General information regarding disposable face masks & respirators, and washable face masks

Disposable masks

Disposable P2/NP95, P1 and Surgical face masks can be ordered through Jaggaer and are suitable for wearing in our research laboratories and workshops, based on a risk assessment for the work.

Warning: similar masks can be purchased through Chemists, Hardware stores, some supermarkets and variety stores, online & in-store, however authentication of these masks is very difficult to establish, and these should not be worn by UNSW people while working in UNSW research and teaching facilities & workshops unless authentication has been established. Without authentication, they may be suitable for general wearing such as in **non-laboratory** settings and when physical distancing cannot be established or maintained

Masks - examples	Description	When to wear
	P2/N95 disposable masks **without valve**. These have a padded nose strip or a metal band to shape over the nose bridge, and two bands that fix behind the head. Should be fit-tested. See also labelling requirements.	• These filter particle sizes down to ~0.3um, such as particles generated from (bushfire) smoke, respirable dust, crystalline silica, asbestos and also airborne pathogens. • They should be worn when indicated in a Risk Assessment for the work. Properly fitting P2/N95 masks reduce the inhalation risk while working with airborne particles including aerosolised respiratory pathogens such as COVID-19.

	P2/N95 disposable masks **with valve**. These have a padded nose strip or a metal band to shape over the nose bridge, and two bands that fix behind the head. Should be fit-tested. See labelling requirements.	• As above but only if the wearer has no respiratory symptoms. • Valves help to reduce the humidity inside the mask, thus extending the wear-time but are not recommended. • valves can reduce the dampness of the mask and prolong the wear-time, they are not recommended because the wearer may unknowingly be infectious and be breathing out infectious air through the valve. • They *should NOT be worn by anyone who has, or suspects that they have a respiratory infection*, including COVID-19.
	P1 disposable dust mask. These have a pre-moulded contour design for increased comfort, a foam rubber nose seal plus adjustable nose bridge for secure seal. Two elastic bands that fix behind the head. Should be fit-tested. See labelling requirements.	• P1 masks filter particle sizes down to ~1um. • These masks protect against mechanically generated particles from sawing, sanding, grinding, and crushing rock & silica. • These are not appropriate for wearing for protection from smaller particles, aerosols that may contain COVIS-19 virus.
	Level 2 surgical mask, ASTM Level 2 (Type 2) disposable barrier surgical mask (3-ply). These have a metal band to shape over the nose, will either have two bands or two ties that go behind the head, or will have ear-loops. If purchasing off campus, it can be difficult to tell the difference between genuine level 2 surgical masks and ASTM level 1 masks or fakes. See labelling requirements.	• If correctly fitted, these surgical masks will block the majority of coronavirus and adenovirus particles • The effectiveness drops significantly if loosely fitted, if the mask is gaping at its sides and also when the mask becomes damp, and hence can become an infection risk to the wearer. • Can be worn where physical distancing cannot be maintained while working in medical-type research facilities, workshops with fine dust etc and in accordance with the risk assessment for the work.

	ASTM Level 1 Masks, Type (level) 1 disposable barrier surgical/task masks (3-ply), Level 1 civilian disposable face masks. These have a metal band to shape over the nose, and ear-loops. May or may not be genuine ASTM level 1 masks	• ASTM level1 is for circumstances where physical distancing cannot be maintained such as supermarkets, public transport, or where the wearer with respiratory symptoms visits a GP (AS 4381:2015), • These should not be used where the wearer is at risk of blood or body fluid splashes, such as in some laboratory setting
	May say ASTM level 1 or 2 mask, but may not be genuine. May have no information provided. May have spelling mistakes, false claims on the packaging. May say *listed* with the TGA but thereis no such thing .	There are many masks available and can look the same. You are reminded to check the labelling/packaging and use only for general wear in public spaces when the ability to physically distance is difficult. These are not to be worn in medical research facilities or clinical situations.
	Few or no markings on packaging. Disposable Protective Face Mask. Difficult to distinguish between these & other no-name brands	As above. For general personal use in circumstances where physical distancing cannot be maintained.
	Reusable, washable, commercially available and home-made 3-layered cloth face masks with ear-loops. For general use. Other cloth face mask points (provided by Raina MacIntyre)	Not to be worn in research facilities. These can be worn for general personal use in circumstances where physical distancing cannot be maintained. While this is not an endorsement for any make or manufacturing technique, the recommendation is to purchase or make masks with 3 or more layers. as per the guidelines for making your own masks (see last page).

A Guide to Buying P2, or Equivalent, Respirators for use in the Australian & New Zealand Work Environment:
https://www.aioh.org.au/static/uploads/files/guide-p2-respiratory-protection-in-anz-final-wfldhefkoksj.pdf

Maintenance: The effective life of a disposable (surgical) mask or a respirator should be indicated by the manufacturer and will varies according to use.

1. Disposable masks may be worn for several hours depending on the concentration of the contaminant and a series of external factors such as air humidity, temperature, volume of air breathed in, etc. Disposable masks should be changed at least daily.
2. Cannisters for non-disposable respirators will need to be changed by the expiry date at the latest (usually several months), earlier once removed from the packaging.
3. Change the mask when it becomes damp because it is no longer working effectively when it is damp. The dampness comes from your breath. NOTE: Although valves can reduce the dampness of the mask and prolong the wear-time, they are not recommended because the wearer may unknowingly be infectious and be breathing out infectious air through the valve.
4. Disposal:
   - **single use masks worn inside a laboratory** should be disposed of into the hazardous waste stream for that laboratory, as you would discard your gloves. Like other PPE, masks worn while working in the laboratory should not be worn outside the laboratory but should be removed before exit.
   - **single use masks worn outside a laboratory** can be disposed of into the nearest general waste bin just as you would a used tissue (then wash your hands!).
   - **Washable masks** should be washed regularly. Place used masks into a sealable plastic bag to be taken home for washing.
5. The above masks can also be purchased online, at Chemists and hardware stores (but check the labelling for compliance – see labelling information below)

How to wash masks

Washing machine:

- You can include your mask with your regular laundry.
- Use regular laundry detergent and the warmest appropriate temperature setting for the material used to make the mask.

Washing by hand:

- Using bleach: Check the label to see if bleach is suitable for the material
  - use household bleach, which contains 4% sodium hypochlorite. Do not use a bleach product if the % sodium hypochlorite is not specified or is past its expiration date. Never mix household bleach with ammonia or any other cleanser.
  - Ensure adequate ventilation.

- Prepare a bleach solution by mixing:
  - 2-3 tablespoons (20 ml/spoonful) of 4% bleach per litre of room temperature water
  - Soak the mask in the bleach solution for 5 minutes then discard the solution down the drain and rinse the mask thoroughly with cool or room temperature water.

- Using detergent
  - use a container of hot tap water with a detergent (no need to boil the water first) and let the cloth mask soak in the water. Give it a hand wash and then rinse thoroughly.

Drying masks: - Make sure to *completely* dry the mask after washing

- Dryer:
  - Use the highest heat setting for the material and leave in the dryer until completely dry.
- Air dry:
  - Allow to dry completely, either flat or line dry. If possible, place the mask in direct sunlight.

(Ref:- -CDC: How to wash masks
How should I clean my cloth mask:-Universities of Newcastle and Monash)

Labelling requirements:

- Manufacturer name/trademark, address
- Batch code, lot/serial number
- DOM & (if applicable) expiry date
- Sufficient description to identify category & barrier level
- Quantity within the package and instructions for use
- P2/N95 should also have the P2 or N95 marking, the Australian/English/US/International Standard number, Licence number
- Currently there are no NIOSH-approved products with ear loops; NIOSH-approved N95s have head bands. Furthermore, limited assessment of ear loop designs indicate difficulty achieving a proper fit. While filter efficiency shows how well the filter media performs, users must ensure a proper fit is achieved

FAKE MASK ALERT - SafeWork NSW alert re P2/N95 masks - https://www.safework.nsw.gov.au/safety-alerts/safety-alerts/supply-of-fake-face-masks

All devices supplied in Australia must comply with the Australian essential principles of safety and performance that are specified in the Therapeutic Goods (Medical Devices) Regulations 2002, including the labelling requirements. This includes P2/N95 and equivalent, plus surgical face marks with specific personal protection claims. Therapeutic goods are required to be registered with the Therapeutic Goods Administration (TGA).

How to wear a face mask

Masks with ear loops: youtube clip courtesy of the school of Public health & Community Medicine): https://www.youtube.com/playlist?list=PLHSIfioizVW3yfMN_XXtKx1LGhBsMg_g2	
Masks with two ties: youtube: clip https://youtu.be/cEse-EiRGCY Two ties: hold the mask by the *upper strings*. Tie the upper strings in a secure bow near *the crown of your head*. Tie the bottom strings securely in a bow near the nape of your neck	
Masks with two bands: pull the *bottom band* over your head first and position it against the nape of your neck. Pull the top band over your head and position it against *the crown of your head*.	

- Don’t touch the mask once in position

Importantly:

- Personal protection is increased with good health education and hand hygiene, related to infection control
- Make sure the mask is not put on upside down or inside out
- Once on, don't touch the outside of the mask - ever, as that is likely where any contamination will be.
- Don't put used masks in pockets, on desks, in handbags or backpacks etc unless they first go into a sealable plastic bag dedicated to *used* masks
- Don't re-use one you recently took off

Information about making your own masks:

- CDC: Make your own face masks
- NSW Health – how to make a re-usable cloth mask.

Cloth masks can increase the risk of infection

Possible reasons for increase of infection

- long duration of use and frequency and type of washing or cleaning.
- Cloth mask may be less fluid resistant, become damp and contaminated, posing an infection and self-contamination risk, if not washed daily before re-use.
- The material choice, design and adequacy of the washing may contribute – hand wash in hot soapy water, or your normal laundry load.
- Inadequate filtration properties of a cloth mask may put the wearer at risk. Look for hydrophobic material, at least three layers, high thread-count, & good fit around the face.
- Cloth masks generally have ear loops, so tend to have a looser fit.
- Cloth masks generally don't have a flexible nose piece to fit over the nose bridge.
- Poor hand hygiene: -health education and hand hygiene

Personal Protective Equipment(PPE): Other useful links