

## Handwashing: Why are the British so bad at washing their hands?

By Denise Winterman BBC News Magazine

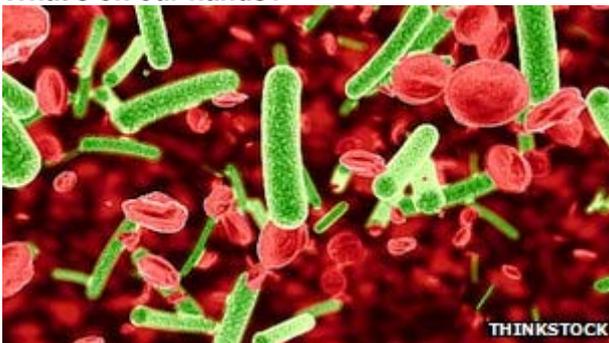


Faecal matter can be found on just over a quarter of our hands, new research suggests. In some cases the quantity of germs is equivalent to the number in a dirty toilet bowl.

So why are the British so bad at washing their hands?

Poo, it's getting everywhere. Faecal bacteria are present on 26% of hands in the UK, 14% of banknotes and 10% of credit cards, according to new research carried out by hygiene experts from Queen Mary, University of London (QMUL) and the London School of Hygiene & Tropical Medicine (LSHTM). It has been published to promote the UN's Global Handwashing Day.

**What's on our hands?**



- The average person's hands carry at least 3,000 different bacteria
- They belong to more than 100 species
- Everyone has a unique bacteria "fingerprint"
- You can identify a person from the bacteria they leave behind after touching an inanimate object
- Bacteria can remain unchanged on an object after two weeks at room temperature

Source: University of Colorado Boulder

## BBC Health: What causes infections?

### BBC Health: E.coli

They say one of the biggest shocks is the level of germs. Findings suggest 11% of our hands are so "grossly contaminated" they are carrying as many germs as a dirty toilet bowl. It's the same for 8% of cards and 6% of notes. We already know faecal matter can be found on one in six mobile phones.

"People may claim they wash their hands regularly but the science shows otherwise," says QMUL's Dr Ron Cutler, who led the study.

The British are particularly bad, other research suggests. Many of us also lie and claim we have washed our hands when we haven't, especially after going to the toilet.

In a recent UK-wide study, 99% of people interviewed at motorway service stations toilets claimed they had washed their hands after going to the toilet. Electronic recording devices revealed only 32% of men and 64% of women actually did.

Even when faced with a serious health threat, many still don't bother. More newly published findings, this time from an **international study by Harvard University**, suggest only 53% of people washed their hands more frequently during the 2009 swine flu pandemic. It looked into how people changed their behaviour to reduce the spread of the H1N1 virus, and the British were the worst of the five countries studied.

The British approach to hand washing is often "bizarre" and "peculiar", say hygiene experts. So what is our problem? A lot comes down to perception and how we see ourselves, also to a lack of understanding about the simplest hygiene.

"It's peculiar but many people in the UK don't think they carry any diseases," says Dr Lisa Ackerley, a consultant in environmental hygiene and co-founder of Hygiene Audit Systems.

"They live in a country with modern facilities and think things are clean."

### The man who got us to wash our hands



- Hungarian physician Ignaz Semmelweis discovered the role of hand washing in preventing cross-infection in 1847
- While working in a Viennese maternity clinic he realised doctors were transferring infections by moving from dissecting corpses to examining new mothers without washing their hands
- He introduced hand washing rules and deaths were drastically reduced
- His ideas were initially rejected by the establishment and he was shunned
- He didn't live to see them accepted, dying in a mental asylum after a breakdown in 1865

Source: Science Museum

## BBC History: Victorian medical discoveries

### What diseases are infectious?

Most people are taught to wash their hands from an early age. When there is a major health scare, the Department of Health runs education campaigns, such as swine flu's

"Catch it, bin it, kill it" campaign. But still some people don't link it with stopping the spread of germs.

"People in the UK are worried about infections, we know that," says Dr Cutler. "But often they don't associate dirty hands with infections until they actually get ill, it's rather bizarre. They think their hands are clean."

They're wrong of course. The average person's hands probably carry at least 3,000 different bacteria belonging to more than 100 species, according to US researchers at the University of Colorado Boulder.

We all have our own unique "bacterial fingerprint", says Prof Noah Fierer, who conducted the research.

"Bacteria on skin are like snowflakes, no two communities are alike," he says.

That even goes for your left and right hand. The study found a person's hands share only 13% of the same bacteria. Also, while women wash their hands more than men, they have a more diverse selection of germs living on them. Scientists don't know why, but say differences in sweat, hormones and even the use of makeup might be involved.

A lot of the different types of bacteria found on skin are not pathogens so do not cause disease, says Prof Fierer. Hand hygiene is more about not passing on the bad germs we pick up.

"The benefit of hand washing is that it removes those transient taxa [organisms] that a doctor, for example, may pick up from a diseased patient, or a cook may pick up from using the toilet and then potentially pass onto another individual," he says.

Sometimes bad hygiene is not down to laziness or a lack of awareness. Automatic behaviour is often subconscious and we simply don't think about what we're doing, says Dr Val Curtis, director of the Hygiene Centre at LSHTM.

#### **How to wash your hands properly**



- Wet hands, apply soap and rub palms together until soap is bubbly
- Rub each palm over the back of the other hand
- Rub between your fingers on each hand
- Rub backs of fingers (interlocked)
- Rub around each of your thumbs
- Rub both palms with finger tips then rinse
- Dry your hands well

Source: Global Hygiene Council

#### **Step-by-step guide to washing hands properly**

##### **Food Programme: Britain's Food Safety Net**

"People often genuinely think they've washed their hands after going to the toilet when they haven't. People think their behaviour is under conscious control, but often it's not. They are mindlessly doing things."

Of those that do wash their hands, often they're doing it wrong. A quick wipe with water is not enough. You should use soap wherever possible and follow certain steps, like

rubbing around your thumbs. If you wash your hands correctly it should take you the same length of time as singing Happy Birthday twice, say experts.

We should also do it more regularly, when we take out the bins or stroke a cat for example. The two most crucial times during the day are after toilet use and before eating. The study of bank notes and credit cards suggest only 39% of people wash their hands before tucking into some food.

It might not seem that important but the consequences of not washing your hands can be serious. Faecal matter is one of the most dangerous around, says Dr Curtis. It can survive on hands and surfaces for hours, especially in warmer temperatures away from sunlight.

"There are about one billion germs per gram in faecal matter," she says. "Even the smallest amount can leave millions of germs on your hands."

The British Olympic Association warned Team GB athletes not to shake hands during the London games this summer in case they caught a bug that might ruin their chances of success.

The UN says washing hands is the most cost-effective intervention for the worldwide control of disease. It estimates hand washing could save more than a million lives a year from diarrhoeal diseases and prevent respiratory infections, one of the biggest causes of child mortality in developing countries.

## Other places germs gather

SOURCE: NHS AND HYGIENE COUNCIL



A **kitchen sink** typically contains 100,000 times more germs than a toilet



Kitchen **chopping boards** have about 200% more faecal bacteria on them than toilet seats



An average **washing machine load** can contain up to 100 million **E.coli** bacteria at any one time



**Handbags** have up to 10,000 bacteria in each square inch

So, how do you get more Brits washing their hands? Challenges facing public health organisations include the fact that our sensitivity to disgust varies. There are extremes at either end of the spectrum, but most people are somewhere in-between. What gets one person washing their hands may not change another's behaviour.

Outbreaks of disease, like swine flu, can encourage better hygiene. During the swine flu scare there was an increase in clinical cases of obsessive-compulsive disorder, says Dr Cutler. But these are a few extreme cases and as Harvard's study shows, a pandemic still doesn't get all Brits washing their hands.



Do you wash your hands properly? Children at Knights Enham Junior School, Andover, show you how

But one tactic that has been shown to work in the UK is shaming people into doing it. The study conducted in service stations toilets found more people washed their hands when signs were put up asking: "Is the person next to you washing their hands?"

"It makes people conscious of what others are doing around them and someone might be looking at them, they get embarrassed," says Dr Ackerley. "Social pressure is a powerful tool.

"There are more notices in US toilets. I remember one that said, 'no poo poo fingers'. That was probably very effective."

Dr Cutler agrees. "People obviously lie about washing their hands because they're embarrassed to admit the truth. Get them to feel embarrassed at the sink and they are more likely wash their hands," he says.

So remember, no poo poo fingers from now on.