



# Occupational Healthcare **Hand Hygiene Training**

PROTECTING THE  
PATIENT AND HEALTHCARE PROFESSIONAL

**SCJohnson**  
PROFESSIONAL  
A Family Company®

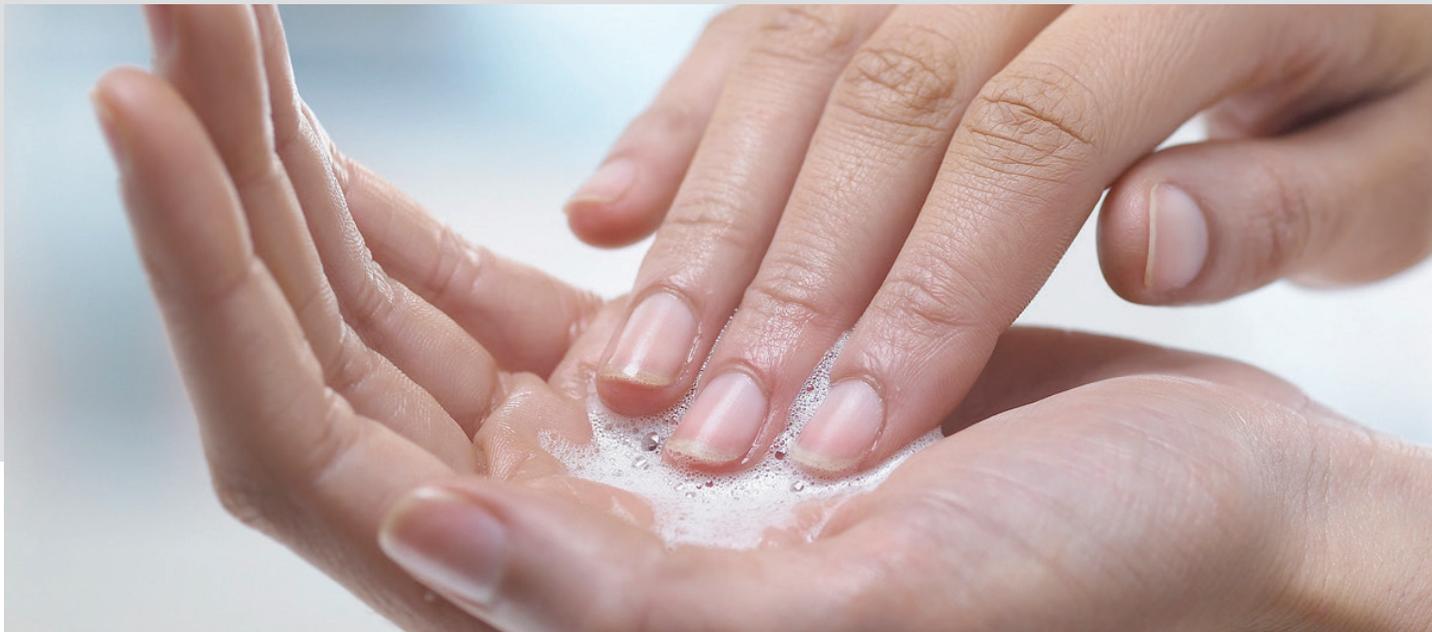
Why Do We  
Need To Keep  
**Our Hands Clean?**



# ┌ The Role Of Hand Hygiene

Hand hygiene is one of the most cost-effective measures healthcare workers can take to reduce the incidence of HCAI's.

Not only does hand hygiene compliance reduce morbidity and mortality in patients, it also lowers treatment costs related to HCAI's.



# The Issue

- Hands are the main pathways of germ transmission in the healthcare environment.<sup>1</sup>
- Keeping hands clean is one of the most important ways to prevent the spread of infection and illness.<sup>2</sup>
- Hand hygiene is a simple thing and the most important measure to prevent health care-associated infections<sup>1</sup>
- Clean hands protect you from infections.<sup>3</sup>

1. [https://www.who.int/gpsc/5may/Hand\\_Hygiene\\_Why\\_How\\_and\\_When\\_Brochure.pdf](https://www.who.int/gpsc/5may/Hand_Hygiene_Why_How_and_When_Brochure.pdf)  
2. [www.cdc.gov/handwashing/why-handwashing.html](http://www.cdc.gov/handwashing/why-handwashing.html)  
3. [www.cdc.gov/patientsafety/features/clean-hands-count.html](http://www.cdc.gov/patientsafety/features/clean-hands-count.html)



# Did You Know?



**2 - 10  
million**

**We have 2 - 10  
million bacteria  
between fingertip  
and elbow.**



**80%**

**80% of all  
infections are  
transmitted  
by hands.**



**1 in 5**

**When you wash your  
hands, you can prevent  
1 in 5 respiratory infections  
such as a cold or flu.**



**3  
hours**

**Germs can  
stay alive on  
hands for up  
to 3 hours.**

# What Kind Of Germs Are There?

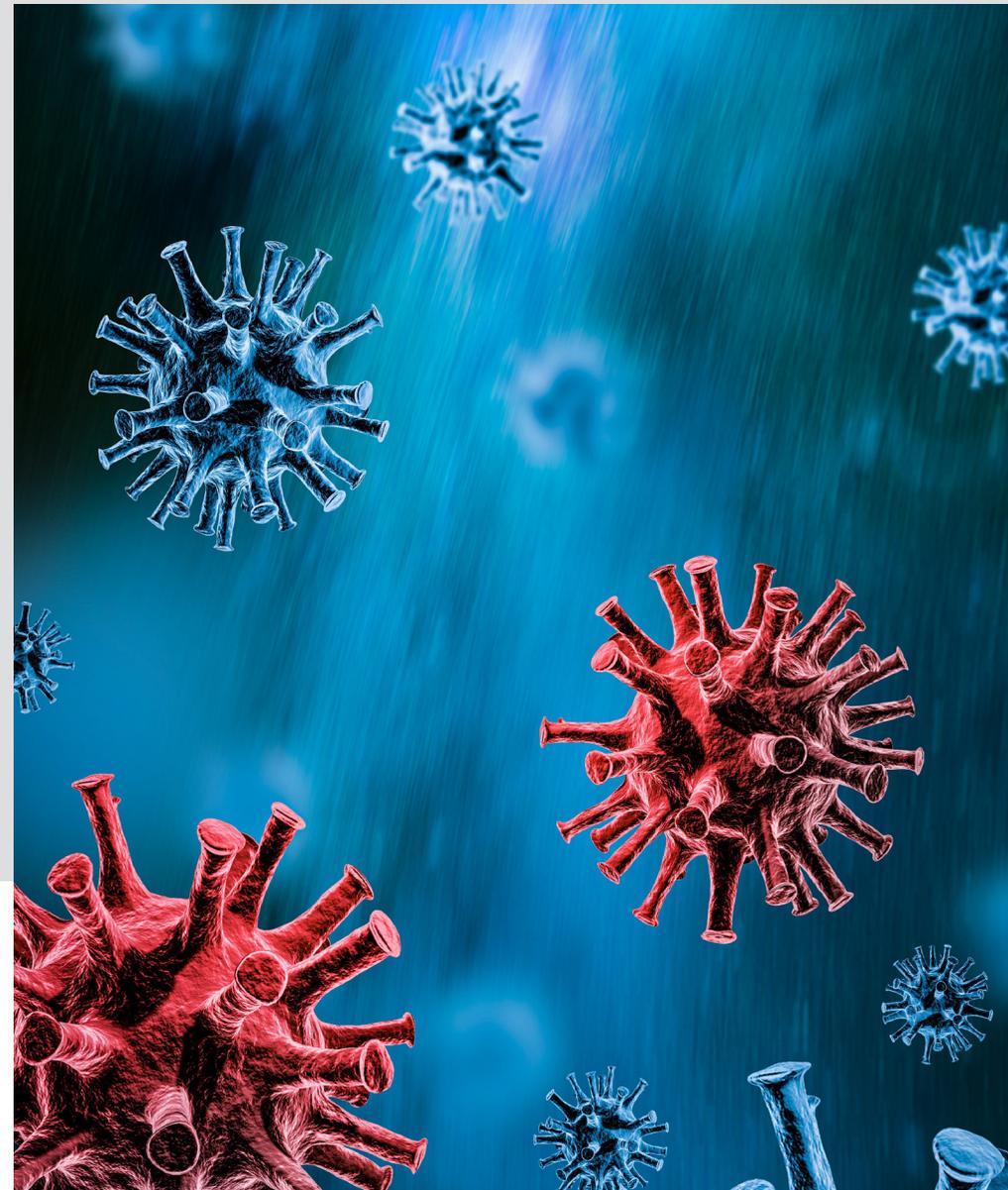
## TWO MAIN CATEGORIES

### RESIDENT

- Found deep within the skin
- As the name suggests these live on us all the time
- Part of the body's natural defence mechanism

### TRANSIENT

- Found on the surface of the skin
- These are the ones that transfer from person to person if hands are not cleaned effectively



# What Kind Of Skin Contaminants Are There?



## CHEMICAL INFLUENCES

- Substances
- Cleanser



## PHYSICAL INFLUENCES

- Heat/cold
- Glove use
- UV-Radiation



## MICROBIAL INFLUENCES

- Bacteria
- Fungi
- Viruses

# What Kind Of Microbes Can Spread In Lapses Of Hand Hygiene?

## EXAMPLES OF TYPES OF MICROBES THAT CAN BE SPREAD ON THE HANDS OF HEALTH CARE STAFF

- **Staphylococcus aureus (including MRSA, MSSA)**
- **Clostridium difficile**
- **E. coli & other gram-negatives**
- **Norovirus**
- **SARS-Cov-2 virus**
- Streptococcus pyogenes (Group A Strep)
- Vancomycin-resistant Enterococcus (VRE)
- Klebsiella
- Enterobacter
- Pseudomonas
- Candida
- Rotavirus
- Adenovirus
- Hepatitis A virus



# When Can Hands Become Contaminated?

Hands can become contaminated after many different procedures even seemingly 'clean' activities

- **Taking a pulse**
- **Taking blood pressure readings**
- **Taking a temperature**
- **Direct patient contact**

Microbes can survive on the hands, sometimes for hours, if hands are not cleaned.

Contaminated hands can be vehicles for the spread of microbes.

1. Source: [www.who.int/gpsc/tools/faqs/evidence\\_hand\\_hygiene/en/](http://www.who.int/gpsc/tools/faqs/evidence_hand_hygiene/en/)



# When Should We Carry Out Hand Hygiene?



# My 5 Moments For Hand Hygiene

The World Health Organisation recognised that:

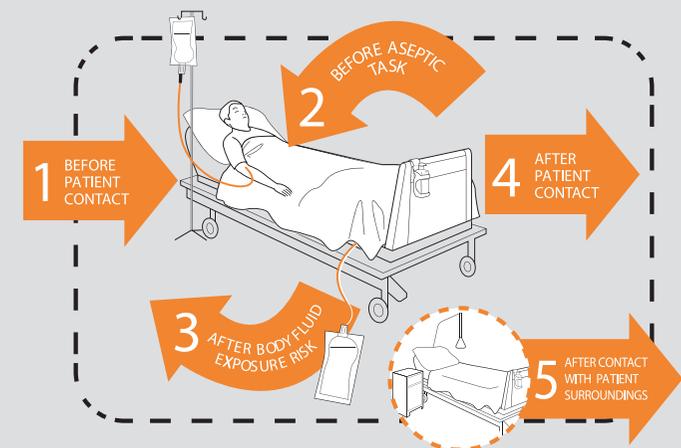
- **Healthcare associated infections affect millions of patients worldwide every year.<sup>1</sup>**
- **The infections lead to serious illness, prolonged hospitalisation, disability and death.<sup>1</sup>**
- **Good hand hygiene is the primary measure to reduce infections.<sup>1</sup>**

Following research detailed assistance from over 100 renowned experts the WHO developed new guidelines on hand hygiene and this included:

## MY 5 MOMENTS FOR HAND HYGIENE

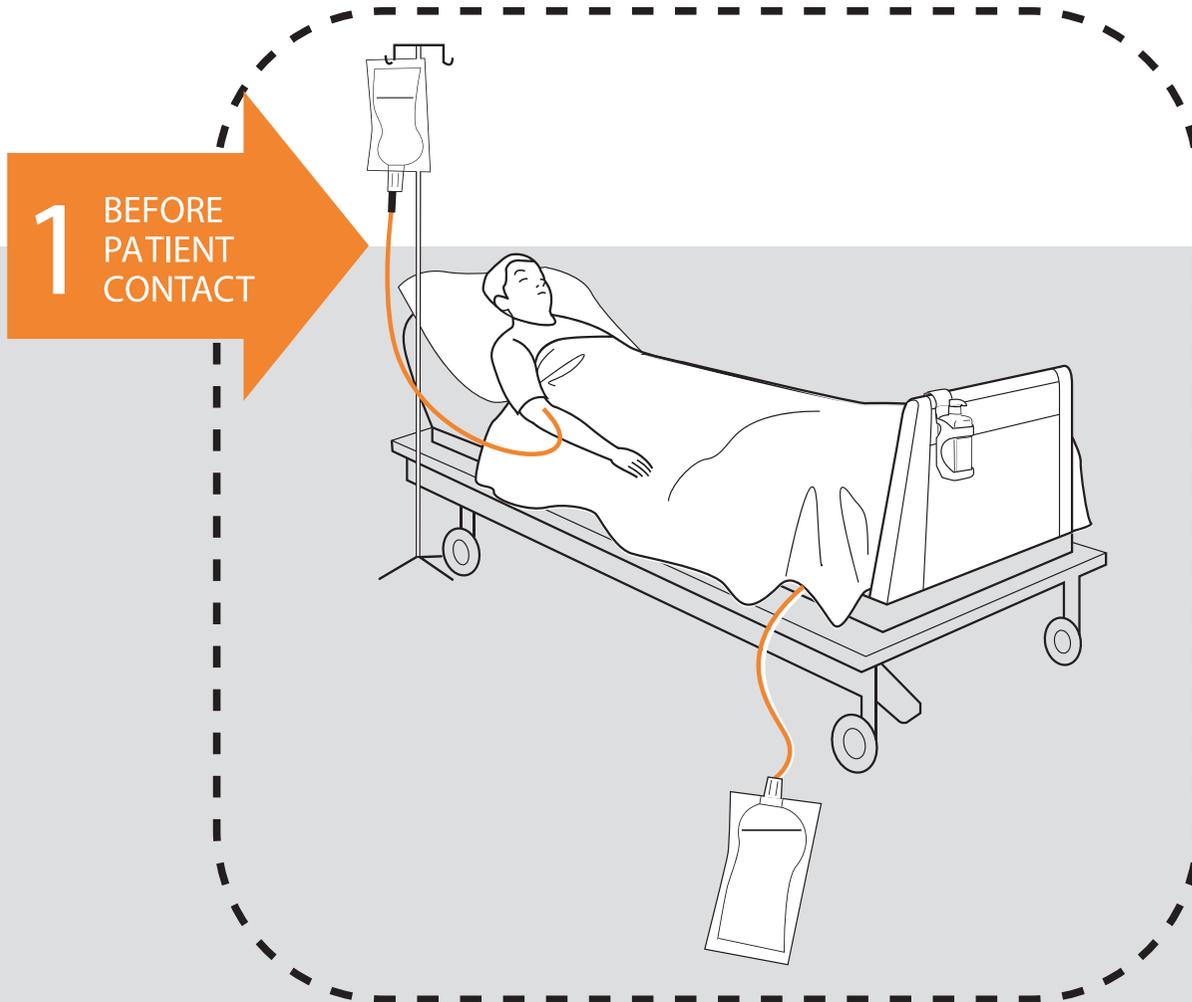
This defines the key moments when healthcare workers should perform hand hygiene.

**AIM:** Create greater awareness and understanding of the importance of hand hygiene.



<sup>1</sup> Source: [www.who.int/gpsc/tools/Five\\_moments/en/](http://www.who.int/gpsc/tools/Five_moments/en/)

# My 5 Moments For Hand Hygiene



## 1: BEFORE PATIENT CONTACT<sup>1</sup>

Some examples of:



Shaking a patients hand



Touching a shoulder



Helping a patient move



Applying an oxygen mask

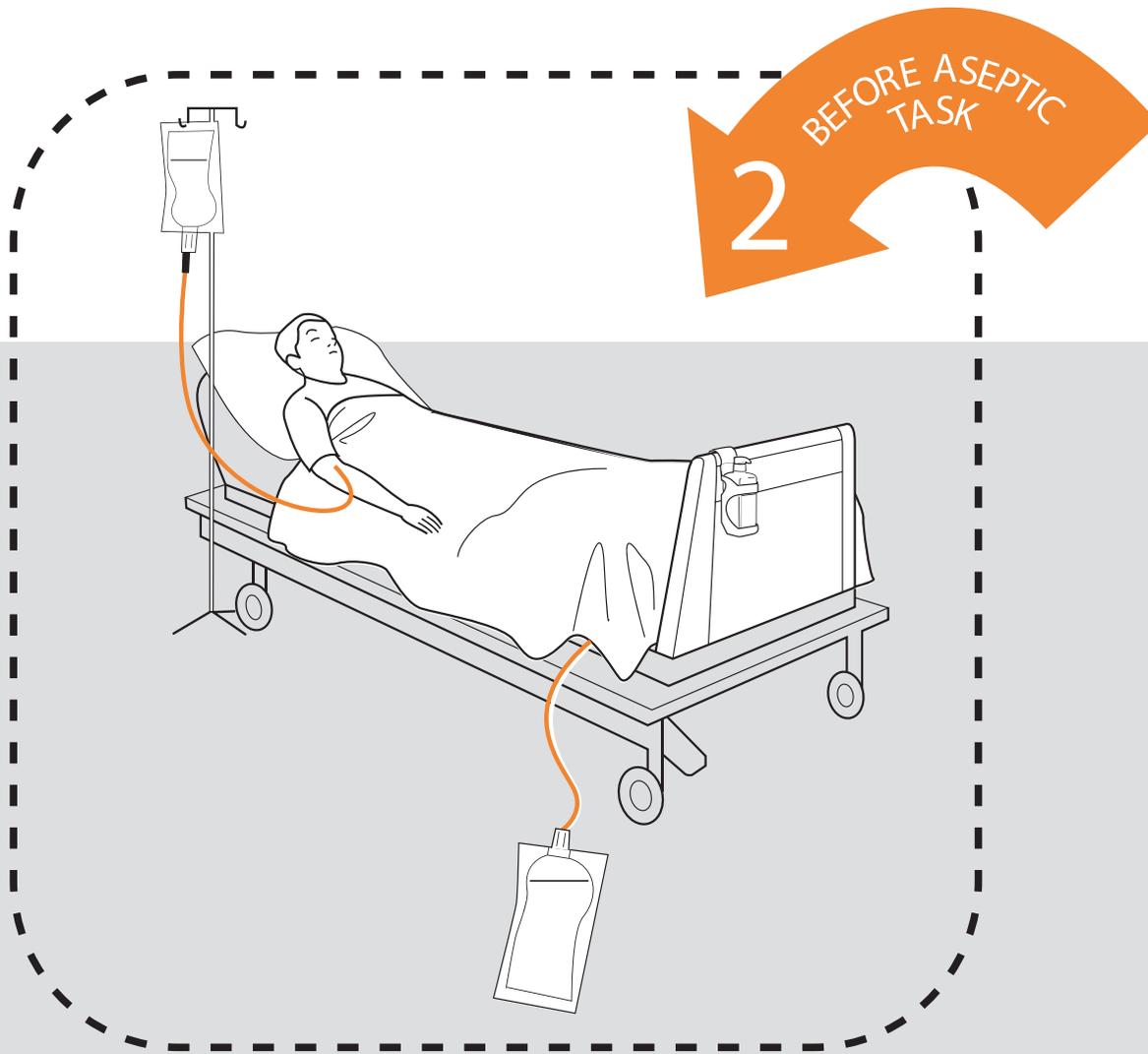


Giving physiotherapy



Conducting a physical examination

# My 5 Moments For Hand Hygiene



## 2: BEFORE ASEPTIC TASK<sup>1</sup>

Some examples of:



Treating open wounds



Catheter insertion



Cleaning bodily fluids



Cannulation

# My 5 Moments For Hand Hygiene



## 3: AFTER BODY FLUID EXPOSURE RISK<sup>1</sup>

Some examples of:



Brushing patients teeth



Contact with mucous membrane



Drawing a fluid sample



Opening a draining system

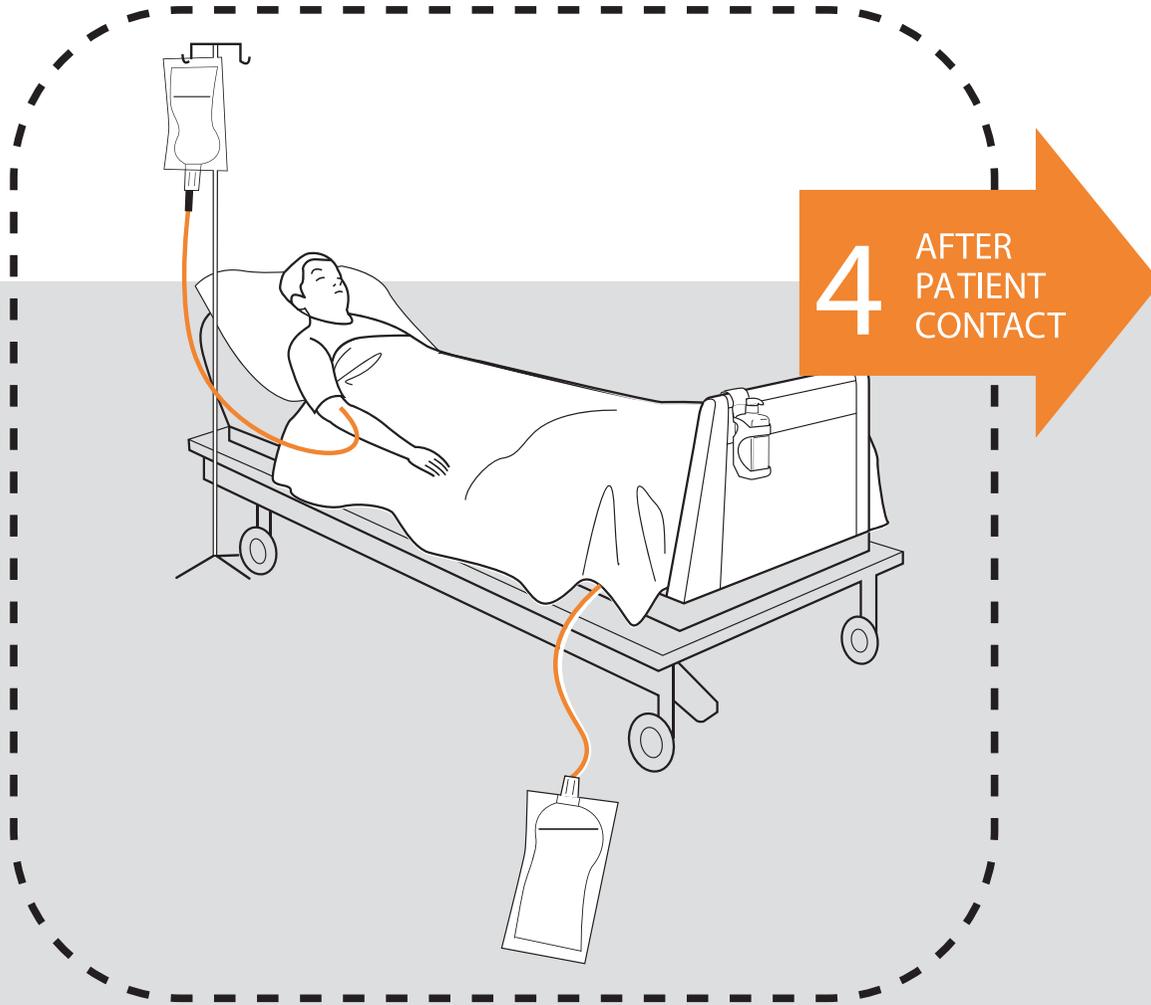


Endotracheal tube insertion and removal



Contact with medical devices or clinical samples

# My 5 Moments For Hand Hygiene



## 4: AFTER PATIENT CONTACT<sup>1</sup>

Some examples of:



Touching a patient



Helping a patient move

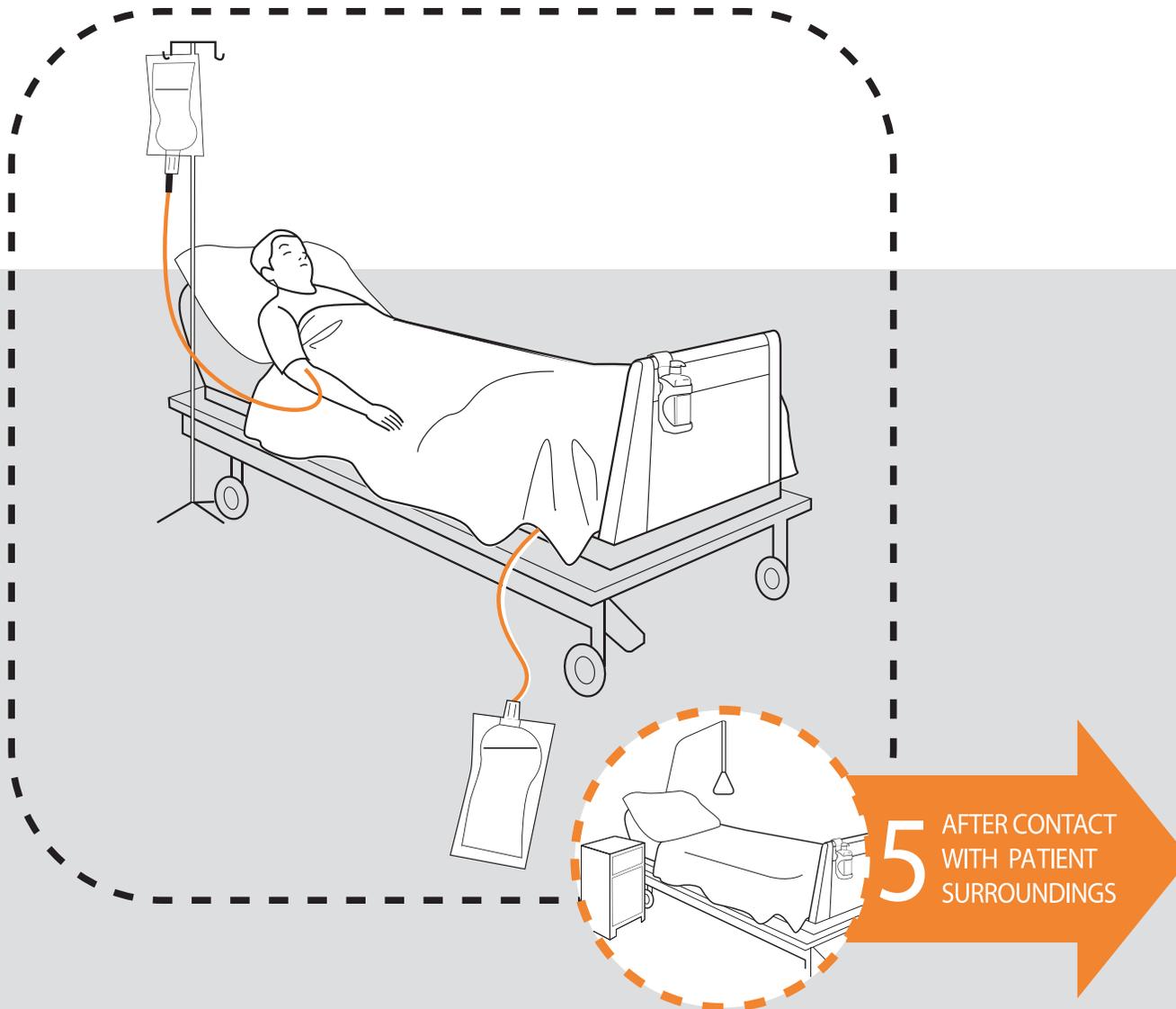


Applying an oxygen mask



Conducting a physical examination

# My 5 Moments For Hand Hygiene



## 5: AFTER CONTACT WITH PATIENT SURROUNDINGS<sup>1</sup>

Some examples of:



Touching belongings or furniture



Changing bed linen



Touching the curtain



Leaning against the bed or night table



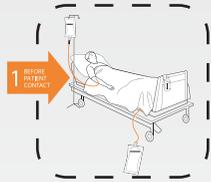
Touching the bed rail



Touching Door

# My 5 Moments For Hand Hygiene

1



**BEFORE TOUCHING A PATIENT**

**WHEN?  
WHY?**

Clean your hands before touching a patient when approaching him/her  
To protect the patient against harmful germs carried on your hands

2



**BEFORE CLEAN/ASEPTIC PROCEDURE**

**WHEN?  
WHY?**

Clean your hands immediately before performing a clean/aseptic procedure  
To protect the patient against harmful germs, including patient's own, from entering his/her body

3



**AFTER BODY FLUID EXPOSURE RISK**

**WHEN?  
WHY?**

Clean your hands immediately after an exposure risk to body fluids (and after glove removal)  
To protect yourself and the health-care environment from harmful patient germs

4



**AFTER TOUCHING A PATIENT**

**WHEN?  
WHY?**

Clean your hands after touching a patient and his/her immediate surroundings, when leaving the patients side  
To protect yourself and the health-care environment from harmful patient germs

5



**AFTER TOUCHING PATIENT SURROUNDINGS**

**WHEN?  
WHY?**

Clean your hands after touching any object of furniture in the patient's immediate surroundings, when leaving - even if the patient has not been touched  
To protect yourself and the health-care environment from harmful patient germs

# Why Is It Important To Keep Skin In Good Condition?

Maintaining good skin condition is vital to protecting both staff and patients.

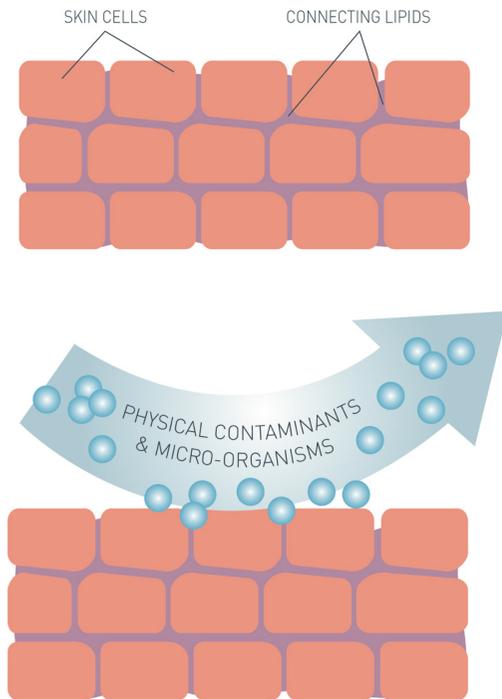
If skin is in poor condition e.g. dry, sore or even cracked, then the likely result will be:

- Harm to the healthcare worker. Dry, sore and cracked skin is uncomfortable and can be painful
- Damaged skin is more susceptible to infection which can be harmful to them and others
- Painful, damaged skin is less likely to be washed or sanitised as frequently increasing the risk of infection

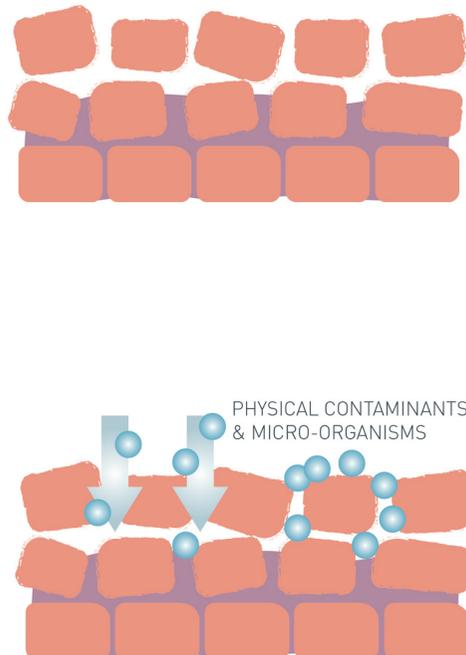


# Why Is It Important To Keep Skin In Good Condition?

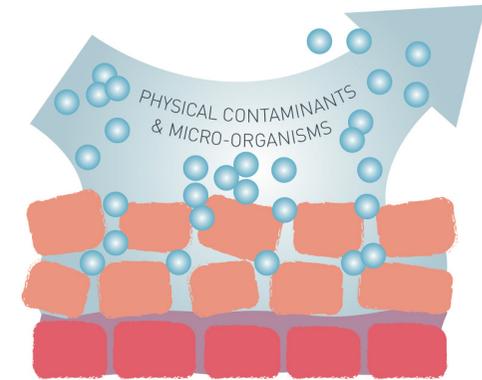
## Healthy Skin



## Dry Skin



## Very Dry Skin



# Occupational Dermatitis

## TWO MAIN TYPES

### IRRITANT CONTACT DERMATITIS (ICD)

- Caused by products that dry out and damage the skin



### ALLERGIC CONTACT DERMATITIS (ACD)

- Caused by an allergic reaction to something that comes into contact with the skin.
- Once skin is sensitised to the substance, allergic contact dermatitis may reoccur.



# Irritant Contact Dermatitis (ICD)

## CAN OCCUR AFTER REPEATED...

- Contact with workplace soilings and contaminants
- Contact with irritants in low (non toxic) concentrations
- Mechanical stress (e.g. from fibre glass, using brushes to clean hands)
- Excessive hand cleansing, especially when carried out incorrectly



# Allergic Contact Dermatitis (ACD)

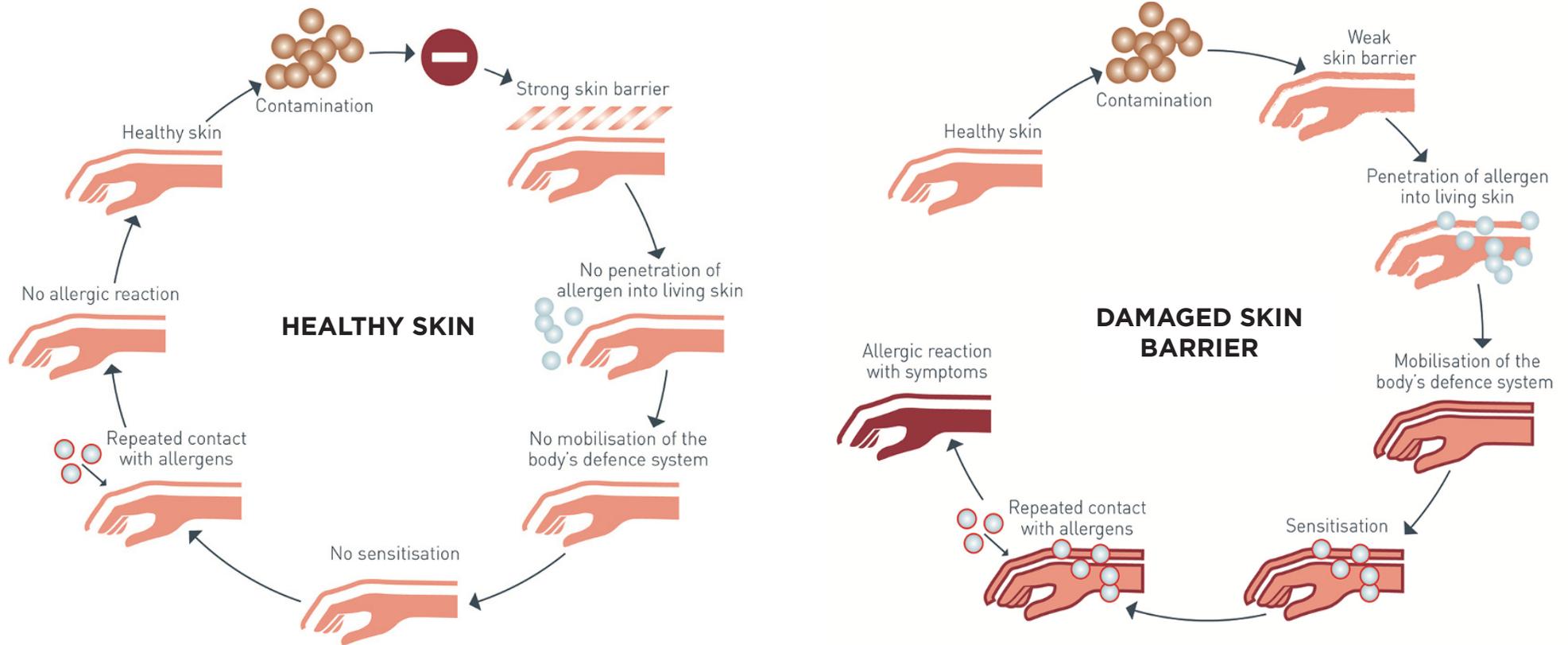
An allergic response caused by contact with a sensitising substance. An allergen is any substance that causes the body's immune system to overreact and produce antibodies against it.

## Factors influencing development of an allergy:

- Exposure
- Concentration, duration, frequency
- Additional skin stressing factors (i.e. chemical and physical)
- Existing skin condition
- Genetic disposition



# Occupational Skin Protection



How To  
Keep Skin In  
**Good Condition?**



# How To Keep Skin In Good Condition

## AN INTEGRATED APPROACH

### PRODUCTS

- Hand wash soaps formulated for high frequency use in Healthcare environments
- Effective yet moisturising Alcohol based foam sanitiser
- Restoring occupational creams to condition & moisturise

### TECHNIQUE

- Applying best practice technique
- Why, when, how



# The Steps For Hand Hygiene Best Practice

## STEP 1: WASH

Our range of effective foam and lotion hand wash products.



## STEP 2: SANITISE

Our 80% ethanol-based foam hand sanitisers kill 99.999% of bacteria and 99.99% of viruses and is proven to not dry out skin.\*



## STEP 3: MOISTURISE

Our moisturising hand creams nourish and condition to help maintain skin health. Options available for normal through to dry and sensitive skin conditions.



\* Highly effective formula kills 99.999% of many common germs and is tested and proven to be bactericidal, yeasticidal, mycobactericidal and virucidal (99.99%). Non-drying formula - Independently tested and proven to maintain skin moisture to help keep the skin in good condition, even after frequent use.

# Step 1: Hand Washing

## WHY SHOULD I PERFORM A REGULAR HAND WASH?

Hands are the principle route by which cross-infection occurs<sup>1</sup>, it is vitally important that you regularly remove the micro-organisms from your hands. This is to protect patients and yourself from potential infections.

Hand washing is a fundamental step in hand hygiene best practice. Apart from removing any visible soiling from hands the physical action of good hand washing technique will remove high levels of bacteria & viruses also present on the skin.



**Hand washing is the single most important method of controlling infection.**

# Step 1: Hand Washing

## HOW SHOULD I WASH MY HANDS?

Diagram 1 illustrates a step-by-step technique on hand washing. The diagram is in line with guidance from the WHO<sup>1</sup> (2009) and NHS Guidance<sup>2</sup>.

For effective routine hand washing, soap should be lathered and rubbed vigorously around the hands and wrists for at least 40-60 seconds.

The temperature of the water supplied to the hand basin should also be set before washing commences, to avoid the need to adjust for temperature part way through.

**Wash hands when visibly soiled.  
Otherwise use hand sanitiser.**

1. [www.who.int/gpsc/5may/Hand\\_Hygiene\\_Why\\_How\\_and\\_When\\_Brochure.pdf](http://www.who.int/gpsc/5may/Hand_Hygiene_Why_How_and_When_Brochure.pdf)  
2. [www.nhs.uk/live-well/healthy-body/best-way-to-wash-your-hands/](http://www.nhs.uk/live-well/healthy-body/best-way-to-wash-your-hands/)

Diagram 1



Wet hands with water



Apply one shot of soap



Rub hands palm to palm



Rub back of each hand with the palm of other hand with fingers interlaced



Rub palm to palm with fingers interlaced



Rub backs of fingers with opposing palms with fingers interlocked



Rub each thumb clasped in opposite hand using rotational movement



Rub tips of fingers in opposite palm in a circular motion



Rinse hands with water



Use elbow to turn off tap



Dry hands thoroughly with a single-use towel



Hand washing technique should take **40 - 60 seconds**

# Hand Washing - When?

## WHEN TO WASH YOUR HANDS?

You should wash your hands in accordance with the WHO My 5 moments for hand hygiene.

- Before starting and finishing work
- Whenever they are visibly dirty
- Whenever they are visibly soiled with blood or other bodily fluids
- After using the toilet
- Before preparing or handling food



# Areas Frequently Missed

Taylor (1978) found that the handwashing techniques of health professionals were often inadequate, and training is therefore useful<sup>1</sup>. You should pay particular attention to include the areas of the hand which are most frequently missed.



## PREPARATION CHECKLIST BEFORE HAND WASHING

- Keep nails short and pay attention to them when washing hands - most microbes on the hands come from beneath the finger nails
- Avoid wearing rings, wrist watches and bracelets. Total bacterial counts are higher when rings are worn
- Do not wear artificial nails or nail polish - they discourage vigorous hand washing
- Roll up sleeves, arms must be bare below the elbow. The wrists must be included when washing the hands

## HAND DRYING

Ensure hands are dried thoroughly. Wet hands transfer micro-organisms more effectively than dry hands. Therefore, the method of drying hands is also important in the maintenance of hand hygiene.

# Hand Washing Technique



Wet hands with water



Apply one shot of soap

## WHY IS THIS IMPORTANT?

- Wet hands allow the soap to glide more easily
- Applying soap directly to dry skin can have a drying effect

## IMPORTANT

- Always follow the recommended amount
- Too much soap can be drying to the skin

# Hand Washing Technique



3  
Rub hands  
palm to palm



4  
Rub back of each  
hand with the  
palm of other  
hand with fingers  
interlaced



5  
Rub palm to  
palm with fingers  
interlaced



6  
Rub backs of  
fingers with  
opposing palms  
with fingers  
interlocked

## IMPORTANT

- Ensure you vigorously carry out each of these steps
- Make sure you don't miss these critical areas

# Hand Washing Technique



Rub each thumb  
clasped in opposite  
hand using rotational  
movement



Rub tips  
of fingers in  
opposite palm in  
a circular motion



Rub each wrist  
with opposite  
hand

## IMPORTANT

- Ensure you don't miss the thumbs and wrists
- Ensure you aren't wearing nail polish
- Ensure you vigorously carry out each of these steps
- Make sure you don't miss these critical areas

# Hand Washing Technique



Rinse hands with water



Use elbow to turn off tap



Dry thoroughly with a single-use towel

## IMPORTANT

- Ensure all soap is rinsed off the hands

## IMPORTANT

- When drying, remember to pat the hands dry

## Step 2: Sanitise

### WHY SHOULD I USE A HAND SANITISER?

Unless hands are visibly soiled, an alcohol-based hand rub is preferred over soap and water in most clinical situations due to evidence of better compliance compared to soap and water<sup>1</sup>.

Where hands are visibly clean and there is no convenient access to washing facilities an alcohol-based hand sanitiser should be used.

In contrast to soap and water, an alcohol-based hand sanitiser kills a high proportion of the micro-organisms present on the hands, rather than physically removing them.

**Hand hygiene plays a vital role in keeping patients safe. Hands should be sanitised with hand sanitiser at the point of care or washed in the hand sinks provided. Alcohol-based sanitisers should be conveniently located, close to where patient care will be delivered, e.g. at bed ends, at main ward entrances and at entry points into ward or treatment rooms.**

1. [www.cdc.gov/coronavirus/2019-ncov/hcp/hand-hygiene.html](http://www.cdc.gov/coronavirus/2019-ncov/hcp/hand-hygiene.html)



# Step 2: Sanitise

## HOW TO APPLY HAND SANITISER

Diagram 2 illustrates a step-by-step technique on hand sanitising. The diagram is in line with guidance from the WHO<sup>1</sup> (2009) and NHS Guidance<sup>2</sup>.

In UK Healthcare it is recommended that alcohol-based hand sanitisers meet the European standard EN1500. The test that evaluates the efficacy of a hygienic handrub by measuring the number of viable bacteria remaining on the fingertips after contamination and handrub exposure.

### Alcohol Free Hand Sanitiser:

**Suitable for areas in Healthcare where alcohol is considered a risk e.g. mental health and elderly**

1. [www.who.int/gpsc/5may/Hand\\_Hygiene\\_Why\\_How\\_and\\_When\\_Brochure.pdf](http://www.who.int/gpsc/5may/Hand_Hygiene_Why_How_and_When_Brochure.pdf)  
2. [www.nhs.uk/live-well/healthy-body/best-way-to-wash-your-hands/](http://www.nhs.uk/live-well/healthy-body/best-way-to-wash-your-hands/)

Diagram 2



Apply product to hands



Rub hands palm to palm



Rub back of each hand with palm of the other hand with fingers interlaced



Rub palm to palm with fingers interlaced



Rub with back of fingers to opposing palms with fingers interlocked



Rub each thumb clasped in opposite hand using a rotational movement



Rub tips of fingers in opposite palm in a circular motion



Rub each wrist with opposite hand



Hand sanitising technique should take **30 seconds**

# Sanitising - Why?

## WHAT ARE THE BENEFITS OF USING AN ALCOHOL BASED HAND SANITISER?

- Speed of use
- Kills a high proportion of the micro-organisms present on hands
- When used frequently they can be less drying to the skin than the equivalent number of hand washes with soap and water\*

\*Studies (Boyce et al 2000, Newman and Seilz 1990)

**It is important to remember, using an alcohol-based hand sanitiser is no substitute for hand washing where hands are visibly soiled**



# Sanitising - When?

The World Health Organisation's Five Moments for Hand Hygiene approach defines the key moments when all healthcare workers should perform hand hygiene

- When entering and leaving patient care
- Before preparing or handling food
- Before and after touching notes, telephones and computer keyboards
- After handling laundry
- Before and after donning sterilised gloves



## Step 3: Moisturise

Using conditioning creams is an important element in skin care best practice. Skin conditioning creams help to maintain the skin in a healthy condition by keeping it soft and supple, avoiding dryness. A conditioning cream should always be applied to clean hands and used when required to keep skin supple and hydrated.

### WHY DO I NEED TO MOISTURISE?

If you are cleaning your hands on a frequent basis, your skin is at risk of becoming dry.

When skin is damaged it is more difficult to remove microorganisms even when staff follow the recommended technique for hand washing.<sup>1</sup>

**An essential step in helping to maintain good skin condition.**

1. Bissett L. Skin care as a tool in the prevention of health care-associated infection. Br J Community Nurs. 2010 May



# Step 3: Moisturise

## HOW TO APPLY HAND CREAM



Apply product to back of hand



Rub backs of hands with each other



Rub palm to palm with fingers interlaced



Rub with back of fingers to opposing palms with fingers interlocked



Rub each thumb clasped in opposite hand using a rotational movement



Rub tips of fingers in opposite palm in a circular motion



Rub each wrist with opposite hand



# Moisturise - Why?

Occupational skin conditioning creams help maintain the skin in healthy condition by keeping it soft and supple. Using conditioning creams is an important element in skin care best practice.

As a consequence of frequent hand washing it is vital to replenish the natural oils lost from the skin with the use of reconditioning cream.



# Moisturise - Where and When?

## WHERE?

Occupational moisturiser should be provided in hygienic wall mounted dispensers rather than sharing communal tubs of cream.

The product should be easily identifiable and be located somewhere convenient for use.

## WHEN?

- Before work
- Break times
- After work

Use regularly even if your skin does not feel dry.

Prevention of dry skin is better than the cure.



# Summary

## Occupational Healthcare Hand Hygiene Training

1

The role of  
**Hand Hygiene**

2

Germs,  
Contaminants,  
Microbes

3

When to carry  
out Hand Hygiene  
**WHO 5 Moments**

4

The importance of  
**Good Skin Health**

5

Hand Hygiene  
best practice  
**WASH**

6

Hand Hygiene  
best practice  
**SANITISE**

7

Hand Hygiene  
best practice  
**MOISTURISE**

8

**ANY  
QUESTIONS?**

- Good hand hygiene is essential to help prevent the spread of infections
- Using the right products with the right technique
- Achieve and maintain good skin health

THANK YOU & ANY QUESTIONS