

# STANDARD DEVIATIONS: Offhand Biosafety

Greetings,



{What we touch touches us.}



While gloves are an ubiquitous piece of personal protective equipment in the clinical setting, we must remember that PPE is the last, **and least effective**, means of controlling exposure to the pathogens we deal with. While gloves may be a barrier to exposure, the bugs just accumulate and make our glove a collection of every organism they encounter.

Handwashing is a work practice control that actually offers better protection because it removes the pathogen and disinfects the area; *when performed correctly*.

A recent study published in the August 17 edition of *Physics of Fluids* confirms that those magic **20 seconds of vigorous scrubbing** are absolutely necessary to dislodge germs from our hands.

The study model used wavy surfaces and a liquid film between them to mimic the rough surface of the hands and measured the flow required to remove trapped particles. The flow of liquid and speed of moving surface must reach a certain strength to overcome the forces holding a particle down.

The model confirmed the 20 second threshold of vigorous handwashing needed to dislodge germs. Think of it like scrubbing stains out of clothing; particles trapped in the rough surface of our skin require energy from the flow and action of scrubbing that is high enough to lift the organisms from the skin. Then the soaps and disinfectants we use can access the germs and do their thing to the membranes and contents, vanquishing the little fiends.

We recognize the value in gloves. We emphasize the necessity of handwashing. Do we treat these two equally, in practice?

Okay, I'm not calling anyone out. You know how long you wash and you're a grown-up. BUT ... everyone is great about wearing gloves, are we as good about keeping to the 20 seconds of handwashing?

I'm asking you to make sure.

Have a great week and be safe,

Bryan

