



A Bi-Weekly Letter For SONOCO Professionals Working in the Gulf

**March 19, 2020**

“Success is not final; failure is not fatal: it is the courage to continue that counts.”

— **Winston S. Churchill**

“Courage is the most important of all the virtues because without courage, you can't practice any other virtue consistently.”

— **Maya Angelou**

“Believe in yourself. You are braver than you think, more talented than you know, and capable of more than you imagine.”

— **Roy T. Bennett**

“Courage is resistance to fear, mastery of fear - not absence of fear.”

— **Mark Twain**

## **How clean are YOUR hands?**

The answer, revealed in this unique experiment, may shock you - and change how you wash!

- You probably don't clean your hands anywhere near as well as you think. And proper hand washing is important - our hands can harbor nasty bugs including E.coli, salmonella, the superbug MRSA, as well as flu viruses and now COVID-19

Are your hands clean? Sure, you washed them after you went to the loo, but as the experiment here reveals, you probably didn't clean them anywhere near as well as you thought.



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But what constitutes proper hand washing, and are you doing enough to protect yourself?

To find out I used a special UV camera to test different hand-washing techniques - from the typical 'rinse and shake' to the 30 seconds recommended by a leading authority on disease control.

First, I rub on a gel known as Glo Germ, which simulates how bacteria cling to your skin. The gel, which is clear but 'glows' under UV light, is used as a visual aid in hygiene training - it's been used for training nurses who are going to be working with Ebola patients, for example.

The gel contains particles the same size as bacteria, so any that's left behind (i.e., that shows up white in the UV light) gives you an immediate idea of how good your hand-washing technique is. In other words, the whiter the hands in these pictures, the dirtier they are - and the darker they are, the cleaner.

The results may make you think twice next time you're at the bathroom sink...

**The whiter the hand, the more bugs left after washing**



**BEFORE WASHING: Covered with germs - shown by the white glow**

## RINSE AND SHAKE

We've all done it: there's no soap or towel, or we're in a rush, so we make do with the merest of rinses under a running tap and a quick shake to get our hands dry. Indeed, up to a quarter of us only briefly wet our hands, according to a 2013 study by Michigan State University. Researchers observed 3,500 people after they'd used a public loo and found men were much more likely to just rinse than women.

However, as the picture shows, rinse and shake doesn't achieve much. After running my hands under the tap for three seconds, my hands show up a glowing white under the camera - suggesting lots of bacteria will have been left there.

Only a little of the bacteria has been removed from the sides of my fingers. You can see the white rings around

my cuticles, where colonies of bacteria may have settled. 'A quick rinse is never enough,' says Dr Lisa Ackerley, a leading hygiene expert and visiting professor at the University of Salford. 'Everyone needs to wash their hands properly, especially after going to the bathroom.'



**RINSE AND SHAKE:** You may be in a rush - but a splash of water won't shift the bugs

Fecal bacteria on hands is really common, explains Dr Val Curtis, an expert in hygiene and public health at the London School of Hygiene & Tropical Medicine. 'We did a study of commuters around England and found that 28 per cent had it on their hands.'

Research suggests just 37 per cent of men and 61 per cent of women wash their hands after using the bathroom.

And people are less likely to wash their hands in a dirty bathroom, says Dr Curtis. 'This makes sense because you get the feeling you might be more likely to get contaminated with something - but that may be exactly when you really need to wash.'

## SIX-SECOND WASH - WITHOUT SOAP



**SIX SECONDS NO SOAP:** The average wash – but vast patches of germs remain

Six seconds is the average length of time people spend washing their hands, according to research. But this is not long enough to effectively remove bacteria.

The NHS recommends we wash for at least 15 seconds - roughly the time it takes to sing Happy Birthday twice over at a fairly jaunty pace.

Washing my hands for slightly longer has reduced the white areas - the amount of 'bacteria' - on my hands compared with rinse and shake (especially on my palms, not shown), but there is still a high concentration on the backs, around my wedding ring, under my fingernails and in my cuticles.

The NHS advice stresses the need to rub your hands palm to palm and then to interlace the fingers as you scrub, followed by rubbing around your thumbs in order to ensure all areas are clean. But, like me, most people tend to put most effort into their palms, says Dr Ackerley, missing areas such as between the fingers and around the nails, cuticles and thumbs.

Overall, however, my hands have fewer bacteria - no doubt because this time I dried my hands with a towel.

'Drying your hands is really important,' says Dr Ackerley. 'If you've missed anything while washing, the rubbing action will help remove any bacteria.'

And germs transfer more easily to and from wet hands - so you want to avoid leaving the loo with damp hands.

'Norovirus can survive well on hard surfaces, such as door handles, so you run the risk of picking up people's germs. Never dry hands on the kitchen tea towel. Any bacteria you take off your hands could then

be transferred to when you wash up. I prefer to use kitchen roll (paper towel).'

## SIX-SECOND WASH - WITH SOAP



**SIX SECONDS WITH SOAP: Proof soap helps - but those fingers are still filthy**

The most important part of hand washing is using soap, according to Dr Curtis. 'As long as you use soap, it's quite hard to wash your hands badly. It's sticky, so you have to wash it off - taking the bacteria with it,' she says.

**'Soap doesn't kill bacteria, it gets rid of them,' she says. 'This is because one end of the soap molecule attaches to water while the other end attaches to dirt (which is where the bacteria will be).'**

**'So, as you rinse your soap-covered hands, the water strips off the soap, taking the dirt with it.'**

For this reason, she says, there's little advantage in using soap with added antibacterial properties to kill bacteria. 'You may get rid of a few more germs, but the majority would be removed by normal soap. Putting antibacterial components into soap doesn't make that much difference in terms of public health.'

Lathering with soap also enhances the rubbing action as you wash, which may explain why in the picture, despite washing for a brief six seconds, my hands show up cleaner - there are less of the glowing white bacteria, though there's still plenty around my cuticles and jewelry, under the tips of my nails and around my wrists.

Nails and cuticles are easily missed areas, says Dr Ackerley. 'And this is a particular problem for people who often nibble on their cuticles or chew on their nails, as they could be risking infection.'

'When you wash your hands, you should scrub the tips of your fingers against your palms to clean under the nails.'

### FIFTEEN SECONDS WITH SOAP

This is how long you should wash for, according to the NHS. Despite considering myself to be a fairly clean person (my husband might say obsessively so), I'm not sure I normally wash for this long - I have to time myself with a stopwatch.



**FIFTEEN SECONDS WITH SOAP: What NHS recommends - but germs still lurk on knuckles and nail cuticles**

In the Michigan State University study, they found just 5 per cent washed their hands for 15 seconds or more. It would seem that by washing for this long you wash bits you might not normally bother with, such as the wrists.

As you can see from the picture, there are far fewer white areas than with the typical six-second wash.

The only white areas are the crescents around my cuticles, a patch on the side of my thumb and a streak on the top of my little finger. 'You should wash for 15 seconds because you need that time to clean all the little bits of your hands,' says Dr Ackerley.

## THIRTY SECONDS WITH SOAP

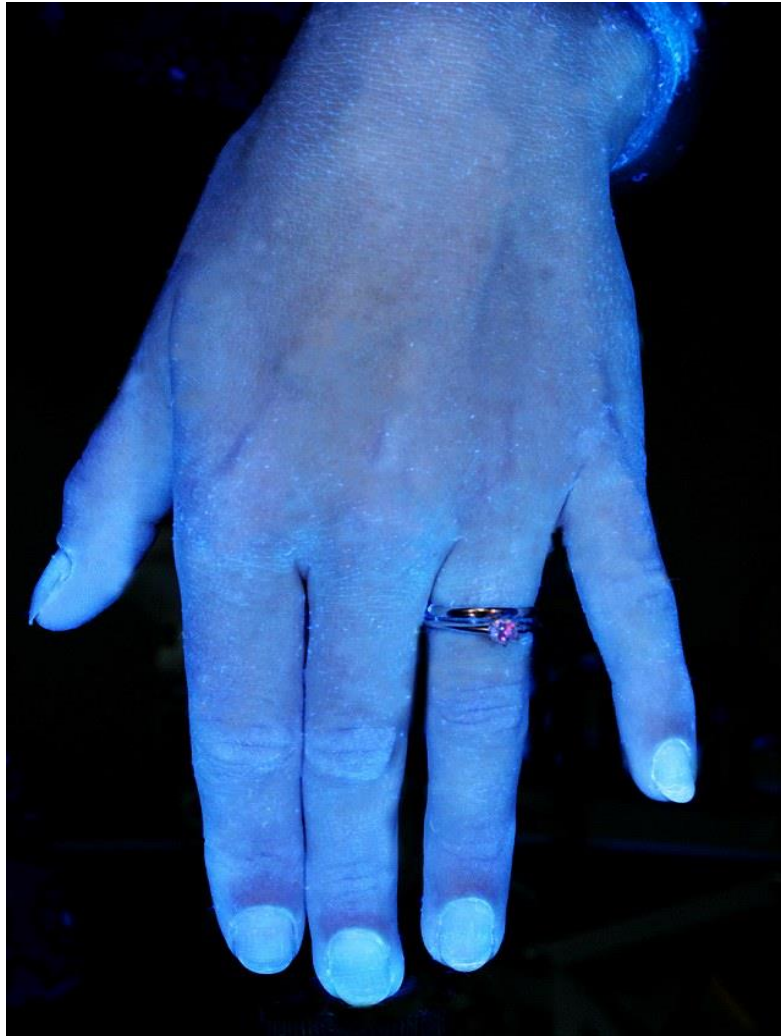
But should you wash for even longer? The Center For Disease Control and Prevention in the U.S., a leading authority on public hygiene, suggests 15 to 30 seconds is enough to remove harmful bacteria.

So, I tried the full 30 seconds, and I cannot stress enough how unnaturally long this felt (it's enough for four jaunty renditions of Happy Birthday).

There is a visible difference - there are even fewer white areas. The crescents of bacteria around my cuticles in the 15-second picture have all but gone - though I'm amazed to see there is still a trace.

I'm not sure the difference with the 15-second picture justifies having to wash your hands for such a long time.

Dr Curtis agrees: 'With a very careful technique or washing for much longer you get rid of the remaining few bacteria, but it's getting rid of the majority that matters.'



**THIRTY SECONDS WITH SOAP: Almost spotless - but this is FIVE times longer than most of us wash**

## P.S. WHAT'S BEST: TOWEL OR DRYER?

'There's a lot of debate about what's best - towel or hand dryer - but the research is inconclusive,' says Dr Ackerley.

'The most important thing is that you take the time to dry your hands thoroughly.'

Research has found 85 per cent of microbes are transmitted by moist hands, compared with 0.06 per cent by dry hands.



**Automatic hand dryers are good in that they reduce the number of things you have to touch**

'An advantage of using a towel - cloth or paper - is the rubbing action will take off any bacteria you've missed with washing. Automatic hand dryers are good in that they reduce the number of things you have to touch in a public bathroom. However, the problem with some dryers is they're so slow people end up not drying for long enough and leave with wet hands or wipe their hands on their clothes - potentially re-contaminating them.'

Above all else, you should avoid using a wet towel in a shared loo to dry hands. 'I've seen from my research how bacteria don't just survive but flourish in a wet towel,'

says Dr Ackerley. 'You might have washed your hands properly, but the person before you might not have, and if that's the only option, I would flick-dry my hands or use toilet tissue.'

And what about touching the door handle of a grubby public bathroom: will that undo all your good work? 'Possibly,' says Dr Ackerley. 'You are reliant on the last person who touched that surface and how clean their hands are.'

'I'm a bit of an advocate of covering my hand with my sleeve or using my knee if the door opens outwards.'

'But you don't need to be too obsessive, as it does depend what you're doing next. If I've just washed my hands because I'm about to eat, then I would be very careful not to touch anything, but if I'm about to go outside or use public transport, I wouldn't worry so much.'

Source:

By JENNIE AGG FOR THE DAILY MAIL

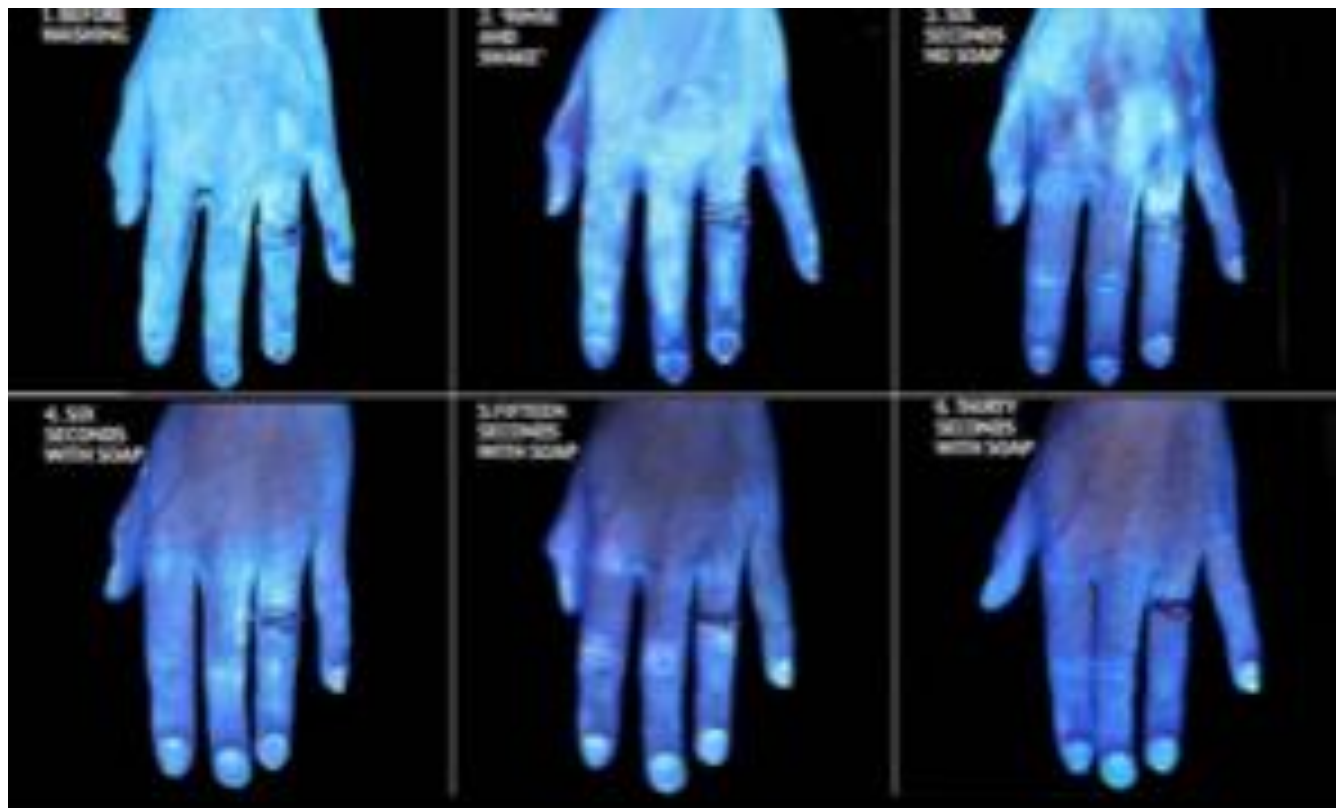
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<https://www.dailymail.co.uk>

additional sources:

<https://www.cdc.gov/handwashing/>





## **The Importance of Hand Washing: 5 Different Washing Durations and their Efficiency. (Glowing Regions Show Dirt and Microorganisms).**

1. Before Washing, 2. Rinse and Shake, 3. Six Second Wash No Soap, 4. Six Second Wash with Soap, 5. Fifteen Second Wash with Soap, 6. Thirty Second Wash with Soap.