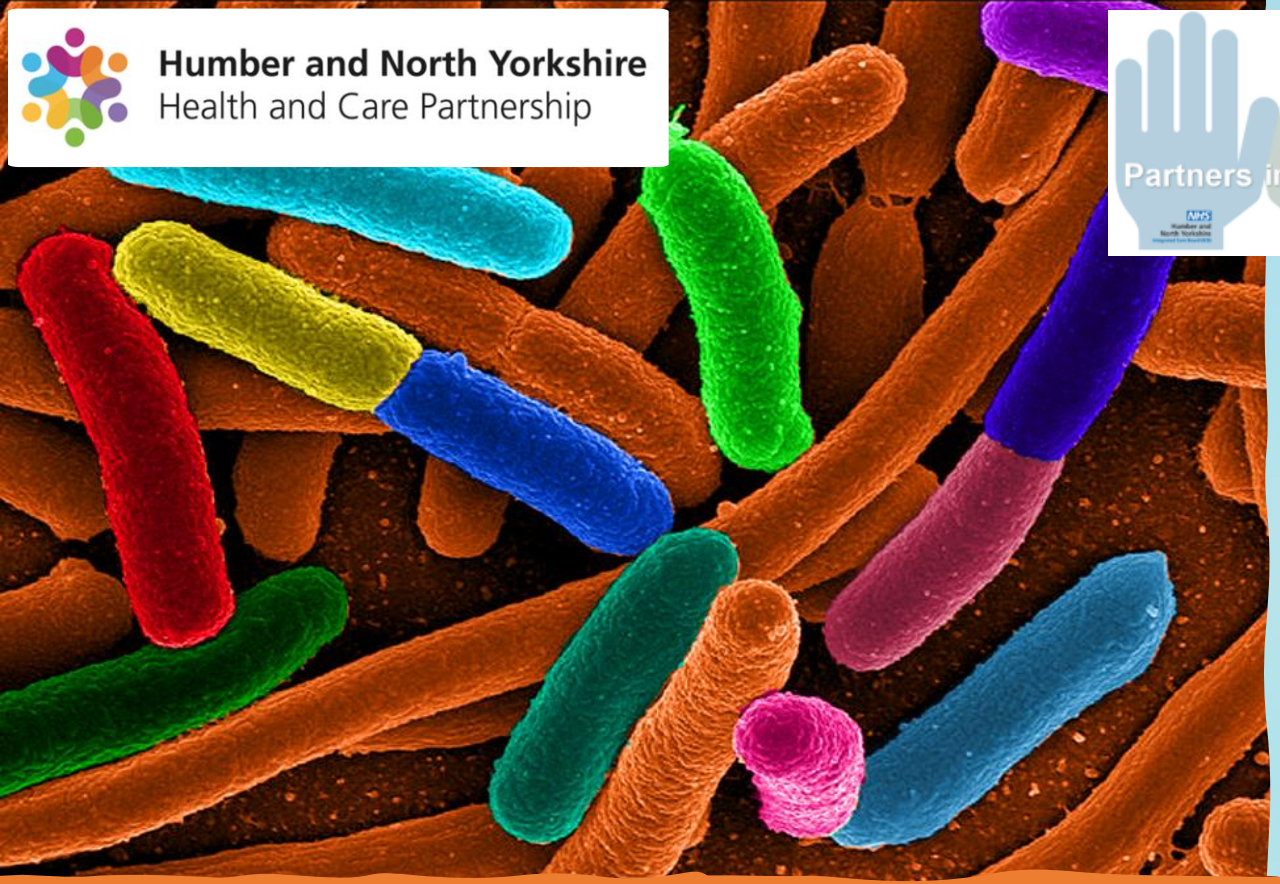


Humber and North Yorkshire Health and Care Partnership

Partners in Care

NHS Humber and North Yorkshire Integrated Care Board (ICB)

Reducing Urinary Tract Infections

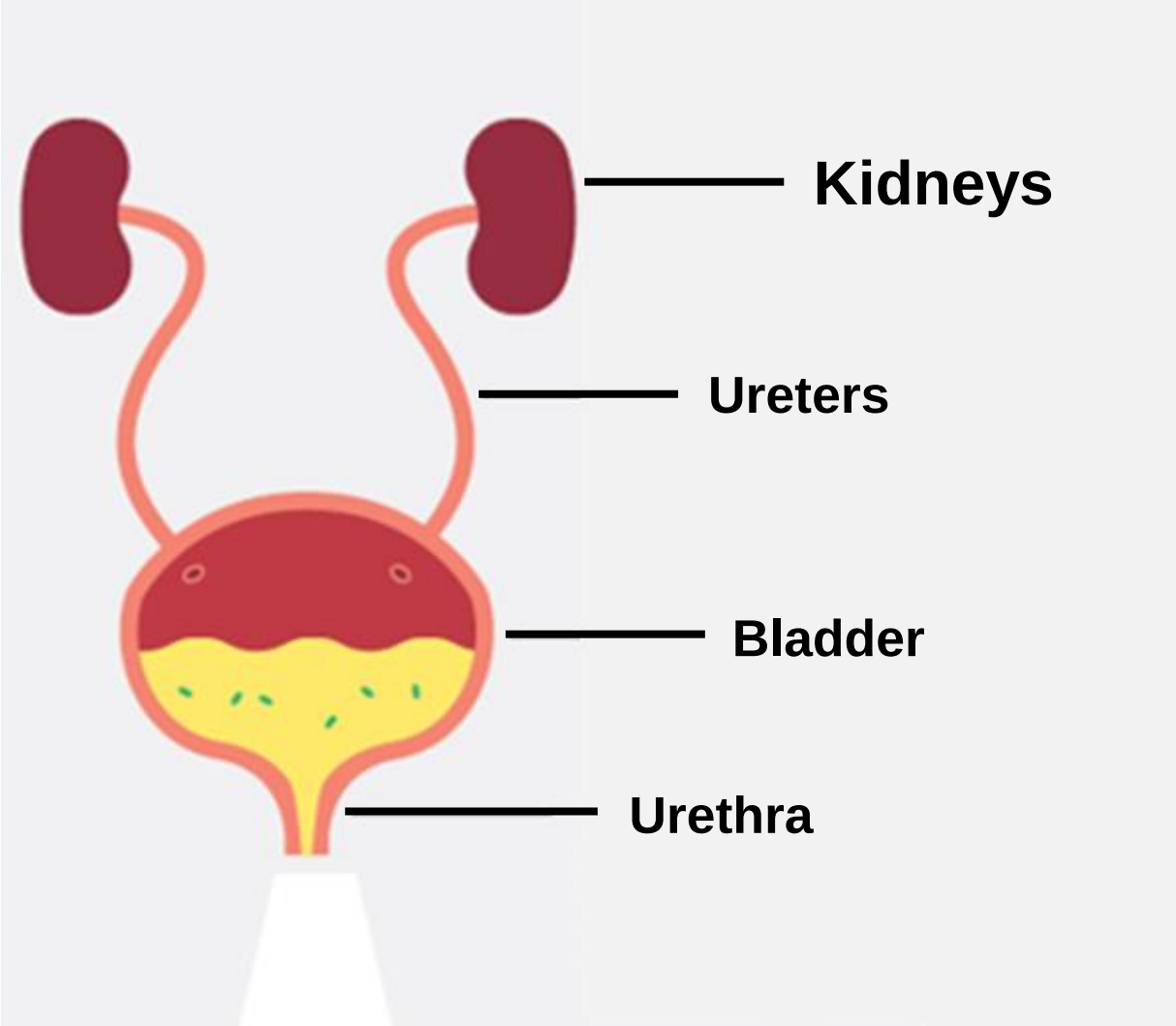
By:

- Improving Hydration
- Continence care
- Appropriate catheter hygiene and maintenance

Adult Social Care Nursing Team

Urinary tract infection (UTI)

An infection that occurs anywhere in the urinary tract



Symptoms of UTI

- Pain when passing urine
- Urgent or frequent need to pass urine
- New or worsening incontinence
- Visible blood in urine
- Shivering/ fever
- Confusion/agitation
- Abdominal or back pain

UTI – What do we know?

Who is at greatest risk of UTI in the older population?

a. Men

b. Women

c. Everyone

What time of the year are UTI's most common in the UK?

a. Spring

b. Summer

c. Autumn

What percentage of care home residents are prescribed antibiotics for UTI in a year?

a. 19%

b. 28%

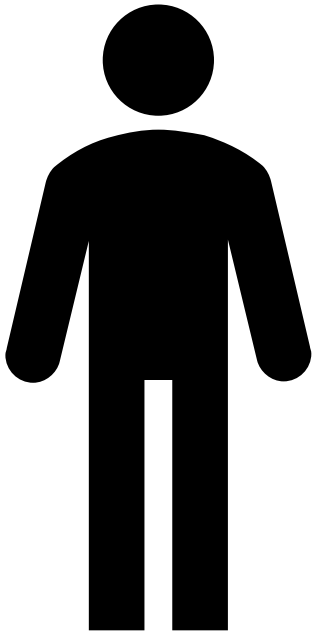
c. 43%

Urine dipsticks detect the presence of nitrates made by bacteria and leukocyte esterase (a chemical in white blood cells) and will usually test positive if there are bacteria in the urine, **whether they are causing infection or not!**

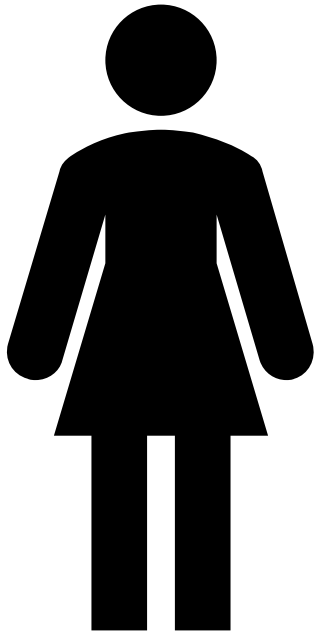
- Not useful in older people to diagnose UTI
- Can be misleading
- Other causes of symptoms can be missed
- Inappropriate antibiotic prescribing – can be harmful
- Frequent use of urine dipsticks is linked to higher rates of antibiotic use
- Using signs and symptoms is a more accurate way of assessing possible UTI

No Dip training video link:
https://www.youtube.com/watch?v=rZ5T1Cz7DHQ

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)



40%



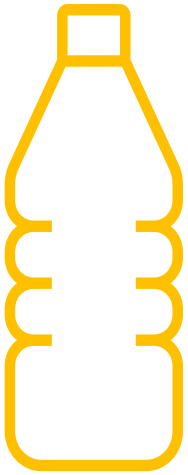
50%

100%

What percentage of the older population does this effect?

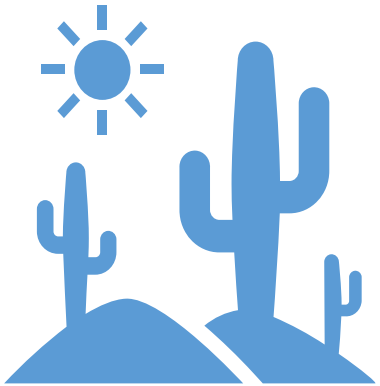
NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

Dehydration



Fluid is required by the body for it to function.

Our bodies constantly lose fluid through breathing, sweating or going to the toilet.



Dehydration occurs when we take in less fluid than we lose.

Risk factors

- Reduced kidney's function and an altered sense of thirst
- Our body's ability to manage and store water
- Excessive fluid losses i.e., medications such as diuretics and laxatives or diarrhea, sweating and vomiting.
- Other functional changes in the body, such as physical and cognitive impairment

The consequences of dehydration can be severe and include:

- Urinary and respiratory tract infections
- Potential for blood stream infections
- Confusion, delirium, dizziness, tiredness, constipation, headache, medication toxicity
- Falls
- Pressure Ulcers
- Hospital admission

There are some simple signs to look out for to identify if someone is becoming dehydrated.

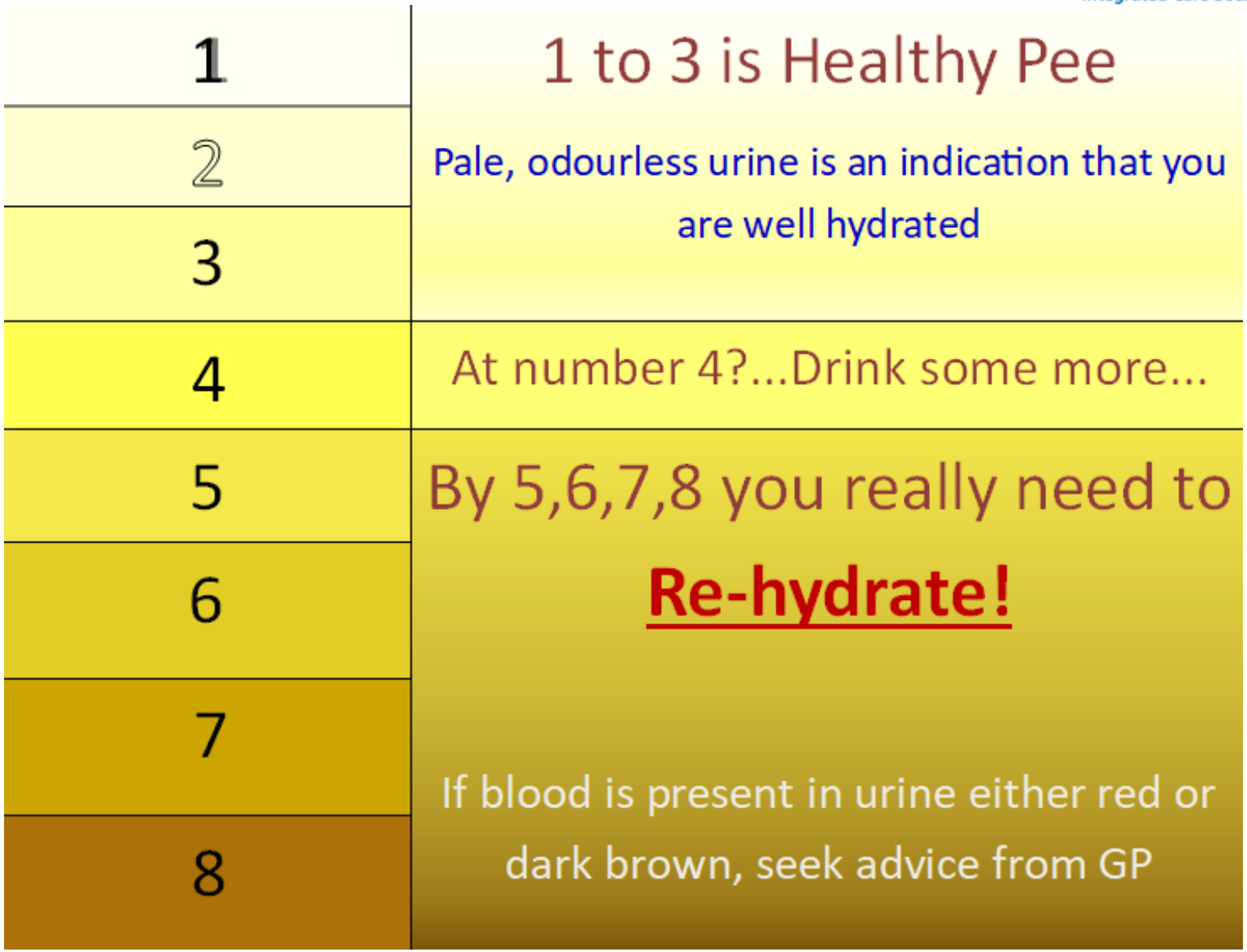
These include:

- A dry mouth, lips and tongue.
- Sunken eyes.
- Dry fragile skin.
- Headache / dizziness.
- Confusion.
- Constipation.
- Tiredness, or not wanting to take part in activities.
- Urinating infrequently or passing small amounts of dark coloured urine which may be smelly.

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

Spotting dehydration

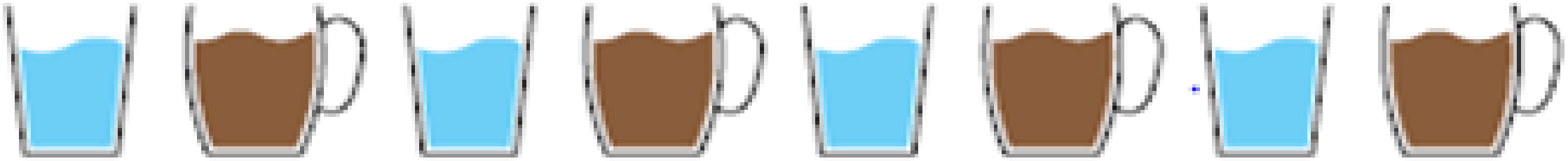
The urine colour guide provides a good indication if a person is drinking enough



Hydration

Think Drink!

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)



It is recommended that adults drink at least 1500mls of fluid every day. This equates to approximately 6-8mugs or glasses. All fluids count (except alcohol) water, juice, tea, coffee, milk…

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

Recognising which individuals are most at risk of dehydration?

Individual assessment is key!

- Level of assistance
- Swallowing difficulties
- Continence / Incontinence
- Understanding
- Preferences
- Oral health

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

What assessment tool do you use?

ROC To Drink Assessment Tool & Care Plan Summary.pdf

MUST Nutritional Screen.pdf

GULP-Dehydration-risk-screening-tool.pdf

Activity 1: Influences on drinking behaviour

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

Negative Influences

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

Physical health

Cognition

Continence / Incontinence

Reliance on others

Drinking aids

Perception

What do people think?

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

I am not always given what I like to drink

I love a nice cup of tea but don't like to ask as they are so busy

I like a cup of tea first thing in the morning when I wake up but don't usually get one until breakfast

I often avoid drinking because I am worried about incontinence

Positive Influences

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

Choice

Support

Positive effects

Social interaction

Continence / Incontinence

Awareness

Think about all the different individuals in your home…
Can you answer, YES?

Are drinks readily available?

Can independent drinkers ask staff for drinks?

Is sufficient support or prompting given to those individuals who need it?

Are individuals adequately supported with toileting access/continence?

Is drinking made pleasurable?

Are individuals understand the importance of drinking?

Do you know if individuals are getting enough to drink?

Do you have a selection of drinking aids available?

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

Time of day	What and how much do you drink?
Early morning	3 cups of tea
Breakfast time	1 cup of tea and a glass of fresh orange
Mid morning	2/3 cups of tea
Lunch time	Can of diet coke
Mid afternoon	2 cups of tea
Teatime	1 cup or team and a glass of water
Evening	A glass of wine and a glass of juice
Supper time	1 cup of team

Activity 2: When and what do you drink?

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

What time do you have your first/last drink?

Do you have any emotional attachment to a drink?

Are the properties of your drinks important?

How would you feel if you didn’t get a choice?

Activity 3: Choosing a cup or glass

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

Things to consider

How much choice do individuals get about the type of drinking cup they use?

How might individuals feel about the cups they drink from?

Is it easy for individuals to use their own cups or mugs?

How do you support individuals who need assistance to drink?

How are individuals assessed for specialist drinking equipment?

Monitoring Fluid balance

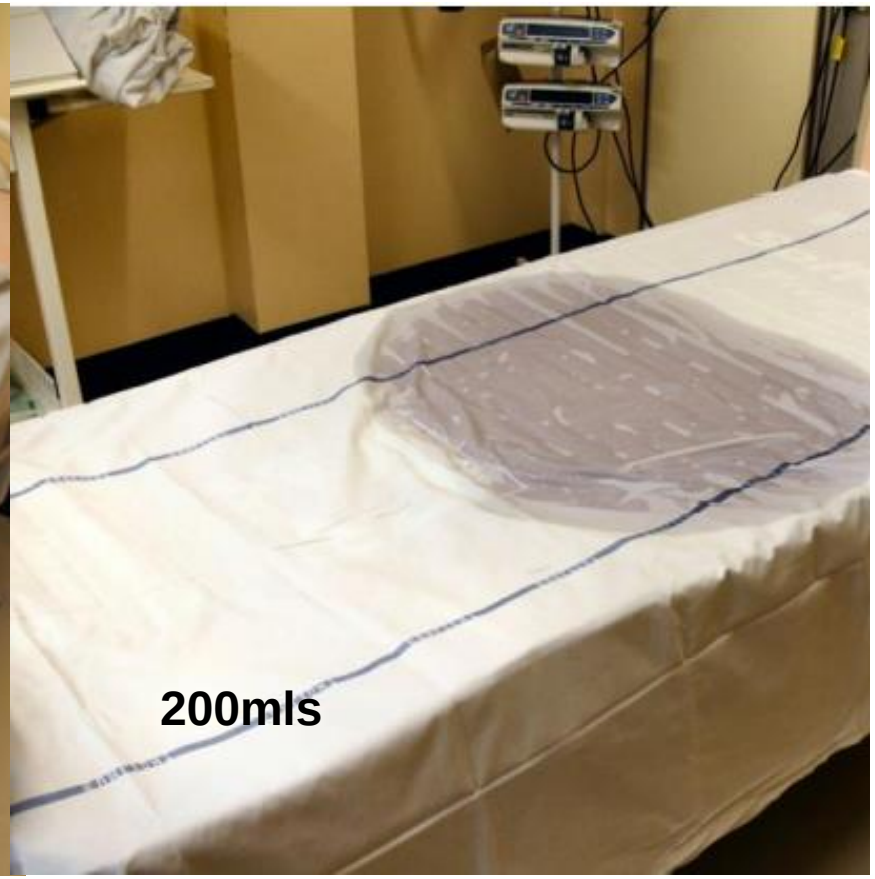
Challenges

- Independent drinking/toileting
- Assisted by relatives/friends with drinking toileting
- Incontinence – how do we know how much urine is in a pad or wet bed?

Encourage residents and relatives to participate in recording fluid balance

Provide standard measures to make documenting easier

moisture indicators on pads and estimation can be helpful



NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

What can we do to improve hydration?

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

...for improving HYDRATION

- Identify those with poor fluid intake/at risk of dehydration or people that require help with drinking
- Ensure sufficient drinking opportunities are available, providing support, encouragement, reassurance and adequate time
- Provide drinks with every meal
- Explore individual preferences, drinks/vessels/aids
- Ensure a wide range of drinks are readily available, served fresh and at the correct temperature
- Try serving water with slices of orange, lemon or lime
- Increase knowledge & understanding of the importance of adequate hydration
- Increase availability of fluid rich foods
- Provide ice pops, lollies or ice cream for people that don't like drinking
- Many people will take extra drinks with medication – use this opportunity to offer extra

Give HYDRATION a BOOST!

PDF

Hydration boosters (2) easy read.pdf

High fluid foods all contribute valuable fluid, i.e.,

- Ice cream, ice lolly's, jelly's & milky puddings, yoghurts, custard.
- Smoothies.
- Water rich fruit or veg such as melon and cucumber.
- Stewed, pureed or tinned fruit.
- Soups, stews and sauces.

Get Creative!

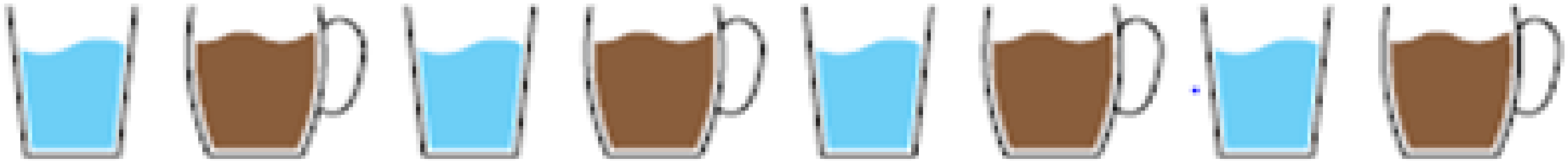
Consider:

- Fizzy vs flat water.
- Ice cubes.
- Flavours and colours.
- A variety of drinking vessels.
- Themed events and social occasions such as mocktails / afternoon tea / tasting sessions.

Knowledge Check!

What is the minimum recommended amount of fluid that an older person should drink every day?

a. 500mls b. 2000mls c. 1000mls d. 1500mls



It is recommended that adults drink at least 1500mls of fluid every day. This equates to approximately 6-8mugs or glasses. All fluids count (except alcohol) water, juice, tea, coffee, milk…

Knowledge Check!

What factors make older people at increased risk of dehydration?

- Reduced kidney's function
- Our body's ability to manage and store water
- Altered sense of thirst
- Excessive fluid losses i.e., medications such as diuretics and laxatives or diarrhoea, sweating and vomiting.
- Other functional changes in the body can cause swallowing difficulties (dysphagia)
- Physical difficulties

All these factors are a risk of dehydration

Knowledge Check!

What factors make older people at increased risk of dehydration?

a. Urinary Incontinence
b. UTI
c. Falls
d. Kidney failure
e. Drug Toxicity
f. Hospital admission
g. Confusion
h. Constipation
i. Pressure ulcers

All these conditions have been linked to dehydration

Knowledge Check!

Which of the following could be signs of dehydration?

a. Dry fragile skin
b. A dry mouth, lips & tongue
c. Sunken Eyes
d. Headache/dizziness
e. Confusion
f. Constipation
g. Tiredness/ not wanting to take part in activities
h. Passing small amounts of dark coloured, smelly urine

All these signs indicate that a person may be dehydrated

Knowledge Check!

Which older people are at the highest risk of dehydration?

- Those with dementia
- Totally dependent on carers
- Partially dependent on carers
- All older people are risk

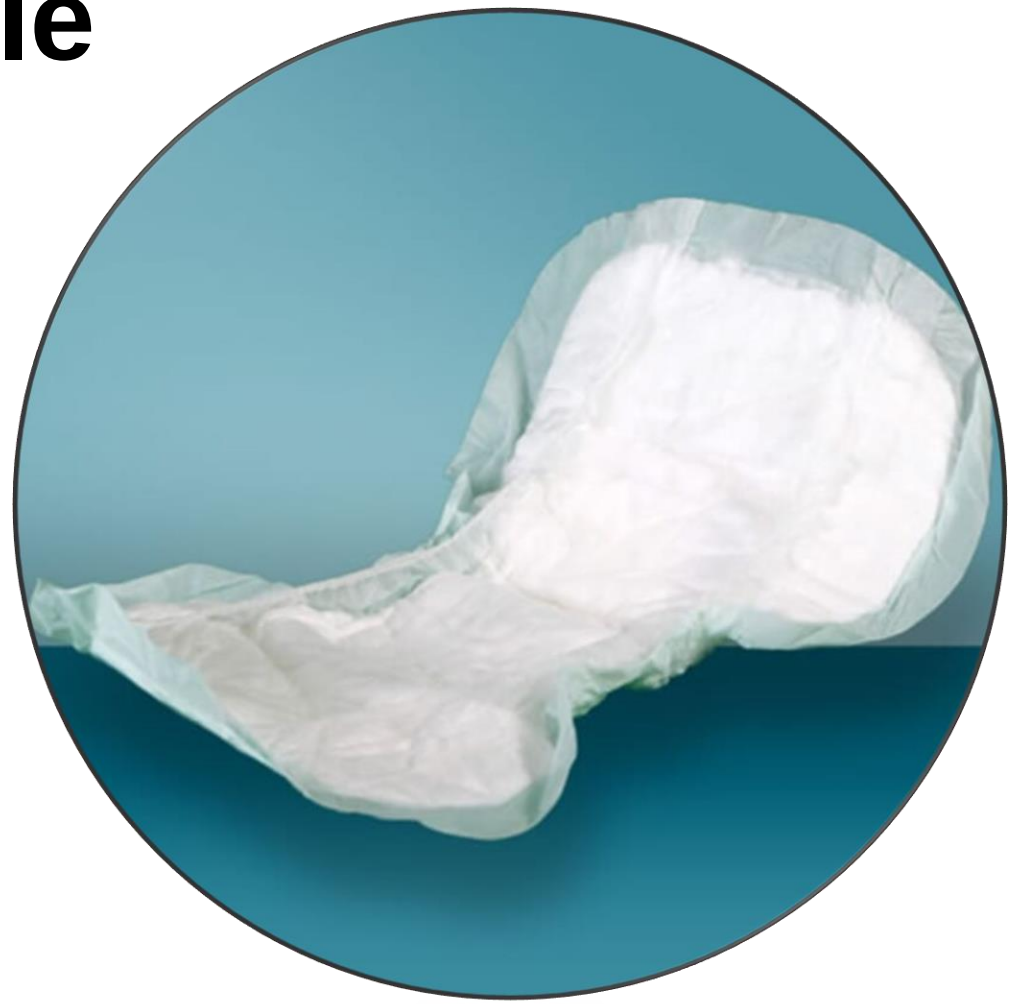
All older people are at risk - Even those who can drink independently without assistance or prompting often do not consume enough fluids.

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

Preventing UTI in people with incontinence

UTI’s are more common in people with incontinence

- Change continence products regularly
- Remove products from front to back
- Wipe the genital area from front to back
- Use Gentle unscented soap for cleaning
- Keep the area as dry as possible – bacteria love moisture!
- Encourage and promote regular toileting



Case study – Charles

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

Today the carer looking after Charles observes that he seems to be more lethargic then usual and a little confused. She's worried that something seems to be wrong with him and informs the nurse in charge that he appears a little ‘off’. The nurse reviews the nursing notes: the records indicate that he has been constipated for the past three days, and yesterday's entry indicated he had ‘strong and smelly urine’.

Charles is 73. He has a diagnosis of dementia, but he can eat and drink independently.

He likes tea and apple juice.

He doesn’t talk much but will ask for specific drinks.

Charles spends most of the day sitting in his armchair, his medication makes him sleepy.

It can take Charles a long time to eat his meal. Sometimes, it is too late for him to have a dessert.

People are usually given a drink after their meal, but Charles doesn’t get offered any as he is still eating. The carers are then too busy and forget to check on him.

The carers don’t like to disturb Charles if he is sleeping, and he doesn’t get offered a drink in the afternoon.

When he does get a drink, he doesn’t always finish it as he falls asleep again and the drink is taken away.

Catheter Care

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

What is a urinary catheter?

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

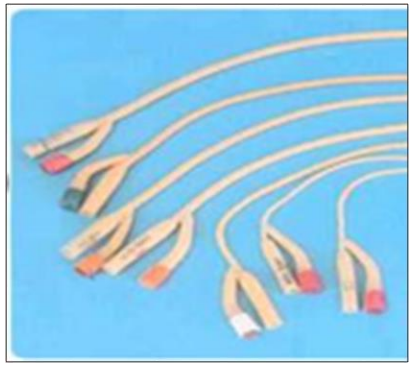
A catheter is a thin, flexible, hollow tube that drains urine from the bladder into a drainage bag.

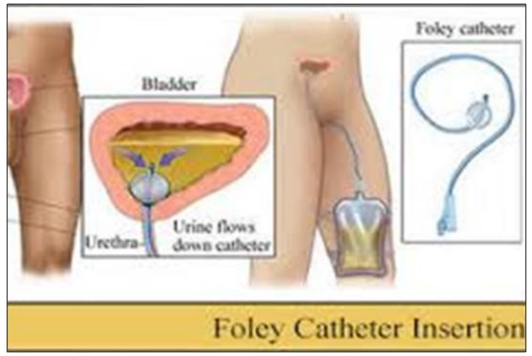
It is inserted into the bladder, either via the urethra or through a hole made in the abdomen (Suprapubic).

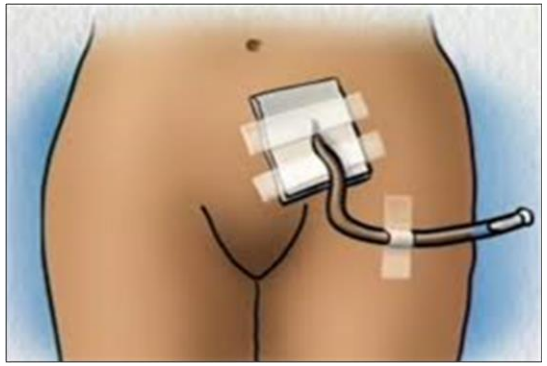
A catheter is a foreign body which can irritate and damage the mucosa (layer of protective mucus) providing an area for bacterial growth.

Catheterisation is a major risk factor in the development of a UTI.

Bacteria or yeast can travel along the catheter and cause infection in the bladder or kidneys.







Catheter associated UTI (CAUTI)

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

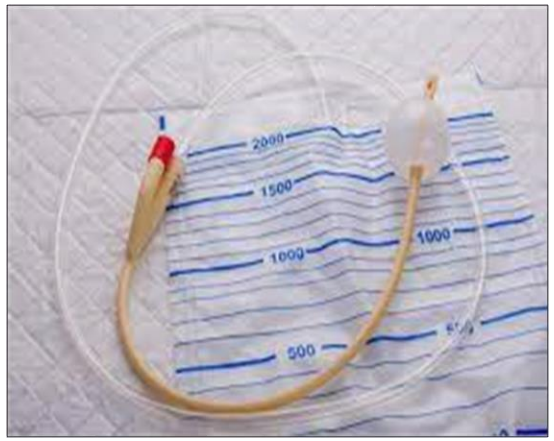
Between 43% and 56% of UTI's are associated with catheter use

An individual with a catheter is at an increased risk of a UTI

The risk of UTI increases 5% each day a catheter is in place

By day 10, 50% of people with a catheter will have bacteriuria (bacteria in urine)

Virtually, every individual with a long- term catheter will have bacteriuria (bacteria in urine)



The risks of long-term catheters

Patients catheterised for > 75% of year are

- 3x more likely to be hospitalised
- 3x more likely to receive antibiotics
- 3x more likely to die

Kunin et al Am.J.Epidemiology 1992,
McNulty et al 2009 B. J. Infection Control

How does bacteria get into the bladder of someone with a catheter?

- Poor hand hygiene
- Trauma
- Breaking of the connection between the catheter and the bag
- Putting the bag above the patient's bladder – no back flow control
- Pulling the catheter out with the balloon intact
- Not cleaning the meatus (opening into the body) daily (most UTI's are caused by the patient's own bowel flora (natural organisms that live in the gut /bowel)
- Using a home-made drainage system or leave the catheter to drip onto a continence pad

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

Reducing the risks of CAUTI through correct catheter hygiene and maintenance

Hands should be washed, and appropriate PPE worn - (Disposable gloves & apron) when touching a catheter/catheter bag

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

Personal Hygiene

Personal hygiene

Females

Males

Catheter users

Toiletries / emollients

Seek advice

- The drainage bag and tube should always be positioned below the level of the bladder to prevent backflow
- Drainage bags should be emptied when 2/3 full
- The catheter tubing must not be kinked or occluded, or pass under pressure areas
- The bag must be kept off the floor
- A separate single use clean container should be used to empty drainage bags, and the drainage valve must not touch the container on emptying the bag
- If a drainage bag becomes disconnected always replace it with a new bag
- Ensure adequate fluid intake

The catheter and drainage bag should be adequately fixed to prevent trauma

NHS
Humber and North Yorkshire
Integrated Care Board (ICB)





Urine Sampling

- Never take urine directly from the bag
- Always use the sampling port
- Clean the port prior to use
- Use a red topped bottle for samples
- (Antibiotic treatment should be based on what is in the bladder, not the bag!!)

Urine Dipstick

- Urinalysis (Dipstick) doesn't diagnose CAUTI (Catheter associated UTI)
- Do not dipstick urine from a catheter!

Catheter Hygiene quiz

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

What should you always do prior to touching a catheter or drainage bag?

NHS
Humber and North Yorkshire
Integrated Care Board (ICB)

If a catheter stops draining, what action should you take?

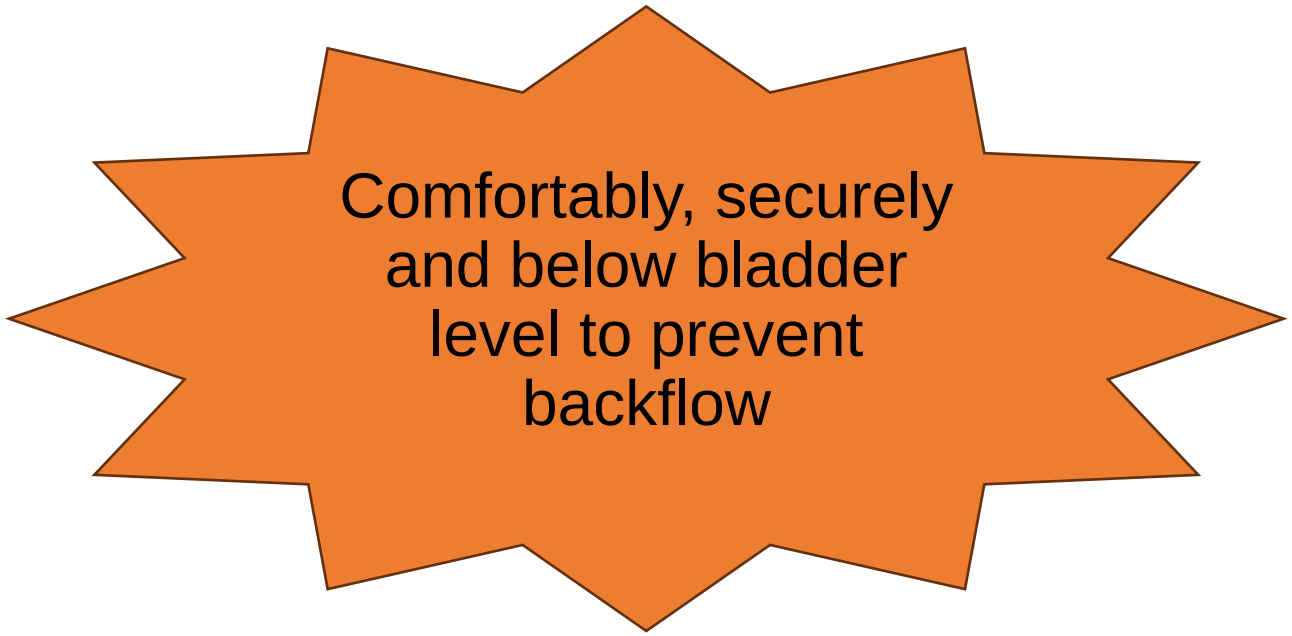
Check for any kinks or loops in the tubing, ensure drainage bag is below bladder level.

If neither are causing the problem, call GP or D/N.

How often should a catheter bag be emptied & why?

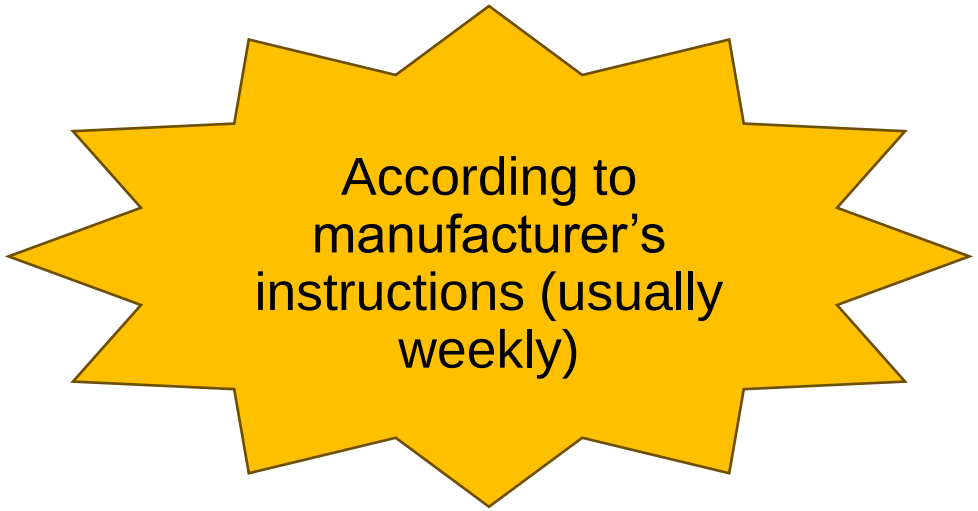
When it is approximately 2/3rds full. Too often increases the risk of infection as it creates a break in the closed drainage system. If allowed to get too full urine backs up and stagnates in the tube, increasing the risk of infection.

How should catheter leg bags be positioned?

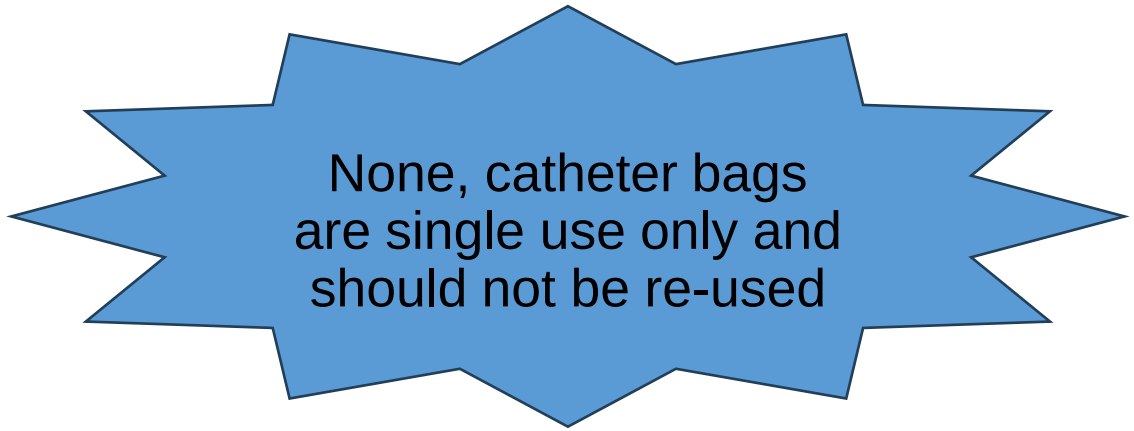


NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

How often should a catheter leg bag be changed?



How many times can a catheter leg bag be washed and re-used prior to discarding?



NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

How should a catheter overnight drainage bag be positioned?

It should be attached to a nightstand, below bladder level, ensuring that no part of the bag or drainage tap are touching the floor

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

How many times can an overnight drainage bag be used?

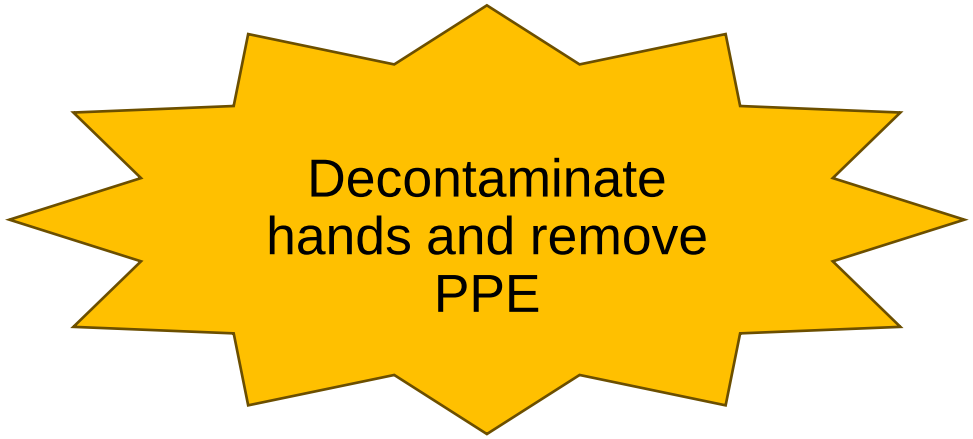
Once only. Overnight drainage bags are single use only and should not be re-used

NHS
Humber and
North Yorkshire
Integrated Care Board (ICB)

What container should you use to empty a drainage bag?

A separate single use clean container should be used to empty drainage bags, and the drainage valve must not touch the container on emptying the bag.

What should you do on completion of any care intervention?



Thank you.
Any questions?