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LOUISIANA EBOLA PREPAREDNESS



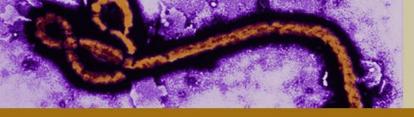






This presentation has been developed for:

- 9-1-1 Public Safety Answering Points (PSAPs)
- EMS agencies and systems
- Law Enforcement agencies
- Fire Service agencies
- Emergency Managers
- **First Responders** (For the purposes of this presentation, "First Responders" means pre-hospital EMS, Law Enforcement, and Fire Service.)





The source of this information is the **CDC**, unless otherwise identified. **Guidance may change.**

Please check the CDC website frequently for updates:

www.cdc.gov/vhf/ebola/index.html





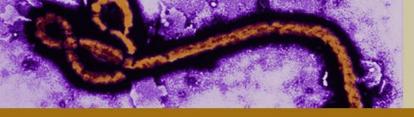


First Responder Ebola Briefing + Personal Protective Equipment (PPE)







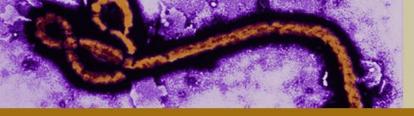


SECTION 1 — Overview of the Ebola Virus Disease (EVD)









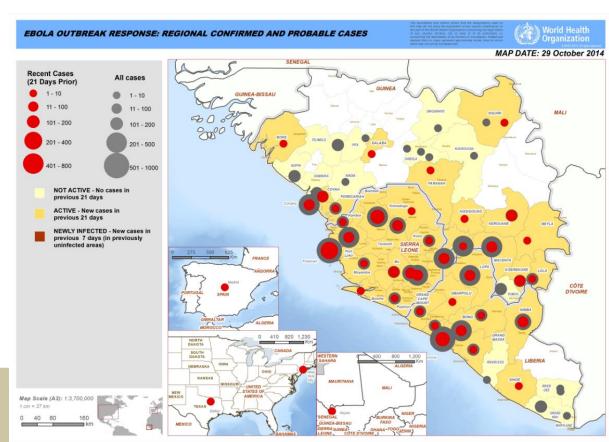
Ebola Virus Disease (EVD)

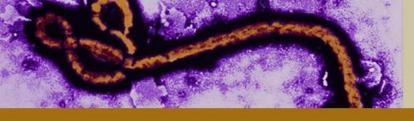
Ebola is a virus that has worldwide consequences.

MAP SHOWING RECENT +
ALL CASES WORLDWIDE

SOURCE: CDC

who.int/csr/disease/ebola/maps/en/







EVD

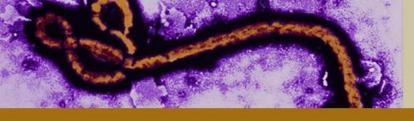
As **First Responders**, you are on the **FRONT LINE** of combating this disease should we have cases in Louisiana.













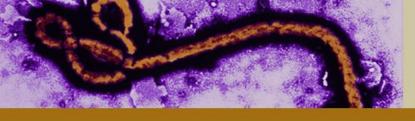
EVD

- Experts tell us Ebola poses **no significant risk** to the **United States** . . .
- However, Louisiana is prepared for a possible threat should one occur.











Purpose

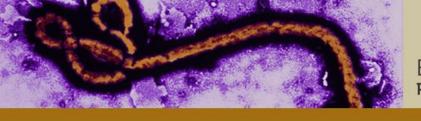
The purpose of this **presentation** is to provide **you** as a **Louisiana First Responder** with . . .













An **overview** of the

Ebola virus:



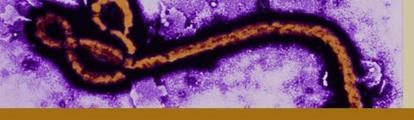
Purpose

- Facts
- Symptoms
- Care









Purpose

Share with you . . .

- What you need to know to protect yourself in the field.
- When, what and how to use Personal Protective Equipment (PPE).







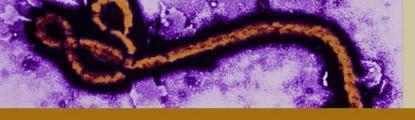


Key facts

Ebola (previously known as Ebola hemorrhagic fever) is a severe, often fatal disease in humans and nonhuman primates (such as monkeys, gorillas and chimpanzees).



SOURCE: CDC www.cdc.gov/vhf/ebola/about.html and www.cdc.gov/ncidod/dvrd/spb/mnpages/dispages/Fact_Sh eets/Ebola Fact Booklet.pdf



Key facts

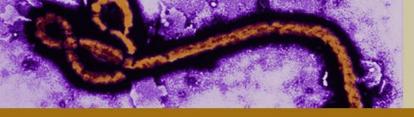
Ebola . . .

- Was first discovered in **1976** in the Democratic Republic of the Congo.
- Since then, outbreaks have appeared sporadically in Africa.







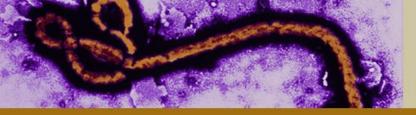


Key facts

The natural **reservoir host** of the Ebola virus has **not yet been identified**.







Key facts

Scientists believe the first patient became infected through contact with an infected animal such as a fruit bat or nonhuman primate.





Key facts

The **2014 Ebola epidemic** is the **largest** in **history**, affecting multiple countries in West Africa and now with cases presenting in the **United States**.





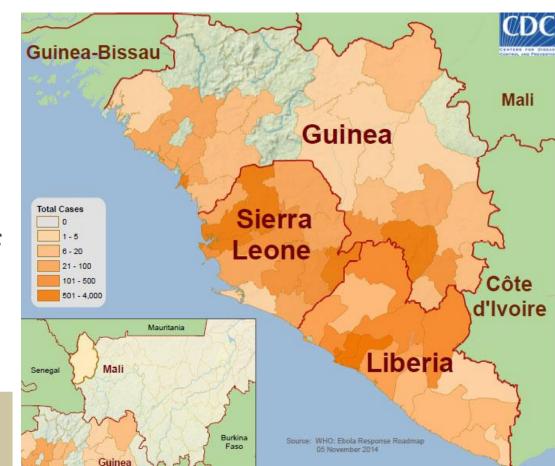






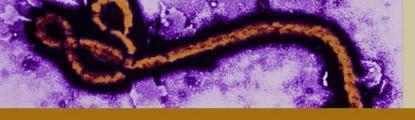
Key facts

Currently three (3)
African countries —
Guinea, Liberia and
Sierra Leone have
severe outbreaks of
Ebola.



SOURCE: CDC

www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/index.html

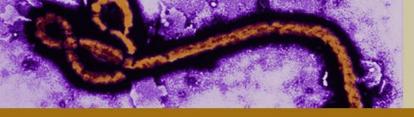


Key facts

- Other countries Nigeria, Senegal and Mali have reported cases.
- The good news is the World Health Organization (WHO) has officially declared the end of the outbreak in Senegal and Nigeria as of October 2014.







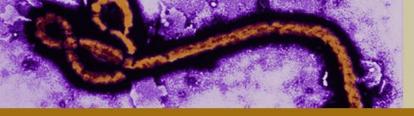
Key facts

As of **November 13, 2014** there have been:

- 14,098 cases of Ebola
- 5,160 deaths







Key facts

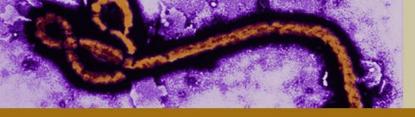
As of **November 13, 2014**, only **four (4) cases** have been reported in the **U.S.**; **one (1)** resulting in death.











Transmission

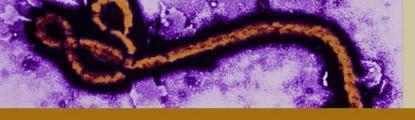
You can only get Ebola from unprotected

direct contact (e.g., broken skin or mucous membrane of the eyes,

nose or mouth) With . . .





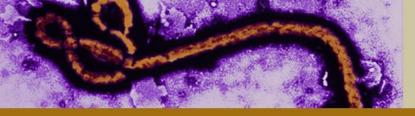


Transmission

- Blood, body fluids or skin of a person or animal who is sick with or has died from Ebola, OR . . .
- Through direct contact with contaminated objects and/or surfaces.







Transmission

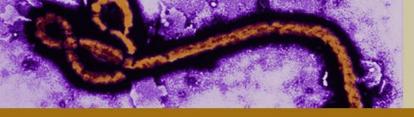
The risk of **direct skin contact** is **lower** than the risk from exposure to **blood** or **body fluids**.











Transmission

Avoid direct contact with body fluids.

- "Body fluids" include (but are not limited to):
 - Blood

Feces

– Semen

Urine

Vomit

Breast milk

Saliva

Sweat





LOUISIANA

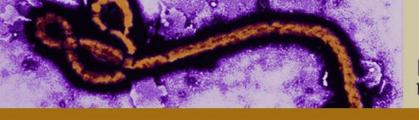


Transmission

 The current strain of the Ebola virus has not been shown to be transmitted in the air.





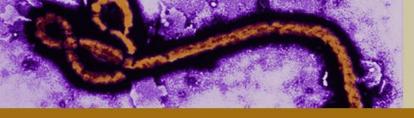


Transmission

- In addition to direct unprotected contact, in West Africa Ebola may spread as a result of handling wild animals hunted for food and infected bats.
 - Only wild animals in West Africa have been shown to carry Ebola – none in the U.S.





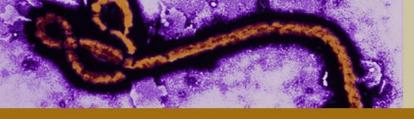


Transmission

- Once a patient has recovered from Ebola, he/she can no longer spread the virus.
- However, Ebola virus has been found in **semen** for up **to three** (3) **months**.
 - Abstinence from sex (including oral sex) or the use of condoms if abstinence is not possible is recommended for up to three (3) months.







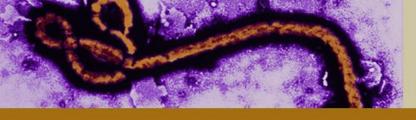
Incubation

The **incubation period** for Ebola, from **exposure** to when signs or **symptoms appear**, ranges from

2 to 21 days (most commonly 8 to 10 days).





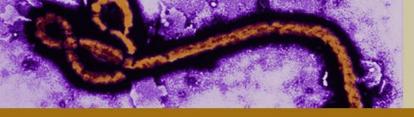


Incubation

- Any Ebola patient WITH signs or symptoms (symptomatic) should be considered infectious.
- Ebola patients without symptoms (asymptomatic) ARE NOT contagious.







Initial signs + symptoms

Initial symptoms occur after about five (5) days.

- Sudden fever
- Chills
- Muscle aches
- Diarrhea

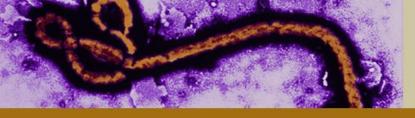
- Nausea
- Vomiting
- Abdominal pain











Initial signs + symptoms

Other symptoms may develop such as:

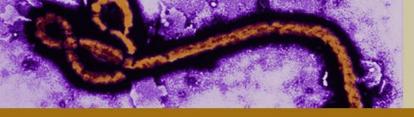
- Chest pain
- Shortness of breath
- Headache
- Confusion
- Fatigue











Initial signs + symptoms

Symptoms may become **increasingly severe** and may include:

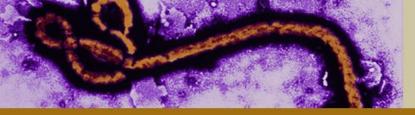
- Jaundice (yellow skin)
- Severe weight loss
- Bleeding inside and outside the body

- Shock
- Multi-organ failure





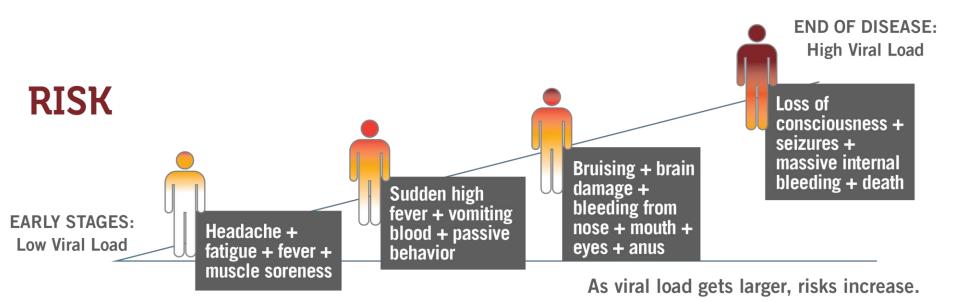




EBOLA:

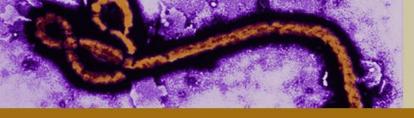
PREPARE + PREVENT + PROTECT + RESPOND

EVD progression









Prevention

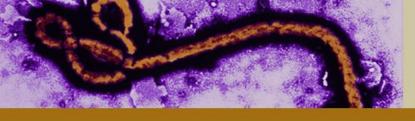
If a person is **known** or **SUSPECTED** to have Ebola:

- Wear appropriate **PPE**.
- Isolate the patient.
- Restrict contact with others.







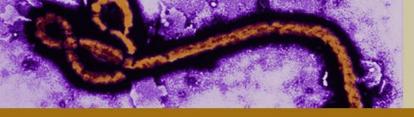


Prevention

- Avoid aerosol-generating procedures.
 - If unavoidable, use proper respiratory protection (PAPR or N95).
- Be diligent in environmental cleaning and disinfection and safe handling of potentially contaminated materials.







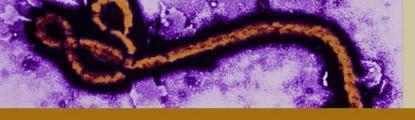
Prevention

Avoid direct unprotected contact with a person known or SUSPECTED to have Ebola AND any object or surfaces with which he/she may have had direct contact.









EBOLA: PREPARE + PREVENT + PROTECT + RESPOND

Prevention

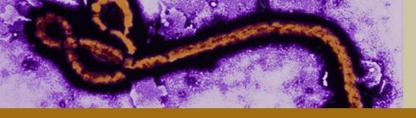
There are **two** (2) ways to **protect** yourself and others from **Ebola exposure**:

- Maintain distance. Stay at least three (3) feet away from a person known or SUSPECTED to have Ebola AND the area of his/her care.
- Put on PPE.



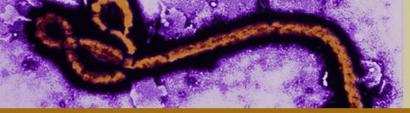






EBOLA: PREPARE + PREVENT + PROTECT + RESPOND

SUIT UP.



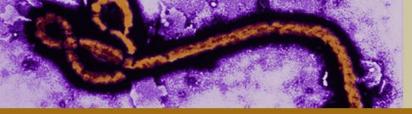


SECTION 2 -**Personal Protective** Equipment (PPE)









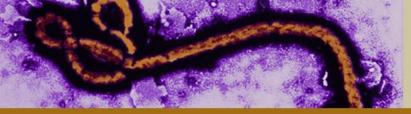


Safe environment requires knowledge and training.









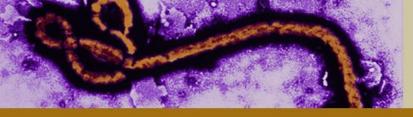
Key questions

- What is proper PPE for First Responders?
- What PPE do you need to stay safe?
- When do you need it?
- How do you correctly put it on and take it off?
- And what do you do with it when once you've removed it?











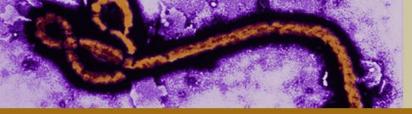
This presentation will answer those questions and more. . .











Language of PPE

First let's set the language for discussing PPE . . .

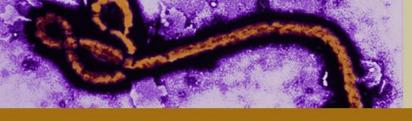
Putting on PPE: DONNING

Taking off PPE: DOFFING





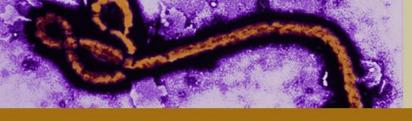


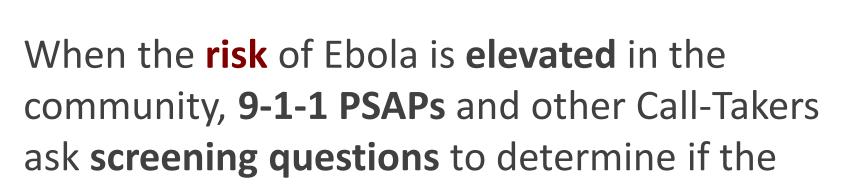




This is where it begins . . .

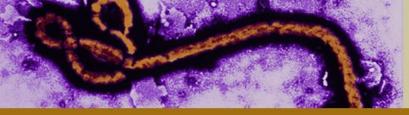






caller has a SUSPECTED case of Ebola.

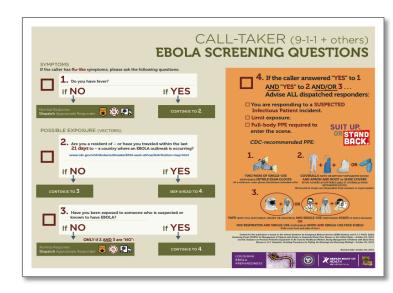


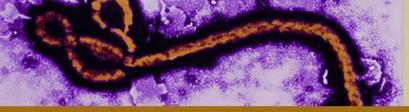


EBOLA: PREPARE + PREVENT + PROTECT + RESPOND

SUIT UP.
OR STAND
SPOND BACK.

- 1. Do you have fever?
- ✓ 2. Are you a resident of or have you traveled within the last 21 days to a country where an Ebola outbreak is occurring?





EBOLA:





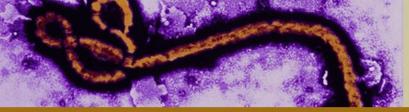
- If a caller answers **YES** to question 1...
- AND YES to 2 AND/OR 3 . . .
- Caller MAY be SUSPECTED of having Ebola.
- Those calls are then identified as a "SUSPECTED Infectious Patient incident."

4. If the caller answered "YES" to 1

AND "YES" to 2 AND/OR 3 . . .

Advise ALL dispatched responders:





EBOLA: PREPARE + PREVENT + PROTECT + RESPOND

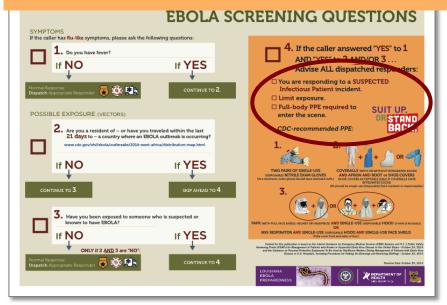


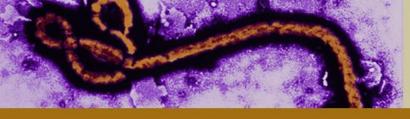
All dispatched responders will be told:

- "You are responding to a SUSPECTED Infectious Patient incident."
- "First Responders should limit exposure at the scene."
- "Full-body PPE REQUIRED to enter the scene."

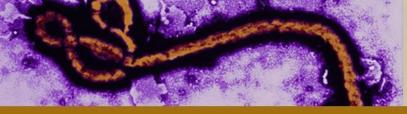
- You are responding to a SUSPECTED Infectious Patient incident.
- **✓** Limit exposure.
- **Y** Full-body PPE required to enter the scene.







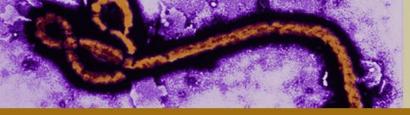
Once dispatched, local Law Enforcement (LE) and Fire Service and/or EMS will respond and head to the scene.





First Responders to arrive set a perimeter to secure the scene and ensure ONLY those in appropriate PPE enter the secured area.







"In the **Fire Service** it's everyone's **first instinct** to run in. During Ebola emergencies I think it's very important for all of us to remember: **Suit up. Or Stand back**."

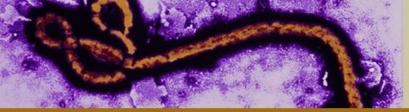
Curt Monte
 Public Information Officer
 Baton Rouge Fire Department









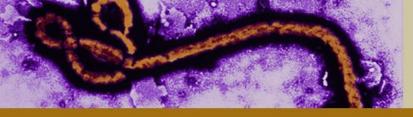


Who sets the standard for PPE?









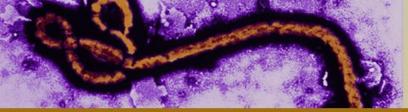




29 CFR 1910.1030(d)(3)

(3) Personal protective equipment—(i) Provision. When there is occupational exposure, the employer shall provide, at no cost to the employee, appropriate personal protective equipment such as, but not limited to, gloves, gowns, lab-







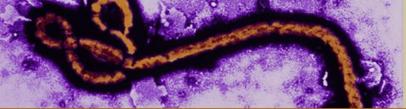


PPE is "appropriate" ONLY if it . . .

... does NOT permit blood or other potentially infectious materials to pass through to or reach your work clothes, street clothes, undergarments, skin, eyes, mouth or mucous membranes under normal conditions of use and for the duration of time you will be suited up.











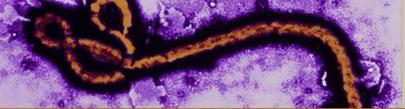


In addition to requirements set by OSHA, the Centers for Disease Control and Prevention (CDC) provides guidance on the proper PPE recommend for EMS, Law Enforcement and Fire Service agencies, hospitals and other healthcare providers and professionals.









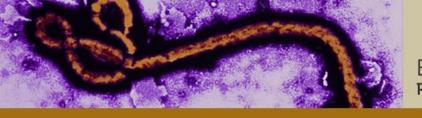




The most recent guidance can be found at the CDC website www.cdc.gov/vhf/ebola/hcp/interim-guidance-emergency-medical-services-systems-911-public-safety-answering-points-management-patients-known-suspected-united-states.html





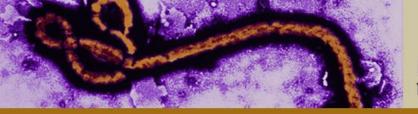


Buddy system

- Properly donning and doffing PPE requires a partnership – or buddy system.
- It's a minimum two (2) person process.

Trained Observer

First Responder

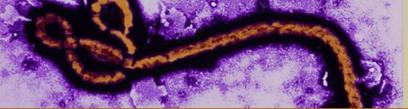


EACH First Responder going into the patient care area **MUST** have:

- On proper PPE.
- A Trained Observer when donning and doffing PPE.





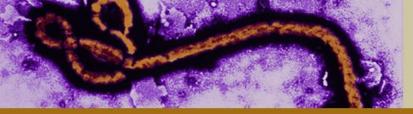


Principles of PPE











Principles of PPE:

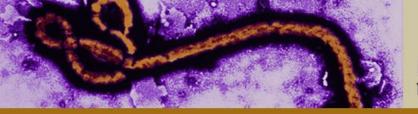
- Donning
- Patient Care
- Doffing

- Training
- Practice









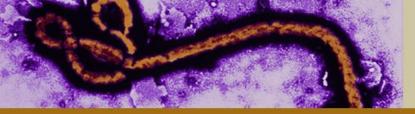
Principles of PPE **Donning**

- PPE must be donned correctly and in the proper order before entering a patient care area.
- It should **not** be **modified** while in the patient care **area** or **adjusted** during patient care.
- Donning PPE must be observed by a Trained
 Observer.









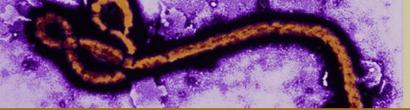
Principles of PPE **Donning**

 If you add or modify PPE guidelines, consider risks/benefits.









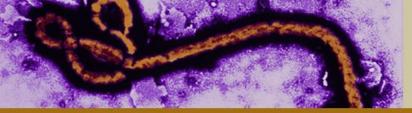
Principles of PPE During patient care

- PPE must be worn correctly for the duration of exposure.
- First Responders should perform **frequent alcohol-based hand rub** (ABHR) on gloved hands.









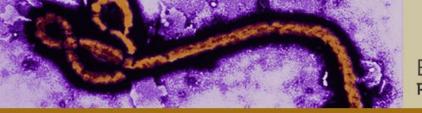
Principles of PPE During patient care

- If a **breach** of PPE occurs, **immediately move** to the **doffing area** to **assess**, and . . .
 - Implement your departmental/agency exposure plan, if appropriate.









Principles of PPE **Doffing**

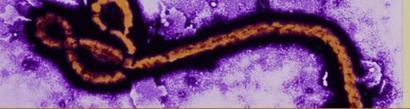
Doffing is when you are most at risk.

Remove PPE slowly and deliberately.









Principles of PPE **Doffing**

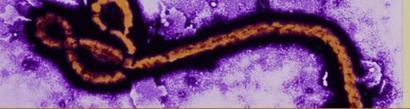
Doffing requires:

- A structured step-by-step and specifically sequenced removal process.
- Trained Observer.
- Designated area for removal.









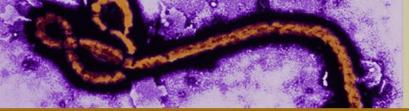
Principles of PPE Donning/Doffing

Doing it **right** requires **training** and **practice**.









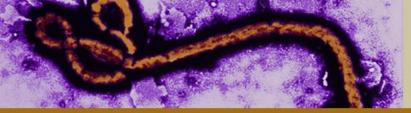
Role of the Trained Observer











Trained Observer should be:

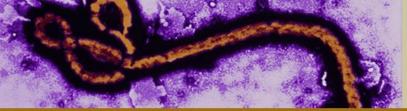
Knowledgeable:

- About all PPE recommended in department or agency protocols.
- Correct donning and doffing procedures, including disposal.
- Department or agency Exposure Management
 Plan in the event of an unintentional break in procedure.









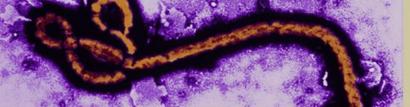
Trained Observer should be:

- Qualified to provide:
 - Guidance.
 - Technique recommendations.







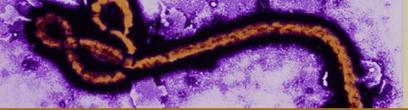




Sole responsibility of the **Trained Observer** is to ensure **adherence** to **procedure**.









Trained Observer

The Trained Observer should:

- Monitor donning and doffing processes.
- Ensure adherence to protocols for donning, doffing and securing used PPE.
- Provide assistance if needed.

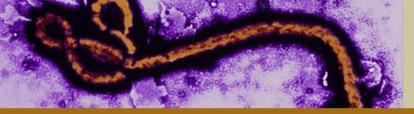












Trained Observer

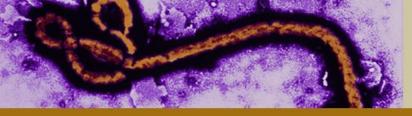
The Trained Observer should NOT:

- Enter the room of a patient known or SUSPECTED to have Ebola; OR
- Participate in Ebola patient-care activities.









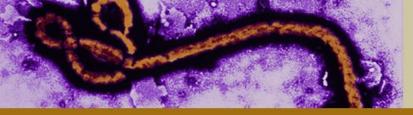
When do you need PPE...

Appropriate PPE is REQUIRED:

• If you are within three (3) feet of a person known or SUSPECTED to have Ebola.



- And/or objects or surfaces with which he/she may have had direct contact.
- And/or in the patient care area.

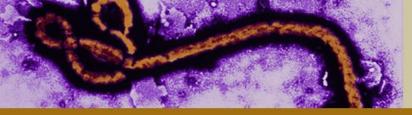


When do you need PPE...

Continue wearing PPE until you are NO longer in direct contact with the patient OR objects OR in areas that may be contaminated.





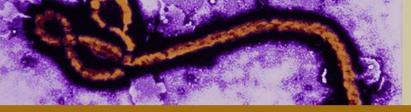


CDC-recommended PPE for First Responders . . .





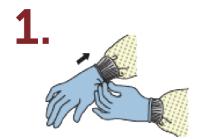




EBOLA:

PREPARE + PREVENT + PROTECT + RESPOND





TWO PAIRS OF SINGLE-USE (DISPOSABLE) NITRILE EXAM GLOVES (At a minimum, outer gloves should have extended cuffs.)

First Responder PPE

2.



COVERALLS (WITH OR WITHOUT INTEGRATED SOCKS)

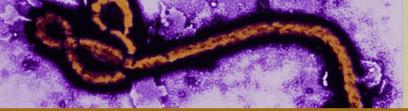
AND APRON AND BOOT or SHOE COVERS

(SHOE COVERS ACCEPTABLE ONLY IF COVERALLS HAVE

INTEGRATED SOCKS)
(All should be single-use [disposable] fluid-resistant or impermeable.)



PAPR (WITH FULL FACE SHIELD, HELMET OR HEADPIECE) AND SINGLE-USE (DISPOSABLE) HOOD (IF PAPR IS REUSABLE)
OR

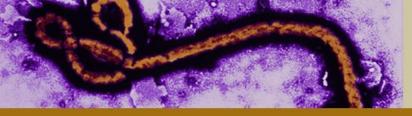




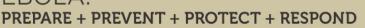
Let's look closer . . .







EBOLA:





You have a choice . . .

NIOSH-certified
Powered Air Purifying
Respirators (PAPR)

NIOSH-certified Fit-tested, disposable N95 respirator

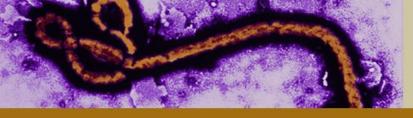


OR



With external beltmounted blower unit. With a self-contained filter and blower unit integrated inside the helmet.



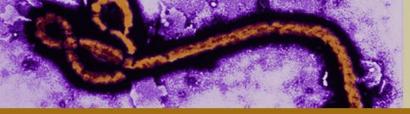


- While the current strain of Ebola is not an airborne pathogen in other words you canNOT get it from the air a mask or respirator is recommended as part of your PPE . . .
- To prevent you from getting any droplets from a sneeze or cough or any thing that could splash in your mouth or nose.









PAPR and N95 respirators

Both must be:

- NIOSH-certified.
- Fluid-resistant or impermeable.

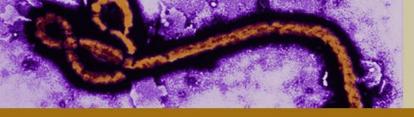












PAPR and N95 respirators

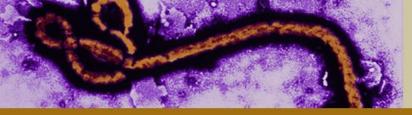
Both MUST comply with with all elements of the OSHA Respiratory Protection Standard found in 29 CFR 1910.134 including:

- Fit testing
- Medical evaluation
- Training







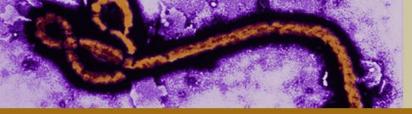


 PAPR MUST have a full face shield, helmet or headpiece.









If **PAPR** has a **reusable** helmet or headpiece, it **must** be covered with a **single-use** (disposable) **hood**.

- Hood should extend to the shoulders and fully cover the neck.
- Hood must be compatible with the selected PAPR.

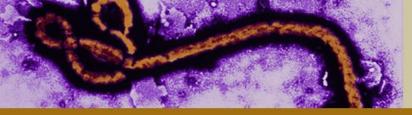














PAPR with a self-contained filter and blower unit integrated inside the helmet is preferred.









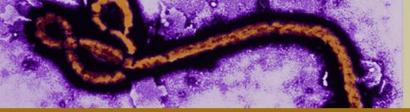
PAPR with an external belt-mounted blower unit requires adjustment of the donning and doffing sequence.





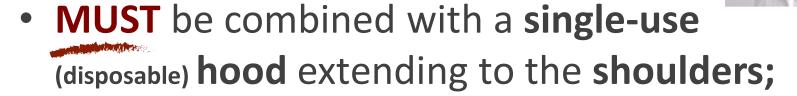








N95 respirator



AND a single use (disposable) full face shield.

That fully covers front and sides of face.

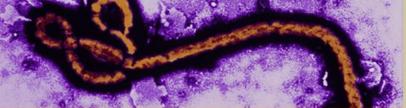














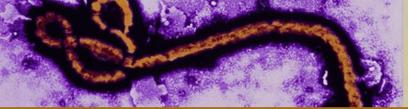
CAUTION - N95 respirator users -

- Do not inadvertently touch your face under the face shield.
 - Avoid touching the front surface of the face shield.
- A full face shield may not provide full-face protection if there is significant splashing.













Coveralls

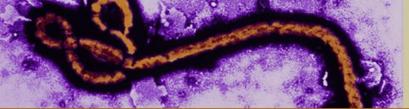
Coveralls should be . . .

- Without an integrated hood.
- With or without integrated socks.
- Single-use (disposable) fluid-resistant or impermeable.









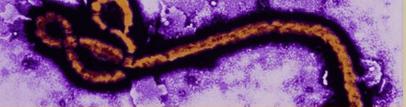
Impermeable

 Impermeable simply means to block any type of liquid or fluid from reaching your under clothing or skin.











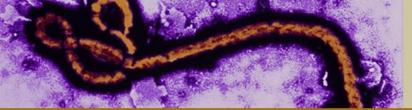
Coveralls

- Coveralls with thumb hooks help to secure sleeves over inner glove to prevent skin exposure.
- Taping can be used but may make doffing more difficult, increasing the risk of exposure.











Taping

If tape is used, **be sure** to use the **buddy tab** method . . .

 Folding end of tape into a tab to facilitate later removal.

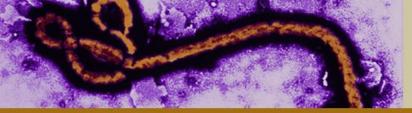










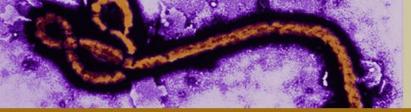


- Two (2) pairs of gloves should be worn.
- Gloves should fit comfortably and properly, not too small or too large.











Gloves should be single-use (disposable) nitrile examination gloves with extended cuffs.

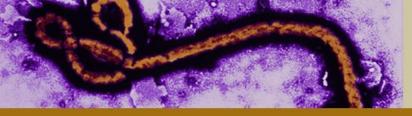
 At a minimum, outer gloves should have extended cuffs.













Using **different colored gloves** when double gloving makes it **easier** to **see** contamination, cuts or tears . . .

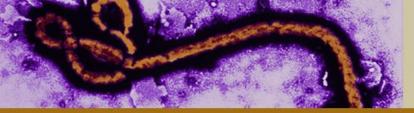
 And is a visual reminder of where you are in the donning and doffing process.







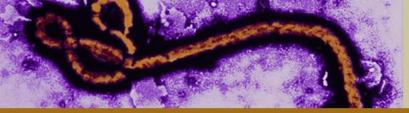




Even though the donning process calls for **DOUBLE gloving,** you will **need several pairs of gloves . . .**













If gloves are damaged during your work:

- STOP work.
- Check for exposure.
 - Move to doffing area if appropriate.
- Change gloves immediately.

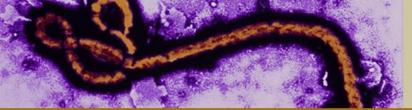
LOUISIANA

PREPAREDNESS







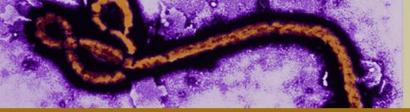


And, glove **changes** occur within the **doffing process**.









EBOLA: PREPARE + PREVENT + PROTECT + RESPOND





Boot covers



Shoe covers

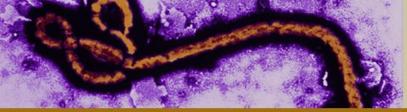
- Single-use (disposable) fluidresistant or impermeable.
- Must extend to mid-calf.

- Single-use (disposable) fluidresistant or impermeable.
- Acceptable ONLY if used in combination with a coverall that has integrated socks.









Apron

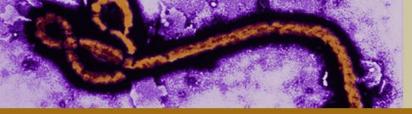
The **last piece** of **recommended** First Responder PPE is an **apron**.

 It provides additional protection if a known or SUSPECTED Ebola patient has vomiting or diarrhea.











Apron

The apron should be:

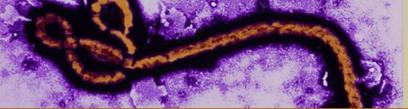
- Single-use (disposable) fluidresistant or impermeable.
- Cover your torso to the level of mid-calf.











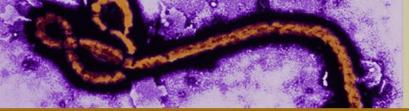
Apron

If wearing PAPR, consider selecting an apron that ties behind the neck to facilitate removal during the doffing process.





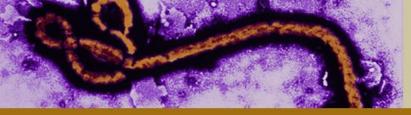




CDC-recommended PPE for Trained Observers . . .







EBOLA: PREPARE + PREVENT + PROTECT + RESPOND



Trained Observer PPE

Each piece should be single-use (disposable).



(Without integrated hood; fluid-resistant or impermeable)



FULL FACE SHIELD (Fully cover front and sides of face)



(Nitrile examination gloves with extended cuffs)



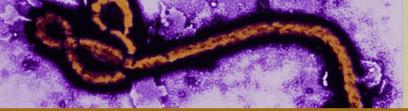
impermeable)











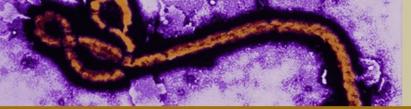


YOU have responsibilities

While OHSA and the CDC provide regulatory and implementation guidance – YOU, too, have responsibilities . . .

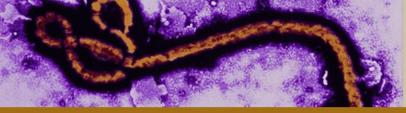






YOU have responsibilities

- Know the proper PPE required.
- Don and doff carefully, thoughtfully and correctly.
- Demonstrate competency.
- Ensure that you always have a Trained
 Observer when donning and doffing.

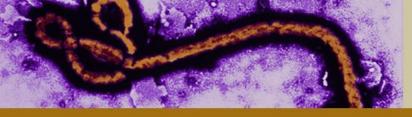


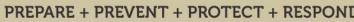




PAPR with an external belt-mounted blower unit full suit



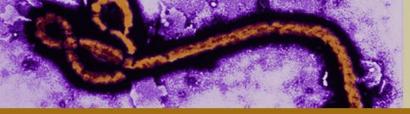






N95 respirator full suit



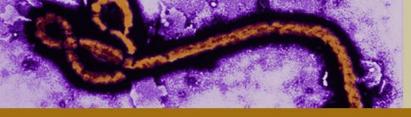




Getting ready to don, doff and secure used PPE









Let's talk about what's last, first . . .







DECON

- DECON is an important part of the doffing process.
- When you doff PPE in the field you need supplies to **DECON** as you go.
- Be sure you have what you need BEFORE donning PPE.

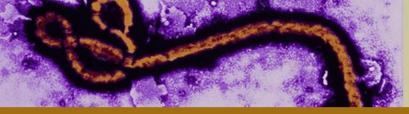
What you need to don, doff and secure used PPE . . .

A sprayer with household bleach solution that is one (1) part household bleach and nine (9) parts water (commonly referred to as a 10% household bleach solution).

Two (2) buckets:

- One (1) with clear water.
- One (1) with 10% household bleach solution.



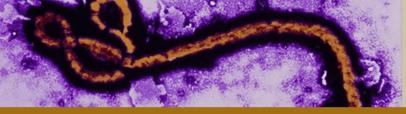




- A small plastic disposable kiddie pool or tub.
- Two (2) disposable chairs or stools,
 OR chairs or stools that can be
 DECONed after use.
- A box of single-use (disposable) nitrile examination gloves with extended cuffs.







- A box of **EPA-registered** disinfectant wipes or alcoholbased hand rub (ABHR).
- ✓ Plastic disposable tarp.
- **✓** Scene tape.
- Duct tape.





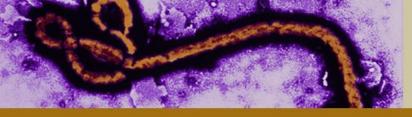
POLICE LINE DO NOT CROSS



- Large (33 gallon or larger) leak-proof plastic bags.
- ✓ Knife.
- An appropriate container for used (contaminated) sharps.

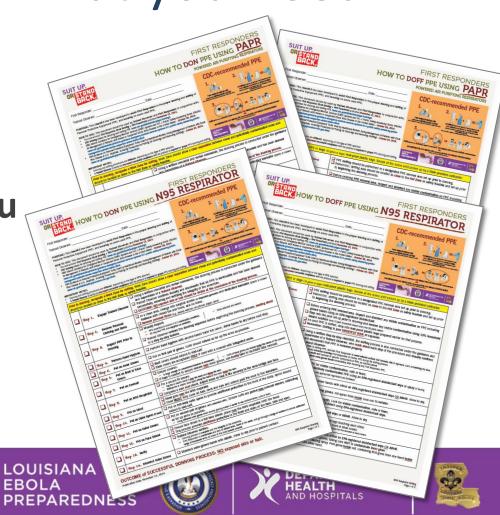


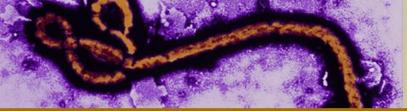






- Donning and Doffing Checklists.
- Most importantly you need your Trained Observer!



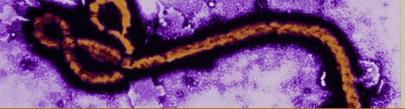


- Cordon off an area in which to work.
 - Ensure space allows a clear separation between clean and potentially contaminated areas.









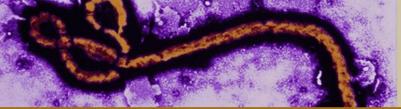


 You may want this area to be behind the building or behind your vehicle to block access of bystanders or media.











Purpose of work zones is to . . .

- Minimize the transfer of hazardous substances from the site.
- Establish security and physical barriers to exclude unnecessary personnel.
- Optimize number of personnel for effective operations.







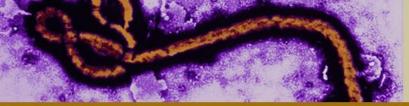
Purpose of work zones is to . . .

- Create control points to regulate access.
- Operate with intent to reduce exposures and eliminate airborne dispersion.
- Perform decontamination (DECON).







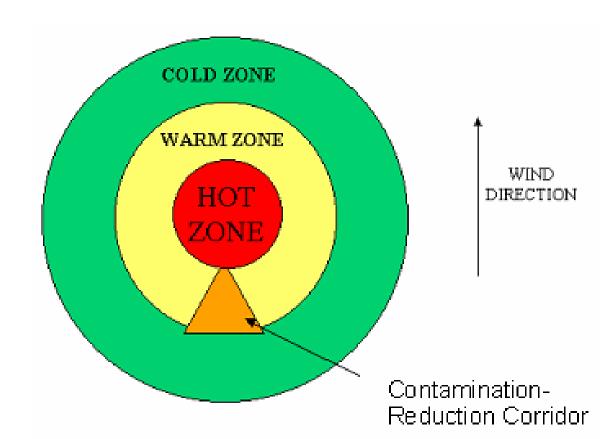


Hot Zone

 Contaminated area.

Warm Zone

- Contamination reduction zone (doffing) Or **DECON** area.





Cold Zone

 Clean area for support equipment, traffic limited, normal work PPE, no contaminated PPE worn or stored in this area.

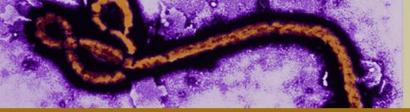
Safe Zone

Facilitates a nuisance-free area.









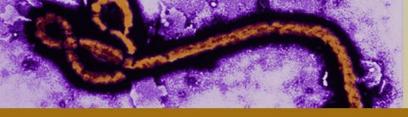


 NOTE: Doffing should be located as close to the Hot Zone as safely feasible.





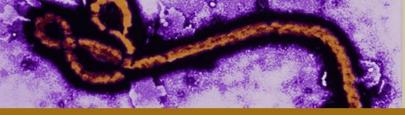




Doffing: Warm Zone

In this reserved area, spread out a plastic disposable tarp and a small plastic disposable kiddie pool or tub.



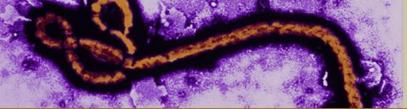




Doffing: Warm Zone

- Place a large (33 gallon or larger) leak-proof plastic bag in the small plastic disposable kiddie pool or tub.
- These will be used during doffing and to secure used PPE.







NOTE

Throughout this presentation, **EPA-registered disinfectant wipes** are referenced.

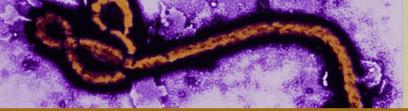
These are wipes impregnated with an EPA-registered hospital disinfectant with a label claim of potency at least equivalent to that for a non-enveloped virus (e.g., norovirus, rotavirus, adenovirus, poliovirus).











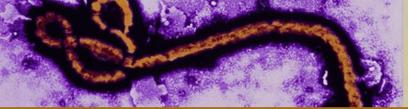


SECTION 3 -Donning using PAPR or N95









Outcomes

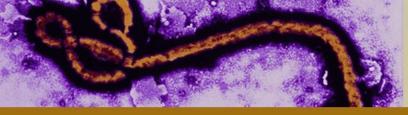
Whether using PAPR or N95 respirator, when **responding** to a **known** or **SUSPECTED** case of Ebola there should be . . .

- NO exposed skin or hair.
- Full-body coverage so that you are maximally protected from exposure, including "splash."





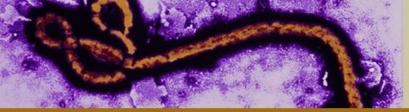




EBOLA: PREPARE + PREVENT + PROTECT + RESPOND

"Splash" occurs when a person known or SUSPECTED of having Ebola sneezes or coughs or vomits or exposes you in any other way to his or her blood or other body fluids.





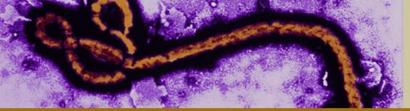


- Donning with PAPR is a 12-Step process.
- Donning with N95 is a 14-Step process.









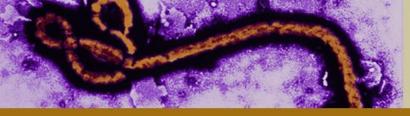


DONNING PPE: PAPR 12-Step process











The donning process is conducted under the guidance and supervision of a Trained Observer.







Step 1

Engage Trained Observer

Using a written checklist and verbal commands, your Trained Observer . . .

 Visually confirms and documents each step of the donning process.





Step 1.

Engage Trained Observer

Engage Trained Observer

- Assists with ensuring and verifying the integrity of your PPE ensemble.
- Ensures NO exposed skin or hair.









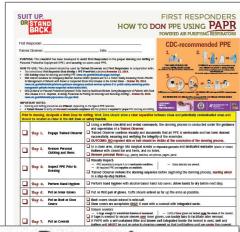


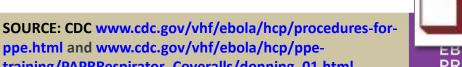


Remove personal clothing and items

Step

- In a clean area, change into surgical scrubs OR disposable garments AND dedicated washable (plastic or rubber) footwear (with closed-toe and heels, and no holes).
- Remove watches, jewelry, cell phones, pens, pagers, etc.





Remove Personal Clothing and Items



Remove personal clothing and items



You should know that garments worn under PPE may not be reusable.

Wear something that is disposable.



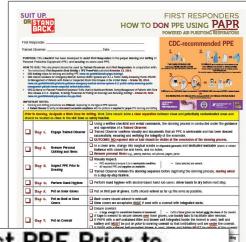




Step

Inspect

- Inspect PPE before donning to ensure it is in serviceable condition and **not torn** or **damaged**.
- Confirm all recommend PPE and needed supplies are available.







Inspect

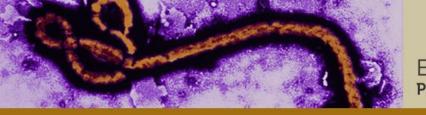


- Confirm that your PPE is the correct size.
- Your Trained Observer reviews the donning sequence with you BEFORE beginning the donning process . . .
 - Reading aloud the checklist in a step-by-step fashion.







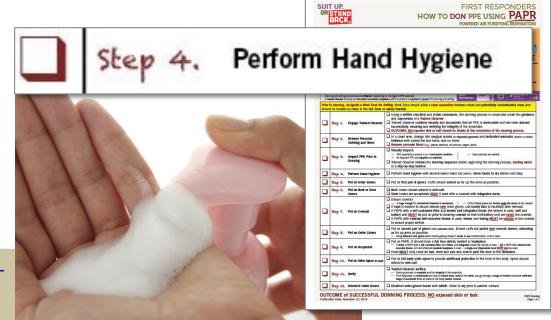


Step 4

Perform hand hygiene

- Perform hand hygiene using ABHR.
- Allow hands to dry before moving to

the **next step.**



Put on inner gloves

- Step 5
- Put on your first pair of gloves.
 These are the inner gloves.
- Cuffs should extend as far up the arms as possible.



SOURCE: CDC www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html and www.cdc.gov/vhf/ebola/hcp/ppe-training/PAPRRespirator_Coveralls/donning_01.html

Step 6.

Covers

Put on boot or shoe covers

- Remember. . .
 - Shoe covers can be used ONLY IF your coveralls have integrated socks.
 - Boot covers should extend to mid-calf.

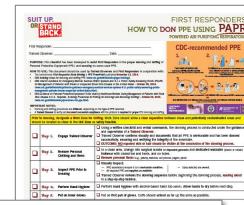


SOURCE: CDC www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html and www.cdc.gov/vhf/ebola/hcp/ppe-training/PAPRRespirator_Coveralls/donning_01.html

Step

Put on coveralls

- Ensure the coverall is large enough to allow unrestricted movement; and . . .
- Ensure cuffs of inner gloves are tucked under the sleeves of the coverall



Put on Coverall

Step /

Put on coveralls

 If tape is needed to secure sleeves over inner gloves, use buddy tabs to facilitate later removal.









Put on coveralls

- If using PAPR with a self-contained **filter** and **blower unit** that is integrated inside the helmet and separate belt and battery unit . . .
 - Belt and battery unit must be put on **prior** to donning the coveralls so that both are contained under the coverall.





Step



Put on coveralls



- If using PAPR with an external belt-mounted blower...
 - Blower and tubing must be on the outside of the coverall to ensure proper airflow.

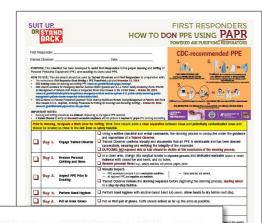




Put on outer gloves



- Put on outer gloves with extended cuffs.
- Ensure cuffs are pulled over the sleeves of the coverall, extending as far up arms as possible.





Step 8

Put on Outer Gloves



Put on **outer** gloves

- Remember, using different colored gloves when double gloving makes it easier to see contamination, cuts or tears.
 - And is a visual reminder of where you are in the donning and doffing process.

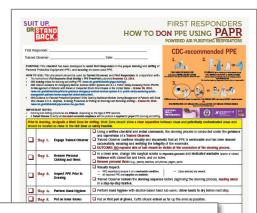




Put on respirator (PAPR)

Step 9

- Put on PAPR.
 - It should have a full face shield,
 helmet or headpiece.





Step 9.

Put on Respirator





Put on respirator (PAPR)

- IF using PAPR with a self-contained filter and blower unit integrated inside the helmet . . .
 - You MUST also use a single-use disposable hood.
 - Hood MUST fully cover all hair, neck and ears and extend past your neck to your shoulder.







Put on respirator (PAPR)



- IF using PAPR with an external belt-mounted blower unit and an attached reusable headpiece
 - • •
 - A single-use (disposable) hood that extends to the shoulders and that fully covers your neck must ALSO be used.
 - Again, be SURE the hood covers all of your hair and your ears and extends past your neck to your shoulders.



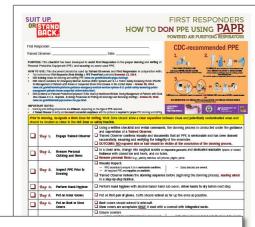






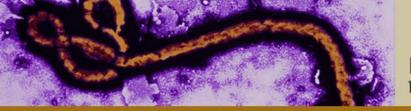
Put on outer apron (if used)

- Put on full-body outer apron to provide additional protection to the front of the body against exposure to body fluids or excrement from the patient.
- Apron should extend to mid-calf.





Put on Outer Apron (if used)



Verify

Step 11

- Trained Observer verifies:
 - Donning process is complete and the integrity of the ensemble.



Verify



- First Responder is comfortable and . . .
 - Can extend arms.
 - Bend at the waist.
 - Has sufficient range of movement while all areas of the body remain covered.



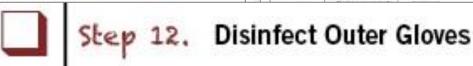


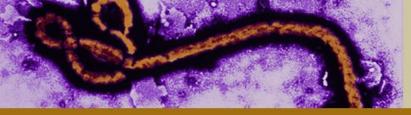


Disinfect outer gloves | Step 12/

 Outer gloves are disinfected with ABHR and allowed to dry prior to patient contact.









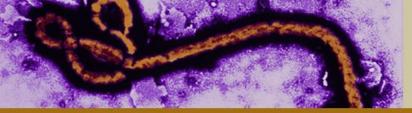
Donning using PAPR is COMPLETE.













DONNING PPE: N95 14-Step process

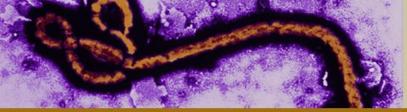


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The first **6** steps of the **donning process** for **N95** respirator users is the same as the donning process for PAPR users.





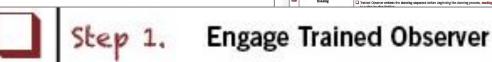


Engage Trained Observer

Like donning with a PAPR . . .

 The donning process for those using an N95 respirator is conducted under the guidance and supervision of a Trained Observer.









Using a written checklist and verbal commands, your Trained Observer . . .

 Visually confirms and documents each **step** of the donning process.







Engage Trained Observer

Step 1

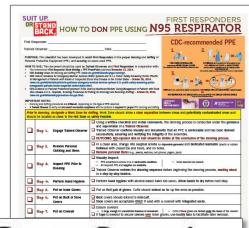
- Assists with ensuring and verifying the integrity of your PPE ensemble.
- Ensures NO exposed skin or hair.





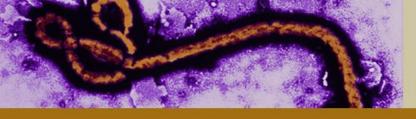
Remove personal clothing and items

- In a clean area, change into surgical scrubs OR disposable garments AND dedicated washable (plastic or rubber)
 footwear (with closed-toe and heels, and no holes).
- Remove watches, jewelry, cell phones, pens, pagers, etc.





Remove Personal Clothing and Items



Remove personal clothing and items

Step

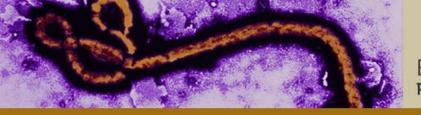
You should know that garments worn under PPE may not be reusable.

Wear something that is disposable.



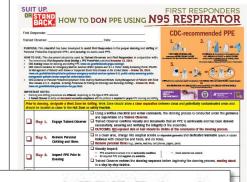






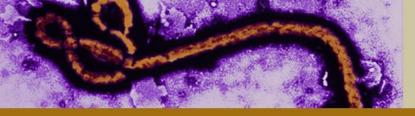
Inspect

- Inspect PPE before donning to ensure it is in serviceable condition and not torn or damaged.
- Confirm all recommend PPE and needed supplies are available.





Step



Inspect

- Confirm that your PPE is the correct size.
- Your Trained Observer reviews the donning sequence with you BEFORE beginning the donning process . . .
 - Reading aloud the checklist in a step-by-step fashion.









Perform hand hygiene

Step

Perform hand hygiene using ABHR.

Allow hands to dry before moving to the next

step.

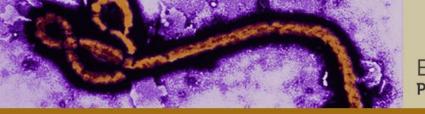


Put on inner gloves

- Put on your first pair of gloves. These are the inner gloves.
- Cuffs should extend as far up the arms as possible.



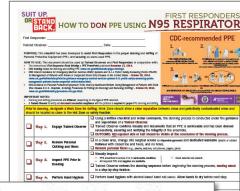
SOURCE: CDC www.cdc.gov/vhf/ebola/hcp/procedures-forppe.html and www.cdc.gov/vhf/ebola/hcp/ppetraining/n95Respirator Coveralls/donning 01.html



Put on boot or shoe covers



- Remember. . .
 - Shoe covers can be used ONLY IF your coveralls have integrated socks.
 - Boot covers should extend to midcalf.

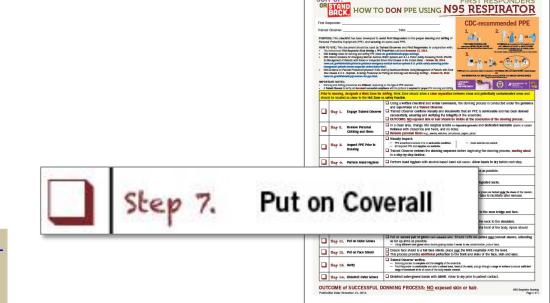


Put on Boot or Shoe Covers

| Sup 11. Pet or feed bledd | Discon feed bled

Put on coveralls

At **step 7**, sequencing becomes a little **different** from donning using **PAPR** . . .



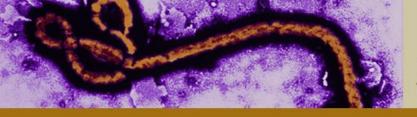


- Put on coveralls.
 - Ensure the coverall is large enough to allow unrestricted movement; and . . .
 - Ensure cuffs of inner gloves are tucked under the sleeves of the coverall.









Put on coveralls

 If tape is needed to secure sleeves over inner gloves, use buddy tabs to facilitate later removal.



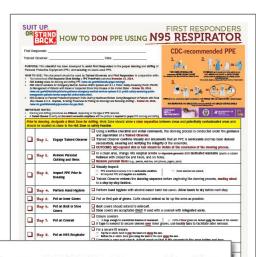




Put on N95 respirator

Put on the N95 respirator.







Put on N95 respirator

- For a secure fit ensure:
 - Top tie or elastic band is over your head and above your ears.
 - Bottom tie or elastic band goes along the back of your neck under your ears.



Put on N95 respirator

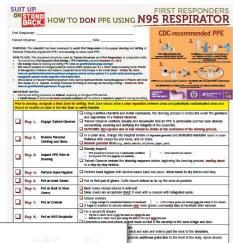
- Complete a user seal check.
 - Adjust the mask so that it fits securely to the bridge of your nose and your face.



Put on hood

- Put hood over the N95 respirator.
- Hood MUST fully cover all hair, neck and ears and extend past your neck to your shoulders.





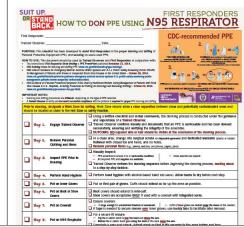


Put on outer apron

Step 10

(if used)

- Put on full-body outer apron to provide additional protection to the front of the body against exposure to body fluids or excrement from the patient.
- Apron should extend to mid-calf.



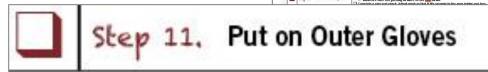


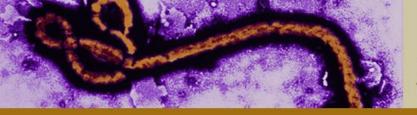


Put on outer gloves

- Put on outer gloves with extended cuffs.
- Ensure cuffs are pulled over the sleeves of the coverall, extending as far up arms as possible.









Put on **outer** gloves

Step

- Remember, using different colored gloves when double gloving makes it easier to see contamination, cuts or tears.
 - And is a visual reminder of where you are in the donning and doffing process.







- Put on full face shield.
- Ensure it is placed over your N95 respirator AND the hood.
- This provides additional
 protection to the front and sides
 of your face, skin and eyes.



OR	STAND BACK HOW T	O DON PPE USING N	FIRST RESPONDE S RESPIRATO
First Ri	esponder:		CDC-recommended PP
Trained	Observer:	Date:	1 2.78 0
PURPOSE: This checklist has been developed to ass Personal Protective Equipment (PPE), and securing o		assist First Respenders in the proper donning and doffing of ag on-scene used PPE.	THE STREET STREET
- The CDC -	instructional field Responder Blook Bissilley a 4 staking vision for Consening and Other PPT. In Indiants Carladono for Exemptory Historia Carladono for Exemptory Historia Technologist Consening C	excite genériciental prigos havingh. ser ENEXO Systems of 3-1 Public Stately Amending Florics OTEAIns of Estate Visit Glossas in the United States - Orderlan M., Oslek. may exhabit entries opinione 211 pills - Orderlan M., Oslek. may exhabit entries opinione 211 pills - Orderlan M., Oslek. to bed by hardsteav Bother During Managament of Pathotos with Essa for Publing On (Country) and Reserving Cristings - Orderlan 20, 2014.	S. + 1 or 1
Prior		or doffing. Work Zone should allow a clear separation b	etween clean and potentially contaminated areas a
	Shap 1. Engage Trained Observ	Using a written checklist and writen commands, the domning process is conducted under the guild and supervision of a Trained Observer.	
	Shep 2. Remove Personal Ciothing and Hems	In a clean area, change into surgical scrubs or exposels generate and dedicated washable quote or no footness with closest live and no hotels. Because personal thems up, yearly extract compass, pages, pens,	
	Shap 3. Inspect PPE Prior to Donaling	□ Visually inspect: □ The secrets to amount it in wedwate condition. □ The secrets to amount it in wedwate condition. □ Table Observer reviews the domning sequence before Deglinning the domning process, modified also also ploy-by fastistics.	
	Step 4. Perform Hand Hygiene	Perform hand hygiene with alcohol-based hand rub (4848). Allow hands to dry before next step.	
	Step 6. Pet on Inner Gloves	☐ Put on first pair of gloves. Cuffs should extend as far up the arms as possible.	
	Shap 6. Put on Boot or Shoe Covers	Boot covers should extend to mild calf. Shoe covers are acceptable ONLY if used with a coverall with integrated socies.	
	Shep 7. Pet on Coverall	Ensure coveral: It beys enough for unwainfeled bracken of movement. It large is needed to secure serves over inner gloves, use buildly tabs to facilitable later removal.	
		For a secure fit ensure. — Top they along to the long top the head and done the east. — Before for a shall be and pope along the land. Before for a shall be and pope along the lands of the reck leging the east.	

Verify

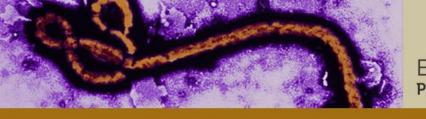
- Trained Observer verifies:
 - Donning process is complete and the integrity of the ensemble.







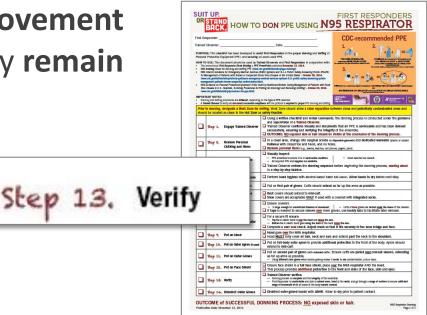




Verify

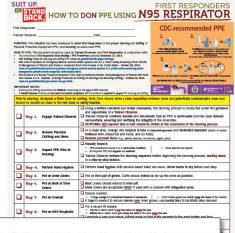
Step

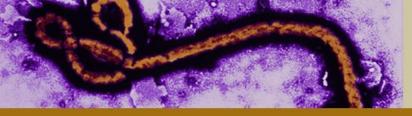
- First Responder is comfortable and . . .
 - Can extend arms.
 - Bend at the waist.
 - Has sufficient range of movement while all areas of the body remain covered.



Disinfect outer gloves

 Outer gloves are disinfected with ABHR and allowed to dry prior to patient contact.





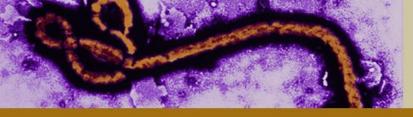


Donning using an N95 respirator is COMPLETE. and the state of t









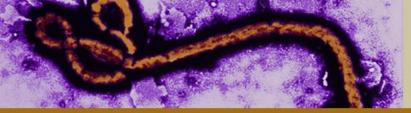


Trained Observers don and doff PPE using the same procedures.







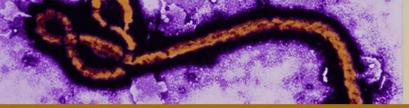




Law Enforcement (LE)









If you are Law Enforcement (LE), remember your job is to secure the scene and protect the perimeter.

If you **MUST assist Medical Responders** OR are going to be **within three** (3) **feet** of a person **known** or **SUSPECTED** to have Ebola – or **direct**

contact with anything with which that person has had direct contact – you MUST put on PPE.



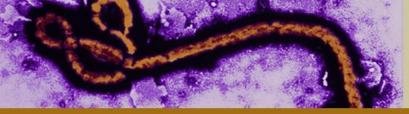




Remember, when you suit up . . .

- LOCK your gear in your car, including your service weapon.
- Remove anything that could puncture or tear your PPE, including your badge.
- You are NO longer identifiable as Law **Enforcement.**
- Be SURE there are other LE personnel on site to keep the perimeter secure.





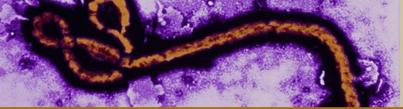


SECTION 4 -**Doffing using PAPR or N95**









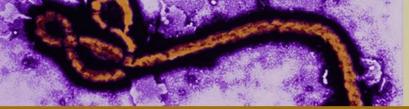
properly.

 Safely removing and properly disposing of PPE is just as important as putting it on

- You MUST remove PPE CAREFULLY.
- Doffing is your GREATEST risk of exposure.
 - Take a breath. Take your time.

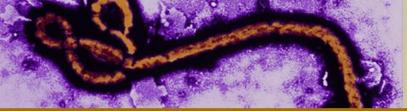






Doff at the **PPE removal** area you set up earlier.





Before entering the **PPE** removal area, inspect and disinfect any visible contamination on PPE including gloved hands using an EPAregistered disinfectant.



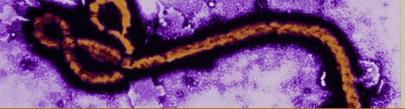






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PREPAREDNESS



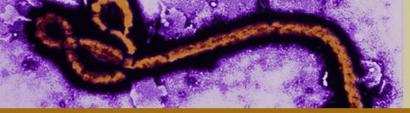


Step into the pool and into the large (33 gallon or larger) leak-proof plastic bag.











Remove any visible contamination on your PPE using the 10% household bleach solution you prepared earlier.

One (1) part household
 bleach and nine (9) parts
 water.

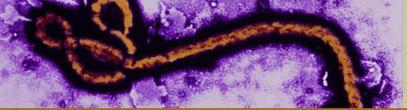










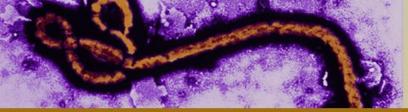


- One common (and improper) approach to decontamination (DECON) is the notion that increasing the strength of a bleach solution will improve effectiveness.
- This should NEVER be attempted when DECONing PPE.









Prepare to doff PPE

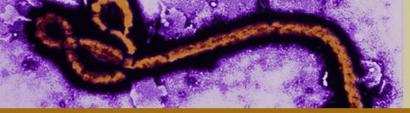
As you doff PPE, you will **drop disposable** items into the **leak-proof plastic bag** prepared for that purpose and later **double bag** the used PPE.











EBOLA: PREPARE + PREVENT + PROTECT + RESPOND

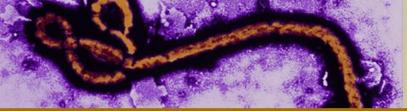


Like donning, the doffing sequence is different depending on whether you use PAPR or N95 respirators.



PAPR – 21-Step process

N95 – 24-Step process



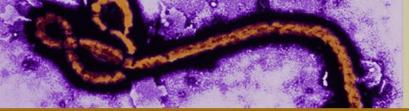
Trained Observer

Like the **donning** process, **doffing** is conducted under the **supervision** of a **Trained Observer**.









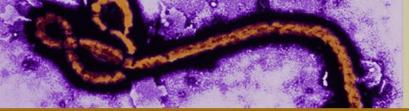
Trained Observer

- A Trained Observer is an ESSENTIAL part of doffing for both PAPR and N95 respirator users.
- You MUST follow his/her commands.











DOFFING PPE: PAPR 21-Step process









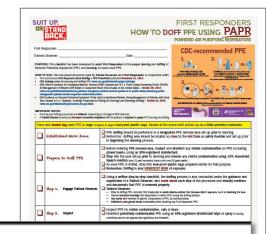




Engage Trained Observer

Your Trained Observer, using a written checklist . . .

- Reads aloud each step of the doffing procedure.
- Visually confirms and documents PPE is removed properly.





Engage Trained Observer

Engage Trained Observer



Your Trained Observer . . .

- Reminds you to avoid reflexive actions that put you at risk, such as touching your face.
- Should minimize touching your PPE during the doffing process.







Engage Trained Observer

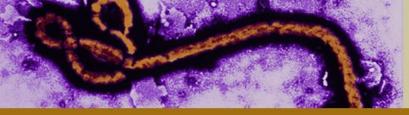
Your Trained Observer . . .

- May assist with removal of specific components of PPE.
- Disinfects outer-gloved hands immediately after handling any of your PPE during the doffing process.



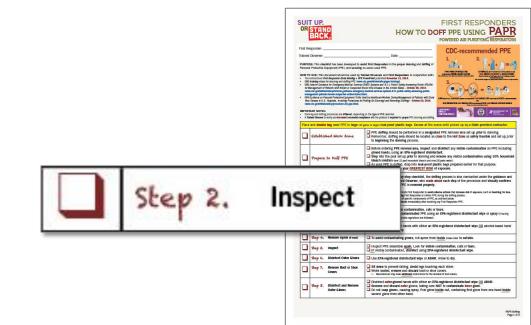






Inspect

 Inspect PPE for visible contamination, cuts or tears.



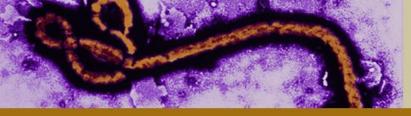
Step

Inspect

- Disinfect potentially contaminated PPE using an EPA-registered disinfectant wipe . . .
 - OR an EPA-registered disinfectant spray (if conditions) permit and appropriate regulations are followed)







Disinfect outer gloves

- Use EPA-registered disinfectant wipe OR ABHR.
- Allow to dry.

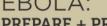


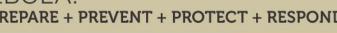
Remove apron (if used)

- Remove and discard apron.
- To avoid contaminating gloves, roll apron from inside (clean side) to outside.











Inspect

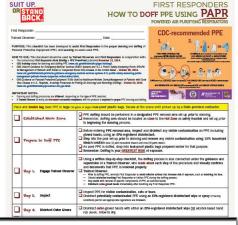
- Inspect your PPE ensemble again.
- Look for visible contamination, cuts or tears.
- If visibly contaminated, disinfect affected PPE using an EPAregistered disinfectant wipe.

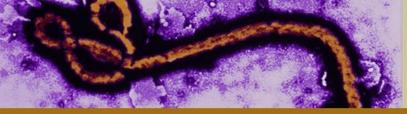


Disinfect outer gloves

 Disinfect outer-gloved hands using an EPA-registered disinfectant wipe OR ABHR and allow to dry.





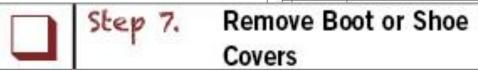


Remove boot or shoe covers



- Sit down so you don't risk falling.
 - Avoid legs touching each other.
- While seated, remove and discard boot or shoe covers.
 - Check boot cover manufacturer for additional removal instructions.

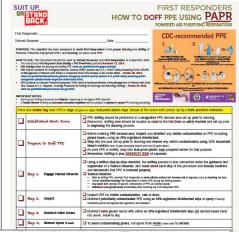


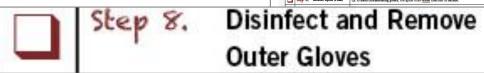


Disinfect and remove outer gloves



- Disinfect outer-gloved hands.
 - Use an EPA-registered disinfectant wipe OR ABHR.







Disinfect and remove outer gloves



- Remove and discard outer gloves.
- Be careful NOT to contaminate inner glove.





Step 9

Inspect and disinfect inner gloves

 Inspect inner gloves' outer surfaces for visible contamination, cuts or tears.





Step 9. Inspect and Disinfect Inner Gloves

	or disposable garments.
9	☐ Showers are recommended for those — Perferring bigh-rish patient one lace, supposed to large quantities of blood, body fluids or secwrist. — Sparring standad prains of the ent's in their postest.
9	☐ Either the infection preventioned or occupational safety and health coordinator or their designee should meet with the Flist Responder to review patient care activities performed to Identity any concerns abust care probacted and to record First Responder's level of falligue.

SOURCE: CDC www.cdc.gov/vhf/ebola/hcp/procedures-forppe.html and www.cdc.gov/vhf/ebola/hcp/ppetraining/PAPRRespirator_Coveralls/doffing_01.html

Inspect and disinfect inner gloves



- IF an inner glove is visibly soiled, cut or torn:
 - Disinfect the glove with either an EPA-registered disinfectant wipe OR ABHR.
 - Remove inner gloves and perform hand hygiene with ABHR on bare hands.
 - Don a clean pair of gloves.







Inspect and disinfect inner gloves

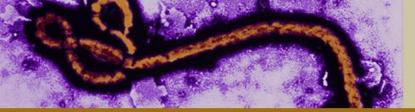


- IF no visible contamination, cuts, or tears are identified on the inner gloves:
 - Disinfect the inner-gloved hands with either an **EPA-registered disinfectant wipe OR ABHR.**









EBOLA:

PREPARE + PREVENT + PROTECT + RESPOND

Remove PAPR respirator

Step 10/

Remember: Two (2) types of recommended PAPR

- PAPR with a selfcontained filter and blower unit integrated inside the helmet – wait until Step 15 for removal.
- Go to Step 11 now.

- If a PAPR with an **external belt-mounted blower unit** is used, **all components must be removed at this step**.
 - Detach hose from hood. Remove and discard disposable hood.
 - Disinfect inner gloves with either an EPA-registered disinfectant wipe OR ABHR.
- Remove headpiece, blower, tubing and the belt and battery unit.
 - You may need assistance from the Trained Observer.
- Disinfect inner gloves AGAIN.
- Place all reusable PAPR in designated container for disinfection.

SOURCE: CDC

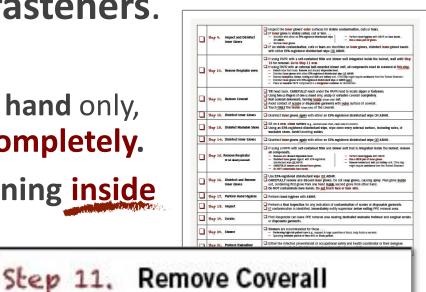
www.cdc.gov/vhf/ebola/hcp/procedures-forppe.html and

www.cdc.gov/vhf/ebola/hcp/ppe-

Remove coverall

Step 11

- Tilt head back.
- CAREFULLY reach under the PAPR hood to locate zipper or fasteners.
 - Avoid touching your skin.
 - Using two (2) fingers of one (1) hand only,
 unzip or unfasten coverall completely.
 - Roll coverall downward, turning inside (clean-side) out.



Remove coverall



- Avoid contact of surgical scrubs or disposable garments with outer surface of coverall.
- Touch ONLY the inside (clean side) of the coverall.





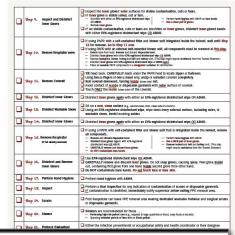
EBOLA:

PREPARE + PREVENT + PROTECT + RESPOND

Disinfect inner gloves AGAIN

Step 12

 Disinfect inner gloves with either an EPA-registered disinfectant wipe OR ABHR.

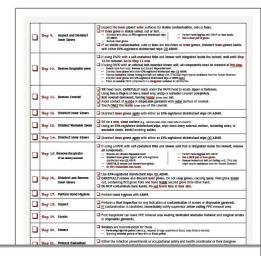








- Sit on a **new**, **clean** surface.
- Using an EPA-registered disinfectant wipe, wipe down every external surface, including soles, of your washable shoes.
- Avoid touching ankles.





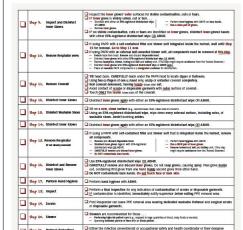
Step 13.

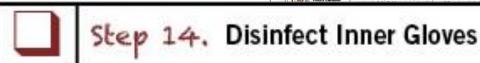
Disinfect Washable Shoes

Disinfect inner gloves AGAIN



 Use either an EPA-registered disinfectant wipe OR ABHR.



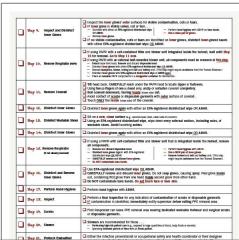


Remove respirator

(if not already removed)

 If using a PAPR with a selfcontained filter and blower unit integrated inside a helmet

• •





Step 15. Remove Respirator

Step

(if not already removed)

Remove respirator

(if not already removed)

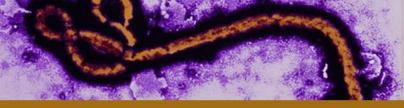


- Remove all components.
 - Remove and discard disposable hood.
 - Disinfect inner gloves (again) with either an EPAregistered disinfectant wipe **OR** ABHR.
 - CAREFULLY remove and discard inner gloves.









Remove respirator

(if not already removed)



- Do NOT contaminate bare hands.
 - Perform hand hygiene with ABHR.
 - Don a NEW pair of inner gloves.
- Remove helmet and belt and battery unit.
 - Get assistance from your Trained Observer if needed.









- Use an EPA-registered disinfectant wipe OR ABHR.
 - CAREFULLY remove and discard inner gloves.
 - Do NOT contaminate bare hands OR touch face or bare skin.



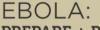
SUIT UP.

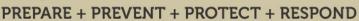
Hand hygiene

Perform hand hygiene with ABHR.



SOURCE: CDC

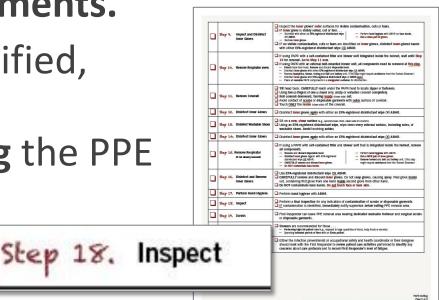


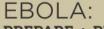


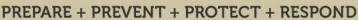


Inspect

- This is a final inspection for any contamination on your surgical scrubs or disposable garments.
- IF contamination is identified, immediately notify your supervisor before leaving the PPE removal area.



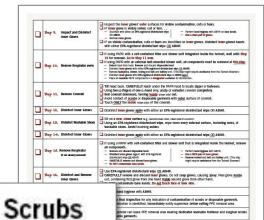


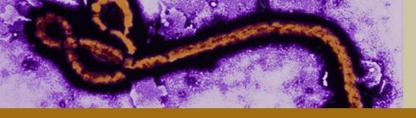




Step 19

 You can leave the PPE removal area wearing dedicated washable footwear and surgical scrubs or disposable garments.





EBOLA: PREPARE + PREVENT + PROTECT + RESPOND

Shower



- Showers are recommended for those:
 - Performing high-risk patient care.
 - Spending extended periods of time with an Ebola patient.



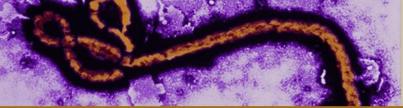
Protocol evaluation/ medical assessment

Step 21

 Either the infection preventionist or occupational safety and health coordinator or their designee should meet with the First Responder to review patient care activities performed to identify any concerns about care protocols and to record First Responder's level of fatigue.









Safe removal of gloves

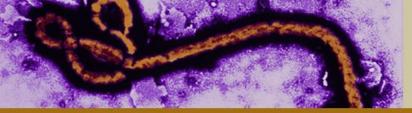
NOTE

CDC recommends the following process to remove contaminated gloves:

 Using a gloved hand, grasp (or pinch) the palm area of the other gloved hand and peel off first glove, inside (clean side) OUt.









Safe removal of gloves

- Hold removed glove in gloved hand.
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove, again, inside (clean side) out.

NOTE







Safe removal of gloves

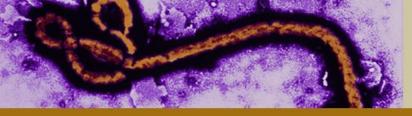
- If double gloved, the process is the same.
- Always perform hand hygiene when removing outer or inner gloves.

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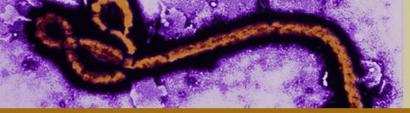
Doffing using PAPR is COMPLETE.













DOFFING PPE: N95 respirator 24-Step process

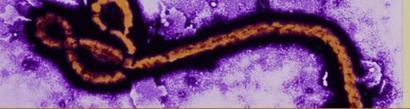


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The first **9** steps of an **N95** user doffing are the same as those for **PAPR**.





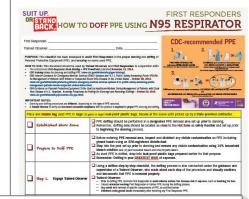


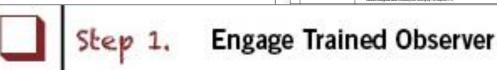


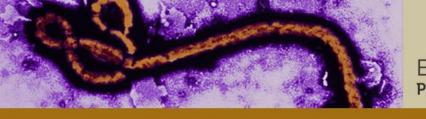
Engage Trained Observer

Your Trained Observer, using a written checklist . . .

- Reads aloud each step of the doffing procedure.
- Visually confirms and documents
 PPE is removed properly.







Engage Trained Observer

Step

Your Trained Observer . . .

- Reminds you to avoid reflexive actions that put you at risk, such as touching your face.
- Should minimize touching your PPE during the doffing process.







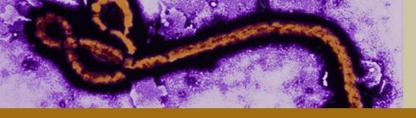
Engage Trained Observer

Your Trained Observer . . .

- May assist with removal of specific components of PPE.
- Disinfects outer-gloved hands immediately after handling any of your PPE during the doffing process.



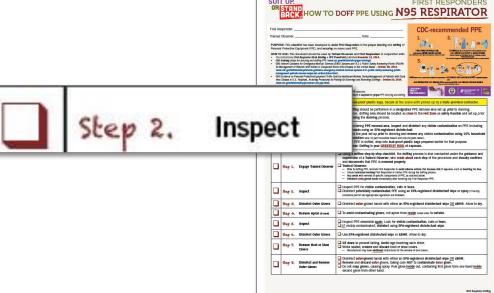




Step 2

Inspect

 Inspect PPE for visible contamination, cuts or tears.



SOURCE: CDC www.cdc.gov/vhf/ebola/hcp/procedures-forppe.html and www.cdc.gov/vhf/ebola/hcp/ppetraining/n95Respirator Coveralls/doffing 01.html



Inspect

- Disinfect potentially contaminated PPE using an EPA-registered disinfectant wipe . . .
 - OR an **EPA-registered disinfectant spray** (if conditions permit and appropriate regulations are followed)





Disinfect outer gloves

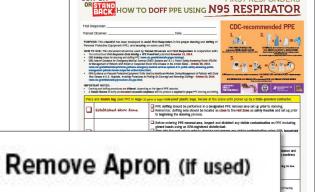
- Use EPA-registered disinfectant wipe OR ABHR.
- Allow to dry.



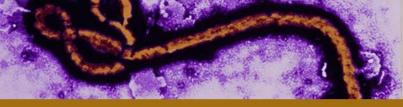
Remove apron (if used)

- Remove and discard apron.
- To avoid contaminating gloves, roll apron

from inside (clean side) to outside.

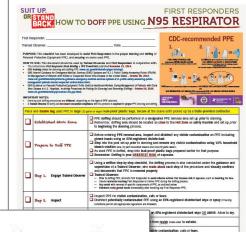






Inspect

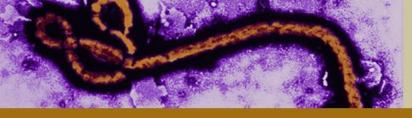
- Inspect your PPE ensemble again.
- Look for visible contamination, cuts or tears.
- If visibly contaminated, disinfect affected PPE using an EPAregistered disinfectant wipe.







Step

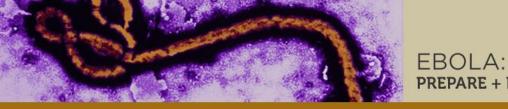


Disinfect outer gloves

Step 6

 Disinfect outer-gloved hands using an EPAregistered disinfectant wipe OR ABHR and allow to dry.

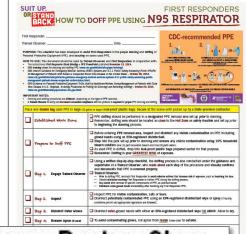


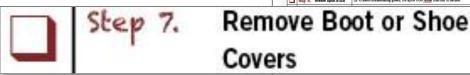


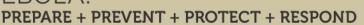
Step 7

Remove boot or shoe covers

- Sit down so you don't risk falling.
 - Avoid legs touching each other.
- While seated, remove and discard boot or shoe covers.
 - Check boot cover manufacturer for additional removal instructions.









Disinfect and remove outer gloves

- Disinfect outer-gloved hands.
 - Use an EPA-registered disinfectant wipe OR ABHR.
- Remove and discard outer gloves.
- Be careful NOT to contaminate inner glove.





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Inspect and disinfect inner gloves

Inspect inner gloves' outer surfaces for visible contamination, cuts or tears.





- IF an inner glove is visibly soiled, cut or torn:
 - Disinfect the glove with either an EPA-registered disinfectant wipe OR ABHR.
 - Remove inner gloves and perform hand hygiene with ABHR on bare hands.
 - Don a clean pair of gloves.











- IF no visible contamination, cuts or tears are identified on the inner gloves:
 - Disinfect the inner-gloved hands with either an **EPA-registered disinfectant wipe OR ABHR.**





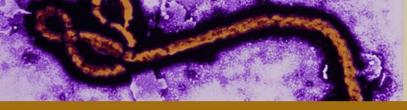
Step 10

Remove face shield

The sequence **changes** at **step 10** for **N95** users.



SOURCE: CDC www.cdc.gov/vhf/ebola/hcp/procedures-forppe.html and www.cdc.gov/vhf/ebola/hcp/ppetraining/n95Respirator_Coveralls/doffing_01.html



Remove face shield

Step

- Remove full face shield.
 - Tilt head slightly forward.
 - Grab the rear strap and pull it over your head.
 - Face shield will gently fall forward.
 - Discard.
- Avoid touching the front of the face shield.

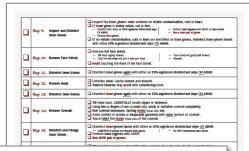




Disinfect inner gloves AGAIN



 Use either an EPA-registered disinfectant wipe OR ABHR.



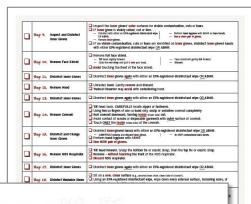


Step 11. Disinfect Inner Gloves

rubs	 First Responder can leave PPE removal area wearing dedicated washable footwear and surgical scru or disposable garments.
bower	Showers are recommended for those
otecol Evaluation/ edical Assessment	☐ Either the infection preventionist or occupational safety and health coordinator or their designee should meet with the Pist Responder to review patient care activities performed to identity any concerns about care protocosts and to record Pirst Responder's level of refigure.
	fecol Evaluation/ dical Assessment

Remove hood

- Unfasten hood.
- Gently remove and discard.
- Trained Observer may assist with unfastening hood.





Step 12. Remove Hood

Disinfect inner gloves AGAIN

Step 13

 Use either an EPA-registered disinfectant wipe OR ABHR.

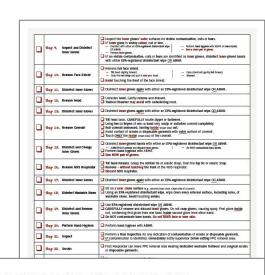




Step 13. Disinfect Inner Gloves

Remove coverall

- Tilt head back.
- CAREFULLY reach to locate zipper or fasteners.
 - Avoid touching your skin.
 - Using two (2) fingers of one (1) hand only, unzip or unfasten coverall completely.
 - Roll down, turning inside (clean side) out.





Remove coverall

Step 14

- Avoid contact of surgical scrubs or disposable garments with outer surface of coverall.
- Touch ONLY the inside (clean side) of the coverall.







Step 15

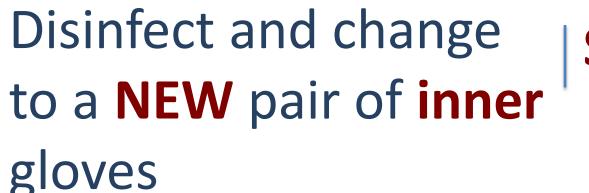
Disinfect and change to a **NEW** pair of **inner** gloves

- Disinfect inner-gloved hands with either an EPA-registered disinfectant wipe OR ABHR.
 - CAREFULLY remove and discard inner gloves.
 - Do NOT contaminate bare hands.



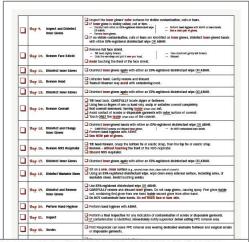






Step

- Perform hand hygiene.
- Don NEW pair of gloves.



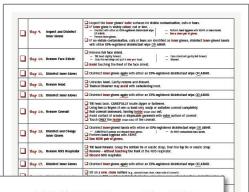


SOURCE: CDC www.cdc.gov/vhf/ebola/hcp/procedures-for-

Remove N95 respirator

Step 16

- Tilt head forward.
- Grasp the bottom tie or elastic strap, then the top tie or elastic strap.





Step 16. Remove N95 Respirator

Remove N95 respirator

- Remove without touching the front of the N95 respirator.
- Discard N95 respirator.



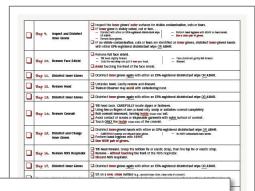


Step

Disinfect inner gloves AGAIN



 Use either an EPA-registered disinfectant wipe OR ABHR.

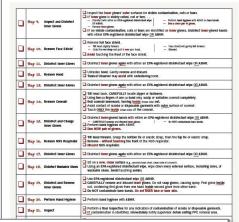


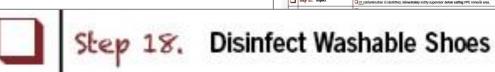


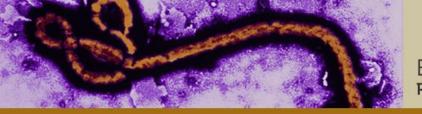
Step 17. Disinfect Inner Gloves

Disinfect washable shoes

- Sit on a **new**, **clean** surface.
- Using an EPA-registered
 disinfectant wipe, wipe down
 every external surface, including
 soles, of the washable shoes.
- Avoid touching ankles.







Disinfect and remove **NEW inner** gloves

Step 19

- Use an EPA-registered disinfectant wipe OR ABHR.
 - CAREFULLY remove and discard inner gloves.
 - Do NOT contaminate bare hands
 or touch face or bare skin.



Hand hygiene

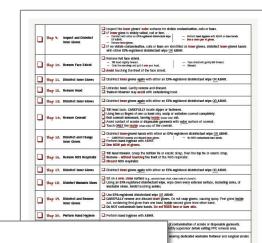
Step 20

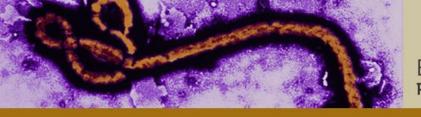
Perform hand hygiene with ABHR.



SOURCE: CDC www.cdc.gov/vhf/ebola/hcp/procedures-forppe.html and www.cdc.gov/vhf/ebola/hcp/ppetraining/n95Respirator_Coveralls/doffing_01.html

- This is a final inspection for any contamination on your surgical scrubs or disposable garments.
- IF contamination is identified, immediately notify your supervisor before leaving the PPE removal area.





Scrubs OR disposable garments

Step

 You can leave PPE removal area wearing dedicated washable footwear and surgical scrubs or disposable garments.

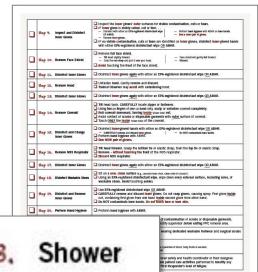


SOURCE: CDC www.cdc.gov/vhf/ebola/hcp/procedures-for-

Shower

Step 6

- Showers are recommended for those:
 - Performing high-risk patient care.
 - Spending extended periods of time with an Ebola patient.



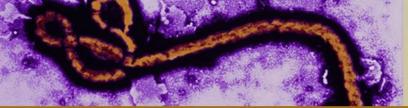
Protocol evaluation/ medical assessment

 Either the infection preventionist or occupational safety and health coordinator or their designee should meet with the First Responder to review patient care activities performed to identify any concerns about care protocols and to record First Responder's level of fatigue.

EBOLA:









Safe removal of gloves

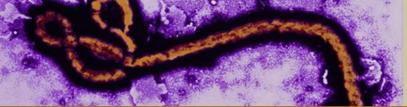
NOTE

CDC recommends the following process to **remove contaminated** gloves:

Using a gloved hand, grasp (or pinch)
 the palm area of the other gloved
 hand and peel off first glove, inside
 (clean side) Out.









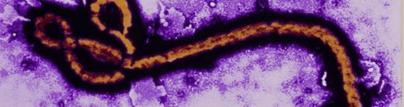
Safe removal of gloves

- Hold removed glove in gloved hand.
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove, again, inside (clean side) Out.

NOTE







Safe removal of gloves

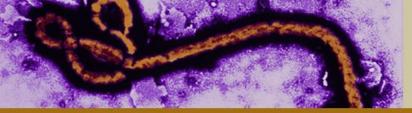
- If double gloved, the process is the same.
- Always perform hand hygiene when removing outer or inner gloves.

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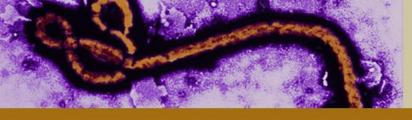


Doffing using N95 respirator is COMPLETE.



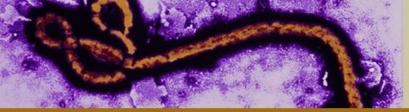






However, you are **not** finished yet . . .



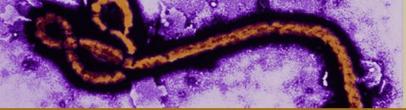


What do you do with PPE after taking it off?









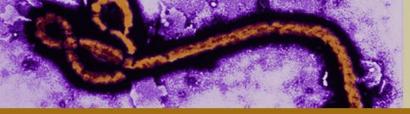


SECTION 5 -**Securing used PPE**











Complete containment and proper disposal is ESSENTIAL for your protection and the protection of others.











Remember you need . . .

- A small plastic disposable kiddie pool or tub.
- Two (2) buckets:
 - One (1) with clear water.
 - One (1) with a **10%** household bleach solution (prepared earlier).







Remember you need . . .

- Single-use (disposable) nitrile examination gloves with extended cuffs.
- ✓ Plastic disposable **tarp.**
- **✓** Duct tape.









- Large (33 gallon or larger) leak-proof plastic bags.
- ✓ Knife.
- An appropriate container for used (contaminated) sharps.







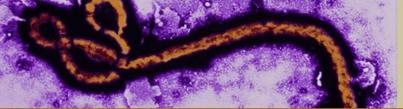
Before disposal begins . . .

- Don a NEW pair of gloves.
- Fill two (2) buckets:
 - One (1) with clear water.
 - One (1) with a 10% household bleach solution (prepared earlier).









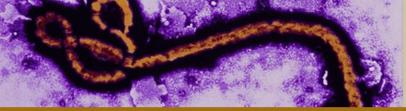


• If you are **on scene**, **double bag** used PPE in large (33 gallon or larger) leak-proof plastic bags and secure.











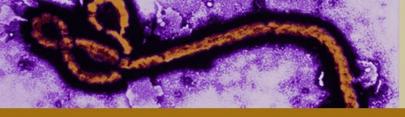
- Tie large (33 gallon or larger) leak-proof plastic bag in which the PPE was doffed and seal with duct tape.
- Place sealed bag into a second leak-proof plastic bag.







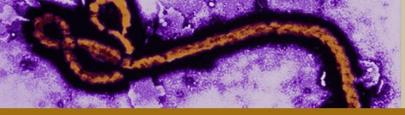






 The outer bag is also sealed with duct tape and placed aside.





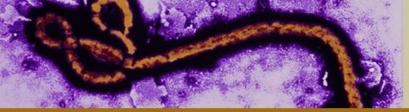


- Once the double bag of used PPE is placed aside, puncture and fold the pool.
- Then place the pool in a large

(33 gallon or larger)

leak-proof plastic bag.







- The leak-proof plastic bag containing the pool is then placed on the center of the tarp.
- The tarp is then folded over the pool and placed into another large (33 gallon or larger) leak-proof plastic bag.
 - While folding, the First Responder should only touch the outside (clean side) of the tarp.

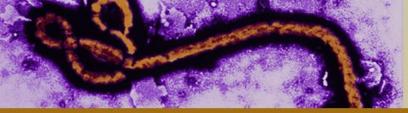














DECON

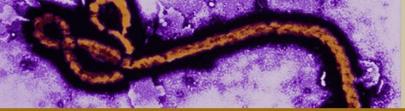
 Go to the prepared buckets of 10% household bleach solution and clear water.











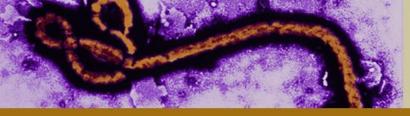
DECON

- Wash gloved hands in the 10% household bleach solution . . .
 - As hands are removed from the solution (but still in the bucket), gently shake off excess solution.









DECON

- . . . followed by washing gloved hands in the bucket of clear water.
 - As hands are removed from the water (but still in the bucket), gently shake off excess water.

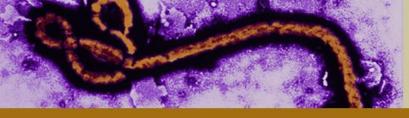






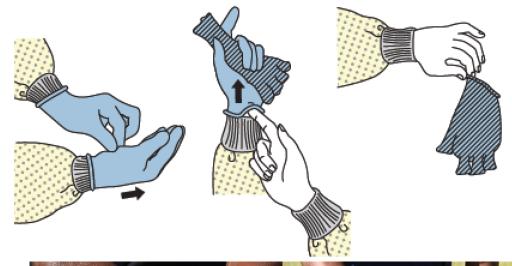




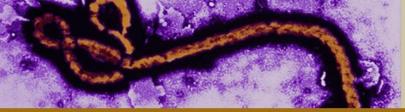




- Now remove gloves
 - . .
 - . . . careful to not contaminate your skin.









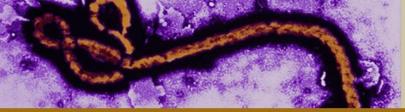
Contain and dispose

- Place gloves in the leak-proof plastic bag containing the pool and tarp.
- Seal with duct tape, double bag and seal with duct tape again.











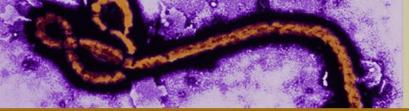
Contain and dispose

- Bags containing used PPE, pool and tarp are secured at the scene to wait for a Stateprovided contractor to properly remove and dispose.
 - To remain secure, someone must stay with the bags and wait for the contractor.











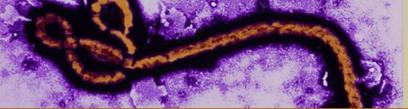
Disposal

 The State-provided contractor places the plastic bags into an overpack drum and seals for disposal.









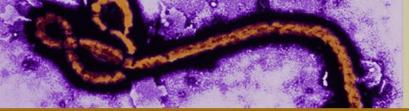
Clean-up

Ensure **reusable** equipment is **properly reprocessed** and that **batteries** are **fully charged**.











Clean-up

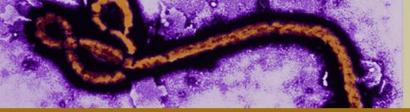
- Follow manufacture's instructions for DECONing reusable PPE components.
 - Ensure someone has designated responsibility for DECONing.
- Follow departmental/agency guidance.
- Follow CDC guidance.









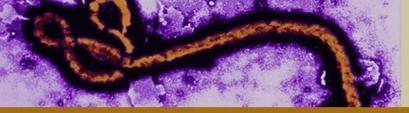




What MORE can you do to ensure a safe environment?





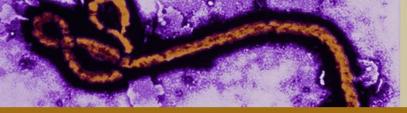




Remember

- Avoid unprotected direct body contact.
- Stay at least three (3) feet away if you are not wearing appropriate PPE.
- Ensure you have the right PPE.

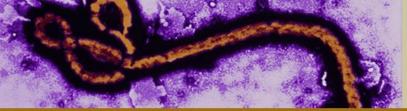






Remember

- Don and doff PPE CAREFULLY.
- ALWAYS have a Trained Observer when donning or doffing PPE.
- Take your time. Do NOT rush.
- CONTAIN used PPE and any contaminated materials COMPLETELY.

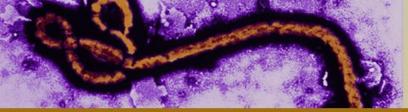


- Don PPE before entering the scene.
- Identify and isolate the patient known or SUSPECTED to have Ebola.







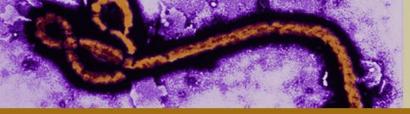


 Limit the number of people who come into contact with the patient and the patient care area.









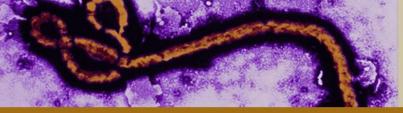
Notify DHH/Office of Public Health/Infectious Disease Epidemiology (ID EPI) Section at 1-800-256-2748 . . .

 AND notify the receiving health care facility that the patient is SUSPECTED of having Ebola.



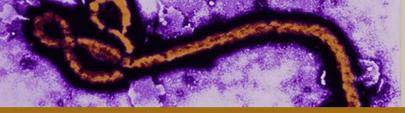






• Limit pre-hospital procedures in transport that increase the risk of exposure to infectious material.





 For example, limit intubation, opening or suctioning of airways, cardiopulmonary resuscitation and similar procedures to the minimum necessary for essential diagnostic evaluation and medical care.



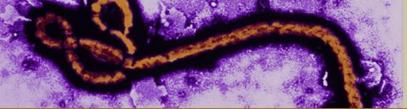






- Limit the use of needles and other sharps as much as possible.
- Follow your departmental/agency guidance and CDC guidance.







If exposed . . .

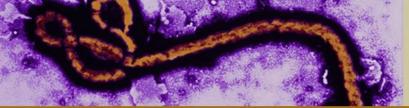


If you **suspect** you have been **exposed** to any contaminants while you are **on scene**, performing your duties OR doffing your PPE . . .





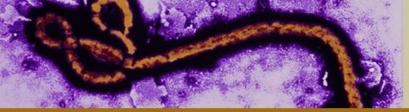




If exposed . . .



- STOP work immediately.
- Wash exposed area with soap and water and/or irrigate eyes, nose and mouth if exposed, with large amounts of water or eyewash solution.
- Notify your supervisor.





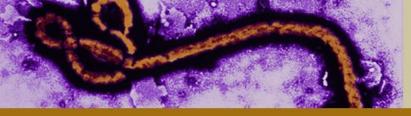
Training and practice

Training and practice are ESSENTIAL to successfully donning and doffing PPE and securing used PPE.







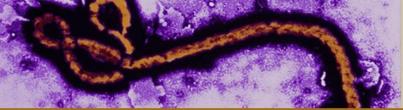




To get it right – PRACTICE! PRACTICE! PRACTICE!





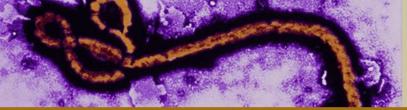


- CDC has produced video training aids including step-by-step guidance for donning and doffing PPE.
- Steps in the video are sometimes different than steps identified in the CDC written guidance.
 - For example, sometimes steps are consolidated, others may vary depending on type of PPE selected.
- The preceding PowerPoint follows the step sequencing in the CDC written guidance published October 20 and 28, 2014.







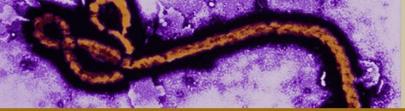


For more information . . .

- Visit these websites:
 - www.cdc.gov/vhf/ebola/hcp/interim-guidance-emergencymedical-services-systems-911-public-safety-answering-pointsmanagement-patients-known-suspected-united-states.html
- CONTERS FOR DISEASE

- www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html
- osha.gov/pls/oshaweb/owadisp.
 Show_document?p_id=12716&p_table=standards





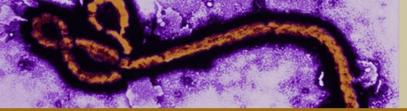
Video resources

- CDC PPE training module: www.cdc.gov/vhf/ebola/hcp/ppe-training/
- PAPR with coveralls: www.cdc.gov/vhf/ebola/hcp/ppe-training/ PAPRRespirator_Coveralls/donning_01.html
- N95 with coveralls: www.cdc.gov/vhf/ebola/hcp/ppe-training/ n95Respirator_Coveralls/donning_01.html











- This presentation was produced and published on November 13, 2014.
- CDC guidance dated October 20 and 28, 2014 were used as foundational material.
- CDC updates the **website** frequently. Check the website for **most current information**.

www.cdc.gov/vhf/ebola/index.html





