

	<h1>N.C. Nurse Aide I Curriculum</h1>
	<h2>MODULE B</h2> <h3>Infection Prevention</h3>
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	<h2>Objectives</h2>
	<ul style="list-style-type: none"><li>■ Relate the chain of infection to the work of a nurse aide in long-term care facilities.</li><li>■ Explain the concept of breaking the chain of infection and its importance to infection prevention.</li><li>■ Compare Standard Precautions and Transmission-base Precautions.</li><li>■ Discuss the use of Personal Protective Equipment by the nurse aide.</li><li>■ Explain why residents in long-term care facilities are at risk for infection.</li></ul>
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	<h2>Infection Prevention</h2>
	<p>All of the things that people do to control and prevent the spread of infection</p>
	
	
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# Infection

A disease or a condition when harmful germs get into the body and grow in numbers

**EXAMPLES**

Two Types

1. Localized
2. Systemic



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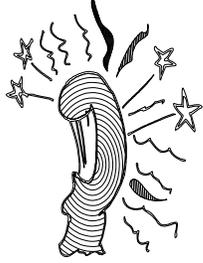
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## Localized Infection



- One body part and symptoms limited
- Example – infected finger
- Symptoms – painful, red, hot, puffy, drainage

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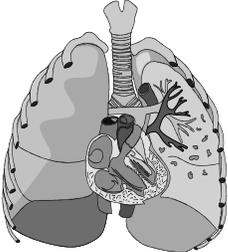
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## Systemic Infection



- Entire body part or system
- Symptoms are fever, chills, fatigue, nausea, vomiting, other specific symptoms
- Example?

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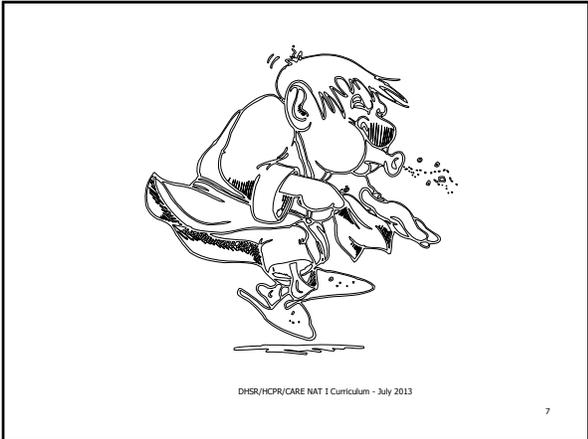
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How do you feel when someone coughs or sneezes on you?



How do you feel when someone hands you a moist, crumpled up, used tissue with yellow, thick, slimy globs of mucus on it to throw away?

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**What kind of symptoms do you think a female resident would have if she had.....**



**a bladder infection?**

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## Bladder Infection - Symptoms

- Fever and chills
- Pain when using bathroom
- Urine will smell bad and might look like it contains blood
- "My urine stinks and it hurts when I have to go to the bathroom"



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*A Person with a Stomach Infection  
will Probably.....*



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**Have you ever had someone vomit on you?**

**Have you ever had to clean up after someone has vomited?**

**How did you feel if you got the vomited liquid on your hand?**

**What did you do?**



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## Microorganisms

- Also called germs
- Live almost everywhere
- Some help people and others harmful
- Requirements to survive?
- Examples?



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## Medical Asepsis

- Also called clean technique
- Used to remove or destroy microorganisms and prevent spread



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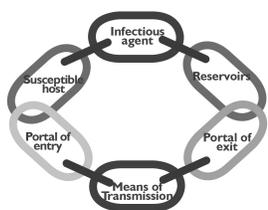
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## Chain of Infection



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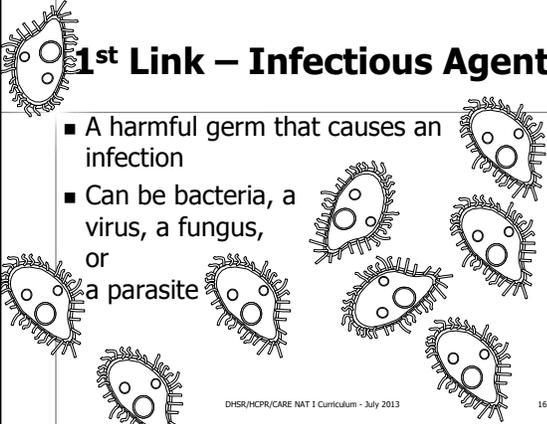
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## 1<sup>st</sup> Link – Infectious Agent

- A harmful germ that causes an infection
- Can be bacteria, a virus, a fungus, or a parasite



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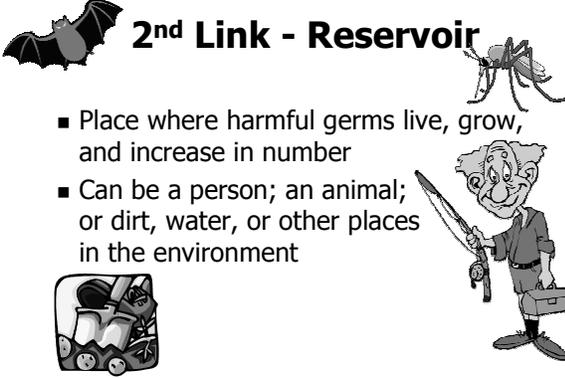
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## 2<sup>nd</sup> Link - Reservoir

- Place where harmful germs live, grow, and increase in number
- Can be a person; an animal; or dirt, water, or other places in the environment



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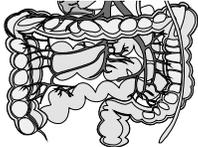
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## 2<sup>nd</sup> Link - Reservoir

When reservoir is a person, some places where harmful germs may be living include:

- Blood
- The skin
- Digestive tract
- Respiratory tract



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	<b>2<sup>nd</sup> Link - Reservoir</b>
	Can you look at a person and <b>ALWAYS</b> tell if he has an infection?  <b>"NO, NOT ALWAYS!"</b>  <small>DHSR/HCPRI/CARE NAT 1 Curriculum - July 2013</small> <span style="float: right;"><small>19</small></span>

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	<b>2<sup>nd</sup> Link - Reservoir</b>
	People as reservoirs for harmful germs  <ul style="list-style-type: none"><li>■ 1<sup>st</sup> group – not infected</li><li>■ 2<sup>nd</sup> group – infected and showing symptoms</li><li>■ 3<sup>rd</sup> group – carriers; are not showing symptoms, but can still infect you</li></ul> <small>DHSR/HCPRI/CARE NAT 1 Curriculum - July 2013</small> <span style="float: right;"><small>20</small></span>

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<b>People We Know Who Are Infected</b>  <b>Carriers - People Who Are Infected That We Do Not Know About</b>	  <small>DHSR/HCPRI/CARE NAT 1 Curriculum - July 2013</small> <span style="float: right;"><small>21</small></span>
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## 2<sup>nd</sup> Link - Reservoir

The  to prevent you, your co-workers, and your residents from getting infected is to treat everyone – **EVERYONE** – as possible reservoirs or hiding places for harmful germs.

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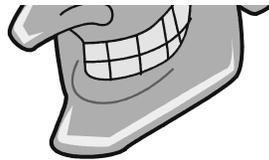
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## 3<sup>rd</sup> Link – Portal of Exit

Any way that harmful germs escape from the reservoir and include:

- The nose and mouth
- The GI tract
- The skin



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## 4<sup>th</sup> Link – Mode of Transportation



How germs get around from place to place

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**THE NUMBER ONE WAY  
A HARMFUL GERM  
TRAVELS FROM PLACE  
TO PLACE IS BY OUR  
HANDS.**



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**4<sup>th</sup> Link – Mode of Transportation**



How do our hands provide transportation for germs?

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**4<sup>th</sup> Link – Mode of Transportation**

Harmful Germs Travel by **Direct Contact** With Body Fluids Where Germs Live

- Blood
- Sputum
- Pus or wound fluid
- Saliva
- Stool
- Vomit

Examples of Direct Contact?

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## 4<sup>th</sup> Link – Mode of Transportation

Harmful Germs Travel by Indirect Contact  
With Body Fluids Where Germs Live

**INDIRECT CONTACT** means that the harmful germs were spread by an object that had touched body fluids from an infected person

Examples of Indirect Contact?

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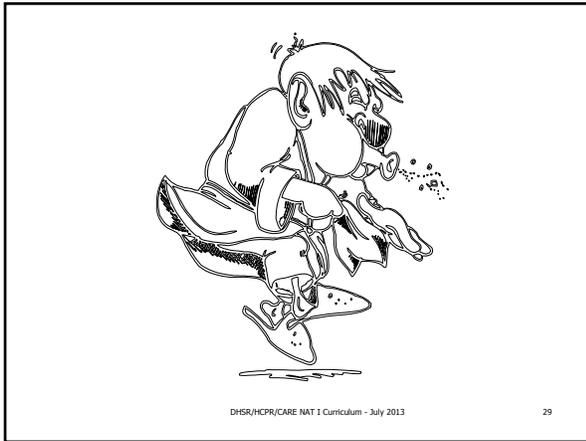
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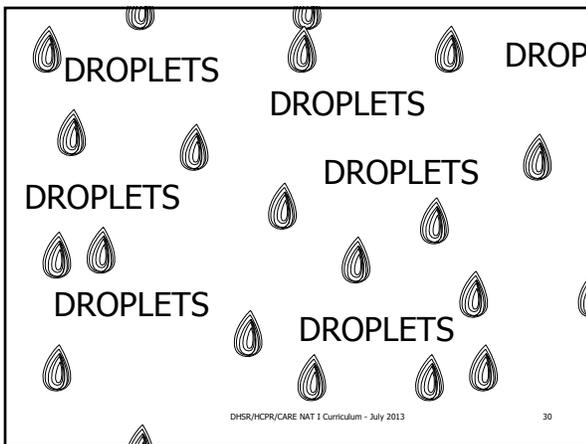
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The  to prevent you, your co-workers, and your residents from getting infected is to treat **ALL** body fluids as possible carriers of harmful germs

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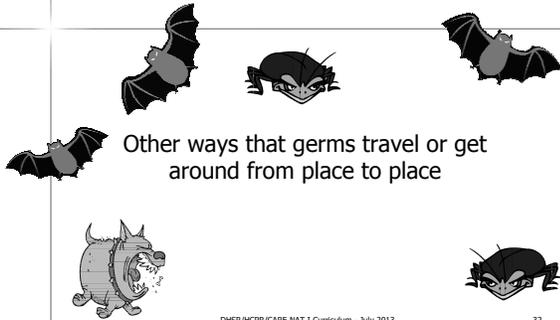
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### 4<sup>th</sup> Link – Mode of Transportation



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### 5<sup>th</sup> Link – Portal of Entry

Any body opening on a person that allows harmful germs to enter into the body. Examples include:

- The nose and mouth
- The GI tract
- The skin



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## 6<sup>th</sup> Link – Susceptible Host

A person who does not have an infection now, but is at risk for becoming infected from harmful germs



**What are some reasons why a person's body cannot fight off an infection?**

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## 6<sup>th</sup> Link – Susceptible Host



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**RESIDENTS LIVING IN LONG-TERM CARE FACILITIES ARE MORE LIKELY TO GET AN INFECTION THAN OTHER PEOPLE WHO LIVE IN OUR COMMUNITY**

*Why?*

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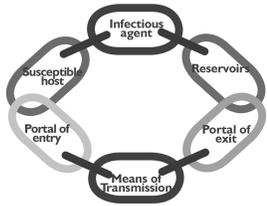
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## Chain of Infection



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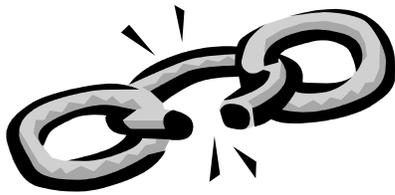
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If **YOU** can break any link in the Chain of Infection, **YOU** can prevent the occurrence of a new infection

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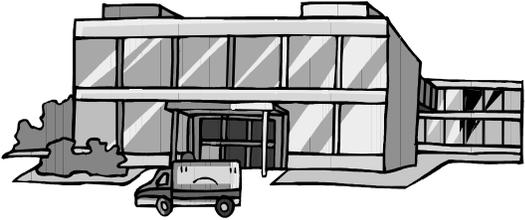
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## Healthcare-associated Infection

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Centers for Disease Control and Prevention  
The CDC

- Agency of the federal government
- In charge of control/prevention of disease
- Two-tiered way to protect the public



Two tiers are Standard Precautions and Transmission-based Precautions

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## Standard Precautions

- 1<sup>st</sup> level to prevent and control infection
- The basic tasks health care workers do when caring for **EACH** and **EVERY RESIDENT** in order to prevent and control the spread of infection

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## Review of Terms

**BODY FLUIDS**  
**Non-Intact Skin**  
**MUCUS MEMBRANES**

**ALL** body fluids, non-intact skin, and mucus membranes must be treated as if they were infected

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Why must Standard Precautions be used with EACH and EVERY RESIDENT?

Without using Standard Precautions, YOU CAN GET SICK AND PASS IT ALONG TO OTHERS!!!!!!

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## Nurse Aides Must.....

Follow Standard Precaution Rules to Protect

- Self
- Co-workers
- Residents

**FROM GETTING INFECTIONS**

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## Hand Hygiene



The CDC defines hand hygiene as washing your hands with:

- Soap and water
- Alcohol-based hand rubs

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## Performing Hand Hygiene



**is the number 1 way to stop the transmission of infections!**

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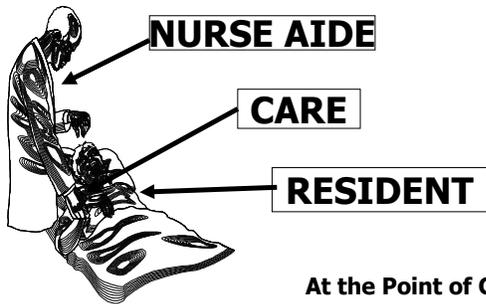
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**Nurse Aide Should Perform Hand Hygiene.....**



**At the Point of Care**

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**Your 5 Moments for Hand Hygiene [WHO]**



1. Before touching a resident
2. Before clean/aseptic procedure
3. After body fluid exposure risk
4. After touching a resident
5. After touching resident surroundings

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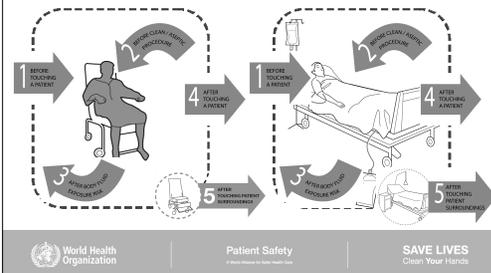
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The 5 Moments apply to any setting where health care involving direct contact with patients takes place




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## Perform Hand Hygiene



RESTROOM

EATING

GLOVING





CLEAN LINEN

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## Perform Hand Hygiene

SOILED HANDS

HANDLING TRASH



ARRIVAL AT WORK



LEAVING WORK

RETURNING HOME



TOUCHING OBJECTS/PEOPLE

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## Perform Hand Hygiene

BLOWING NOSE

SNEEZING IN HAND

TOUCHING HAIR

TOUCHING OTHER BODY PARTS



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W  
H  
E  
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# DO YOU HAND WASH?

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W  
H  
E  
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# MAY YOU HAND RUB?

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## Personal Protective Equipment



**A group of items used to block harmful germs from getting on skin and clothes**

What nurse aides put on at work to keep blood, urine, stool, spit, and sputum off of the skin and clothes

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## Personal Protective Equipment



Protect skin on hands



Protect skin & clothes



Protect mouth & nose

Plus goggles that protect eyes and face shields that protect whole face

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## Personal Protective Equipment

*How will I know which equipment I will need?*

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# G O W N



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# Mask

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**Sharps** - items that have corners, edges, or projections that can cut or pierce the skin

- Wear gloves and be careful
- Do not cut self or resident during shaves
- Do not jab self when using sharps
- NEVER, EVER re-cap a needle or other sharp object
- NEVER, EVER put anything sharp in a regular trashcan



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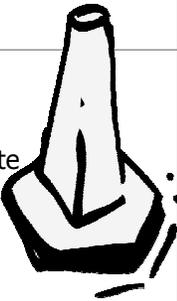
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**SPILLS on the floor...  
What do I do now?**

- Put on gloves
- Absorb spill and clean area
- Discard waste in appropriate container
- Apply disinfectant to area
- Place a warning cone or sign in area



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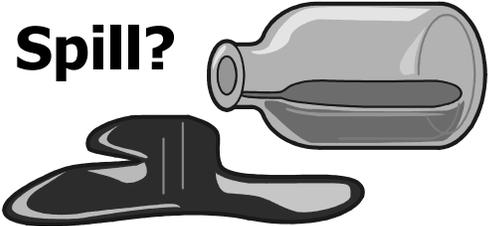
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**Spill?**



Why are spills on the floor involving body fluids especially dangerous in a long-term care facility?

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## Clean all Surfaces...



- Any time blood or body fluids get on any surface
- Use products available where you work
- Follow facility procedures and product instructions
- Examples?

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## Transmission-based Precautions



- 2<sup>nd</sup> level to prevent and control infections
- Specific measures and tasks when caring for residents who are infected/may be infected with specific types of infections

### 3 Types

1. Contact Precautions
2. Droplet Precautions
3. Airborne Precautions

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## Contact Precautions

Purpose – prevent spread of harmful germs spread by direct contact

PPE = Standard Precautions + Gown + Gloves



Examples:

- MRSA
- Norovirus

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# Droplet Precautions

Purpose – prevent spread of harmful germs that travel by 

Spread when an infected resident coughs, sings, sneezes, or laughs

PPE? 

Examples? 

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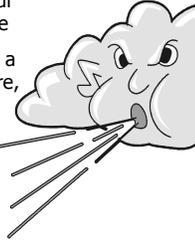
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# Airborne Precautions

Purpose – prevent spread of harmful germs that travel in air at a distance

Harmful germs can float around for a while and can be carried by moisture, air currents, and dust

PPE = Standard Precautions + Respirator (depending on disease)

Examples? 

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# "OUTBREAK!!!!!"

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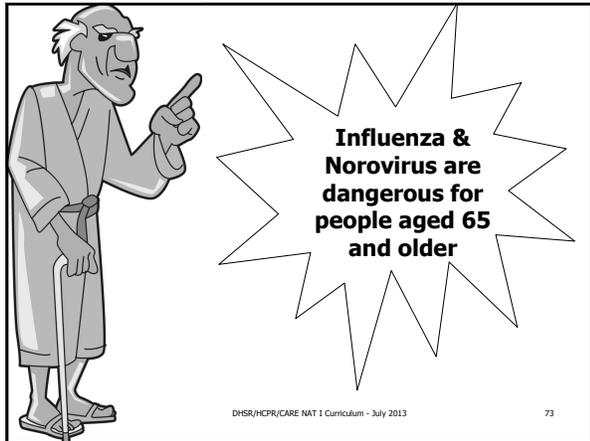
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**Influenza & Norovirus are dangerous for people aged 65 and older**

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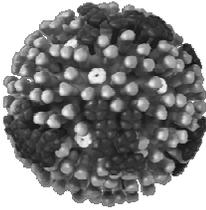
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## The Flu



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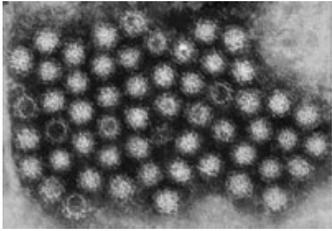
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## Norovirus



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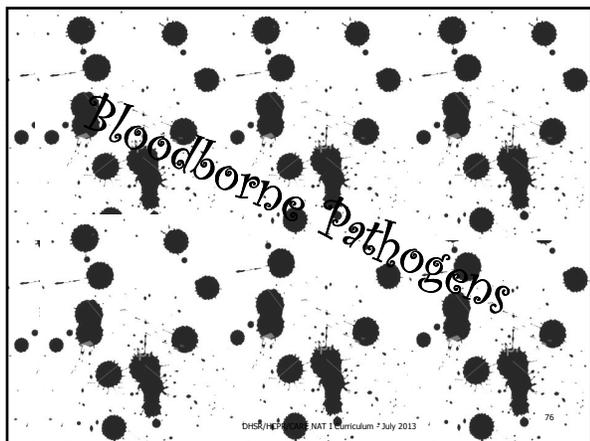
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	<h2>Hepatitis B Virus (HBV)</h2>
	<ul style="list-style-type: none"><li>■ Causes Hepatitis B, a disease of the liver</li><li>■ About 1/3 of persons infected with HBV do not show symptoms</li><li>■ Can live outside body on equipment and on surfaces like table tops or blood glucose meters for seven days; can infect others during that time</li><li>■ GREAT NEWS! Vaccine is available to prevent you from getting the disease</li></ul>
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## Nurse Aide Should:

- Always wear gloves when there is a chance of exposure to blood
- Handle used sharps carefully and discard appropriately
- Follow facility's exposure plan if any part of body is exposed to blood or jabbed with contaminated sharp



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## WHAT IS WRONG WITH THIS PICTURE?

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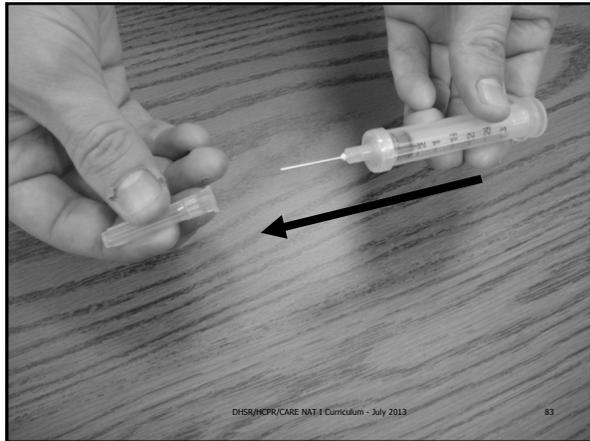
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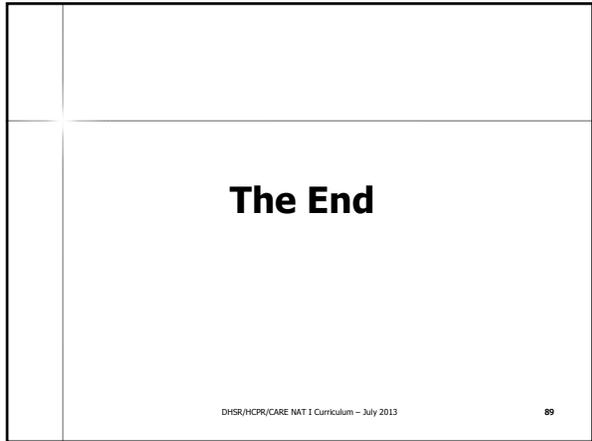
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