

Medical Solutions Division

Subject:

Novel Coronavirus (COVID-19) and Hand Hygiene

From:

Katrina Shaw
3M Medical Solutions Division
3M North Ryde, NSW

Key message:

Coronavirus is defined as -

enveloped virus: the virus has a lipoprotein envelope surrounding the nucleoprotein core of the virus

Soap molecules are similar to those that make up the outer layer of the virus, whereby the molecules in the lipid bilayer are strongly attracted to soap molecules. This disrupts the fat membrane surrounding the virus, once the lipid envelope is damaged, the integrity of the virus is compromised.

Alcohol targets viral envelopes, but in a different way. Ethyl alcohol, at concentrations of 60%–80% denatures the cell wall proteins causing interference with metabolism and cell lysis.

CDC recommends

HCPs should perform hand hygiene by either:

- washing hands with soap & water for at least 20 seconds or
- using an Alcohol Based Hand Rub (ABHR) with 60-95% alcohol

(Note: none of these measures will be effective should correct technique not be followed)

Washing hands with soap & water:

- Wet your hands first with water
- Dispense the soap into a cupped hand
- Thoroughly rub the soap all over your hands.
- *(It is important to pay special attention to the backs of your hands, between the fingers and under your nails. This process should be carried out for a minimum of 20 seconds.)*
- Rinse hands with water and use disposable towels to dry
- *(Use towel to turn off faucet)*
- Ensure you continue to moisturise your hands to reduce the incidence of skin breakdown.

Using Alcohol-Based Hand Rub:

- Apply product to hands and rub hands together
- Cover all surfaces until hands feel dry (approx. 20 seconds)

3M Medical Solutions Division