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.

## Supportive Research


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## N95 Mask Integrity

- N95 keeps fit and filter performance after 10-20 cycles of 1-1.2 J/cm² UV-C

- Some damage to N95 seen at high UV-C doses (≥120 J/cm²)

- Strap and facepiece damage seen on some N95 models after UV-C

## Risks

- Residual contamination may remain on N95 straps and may need to be separately wiped with disinfectant

- Consumer UV products are not recommended for N95 decontamination

- If UV-C source is underpowered, decontamination timescales may be infeasible

- UV-C may not decontaminate N95 straps or eliminate risk of bacterial co-infection

- Makeup and sunscreen on N95 may reduce decontamination efficacy

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## Key Considerations

- N95 light may not reach inner N95 layers for all N95 models

- Straps may not be fully decontaminated by UV-C alone

- Shadowing blocks UV-C rays & can leave parts of N95 contaminated

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## Implementation

- Measure dose at N95 surface with calibrated sensor

- Keep N95s separate and return to original users

- Perform user seal check before each reuse

- Be aware that data from tests on specific N95 models may not apply to other models

### Reference documents from University of Nebraska Medical Center for implementation

### Validate each UV-C source and protocol with a UV-C sensor to ensure adequate dose for decontamination at the N95 surface

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## Conclusion

If implemented properly using sensors to ensure ≥1 J/cm² UV-C dose to the N95, this method likely inactivates SARS-CoV-2; however, this has not yet been confirmed directly with SARS-CoV-2. This method may protect against some bacterial co-infection risks but not all.

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### UV-C

Use appropriate UV-C source

Use sensor to validate 1 J/cm² dose

Exposé both sides of N95 mask