INSTRUCTIONS FOR THIS TEMPLATE

- The purpose of this template is to assist health care facilities in Iowa that provide training and fit testing for employees who are required to wear tight-fitting respirators.
- Respiratory Protection Program Administrators can use these slides and scripts to customize training specifically for their organization.
- A Respirator Training Outline and Active Learning Worksheet can also be customized for your organization and given to employees to complete during their respirator training.
- Program Administrators should fully understand the content and resources provided in this presentation before training employees.

THIS SLIDE CAN BE REMOVED IN YOUR FINAL SLIDE DECK

(Resources for Respiratory Protection Program Administrators and health care workers can be found at https://hhs.iowa.gov/hai-prevention/respiratory*)*

IOWA DEPARTMENT OF HEALTH AND HUMAN SERVICES

- The Iowa Department of Health and Human Services (Iowa HHS) is not a regulatory agency.
- This template is intended as an educational resource and guidance document only. If the end user adapts this template for their Respiratory Protection Program, it is their responsibility to ensure all content and referenced sources are current and relevant for their specific setting.
- Any specific questions on meeting safety and regulatory mandates should be directed to the appropriate regulatory authority for that specific workplace setting and not the Iowa HHS.
- To contact Iowa's Occupational Safety and Health Administration, visit Iowa OSHA.

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(Respiratory Protection Program Administrators should become familiar with regulatory requirements and resources found at https://www.iowaosha.gov/iowa-osha.)

PROJECT FIRSTLINE

Funding for this resource was made available through Project Firstline. Project Firstline is a national collaborative led by the U.S. Centers for Disease Control and Prevention (CDC) to provide infection control training and education to frontline health care workers and public health personnel. The Iowa HHS is proud to partner with Project Firstline, as supported through the 2021 Cooperative Agreement. CDC is an agency within the Federal Department of Health and Human Services (HHS). The contents of this PowerPoint presentation do not necessarily represent the policies of CDC or HHS and should not be considered an endorsement by the Federal Government.

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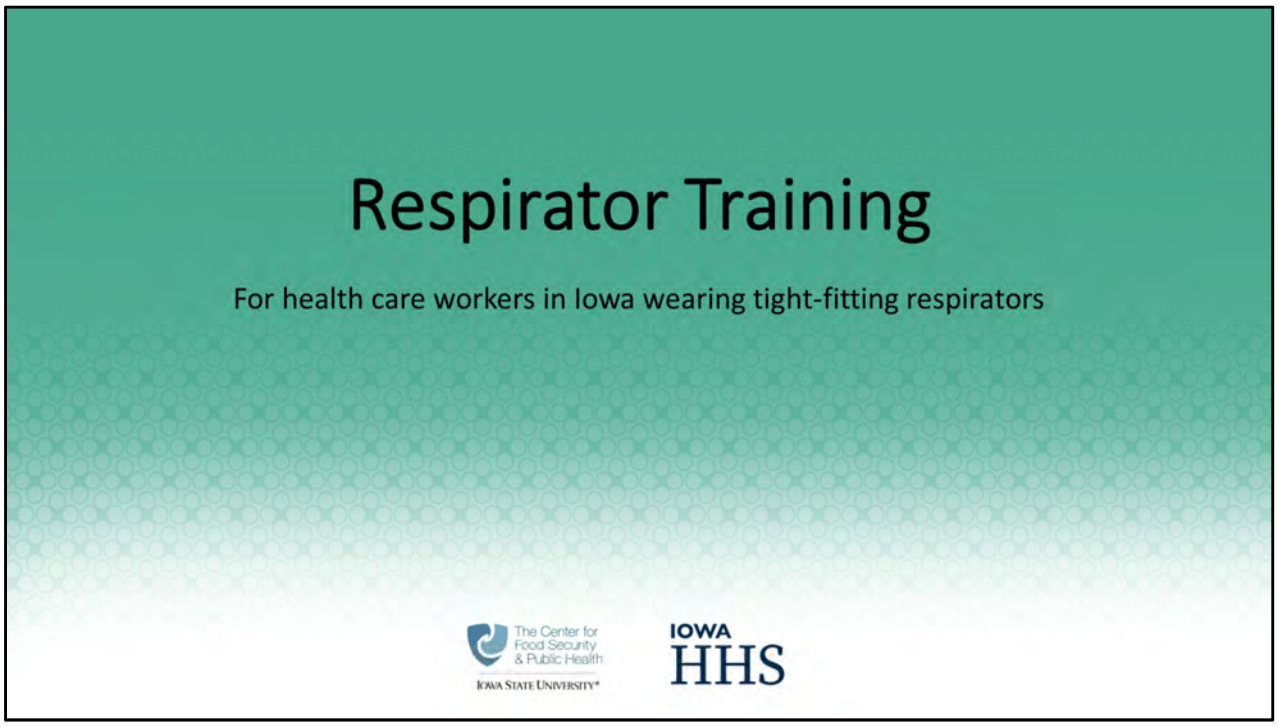
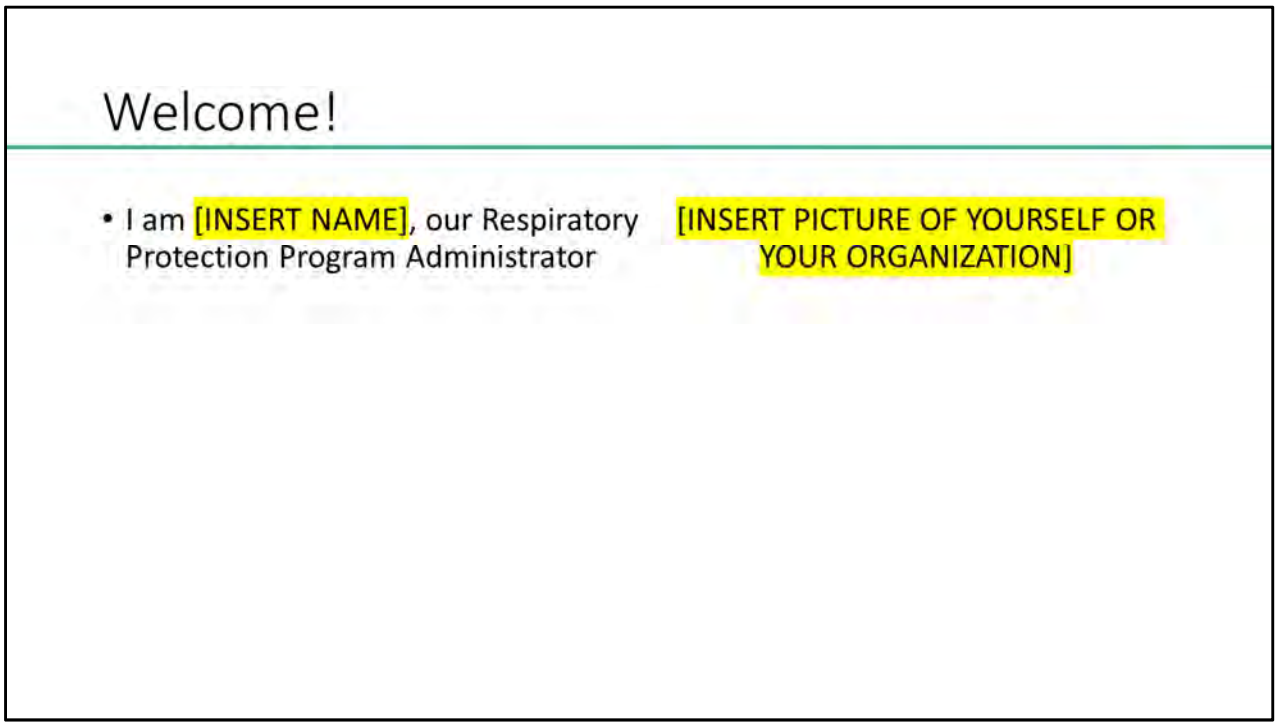


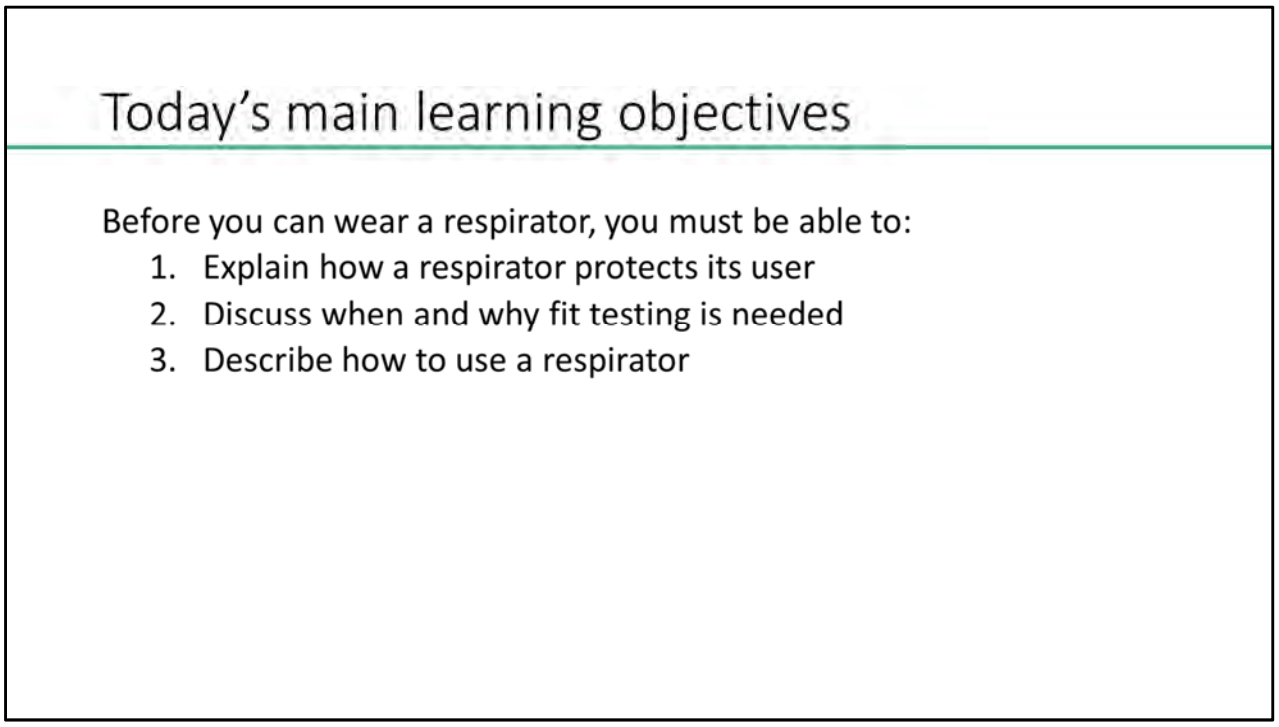
(Hand out the Respirator Training and Active Learning Worksheet so attendees can fill in the blanks during the presentation and keep a copy of the training's key takeaways.)



Welcome!

[Introduce yourself and your job duties as they relate to your organization's Respiratory Protection Program]

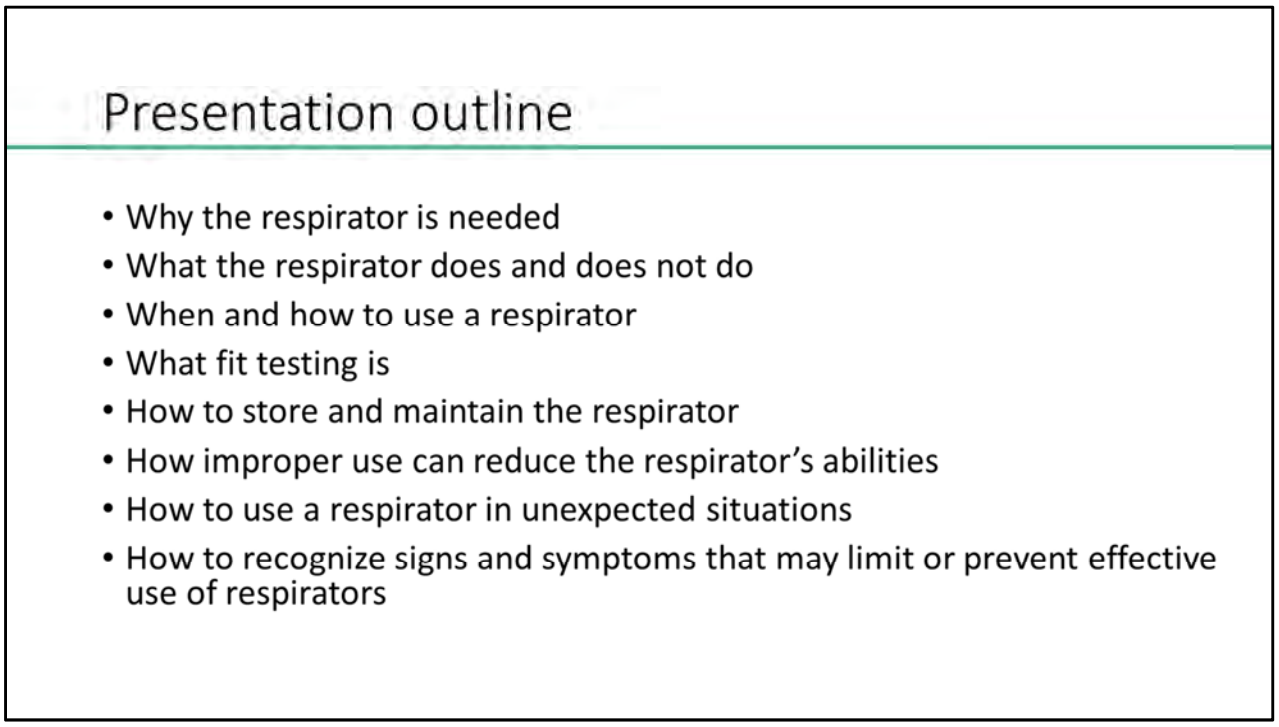
Invite everyone to introduce themselves, their positions, if this is their first respirator training or annual training, etc.



We will cover a lot of information in today's training, but it mostly boils down to three main learning objectives.

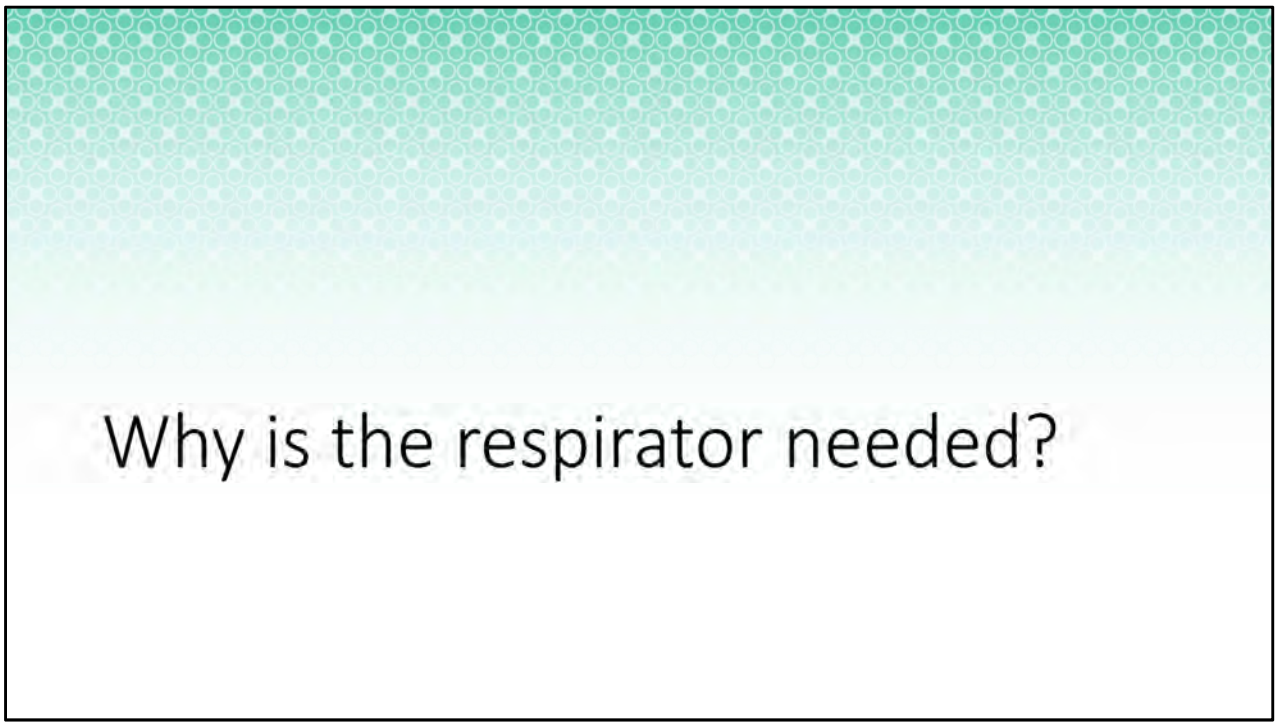
Before you can wear a respirator, you must be able to:

1. Explain how a respirator protects its user
2. Discuss when and why fit testing is needed
3. Describe how to use a respirator

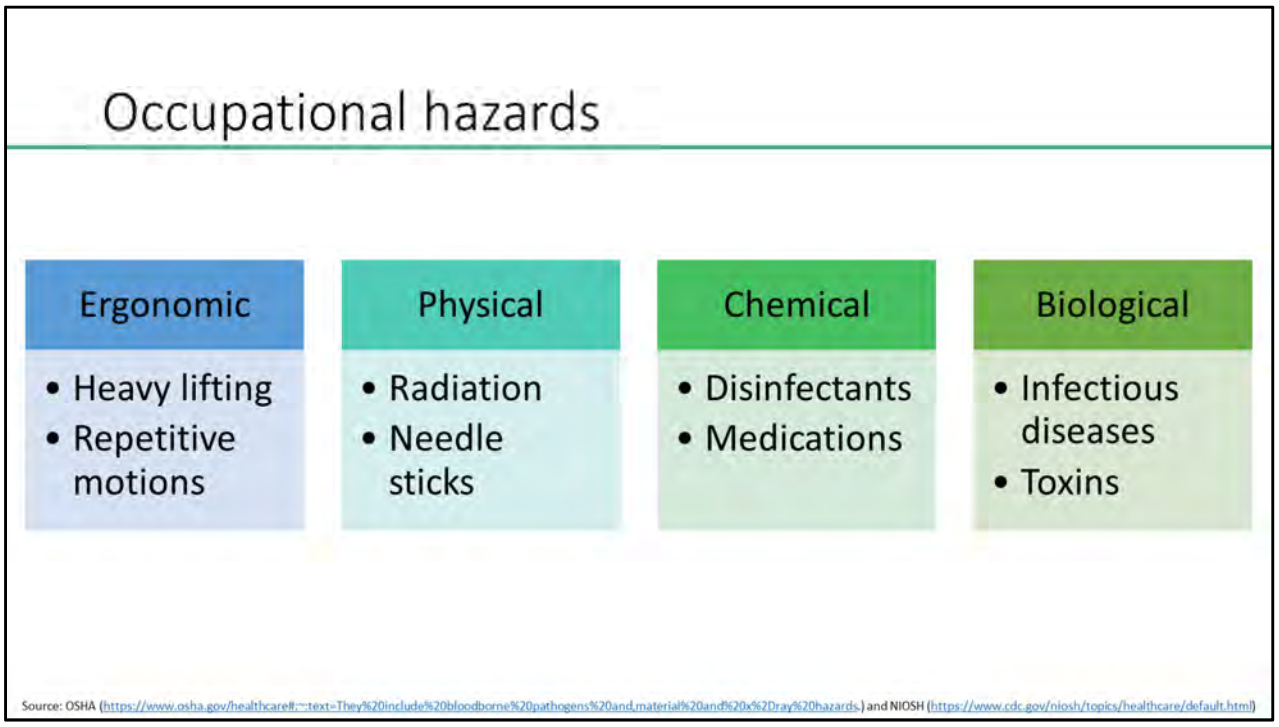


Today's respirator training will include:

- Why the respirator is needed
- What the respirator does and does not do
- When and how to use a respirator
- What fit testing is
- How to store and maintain the respirator
- How improper use can reduce the respirator's abilities
- How to use a respirator in unexpected situations
- How to recognize signs and symptoms that may limit or prevent effective use of respirators



First, let's find out why the respirator is needed.

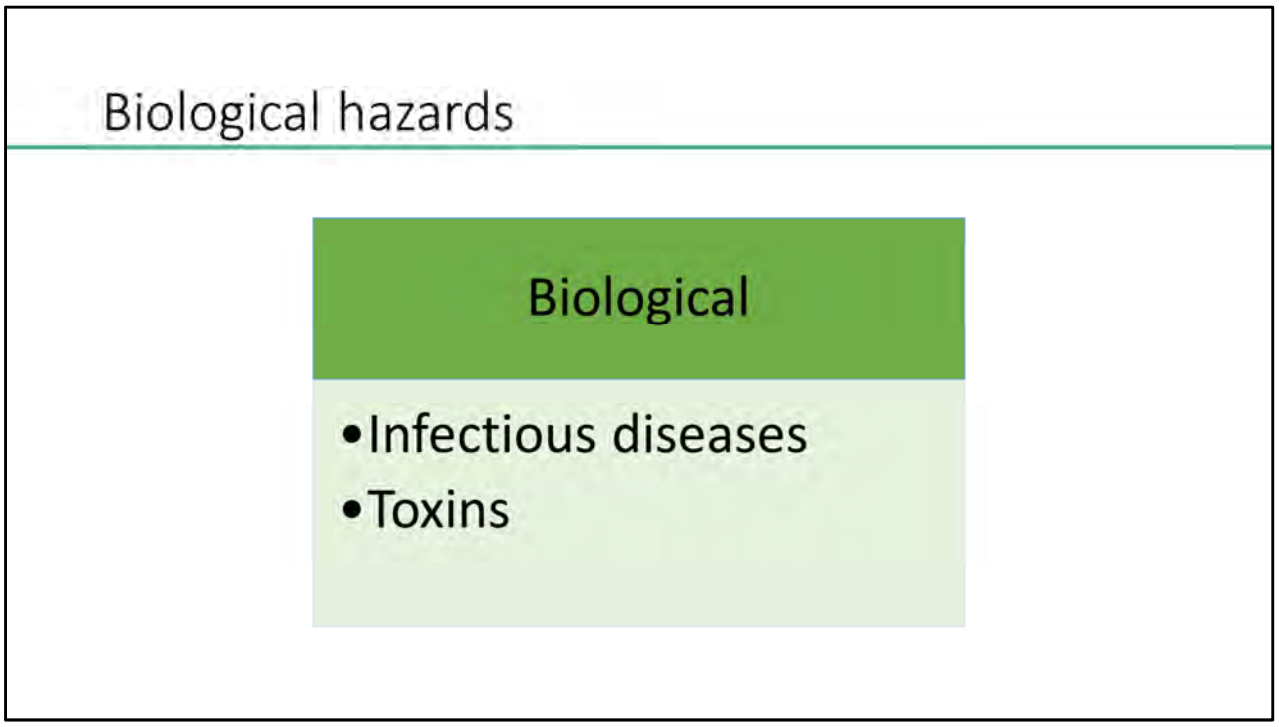


(Add or edit these examples of hazards to fit with your facility's practices)

Hazards are all around us, and can be described as ergonomic, physical, chemical, or biological.

Examples of ergonomic hazards include heavy lifting and repetitive motions, physical hazards include radiation and needle sticks, chemical hazards may include disinfectants and medications, and biological hazards include infectious diseases and toxins.

By understanding how biological hazards, such as germs and toxins, spread and make people sick, you can recognize the risks throughout your workday.



(Add or edit these examples of hazards to fit with your facility's practices)

The focus of today's training is for you to better understand how respirators fit into our infection prevention and control program.

Respirators are devices that can protect you from breathing in harmful substances – like germs, dusts, and chemicals.

There may be moments when you might need to apply infection control recommendations to situations that aren't described in guidelines.

Understanding how germs spread and make people sick is helpful so you can protect yourself, your coworkers, and your patients.

Germs are everywhere

Source: CDC (https://www.cdc.gov/infectioncontrol/projectfirstline/healthcare/where-germs-live.html)

Germs are everywhere – in the environment and on or in our bodies.

There's a higher chance for germs to spread in health care settings, like ours, because patients come here for care. We have closer interactions during care than people do in community settings. Also, patients who are already ill or weak are more likely to be vulnerable to infection. And it's not just our patients who are at risk—some germs can break through the body's natural defenses, even in a person who is healthy. This is why recognizing infection risks in health care is so important.

Learning to recognize infection risks means learning to identify where germs live (their reservoirs) and how they can get from place to place or from person to person (through pathways). Common reservoirs in the environment include water, wet and dry surfaces, dirt and dust, and devices. Common reservoirs on or in the body include the skin, gut, blood, and respiratory tract.

Respiratory system pathways

- Breathing in germs in respiratory droplets or in the air
- Getting splashes or sprays into our eyes, nose, or mouth
- Spreading germs in the nose and mouth to the skin and hands after touching the face
- Bypassing the body's natural defenses through procedures or surgeries

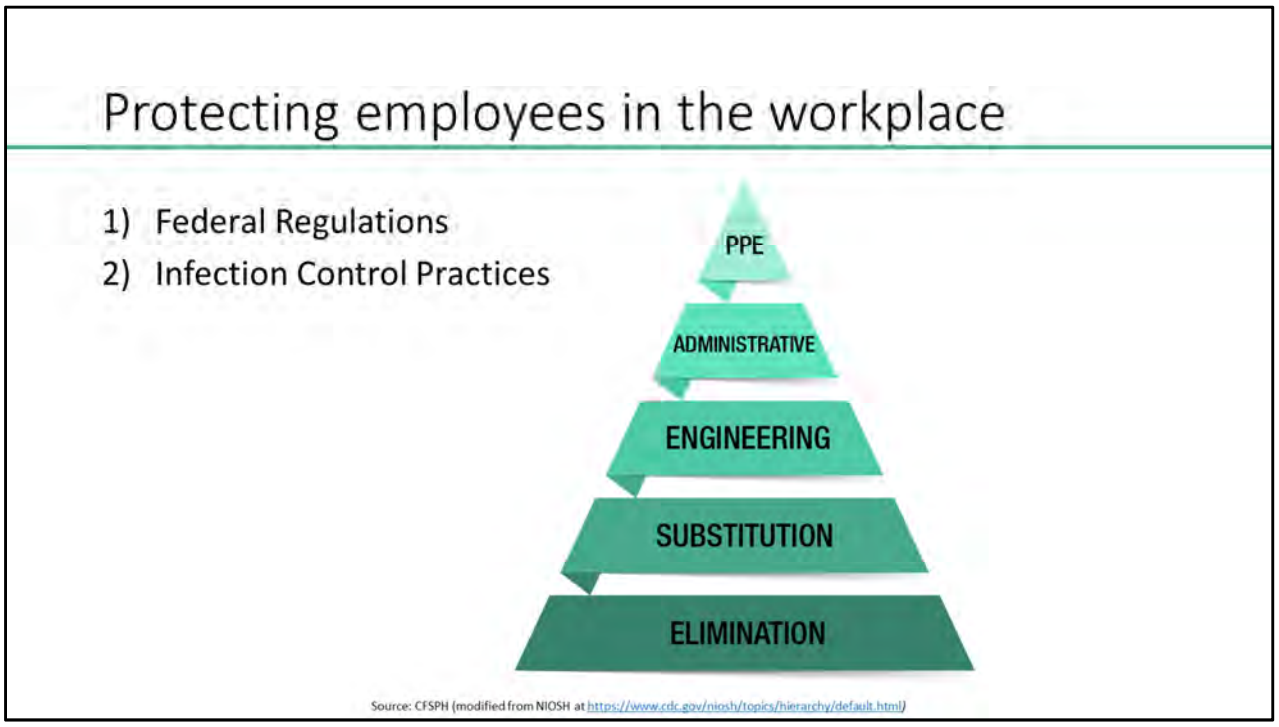
Source: CDC (https://www.cdc.gov/infectioncontrol/projectfirstline/healthcare/germs-body.html)

Let's focus on the respiratory system specifically. This includes the nose, mouth, throat, windpipe, and lungs.

Most of the germs commonly found in the upper respiratory system keep those parts of the body healthy, but when they get into the airway or lungs, they can cause infection.

Common pathways, or ways germs get from one place to another, for germs to spread from the respiratory system include:

- Breathing in germs in respiratory droplets or in the air
- Getting splashes or sprays into our eyes, nose, or mouth
- Spreading germs in the nose and mouth to the skin and hands after touching the face
- Bypassing the body's natural defenses through procedures or surgeries



When hazards occur in work settings, we have federal regulations and infection control practices in place to protect employees.

To provide optimal protection, a series of prevention or control methods should be implemented, from most to least effective.

This pyramid shows the hierarchy of controls to protect people in the workplace.

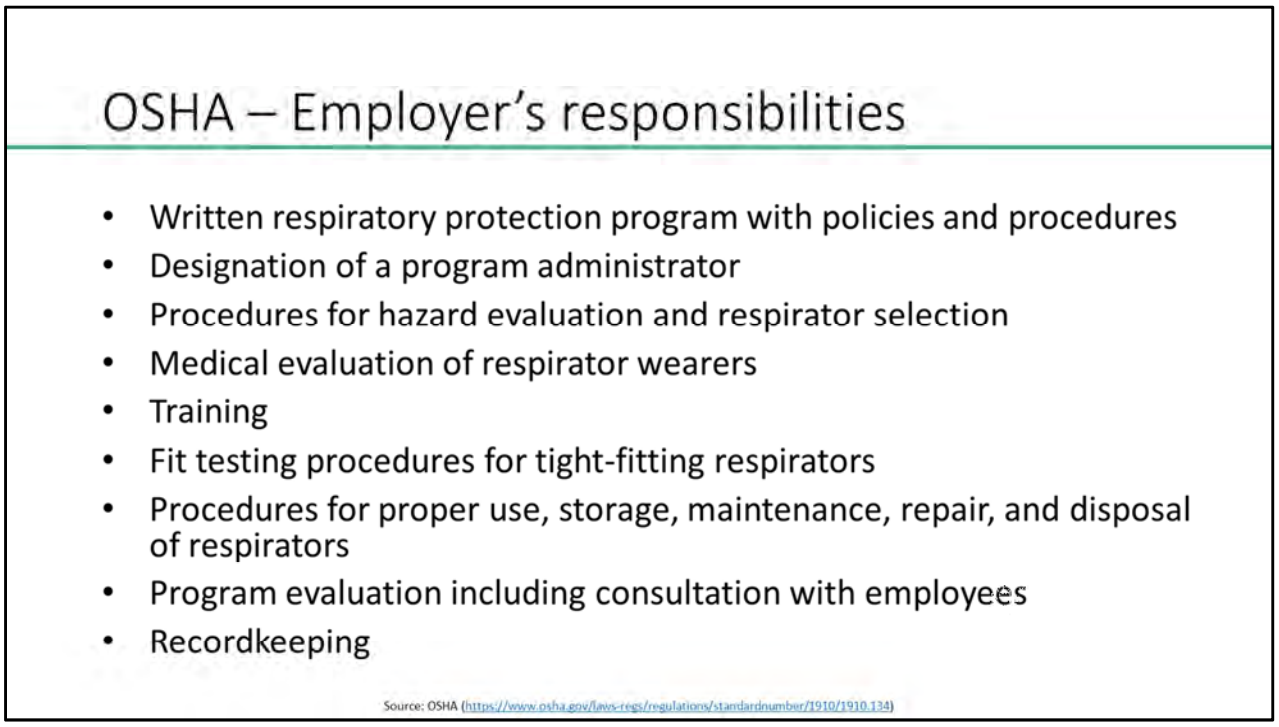
The most effective method, elimination, is at the bottom and is preferred whenever possible.

Substitution, engineering, administrative, and PPE (personal protective equipment) controls are also effective methods to protect people from occupational hazards.

Examples of each of these control methods include:
- Elimination - restricting sick people from coming to work
- Substitution - allowing remote work by staff
- Engineering - using visual markings to maintain social distancing
- Administrative - reminding staff with signs to correctly wear PPE

- PPE - requiring staff to use masks, respirators, gowns, gloves, and eye protection

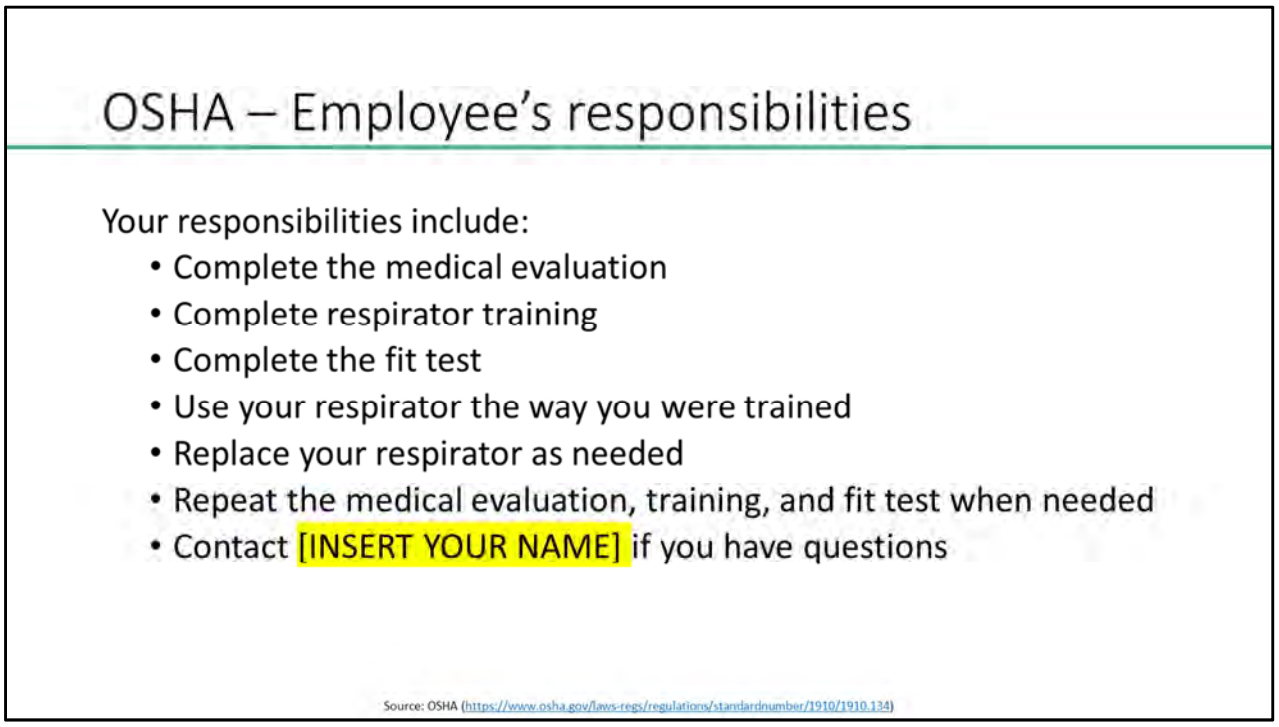
(Image created by CFSPH and modified from content from NIOSH at https://www.cdc.gov/niosh/topics/hierarchy/default.html)



The Occupational Safety and Health Administration, or OSHA, has regulations regarding the Respiratory Protection Standard 29 CFR1910.134.

According to these federal regulations, your employer's responsibilities include:

- Written respiratory protection program with policies and procedures
- Designation of a program administrator
- Procedures for hazard evaluation and respirator selection
- Medical evaluation of respirator wearers
- Training
- Fit testing procedures for tight-fitting respirators (including filtering facepiece respirators)
- Procedures for proper use, storage, maintenance, repair, and disposal of respirators
- Program evaluation including consultation with employees
- Recordkeeping



As you will learn in the following presentation, you also have responsibilities to help keep yourself safe and healthy.

Your responsibilities include:

- Complete the medical evaluation
- Complete respirator training
- Complete the fit test
- Use your respirator the way you were trained
- Replace your respirator as needed
- Repeat the medical evaluation, respirator training, and fit test when needed
- Contact [me] if you have questions

Goal of infection control

Image Source: CDC (https://phil.cdc.gov/details.aspx?pid=11161)
Content Source: CDC (https://www.cdc.gov/infectioncontrol/projectfirstline/videos/Ep4-Droplet-LowRes-New.mp4)

The ultimate goal of infection control in health care facilities, for any disease, is to keep people from getting sick.
As this picture nicely shows, sometimes the air that we breathe has hazards that could make you sick.

Our breath contains water that you usually can't see. Those are our respiratory droplets.
Some respiratory viruses travel between people through these respiratory droplets. You can get sick if someone nearby is infected with a virus and you breathe the droplets in, if the droplets land on your eyes, or if you touch something that has live virus on it and then touch your face without washing your hands.
This is why using a respirator in the right way and at the right time is so important.

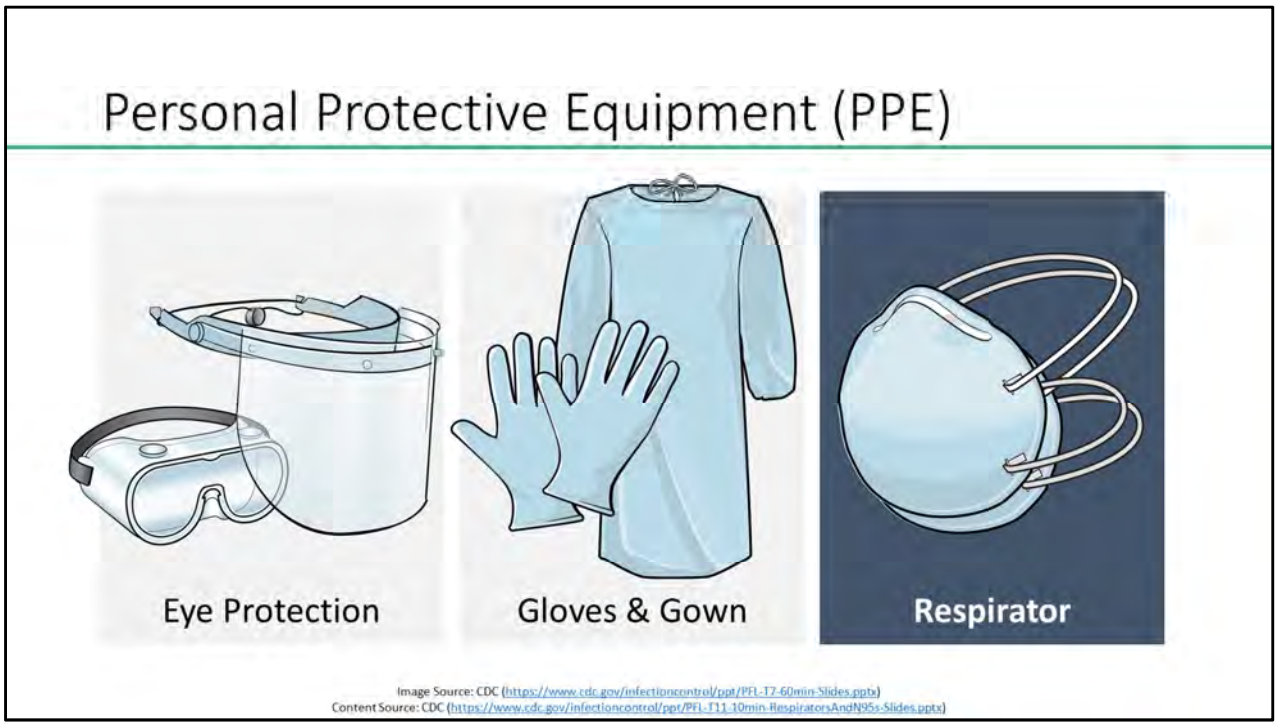
Infection control practices to reduce risk

- Hand hygiene
- Respiratory hygiene
- Cleaning and disinfection
- Ventilation
- Source control
- Personal protective equipment (PPE)

Image Source: CDC (https://www.cdc.gov/infectioncontrol/projectfirstline/resources.html)
Content Source: CDC (https://www.cdc.gov/infectioncontrol/pdf/projectfirstline/Healthcare-Germs-Body-RespiratorySystem-508.pdf)

Infection control practices to reduce risk include:

- Hand hygiene, including hand washing and use of hand sanitizer
- Respiratory hygiene, including covering your coughs and sneezes
- Cleaning and disinfection
- Ventilation
- Source control, such as masking
- Personal protective equipment (PPE), such as respirators

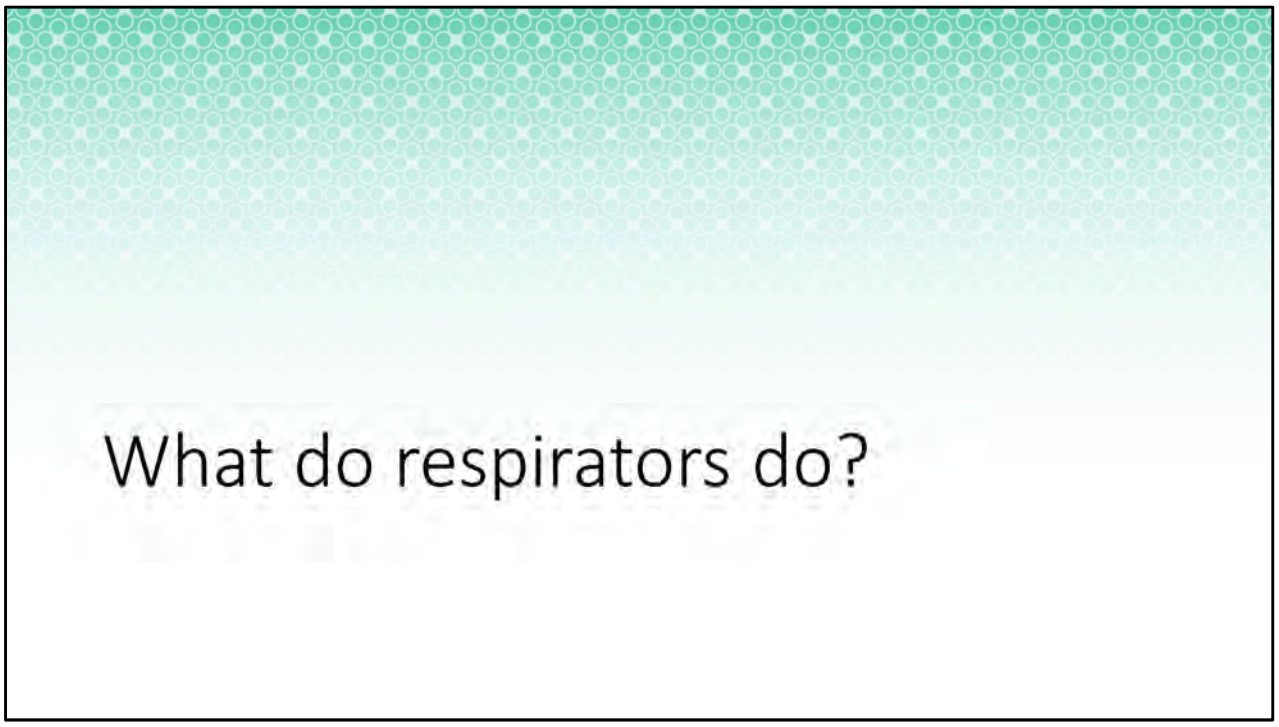


One of the most important ways we can protect our employees from getting sick is through respirators and other PPE.

PPE includes equipment for eye protection (like goggles and face shield), skin protection (like gloves, gown, and boots), and respiratory protection (like masks and respirators).

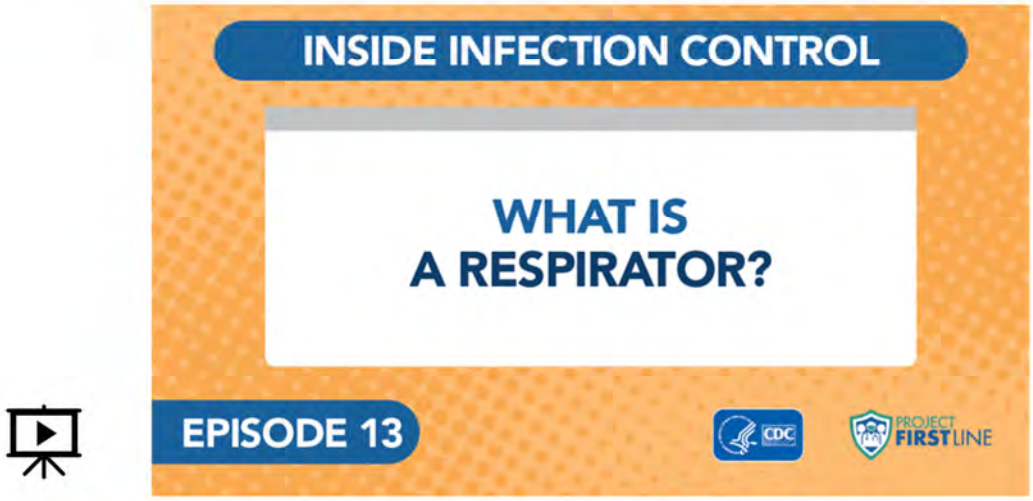
For example, these graphics show what PPE is recommended for protection against COVID-19.

Respirators are a type of PPE and may be required for some health care jobs as a part of their infection control practices.



Now let's discuss what respirators do.

Respirators



Source: CDC (https://www.cdc.gov/infectioncontrol/projectfirstline/videos/EP13-Respirator-LowRes.mp4)

Watch this video from CDC's Project Firstline to help you understand "What is a respirator?" *(6:45) (Ctrl+Click on icon in lower left corner to play or visit* https://www.cdc.gov/infectioncontrol/projectfirstline/videos/EP13-Respirator-LowRes.mp4)

What is something you learned from that video?

- *A respirator's job is to keep you from breathing in things in the air that might hurt you, like germs, dust, chemicals, and other dangerous things.*
- *In health care, we use respirators when we think we're going to be in a situation when we could breathe in air that's carrying infectious material – like particles containing viruses.*
- *Types of respirators used in health care:*
  - *Filtering facepiece respirator (FFR), the type most commonly used in health care*
  - *Powered air-purifying respirator (PAPR)*
  - *Elastomeric respirator*

Types and uses for respiratory protection

Type of mask				
Name	Face covering	Surgical mask	Filtering Facepiece Respirator (FFR)	Air Purifying Respirator (APR)
Common example	Handmade cloth mask	Disposable 3-ply ASTM F3502-21	N95 respirator	Powered APR (PAPR)
Is it tight-fitting?	No	No	Yes	Sometimes
What is an example of when it should be used?	Close contact with someone outside of a health care setting during high risk of COVID-19 community transmission	Close contact with a patient with suspected seasonal influenza	Close contact with a patient with an infectious disease requiring airborne precautions (e.g., measles)	Close contact with a patient with suspected infectious disease requiring droplet precautions (e.g., pertussis) when a FFR is not tolerated by the user

Image Source: CFSPH
Primary Content Source: NIOSH (https://www.cdc.gov/niosh/docs/2015-117/pdfs/2015-117revised042022.pdf?id=10.26616/NIOSHPUB2015117)

Let's review the different types of masks and respirators that may be used in our facility.
Face coverings and surgical masks are not respirators, like filtering facepiece respirators and air purifying respirators.
The N95 respirator fits snugly on your face without any gaps, which is very different from the way a surgical mask fits on your face.
PAPRs, or powered air purifying respirators, may or may not fit snugly on your face.

Face coverings and surgical masks provide source control, in which they cover a person's mouth and nose to prevent spread of respiratory secretions when they are breathing, talking, sneezing, or coughing.
Source control is important in controlling the spread of some diseases, like COVID-19, but it is not the same as PPE.
Respirators not only protect the wearer from breathing in respiratory droplets, but many of them also serve as source control, blocking the wearer's respiratory droplets.

These examples are not meant to provide comprehensive guidance for all settings, but they may help illustrate situations in which each type of mask or respirator can be worn by a health care worker.

(Close contact means being within 6 feet of someone for a cumulative total of 15 minutes or more over a 24-hour period.)

N95 respirator benefits and limitations

What N95s do

- Tight-fitting respirator
- Filters out 95% of the hazardous particles in the air

What N95s do not do

- Will not protect you if it does not fit correctly
- Does not provide oxygen
- Does not protect you from vapors or gases
- Does not protect you if oil is in the air

Image Source: CDC (https://phil.cdc.gov/Details.aspx?pid=15482)
Primary Content Source: NIOSH (https://www.cdc.gov/niosh/docs/2015-117/pdfs/2015-117revised042022.pdf?id=10.26616/NIOSHPUB2015117)

N95 respirators are the most commonly used respirators in health care facilities.

The N95 is a tight-fitting respirator that filters out 95% of the hazardous particles in the air.

The N95 is a wonderful piece of equipment, but it has some limitations you should know about.

- It will not protect you if it does not fit correctly
- It does not provide oxygen
- It does not protect you from vapors or gases
- It does not protect you if oil is in the air

NIOSH is the National Institute for Occupational Safety and Health and is a part of CDC. They create respirator standards and approve respirators that are used in American workplaces. For example, most N95 respirators are made for use in construction and other industrial types of occupational settings because workers are exposed to dust and small particles. Some N95 respirators are used in health care settings to protect both the health care worker and the patient.

All respirators used in health care should be approved by NIOSH and authorized by the FDA, or U.S. Food and Drug Administration, for use in health care.

N95 respirators and FFR alternatives

Minimum filter efficiency	N Series (not resistant to oil)	R Series (somewhat resistant to oil)	P Series (strongly resistant to oil)
95%	N95	R95	P95
99%	N99	R99	P99
100% (99.97%)	N100	R100	P100

Source: NIOSH (https://www.cdc.gov/niosh/docs/2015-117/pdfs/2015-117revised042022.pdf?id=10.26616/NIOSHPUB2015117)

For employees who need protection from vapors or gases, or when oil is present in the air (like in pharmaceutical or manufacturing industries), other types of filtering facepiece respirators, or FFRs, are available.
This table shows the NIOSH particulate filter categories.
FFRS are available in nine different classes – three for each filtering level (efficiency) and three for each oil protection.

N95 respirators are not resistant to oil but remove at least 95% of penetrating airborne particles 0.3 microns and larger, and adequately protect against most health care exposures.
Other types of respirators, such as N99 or N100, can also be used, when tolerated by the employee.
While it is unlikely you would need to use an R or P series of respirator, they may be considered for employees working in health care facilities.

Selecting N95 respirators

- Avoid counterfeit products that may not protect you properly
- Visit NIOSH-Approved N95s to search for specific products
- Look for particular features on your N95 respirator each time you use it

Image Source: CDC (https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/types-of-masks.html)
Content Source: NIOSH (https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/n95list1.html)

To avoid using counterfeit N95 respirators that may not protect you properly, visit NIOSH-Approved N95s (https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/n95list1.html) to search for specific products that are approved. This website is updated weekly and is a good resource to use when choosing an N95 respirator.

You should also look for particular features on your N95 respirator each time you use one.

N95 rating or higher

Source: CFSPH (modified from NIOSH at https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/default.html)

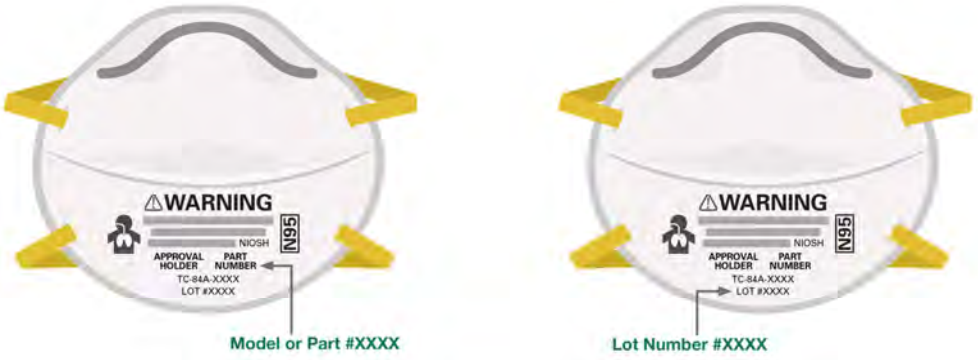
- Rated as N95 Protection (or higher)

NIOSH in capital block letters

Source: CFSPH (modified from NIOSH at https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/default.html)

- NIOSH in capital block letters

Model, part, or lot number



Source: CFSPH (modified from NIOSH at https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/default.html)

- Model, part, or lot number

TC-Approval number

Source: CFSPH (modified from NIOSH at https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/default.html)

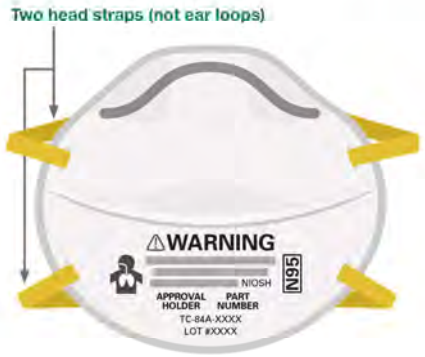
- Testing and Certification-Approval number

Name or logo of approval holder

Source: CFSPH (modified from NIOSH at https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/default.html)

- Name or logo of approval holder (such as the company that manufactures the respirator)

Two head straps, not ear loops



Source: CFSPH (modified from NIOSH at https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/default.html)

- Two head-straps, not ear loops

Moldable noseband

Source: CFSPH (modified from NIOSH at https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/default.html)

- Moldable noseband

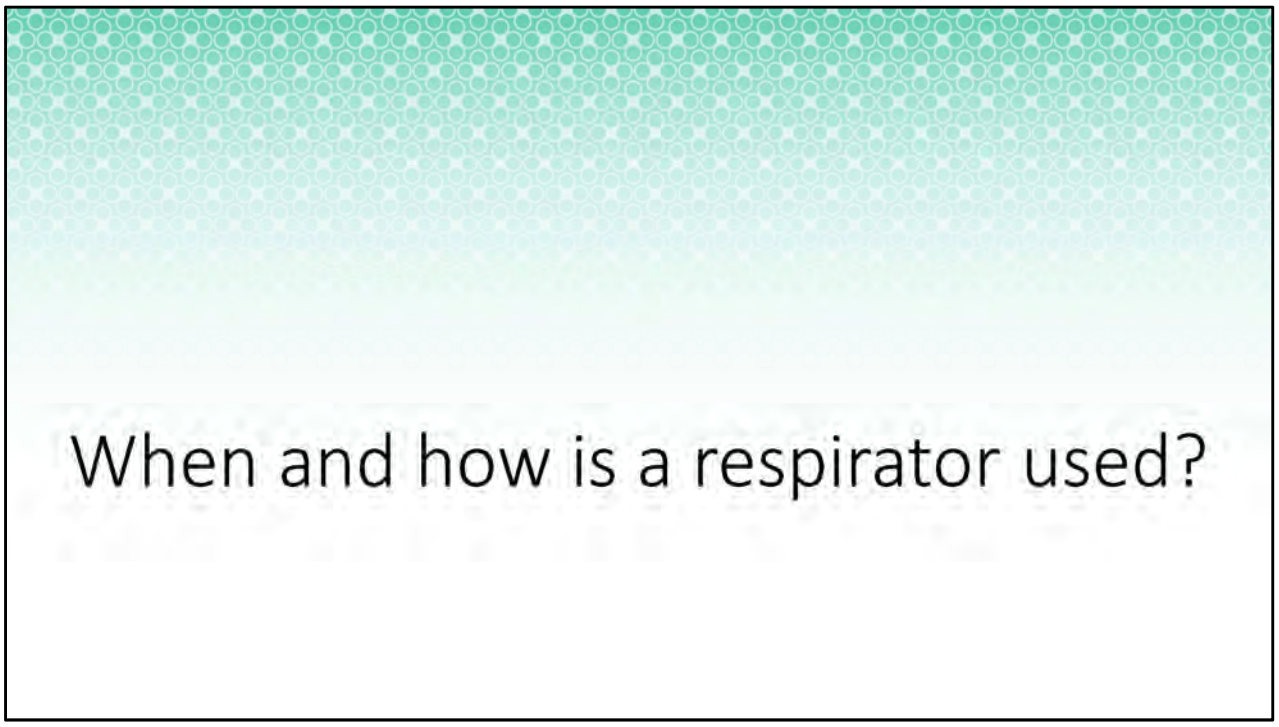
No exhalation valves

Source: CFSPH (modified from NIOSH at https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/default.html)

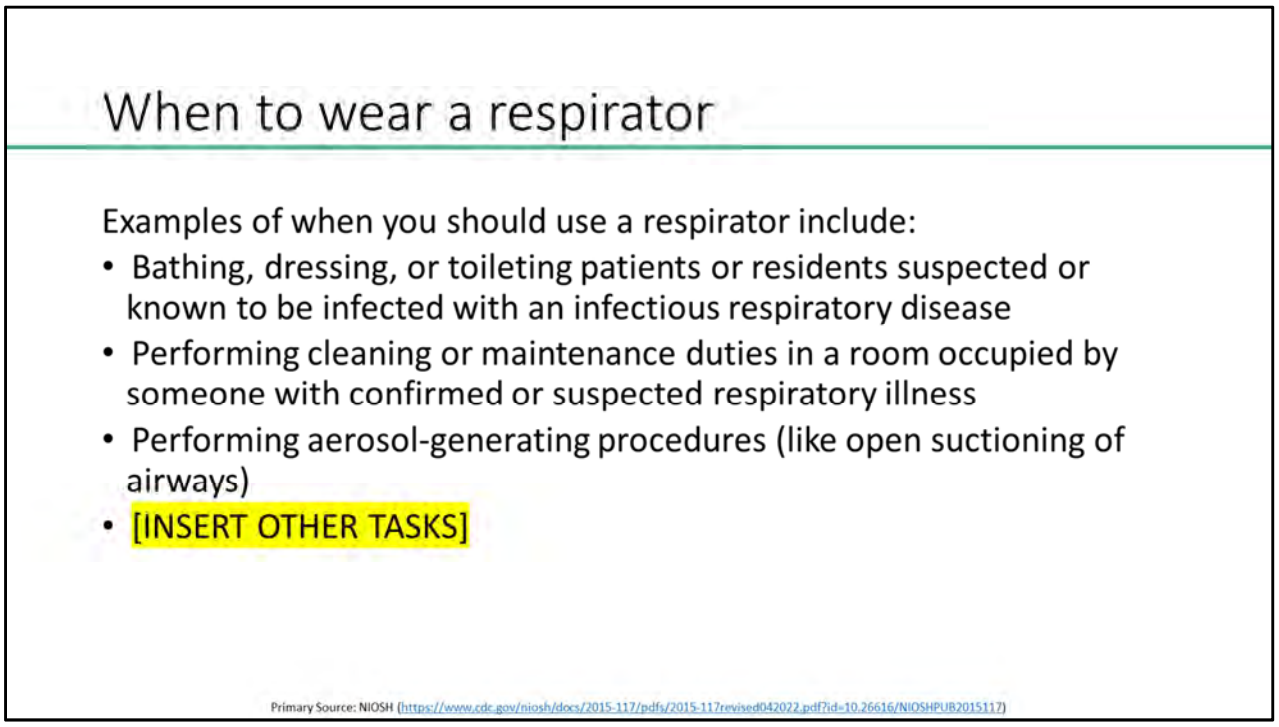
- No exhalation valves, which is an important feature only for infectious disease control. An exhalation valve would not provide sufficient source control and could lead to you spreading germs to the people you are caring for so is not appropriate for use in health care facilities.

A respirator lacking any of the elements shown could be a warning that the respirator is counterfeit, and it should not be used.

Again, you can visit NIOSH-Approved N95s (https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/n95list1.html) to search for specific products that are approved.

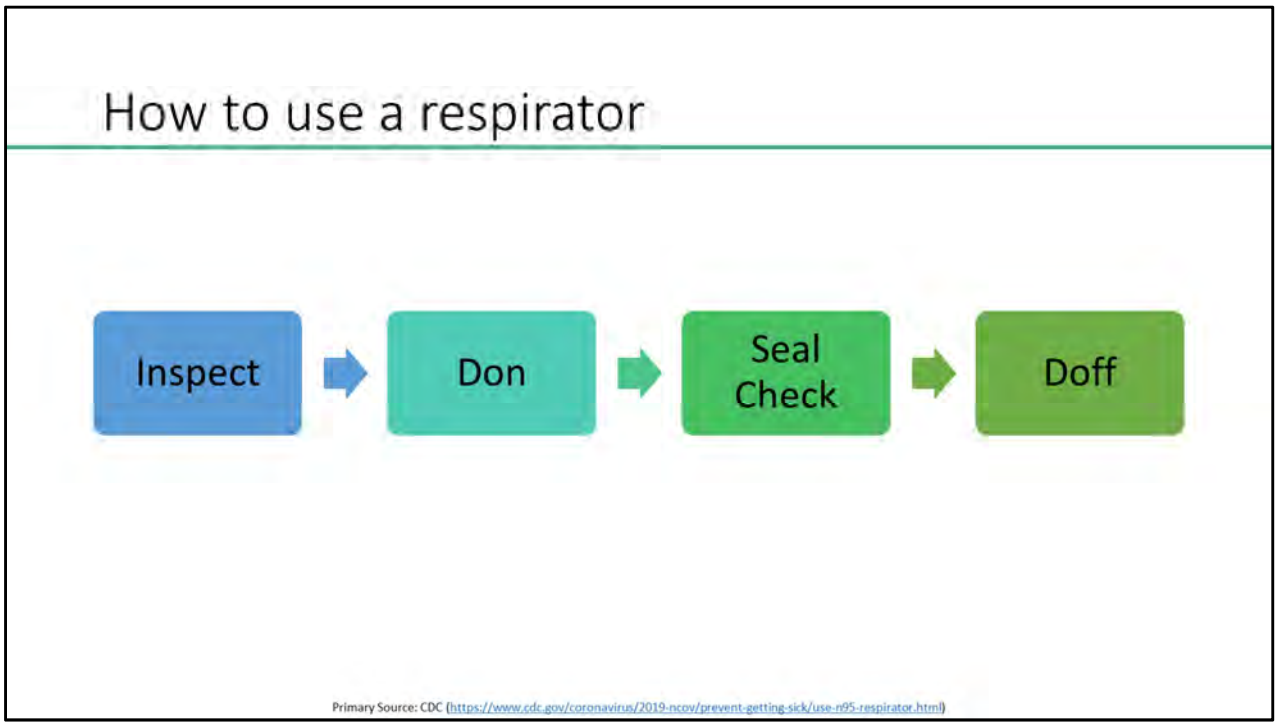


Next, we will cover when respirators should be used and how they should be used.



Examples of when you should use a respirator include:

- Bathing, dressing, or toileting patients or residents suspected or known to be infected with an infectious respiratory disease
- Performing cleaning or maintenance duties in a room occupied by someone with confirmed or suspected respiratory illness
- Performing aerosol-generating procedures (like open suctioning of airways)
- [List other tasks]



To use a respirator correctly, you must know how to inspect, don (put on), seal check, and doff (take off) correctly.

Always remember to perform hand hygiene before and after donning and doffing.

We will cover each of these steps in more detail in the following slides.

Inspecting a respirator

Ask yourself these questions every time you use your respirator:

1. If it is individually wrapped, is the wrapper torn or taped together?
2. Is there any dirt, stains, tears, or wetness?
3. Are the straps loosely attached?

If YES to any of these questions –
get a new respirator!

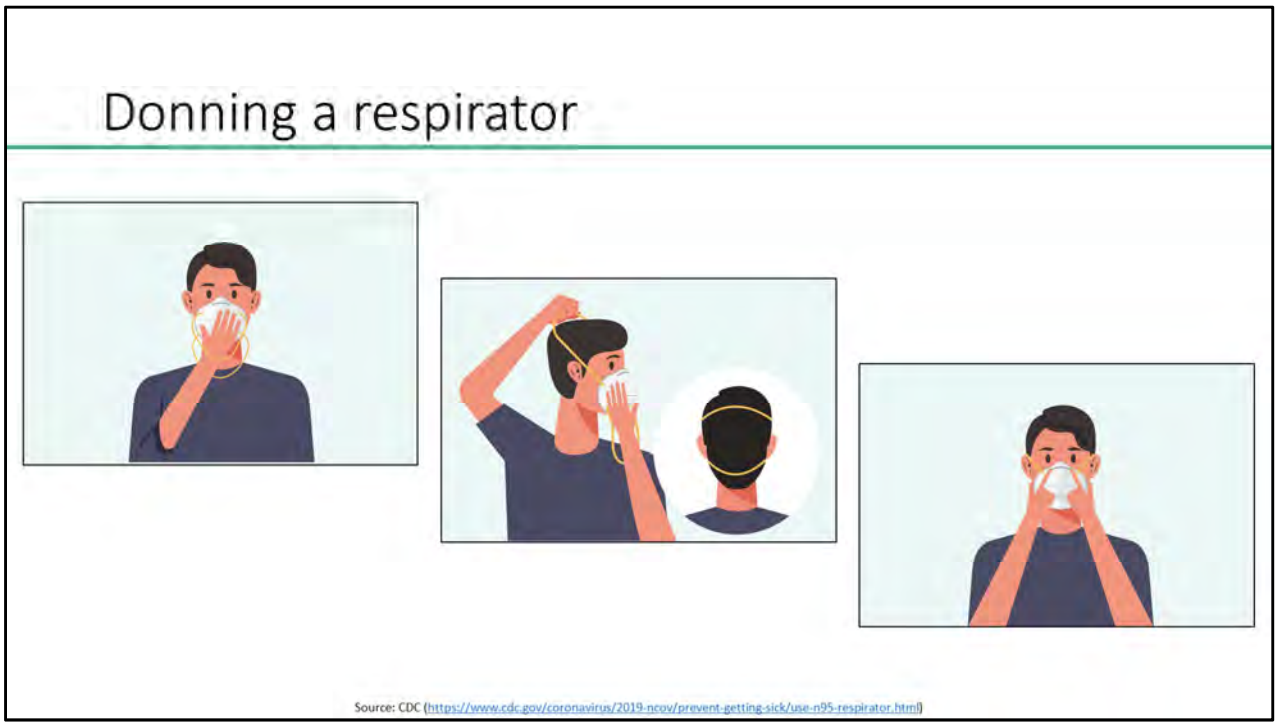
Source: CDC (https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/use-n95-respirator.html)

Every time you use your respirator, you need to inspect it.
And remember to clean your hands before handling your respirator.

Specifically, ask yourself these three questions:

1. If it is individually wrapped, is the wrapper torn or taped together?
2. Is there any dirt, stains, tears, or wetness?
3. Are the straps loosely attached?

If your answers to any of these 3 questions are “yes”, get a new respirator!
If your respirator is disposable, throw it out and get another one.
If your respirator is not disposable and needs repair, contact your supervisor or [INSERT CONTACT’S NAME OR POSITION].

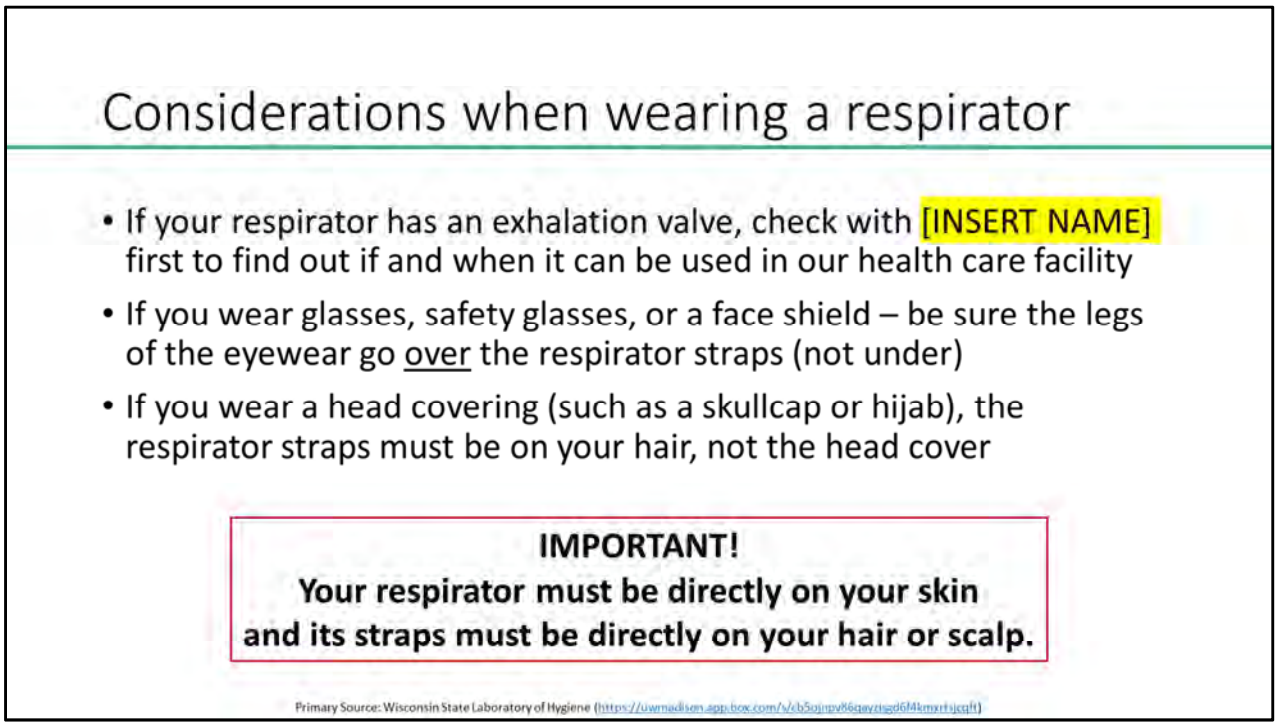


Donning a respirator simply means putting it on.

Not all types and brands of respirators are donned the same way.
It is important to follow the instructions from your respirator's manufacturer.
The NIOSH-Approved N95s website (https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/n95list1.html), is useful because it links to instructions for every make and model of respirator.

Here are some general tips for donning an N95 respirator:

- Wash your hands or use alcohol-based hand rub to perform hand hygiene before and after donning your respirator.
- Use a mirror to help you check the edges of your respirator and any hair that may interfere with the respirator seal.
- Cup the respirator in your hand and bring the respirator to your face.
- Position the straps so they don't crisscross each other.
- Use your fingertips to mold the top of the respirator to the shape of your nose.



Let's pause here to discuss a few particular considerations some of you may have when wearing a respirator.

- If your respirator has an exhalation valve, check with [INSERT NAME] first to find out if and when it can be used in our health care facility
- If you wear glasses, safety glasses, or a face shield – be sure the legs of the eyewear go over the respirator straps (not under)
- If you wear a head covering (such as a skullcap or hijab), the respirator straps must be on your hair, not the head cover

The most important thing to remember is that your respirator must be directly on your skin and its straps must be directly on your hair or scalp.

Checking a respirator's seal

Source: CDC (https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/use-n95-respirator.html)

Again, not all respirator types and brands are the same, so it is important to follow guidance from your health care facility and the respirator's manufacturer.

Check your respirator's seal every time you wear it.
The purpose of a seal check is to see if there are leaks that would allow you to breathe in contaminated air.
If a respirator doesn't fit well, it will not protect you.

Place the palms of both hands on the respirator to cover the breathing area. By blocking the filter, air will be forced out toward your eyes and face if there is a leak.
Adjust the respirator and metal nose piece until you don't feel air leaking.
Do not press the respirator against your face. Your hands are to block the air from passing through the filter.

In general, these steps can be followed to check the seal of an N95 respirator:

1. Place both hands over the respirator.
2. Take a deep breath in and blow it out quickly to feel for air leakage.
3. Readjust the nose piece, mask, or straps if air leaks around the nose or edges.
4. Ask for help or try a different respirator model or size until you achieve a proper

seal.

Doffing a respirator

Source: OSHA (https://www.youtube.com/watch?v=Tzpz5fko-fg)

Doffing a respirator simply means taking it off.

Not all types and brands of respirators are doffed the same way so follow instructions from your manufacturer.

Here are some general tips for doffing an N95 respirator:

- Wash your hands or use alcohol-based hand rub to perform hand hygiene before and after doffing your respirator.
- Remove your other PPE first.
- Avoid touching the front of the respirator since it is contaminated.
- Grab the bottom strap first to pull over your head and then repeat with the top strap.
- Discard disposable respirators or follow protocols from your manufacturer for cleaning and storage.

To review all these steps, watch this OSHA video: Respirator Safety (9:16 minutes) (*Ctrl+Click icon in lower left corner of slide to play or visit https://www.youtube.com/watch?v=Tzpz5fko-fg).*

What is fit testing?

Now let's talk about fit testing.

Fit testing

Qualitative

Quantitative

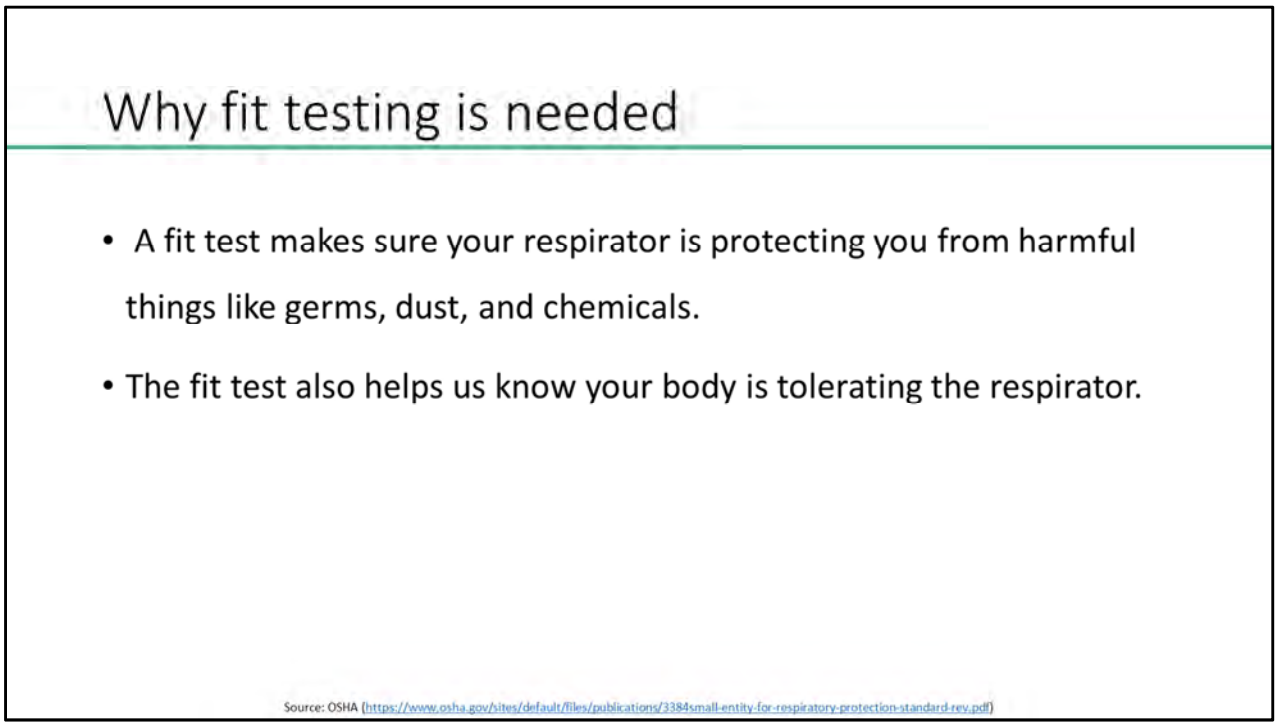
Source: OSHA (https://www.osha.gov/sites/default/files/publications/3384small-entity-for-respiratory-protection-standard-rev.pdf)

Fit testing can be performed as a qualitative test or a quantitative test.

Qualitative fit testing is a subjective measurement to assess if your respirator fits correctly.
It is based on your ability to taste a bitter or sweet tasting solution and uses simple equipment, such as a hood over your head.

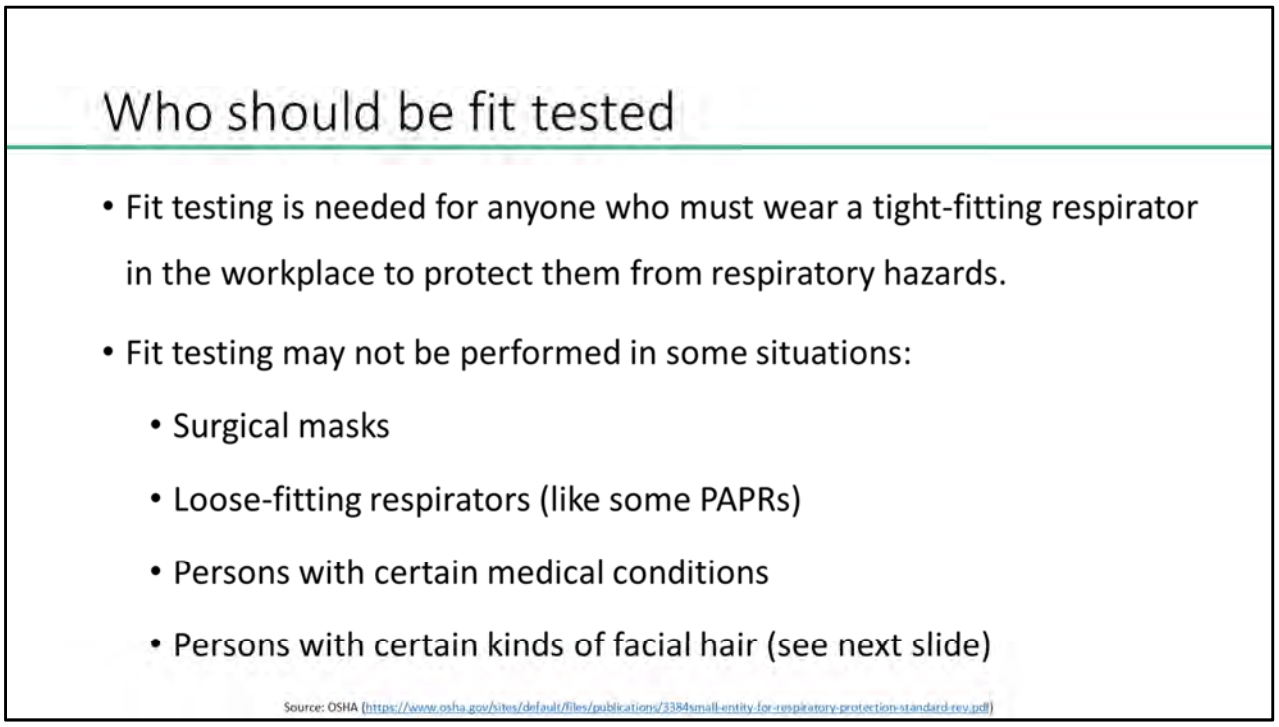
Quantitative fit testing is an objective measurement to assess if your respirator fits correctly.
It is based on a numerical measurement using specialized equipment and is usually not necessary for most employees working in health care facilities.

[EXPLAIN WHO PROVIDES FIT TESTING AND WHERE/HOW IT OCCURS IN YOUR ORGANIZATION]



A fit test makes sure your respirator is protecting you from harmful things in the air like germs, dusts, and chemicals.
The fit test also helps us know your body can tolerate the respirator.

Every shape and size of respirator will fit your face differently and not all of them will fit you correctly.
It's important to find a respirator that fits you correctly so it protects you correctly.



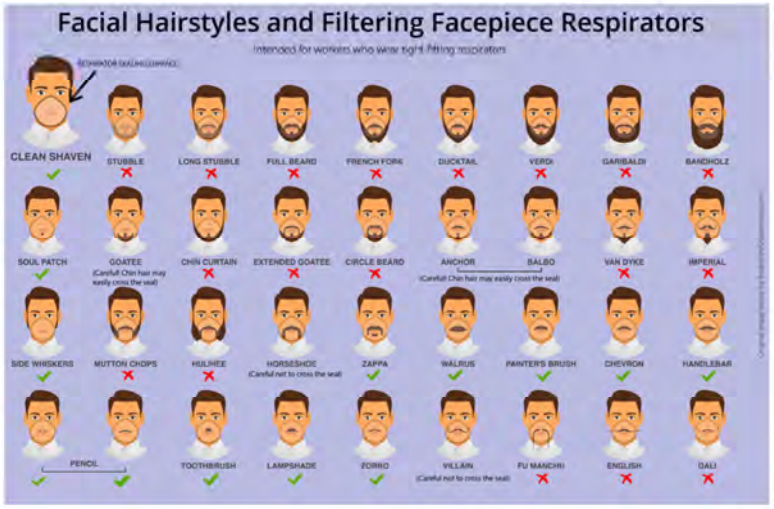
Fit testing is needed for anyone who must wear a tight-fitting respirator in the workplace to protect them from respiratory hazards.

For individuals in which a respirator is needed but fit testing can't be performed, other forms of PPE will be provided for respiratory protection.

Fit testing may not be performed in some situations, such as:

- Surgical masks
- Loose-fitting respirators (like some PAPRs)
- Persons with certain medical conditions
- Persons with certain kinds of facial hair (see next slide for more details)

Considerations for facial hair



Source: NIOSH (https://www.cdc.gov/niosh/npptl/pdfs/facialhairwmask11282017-508.pdf)

This graphic demonstrates some important considerations if you have facial hair.
Your respirator seal relies on a tight fit to your face.
Facial hair or stubble may cause a break in that seal and allow you to breathe in contaminated air.
Some facial hairstyles can be worn with FFRs but others can't.
If you have facial hair and an N95 respirator won't seal tightly to your face, we can explore other respirator options with you.

(Graphic from CDC Facial Hairstyles and Filtering Facepiece Respirators, https://www.cdc.gov/niosh/npptl/pdfs/facialhairwmask11282017-508.pdf)

When fit testing is needed

- Before a respirator is used
- Once a year
- Sooner if:
  - Changes in working conditions
  - Changes in respirator make, model, or size
  - An obvious change in body weight (e.g., weight loss or gain over 20 pounds)
  - Extensive dental work, scarring, or surgery

Source: NIOSH (https://blogs.cdc.gov/niosh-science-blog/2016/01/05/fit-testing/#:~:text=an%20acceptable%20fit.-,Conclusions,requirement%20for%20annual%20fit%20testing)

Fit testing is needed before a respirator is used and at least once a year.

Fit testing may be needed sooner than that if you experience:

- Changes in working conditions
- Changes in respirator make, model, or size
- An obvious change in body weight (e.g., weight loss or gain over 20 pounds)
- Extensive dental work, scarring, or surgery

(More information can be found at https://www.cdc.gov/niosh/npptl/pdfs/Fit-test-10.508_FNL-508.pdf and https://blogs.cdc.gov/niosh-science-blog/2016/01/05/fit-testing/#:~:text=an%20acceptable%20fit.-,Conclusions,requirement%20for%20annual%20fit%20testing.)

Before your fit test

You need respirator training

- To help you use your respirator correctly so that it protects you

You need a medical evaluation

- To help us know your body can tolerate the respirator

Source: OSHA (https://www.osha.gov/sites/default/files/publications/3384small-entity-for-respiratory-protection-standard-rev.pdf)

Before you get fit tested, you will need two things:

1. Respirator training, like you are doing right now, will help you use your respirator correctly so that it protects you correctly. If you do not use your respirator correctly, it cannot protect you correctly.

2. A medical evaluation is needed to help us know your body can tolerate the respirator. Wearing a tight-fitting respirator puts a strain on your body by making it harder to take a breath when breathing through the filter. The medical evaluation consists of a questionnaire. You may or may not need an in-person health examination, depending on your responses on the medical questionnaire.

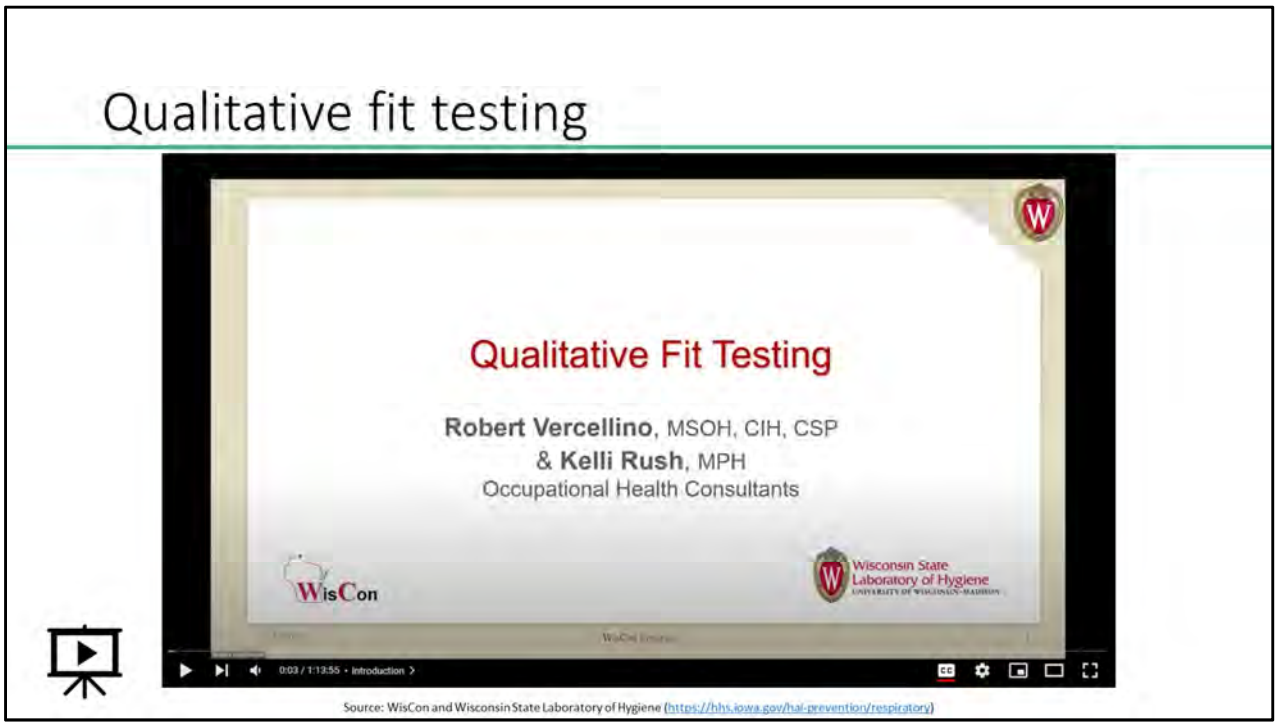
Medical Evaluation

[INSERT A DESCRIPTION AND/OR IMAGE OF YOUR ORGANIZATION'S PROTOCOL FOR MEDICAL EVALUATIONS]

The medical evaluation is confidential, meaning your supervisor and employer will only know if you are approved or not approved to use a respirator.
They will not have access to the questionnaire you complete.
You will be allowed to answer the questionnaire during normal work hours in a time and place that is convenient for you.
The questionnaire we use [EXPLAIN YOUR ORGANIZATION'S PROTOCOL]…

Medical evaluations should occur again if you have:

- Difficulty breathing or other issues while wearing a respirator
- Changes in working conditions that may stress your body
- Changes in health such as lung or heart problems



Once you have completed respirator training and a medical evaluation, you can proceed with fit testing.

To help you know what to expect during a qualitative fit testing procedure, here is a helpful handout.

(Give each participant a printed copy of "How to Prepare for Your Qualitative Fit Test" found at https://hhs.iowa.gov/hai-prevention/respiratory*)*

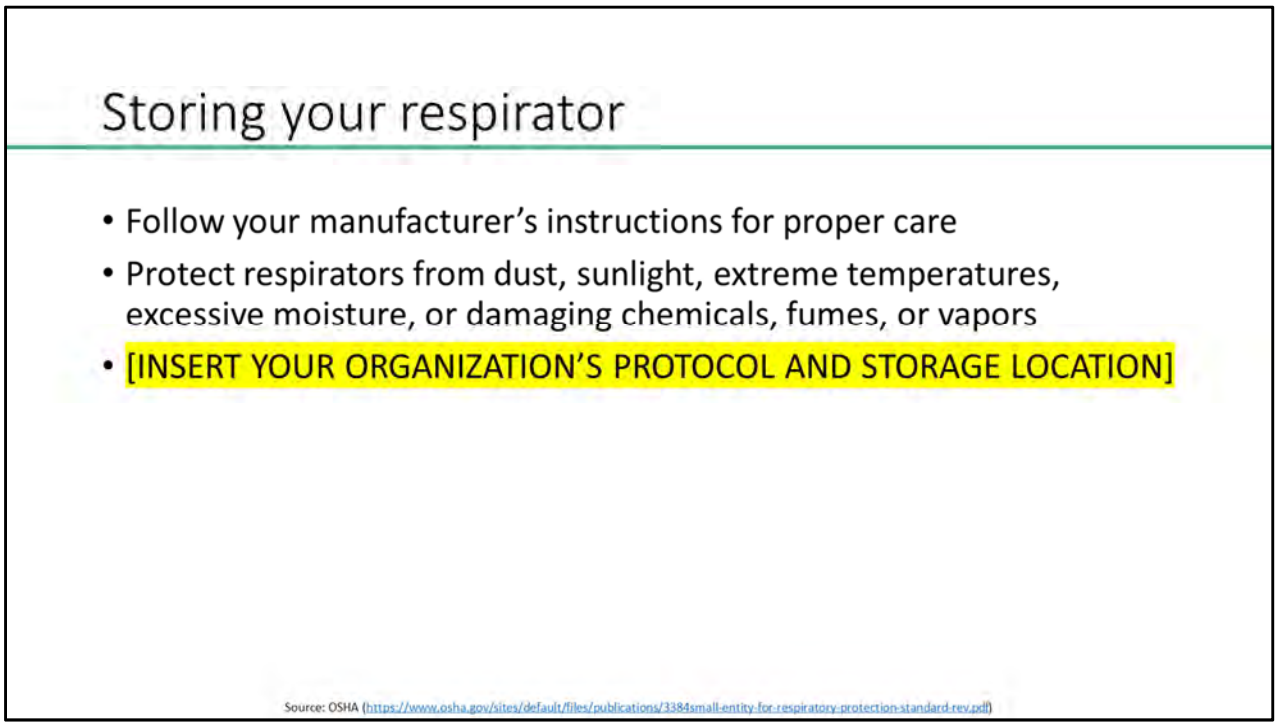
(Consider taking pictures of your fit test procedures or using text and graphics from the handout and inserting them in this section to provide visual demonstrations of each step.)

To show you what a qualitative fit testing procedure looks like, let's watch this webinar from WisCon and the Wisconsin State Laboratory of Hygiene: *Ctrl+Click icon in lower left corner of slide to play or visit* https://hhs.iowa.gov/hai-prevention/respiratory*)*

(to skip ahead in the webinar, select the "Qualitative fit test" chapter of the video)

How is the respirator stored and maintained?

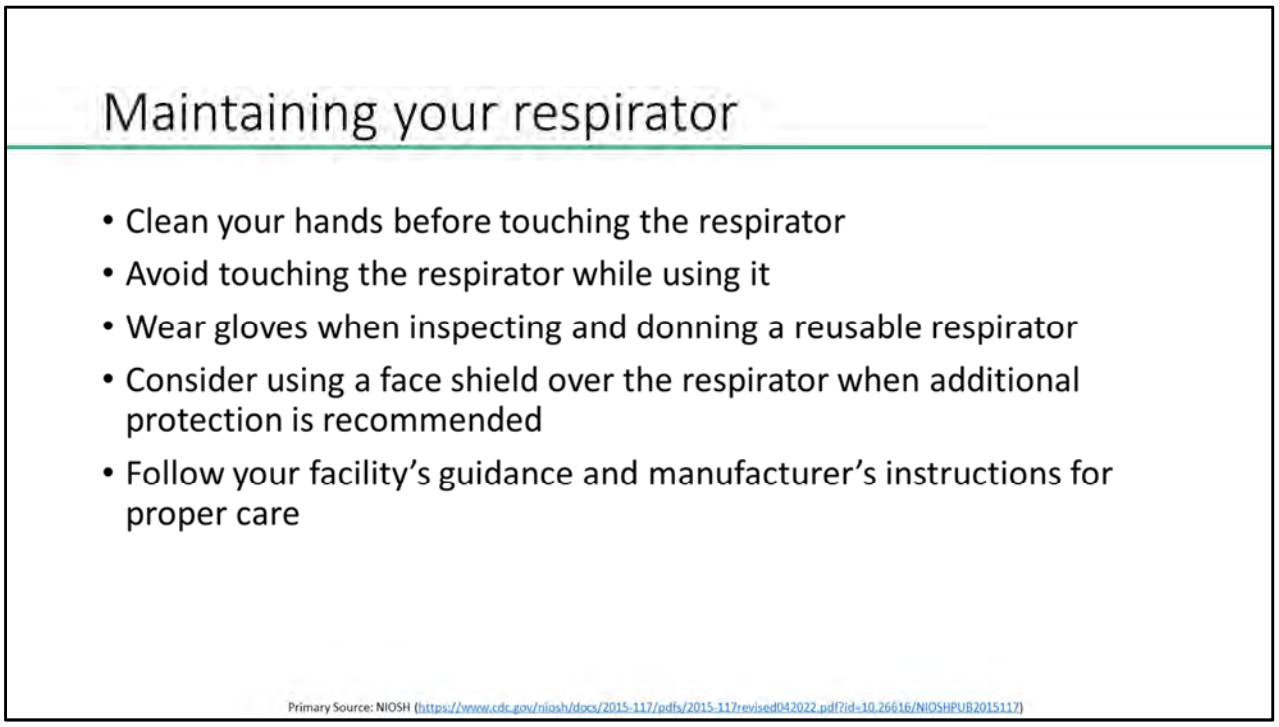
Next, let's briefly discuss how respirators should be stored and maintained.



In addition to following your manufacturer's instructions for proper storage of your respirator, you should:

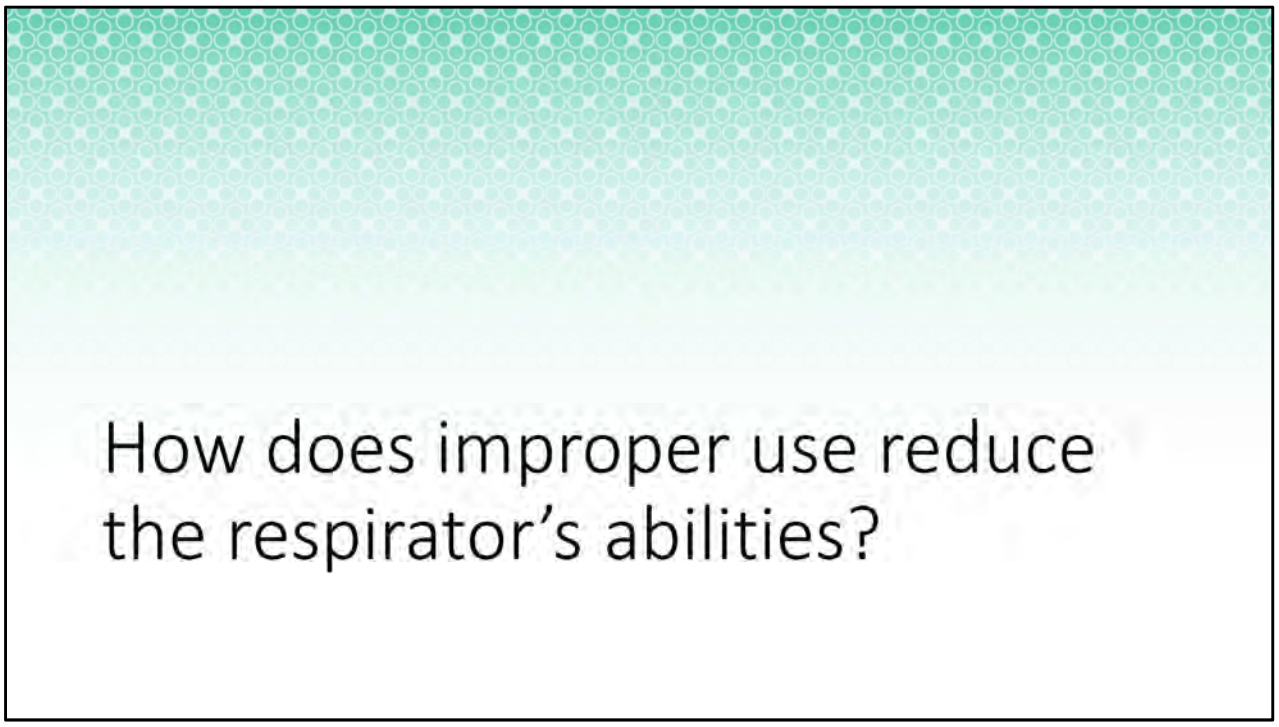
- Protect respirators from dust, sunlight, extreme temperatures, excessive moisture, or damaging chemicals, fumes, or vapors
- [INSERT YOUR ORGANIZATION'S PROTOCOL AND STORAGE LOCATION FOR EACH RESPIRATOR TYPE]

For example, respirators should be kept accessible to the work area, in a clearly labeled compartment that is clean and dry.

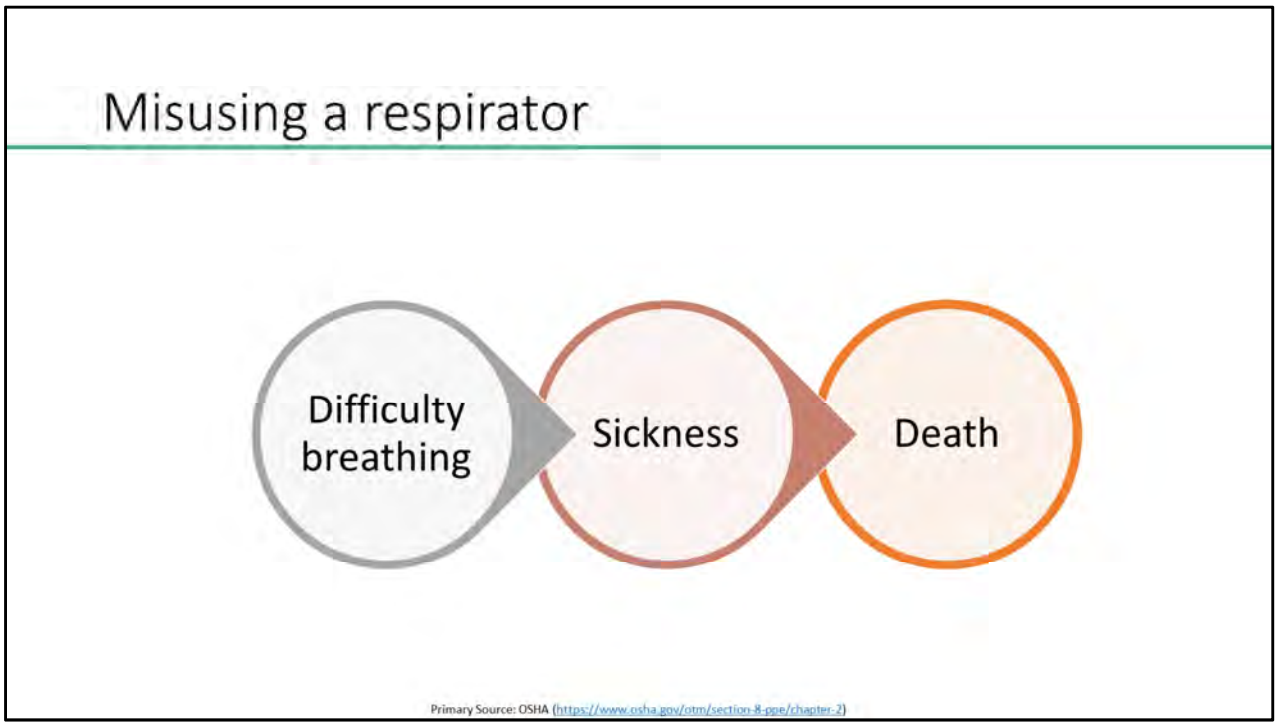


To preserve your respirator's integrity, it is important to:

- Clean your hands before touching the respirator
- Avoid touching the respirator while using it
- Wear gloves when inspecting and donning a reusable respirator
- Consider using a face shield over the respirator when additional protection is recommended
- Follow your facility's guidance and manufacturer's instructions for proper care



Next, let's cover how improper use can reduce the respirator's abilities.

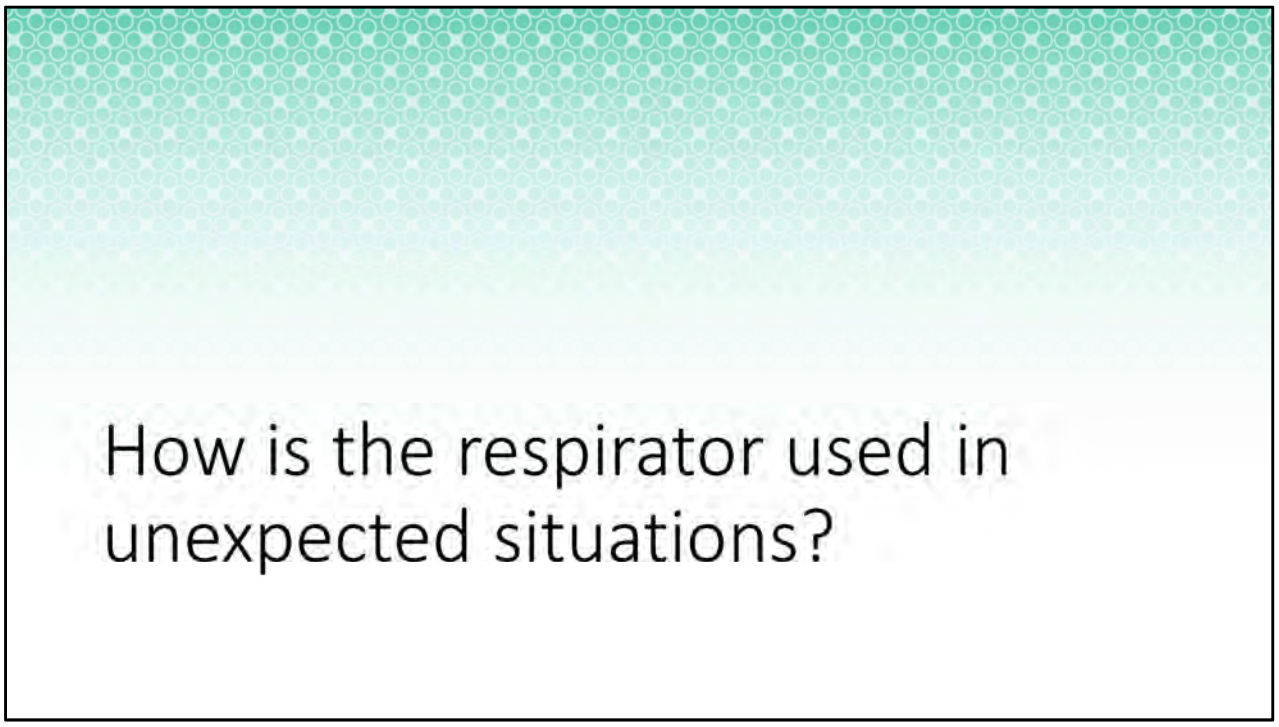


As we've already discussed, it is important to use your respirator correctly so it protects you and does not harm you.

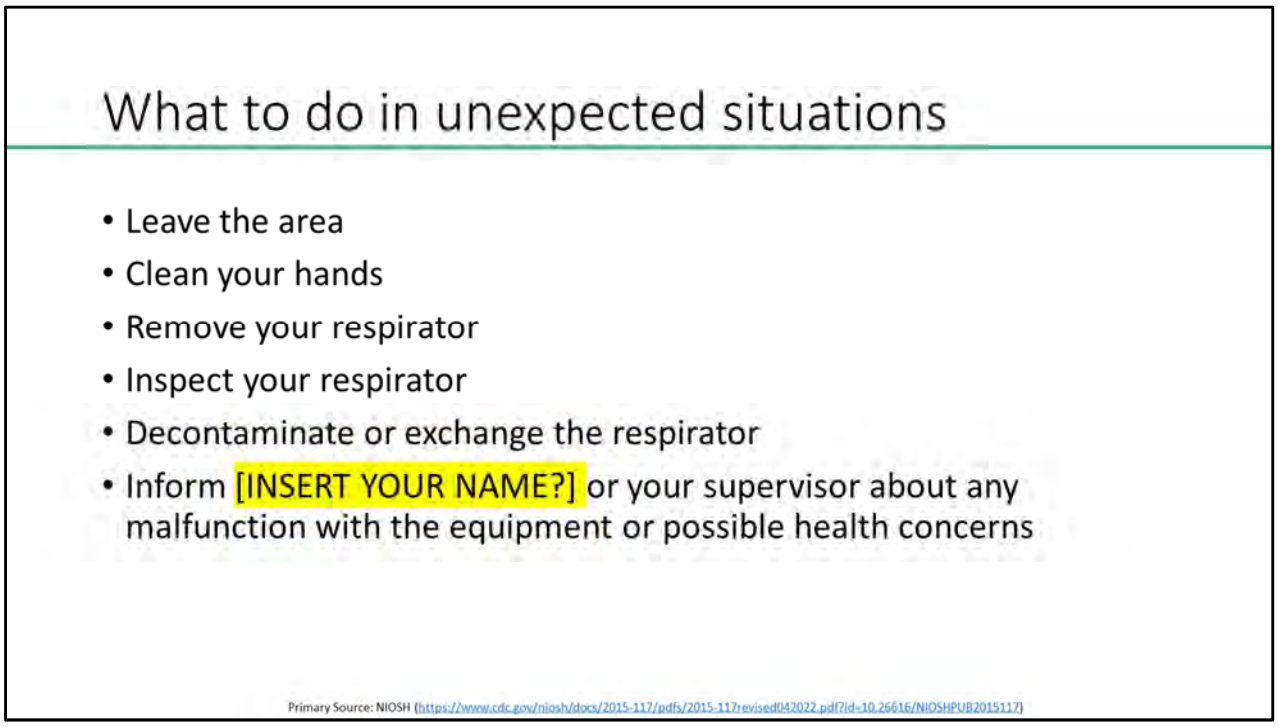
Respirator misuse could involve something as simple as an ineffective seal on an N95 or something disastrous as a broken valve on a PAPR.

Depending on the hazards around you, misusing a respirator could lead to serious consequences, such as:

- Difficulty breathing
- Sickness
- Death



Now, let's discuss how the respirator should be used in unexpected situations.



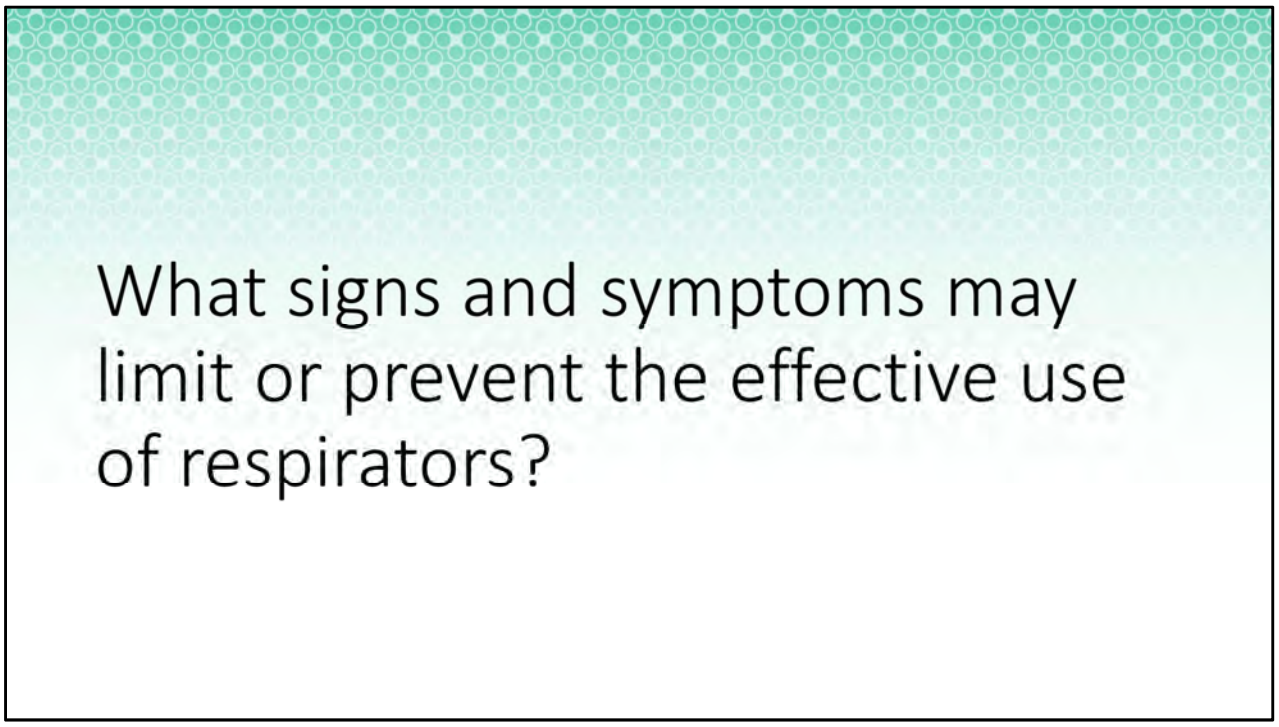
Imagine if a resident or a co-worker accidently bumps your respirator or a confused patient pulls off your respirator.

Other malfunctions can occur, such as breakthrough, facepiece leakage, or broken valve.

If any of these unexpected situations occur, here are some steps you can consider taking:

- Leave the area
- Clean your hands
- Remove your respirator
- Inspect your respirator
- Decontaminate or exchange the respirator
- Inform [INSERT YOUR NAME?] or your supervisor about any malfunction with the equipment or possible health concerns

[MODIFY THE ABOVE BULLET POINTS AS NEEDED TO ABIDE BY YOUR FACILITY'S SPECIFIC RECOMMENDATIONS]



Lastly, we will discuss some signs and symptoms that may limit or prevent the effective use of respirators.

Recognize signs and symptoms

- Some medical conditions can affect a person's ability to tolerate a respirator
- Examples of symptoms:
  - Difficulty breathing
  - Shortness of breath
  - Dizziness
- Seek medical attention for any health concern you have

Primary Source: OSHA (https://www.osha.gov/otm/section-8-ppe/chapter-2)

It is important for you to be able to recognize the signs and symptoms of medical conditions that may limit or prevent the effective use of your respirator.
Some medical conditions can affect a person's ability to tolerate a respirator, such as asthma, epilepsy, or a history of smoking.
Symptoms that could be associated with a medical condition include difficulty breathing, shortness of breath, and dizziness.

If you have any health concern at all, remove your respirator and seek medical attention.

[INSERT SPECIFIC MEDICAL PROTOCOLS AS NEEDED FOR YOUR FACILITY]

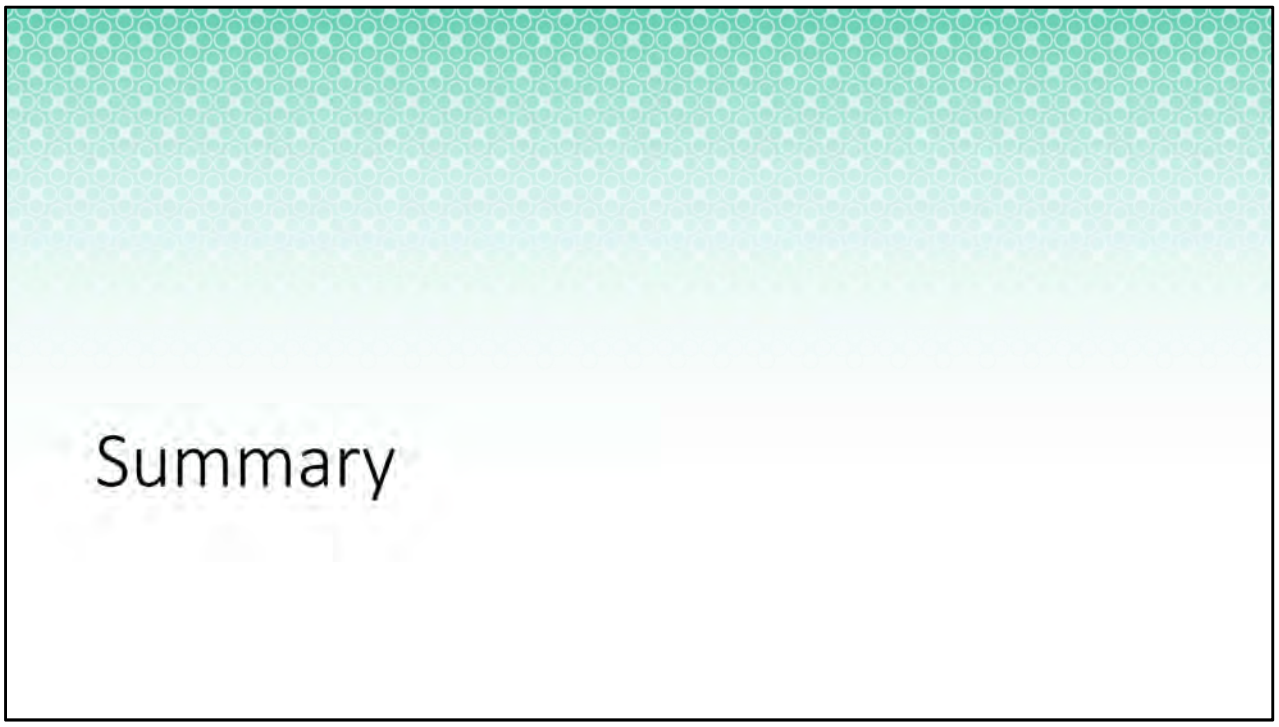
(For more information, visit https://www.osha.gov/otm/section-8-ppe/chapter-2.)

Helpful terms

Term	Definition
Aerosol generating procedures	Procedures performed on patients that may be more likely to generate potentially infectious aerosols
Doff	A term commonly used with PPE, to take it off
Don	A term commonly used with PPE, to put it on
Exhalation valve	A valve on a respirator that does not filter the user's breath
Fit test	A way to test if the fit of the respirator is snug enough to protect you from respiratory hazards
Mask	A general face covering, it is not a respirator
Medical evaluation	An evaluation to determine if your body can tolerate using the respirator
N95	A respirator that fits tightly on the face to filter out 95% of airborne particulates in a non-oil environment
NIOSH	National Institute for Occupational Safety and Health - Federal research agency focused on worker health and safety
OSHA	Occupational Safety and Health Administration - Federal regulatory agency for worker health and safety
PPE	Personal Protective Equipment - gloves, gown, mask, respirator, safety glasses/goggles, face shield, etc.
Respirator	A device that removes contaminants from the air or supplies clean air from another source for you to breathe
Seal check	Checking the respirator's seal on your face when you first put it on and at any time you think the seal may have been broken

Here are some helpful terms from the presentation that are defined in a table for you.

Are there questions about any of these terms?



Before you go, let's summarize what we talked about today by reviewing each of the key takeaways on your Respirator Training Outline and Active Learning Worksheet.

Key Takeaway 1

1. Respirators are devices that can protect you from breathing in harmful substances like _____, dusts, and chemicals.

Does anyone know the answer to the first key takeaway?

Key Takeaway 1 - Answer

1. Respirators are devices that can protect you from breathing in harmful substances like **germs**, dusts, and chemicals.

germs

Key Takeaway 2

2. Respirators are a type of _____ _____ _____ and may be required for some health care jobs as a part of their infection control practices.

Does anyone know the answer to the second key takeaway?

Key Takeaway 2 - Answer

2. Respirators are a type of **personal protective equipment (PPE)** and may be required for some health care jobs as a part of their infection control practices.

Personal protective equipment (or PPE)

Key Takeaway 3

3. All respirators used in health care should be approved by _____ and authorized by the ___ for use in health care.

Does anyone know the answers to the third key takeaway?

Key Takeaway 3 - Answer

3. All respirators used in health care should be approved by **NIOSH** and authorized by the **FDA** for use in health care.

NIOSH
FDA

Key Takeaway 4

4. To use a respirator correctly, the user should do the following every time it is worn: inspect, don, _____ _____, and doff.

Does anyone know the answer to the fourth key takeaway?

Key Takeaway 4 - Answer

4. To use a respirator correctly, the user should do the following every time it is worn: inspect, don, **seal check**, and doff.

Seal check

Key Takeaway 5

5. _____ hygiene must be performed before and after donning and doffing.

Does anyone know the answer to the fifth key takeaway?

Key Takeaway 5 - Answer

5. **Hand** hygiene must be performed before and after donning and doffing.

Hand

Key Takeaway 6

6. ___ _____ can be performed as a qualitative or quantitative test.

Does anyone know the answer to the sixth key takeaway?

Key Takeaway 6 - Answer

6. Fit testing can be performed as a qualitative or quantitative test.

Fit testing

Key Takeaway 7

7. Some facial _____ can be worn with FFRs but others can't because the respirator must seal tightly to the face to protect properly.

Does anyone know the answer to the seventh key takeaway?

Key Takeaway 7 - Answer

7. Some facial **hairstyles** can be worn with FFRs but others can't because the respirator must seal tightly to the face to protect properly.

Hairstyles

Key Takeaway 8

6. Fit testing is needed before a respirator is used and _____, or more often if:
   - Changes in working _____
   - Changes in respirator make, _____, or size
   - An _____ change in body weight (e.g., weight loss or gain over 20 pounds)
   - Extensive _____ work, scarring, or surgery

Does anyone know the answers to the eighth key takeaway?

Key Takeaway 8 - Answer

6. Fit testing is needed before a respirator is used and **yearly**, or more often if:
   - Changes in working **conditions**
   - Changes in respirator make, **model**, or size
   - An **obvious** change in body weight (e.g., weight loss or gain over 20 pounds)
   - Extensive **dental** work, scarring, or surgery

Yearly
Conditions
Model
Obvious
Dental

Key Takeaway 9

7. Before a fit test, respirator training and a _____ evaluation are needed.

Does anyone know the answer to the ninth key takeaway?

Key Takeaway 9 - Answer

7. Before a fit test, respirator training and a **medical** evaluation are needed.

medical

Key Takeaway 10

8. Each respirator should be used, seal checked, and cared for according to the _____ instructions.

Does anyone know the answer to the tenth key takeaway?

Key Takeaway 10 - Answer

8. Each respirator should be used, seal checked, and cared for according to the **manufacturer's** instructions.

Manufacturer's

Key Takeaway 11

9. Misusing a respirator can result in difficulty _____, sickness, and death.

Does anyone know the answer to the eleventh key takeaway?

Key Takeaway 11 - Answer

9. Misusing a respirator can result in difficulty **breathing**, sickness, and death.

Breathing

Key Takeaway 12

10. Some medical conditions can affect a person's ability to _____ a respirator.

Does anyone know the answer to the twelfth, and final, key takeaway?

Key Takeaway 12 - Answer

10. Some medical conditions can affect a person's ability to **tolerate** a respirator.

tolerate

Great job, everyone!

For helpful resources about respirators, such as videos and links to other websites, visit the Iowa Department of Health and Human Services website on Respirators and Fit Testing in Iowa (https://hhs.iowa.gov/hai-prevention/respiratory).

Other useful sites you may want to visit are NIOSH-Approved N95s (https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/n95list1.html), NIOSH Fit Test FAQs (https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/respsource3fittest.html#:~:text=You%20should%20be%20fit%20tested,type%2Fbrand%2C%20or%20size.), and Project Firstline Videos (https://www.cdc.gov/infectioncontrol/projectfirstline/resources/videos.html).

Thank you

Questions ?

Image Source: CDC (https://phil.cdc.gov/Details.aspx?pid=23870)

Thank you for attending the respirator training today!
Do you have any questions?

See you again soon!

- Respirator training and fit testing occurs every year
- Respirator training and fit testing should occur sooner if:
  - Changes in working conditions
  - Changes in respirator make, model, or size
  - An obvious change in body weight (e.g., weight loss or gain over 20 pounds)
  - Extensive dental work, scarring, or surgery
- Medical evaluations should occur again if:
  - Difficulty breathing or other issues while wearing a respirator
  - Changes in working conditions that may stress your body
  - Changes in health such as lung or heart problems

And remember - I will see you again next year, or sooner if needed!

Ask participants to sign the Employee Training Form for Required Respirator Use and retain it in your facility's records.