

National Park Service Guide on Protecting Employee and Family Members from the H1N1 Virus

Adopted from Occupational Safety and Health Administration Guidance

For understandable reasons, we've been inundated with inquiries from National Park Service employees on how to protect themselves and their families from H1N1 at home and work. The Center for Disease Control (CDC) and the Occupational Safety and Health Administration (OSHA) emphasizes social distancing as the key in avoiding exposure to H1N1. Social distancing means reducing the frequency, proximity, and duration of contact between people (employees and others) to reduce the chances of spreading the H1N1 virus from person-to-person.

In addition to social distancing, these agencies stress practicing proper hygiene including the frequent washing of hands with soap and water or using hand sanitizers between washings and decontaminating surfaces. As with any cold or flu, it is highly recommended that personnel cover their mouths when sneezing or coughing and disposing of used facial tissue immediately after use. It is also recommended that individuals avoid touching their eyes, nose, or mouth with their hands.

For off-duty employees and family members that must enter social settings, e.g. grocery/retail stores, in the event the H1N1 virus continues to spread, there are personal protective measures that are available



such as disposable respirators that can be purchased in bulk. The recommended mask is the N95 disposable filtering facepiece respirator. These masks are very inexpensive and available in a variety of sizes including child sizes and can usually be purchased in local hardware stores or ordered online. Please understand that the effectiveness of these and other respirators is unclear since these types of respirators did not exist during the last pandemic, but it is known that these masks provide protection from other hazards including hantavirus, anthrax, and tuberculosis. It is

believed these masks will provide protection against H1N1 based on the mode of transmission, particle size, and professional judgment.

In order to ensure the best protection possible while wearing one of these masks, the proper size must be selected to ensure a good seal is maintained. Note: facial hair (beards) will prevent a good seal and will expose the wearer to airborne contaminants including H1N1 if worn in a contaminated area. Be certain to read the manufacturer's instructions prior to wearing the respirator and conduct a user seal check each time the respirator is donned.

If you are unable to obtain the proper size respirator for your family members, then the last option is to use disposable surgical masks. These masks are not preferred because they do not provide an airtight seal and can expose the wearer to airborne contaminants. Surgical masks are intended to provide a physical barrier to protect healthcare workers from hazards such as splashes of blood or bodily fluids.

Disposable masks and respirators, such as N95s, are designed to be disposed after use. Once worn in the presence of an infectious individual, the respirator should be considered potentially contaminated with infectious material. Avoid touching the outside of the respirator to prevent self-inoculation (touching the contaminated respirator and then touching one's eyes, nose, or mouth). It should be noted that a once-worn respirator will also be contaminated on its inner surface by the microorganisms present in the exhaled air and oral secretions of the wearer.

In the above scenario, users should discard respirators when they become unsuitable for further use due to excessive breathing resistance (e.g., particulate clogging the filter), unacceptable contamination/soiling, or physical damage. In the context of pandemic influenza, some have proposed reusing disposable respirators for prolonged periods of time (e.g., weeks or months) in the event supplies are limited. However, data on decontamination and/or safe reuse of respirators for infectious diseases are currently not available.

Currently, respirators are not recommended for NPS employees while on-duty. However, if circumstances dictate that protection greater than the precautions outlined by CDC and OSHA are needed, respirators will be issued based on the risk level the employee is subjected to for those occupationally exposed to persons infected with the H1V1 virus and will be used per the requirements of Reference Manual 50B, Section 4.3, *Respiratory Protection*.

Advantages and Disadvantages of N95 Respirators

Device	Unit Cost*	Advantages	Disadvantages
N95 respirator (filtering facepiece)	\$0.50-1.20	<ul style="list-style-type: none"> • Reduces exposure to small inhalable particles and large droplets. • Designed to form a tight seal to the face. • Filtration efficiency certified. 	<ul style="list-style-type: none"> • Cannot be decontaminated, may be shortages during a pandemic. • Must be fit-tested to assure full protection. • Cannot be worn with facial hair that interferes with the seal between the face and respirator. • Harder to breathe through than a facemask. • Not designed to be used in surgery.
N95 respirator w/ exhalation valve (filtering facepiece)	\$1.30-3.00	<ul style="list-style-type: none"> • Reduces exposure to small inhalable particles and large droplets. • Designed to form a tight seal to the face. • Filtration efficiency certified. • Exhalation valve makes it easier to exhale and reduces moisture buildup inside the facepiece compared to other filtering facepiece respirators. 	<ul style="list-style-type: none"> • Cannot be decontaminated, may be shortages during a pandemic. • Must be fit-tested to assure full protection. • Cannot be worn with facial hair that interferes with the seal between the face and respirator. • Harder to breathe through than a facemask. • Should not be used when others must be protected from contamination by the wearer. • Not designed to be used in surgery.

OSHA Exposure Risk Levels:

Employee risks of occupational exposure to influenza during a pandemic may vary from very high to high, medium, or lower (caution) risk. The level of risk depends in part on whether or not jobs require close proximity to people potentially infected with the pandemic influenza virus, or whether they are required to have either repeated or extended contact with individuals or groups.

Very high exposure risk occupations are those with high potential exposure to high concentrations of known or suspected sources of pandemic influenza during specific medical or laboratory procedures.

High exposure risk occupations are those with high potential for exposure to known or suspected sources of pandemic influenza virus.

Medium exposure risk occupations include jobs that require frequent, close contact (within 6 feet) exposures to known or suspected sources of pandemic influenza virus such as coworkers, the general public, outpatients, school children or other such individuals or groups.

Lower exposure risk (caution) occupations are those that do not require contact with people known to be infected with the pandemic virus, nor frequent close contact (within 6 feet) with the public. Even at lower risk levels, however, employers should be cautious and develop preparedness plans to minimize employee infections

To help employers determine appropriate work practices and precautions, OSHA has divided workplaces and work operations into four risk zones, according to the likelihood of employees' occupational exposure to pandemic influenza. The vast majority of American workplaces are likely to be in the medium exposure risk or lower exposure risk (caution) groups.

Occupational Risk Pyramid for Pandemic Influenza



Very High Exposure Risk:

Healthcare employees (for example, doctors, nurses, paramedics, or dentists) performing aerosol-generating procedures on known or suspected pandemic patients (for example, cough induction procedures, tracheal intubations, bronchoscopies, some dental procedures, or invasive specimen collection).

Healthcare or laboratory personnel collecting respiratory tract specimens from known or suspected pandemic patients.

High Exposure Risk:

Healthcare delivery and support staff exposed to known or suspected pandemic patients (for example, doctors, nurses, and other hospital staff that must enter patients' rooms).

Staff transporting known or suspected pandemic patients (for example, emergency medical technicians).

Staff performing autopsies on known or suspected pandemic patients.

Law Enforcement, public health, and public safety personnel with frequent contact within 6' of potentially infected personnel

**NPS
Law
Enforcement
Employee
Risk Level**

**Typical
NPS
Employee
Risk Level**

Medium Exposure Risk:

Employees with high-frequency contact with the general population (such as schools, high population density work environments, and some high volume retail).

Lower Exposure Risk (Caution):

Employees who have minimal occupational contact with the general public and other employees (for example, office employees).

For additional information on protective measures, please contact the NPS Risk Management Division at 202-513-7222 or visit the NPS intranet Swine Flu (N1H1) website at <http://inside.nps.gov/waso/waso.cfm?lv=2&prg=122> and the NPS external Swine Flu (H1N1) website at www.nps.gov/public_health.