Best practice is to use new N95s. Decontamination does not solve the PPE shortage crisis, and is an emergency practice to be considered during the COVID-19 pandemic. Efficacy and safety of N95 decontamination has not been fully characterized.

## CORONAVIRUS INACTIVATION

| + | • 70°C dry heat for 60min inactivated
|   | SARS-CoV-2 on N95 under lab conditions
|   | • 50–85% humidity enhances inactivation of flu virus (non-CoV) on N95 and metal
|   | • Real-world conditions (e.g. saliva, mucus droplets) may require higher temperature, humidity, or longer time.
|   | • SARS-CoV-2 NOT inactivated by 70°C dry heat for 30min (on N95) and 60min (on metal)
|   | • Method does NOT inactivate all bacterial or mold spores on N95

### KEY CONSIDERATIONS

Temperature and humidity must be calibrated and monitored; heating devices can be highly variable

N95 must be isolated and returned to original user

User seal check must be performed before each reuse

Each don/doff can reduce N95 fit; some models fit unacceptably after 5 don/doff cycles

### IMPLEMENTATION

| + | • CDC released guidance on heat+humidity for N95 decontamination
|   | • Many devices can maintain 70–80°C, 50–85% humidity (warming cabinets, water baths, autoclaves, ovens)
| ? | • Method has not been validated in an FDA-approved process

### CONCLUSION

Heat and humidity for N95 decontamination requires further investigation for inactivation of SARS-CoV-2. Its use should be evaluated by relevant authorities. This is a low-cost technique that could be easy to implement in a wide range of settings. However, excessive heating or multiple thermal cycles may damage N95 fit and filtration. Moreover, this approach will NOT protect against all bacterial and mold co-infection risks. If risks are mitigated, this protocol merits future FDA feasibility studies.

### SUPPORTING RESEARCH


The Content provided by N95DECON is for INFORMATIONAL PURPOSES ONLY and DOES NOT CONSTITUTE THE PROVIDING OF MEDICAL ADVICE and IS NOT INTENDED TO BE A SUBSTITUTE FOR INDEPENDENT PROFESSIONAL MEDICAL JUDGMENT, ADVICE, DIAGNOSIS, OR TREATMENT. Use or reliance on any Content provided by N95DECON is SOLELY AT YOUR OWN RISK. A link to the full N95DECON disclaimer can be found at https://www.n95decon.org/disclaimer.

v2.0 (April 23, 2020)