.drmckay.com/rtc-resp_selection.shtml
May 18-19, 2021

Fit Testing Refresher & Advanced Topics
http://www.drmckay.com/rtc-resp-refresher-advanced.shtml
May 20, 2021

Fit Testing Workshop Quantitative (1-day):
http://www.drmckay.com/rtc-workshop1day.shtml
Onsite only

All courses are held in Cincinnati, unless noted otherwise. On-site training is available.

Respirator Selection & Change Out Schedules

This workshop provides guidance on respirator selection and the development of OSHA compliant change out schedules for respirator cartridges. A combination of lecture with practice problem sessions is used. The course is designed to teach students how to select a respirator based on workplace conditions (exposure level, type of contaminant, length of time to be worn, etc.). The selection process goes beyond the typical recommendation to "use a NIOSH approved air purifying respirator". Students will learn how to select a specific respirator as well as a specific filter/cartridge (when appropriate). More than a dozen guidelines for development of an OSHA compliant cartridge change out policy will also be taught, including common computer models and how to use them.

Partial Listing of Topics

Respirator Selection

* Review of facepiece definitions and modes of operation.
* Practical and theoretical basis for respirator selection based upon:
  Assigned Protection Factors (APF)
  - MUC's, HR's, IDLH, etc.
* OSHA guidelines for respirator selection.
  - IDLH and non-IDLH atmospheres.
* Selection steps and information gathering procedures.
* Minimum respiratory protection versus practical alternatives.
* Filter selection issues
  - How to select an N, R, or P filter.
  - Why filter selection is influenced by exposures below the exposure limit.
  - How to choose a 95 versus 100 filter.
* Practical methods for handling unknown concentrations without defaulting to an SCBA.
* Calculating MUC's for mixtures.
* Saturated Vapor Concentrations (SVC's) and selection concerns.
* When a particulate filter may be needed for organic solvents.
* Equilibrium Vapor Concentrations.
* Selection Workshop
  - Practical problems and solutions.

Development of Cartridge Change Out Schedules

* OSHA recommendations for a change out policy.
* Factors that affect cartridge service life.
* Learn how to develop an OSHA compliant change out schedule.
* Understanding the breakthrough curve.
* Common methods used to define breakthrough.
* What level of breakthrough should be used?
* Work rate tables.
* Effect of high relative humidity.
* Methods for determining service life (use, limitations, and practice problems)
  - OSHA recommendations
  - Rules of thumb
  - Using laboratory data
  - Using math models
  - Using computer (software) models
  - Cartridge testing methods (3 methods) Combining methods
* Learn how to develop a change schedule when computer models are not available.
* Recommendations for mixtures:
  - OSHA compliance method
  - mole fraction method
  - multi vapor model
* How to confirm your change-out schedule.
* Storage and migration concerns.
* Immediate Breakthrough Upon Reuse (IBUR) concepts

Gain confidence your current procedures are correct! Former students have found this information to be extremely valuable.

Fit Testing Workshop:

This two (2) day workshop provides comprehensive lecture and "hands-on" training for students who need to learn how to conduct an OSHA accepted qualitative or quantitative respirator fit test. Students will have an opportunity to fit test a variety of different style facepieces, including filtering facepieces, half, & full. A combination of lecture and "hands-on" testing in the presence of a trained and experienced instructors will be used to help participants learn how to conduct respirator fit testing to satisfy regulatory requirements. Hands-on fit testing will include qualitative and quantitative methods. The following types of fit testing equipment will be available: Saccharin (sweetener) and Bitrex (bitter) qualitative fit test kits using squeeze-bulb nebulizers. Quantitative fit testing with the TSI PortaCount, AccuFIT 9000, and the OHD QuantiFit. Class size will be limited to ensure a favorable faculty to student ratio. Students will learn how to set-up, operate, maintain, troubleshoot, analyze, and interpret fit test results. Where appropriate, students will learn how to calibrate testing equipment and record results. All course materials, supplies, equipment, and reference manuals will be provided.

Students will also disassemble, reassemble, and inspect respirators for common problems. The workbook alone is a valuable reference for solving fit testing problems in the future.

This course uses a combination of lecture and small practicum groups to ensure students have ample time to practice and learn fit testing techniques. The second day provides students sufficient time to concentrate on the particular methods of interest to them. The "Hands-On" approach is emphasized in this course. Students will have the opportunity to fit test several different make and model respirators. The fit testing workshop provides an opportunity to see and experience many different types of commonly used fit testing methods (qualitative and quantitative).

Individuals who plan to attend the fit testing workshop, but have little or no experience with respiratory protection should take our 1-day "Overview" class, routinely offered before the fit testing workshop. A substantial discount is given when both courses are taken.

Dr. McKay is the past chair of the ANSI Z88.10 Respirator Fit Testing sub-committee, a voting member of the full ANSI Z88 Respiratory Protection Committee, the AIHA Respiratory Protection Committee, and others.

Fit Testing Refresher & Advanced Topics:
This 1-day course is specifically designed for the person who has been conducting fit tests, but has not had formal training or needs a review. This course reviews OSHA fit testing requirements and helps the operator understand **why poorly fitting respirators pass fit testing and why good fitting respirators fail**. It also provides an opportunity to discuss advanced topics not covered during a typical 2-day fit testing workshop due to time limitations. This course is also valuable for respirator program administrators who need a better understanding of fit testing procedures and assurance that their fit testing program is being run properly. The emphasis of this course is on quantitative fit testing, although many of the concepts are applicable to all fit test methods.

Partial Listing of Topics
Review of fit test procedures
- Facial hair: issues & solutions
- Selection process
- Comfort assessment
- Interference with PPE

Establishing pass/fail criteria
Interpretation of fit test results
Why user seal checks fail to detect leakage
Why user seal checks create leaks not present
Proper use of fit test adapters
Selecting sample probe location
Why leaking respirators pass fit testing
Why good fitting respirators fail fit testing
What does a high fit factor really mean?
Wear time & non wear time issues
- Understanding fit factor vs protection

When is quantitative fit testing required?
Opportunity to get answers to your questions

This course can also be given on-site.

Overview of Respiratory Protection:
This one day course provides a practical overview of respirators, standards, guidelines, use, and limitations of commonly used air purifying respirators. This class also provides an excellent overview of the OSHA Respirator Standard. Little or no prior formal training is required. The morning session includes lectures on the types and use of respirators and basic respirator selection procedures using APFs and MUCs. The advantages and disadvantages of different respirator facepieces, filters (N, R, & P), cartridges, PAPR's, and the physiologic effects of wearing a respirator will also be discussed. Respirator standards and program requirements will be reviewed to help the student comply with OSHA regulations. Discussion of qualitative and quantitative fit testing, user seal checks, worker training, and respirator medical clearance requirements will be provided. This course is essential for those individuals who oversee respirator users in their work place or new to respiratory protection.

Respirator Training at Your Location:
A variety of respirator training programs are available on-site. Courses available include:
* Fit Testing Refresher & Advanced Topics
* How to Develop a Cartridge Change Out Schedule (1 day)
* Respirator Selection (1 to 1.5 days)
* Fit Testing for Health Care Professionals (1 day)
* Basics of a Respiratory Protection Program (2 days)
* Overview of Respiratory Protection (1 day)
* Respirator Fit Testing: Quantitative (1 or 2 days)
* Respirator Fit Testing: Qualitative (1day)
* Fit Testing at your workplace. Not a course, but a hands-on program with your staff and equipment.

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If you Receive Duplicate Newsletters:
Click "reply" and put "Remove" in the subject heading of the email address you wish to have removed as described above.

Roy McKay, Ph.D.
University of Cincinnati
www.DrMcKay.com

Dr. McKay has approximately 40 years of national and international experience in all areas of respiratory protection including **research, teaching, clinical practice, peer reviewed publications, and consultation** as a faculty member at the University of Cincinnati. Dr. McKay is the past chair of ANSI/AIHA Z88.10, the committee responsible for "Respirator Fit Test Methods" and a member of ANSI/ASSE Z88.2-2015 which published the "American National Standard Practices for Respiratory Protection. Respirator committee assignments include the American Industrial Hygiene Association's Respiratory Protection committee. He has conducted respirator fit testing, training, and consultation services for governmental agencies, including OSHA, NIOSH, NPPTL, CDC, private industry, and respirator manufacturers. He's developed more than a dozen different continuing education courses on respiratory protection, which include fit testing, respirator selection, cartridge change out, program administration, filter penetration, protection factors, and other topics.

Dr. McKay does not receive any public or private funding for this educational service. The opinions in this newsletter are those of Dr. McKay and not the University of Cincinnati.

For information about **QualFit** Software for qualitative respirator fit testing with sweet and/or bitter agents, go to www.QualFit.net

What is **QualFit** software?
Check out this 12 minute video:
https://youtu.be/RwdMfrQXdTY

Basic Operation of **QualFit** Software:
https://youtu.be/vfwfuVOkAKw

Comprehensive Fit Test Training Video
54 minutes
https://youtu.be/FxpVsm3OhLY

Respirator Fit Testing Errors and Solutions - new video (21 minutes)
https://youtu.be/0RsQEeOcS7o

Fit testing errors can cause poorly fitting respirators to pass a fit test. These common mistakes and solutions are explained. Examples include improper squeezing of the nebulizer bulb, excessive tilting, incorrect direction, skipping exercises, incorrect length of time, etc. Solutions for each of these errors are provided.