

Face Coverings: The evidence, choosing and using

24th July 2020

Wearing face coverings can help save lives and prevent disabling illnesses. This expert advice has been developed to guide you through the definition of face coverings, point you to the current regulations and guidelines around their use, particularly in the workplace, plus how to choose a face covering and advice on using and wearing them.

Face coverings

A face covering can be any covering of the mouth and nose that is made of cloth or other textiles and through which an individual can breathe. It is important they securely fit round the side of the face. Religious face coverings that cover the mouth and the nose can count as face coverings. A scarf, bandana, or hand-made cloth covering may also be worn. For those who are unable to wear face coverings, a face visor may be used, but it should cover the wearer's nose and mouth completely.

How face coverings work

Current evidence suggests that COVID-19 spreads between people through direct, indirect (through contaminated objects or surfaces), or close contact with infected people via mouth and nose secretions.¹ When people talk, cough or sneeze small droplets spread that can contain the COVID-19 virus, face coverings catch the droplets and help to prevent the spread of the virus.

Face covering regulations and guidelines

It is recommended that a person wear a face covering in enclosed public spaces where social distancing may be difficult, and they may come into contact with people they do not normally meet.

Guidelines are based on current scientific evidence and are likely to change, for up to date information on situations in which it is mandatory to wear face masks please click the links to the right.

People who should not wear a face covering

- those who have trouble breathing
- anyone who finds it difficult to manage them correctly due to a physical or mental illness or impairment, or disability
- those who would suffer severe distress
- children under three years old (five year's old in Scotland).

Young children should have adult supervision when wearing a face covering.



- **England:** <https://www.gov.uk/government/publications/staying-safe-outside-your-home/staying-safe-outside-your-home#face-coverings>
- **Northern Ireland:** <https://www.publichealth.hscni.net/covid-19-coronavirus/covid-19-information-public#face-coverings>
- **Scotland:** <https://www.gov.scot/publications/coronavirus-covid-19-phase-3-staying-safe-and-protecting-others/pages/face-coverings/>
- **Wales:** <https://gov.wales/face-coverings-frequently-asked-questions>
- **Ireland:** <https://www.gov.ie/en/publication/aac74c-guidance-on-safe-use-of-face-coverings/>

Face Covering Exemptions

In some situations, there may be exemptions to wearing face coverings due to age, health or equality reasons or a reasonable excuse not to wear them. Check local guidelines for information.



Face coverings in the workplace

There is no one piece of guidance about face coverings in the workplace as there are so many different working environments.

The Department for Business, Energy and Industrial Strategy (BEIS) has provided guidance for specific industrial sectors. These stress the importance of undertaking a risk assessment to identify the risks posed by COVID-19 and to use this to determine the correct control measures to implement. Face coverings are not mandatory but may be beneficial and a precautionary measure, especially if there is close proximity working.

The Health and Safety Executive (HSE) also recommends managing the risk of COVID-19 through guidance implementing appropriate control measures, rather than specifying face coverings, as these are designed to protect others and not the wearer. It recommends that if workers choose to wear a face covering, then they should be supported.⁴ It is not compulsory for shop or supermarket staff or transport workers to wear face coverings, although employers may consider their use where appropriate and where other mitigations are not in place.

Face Covering Standards

Face coverings do not conform to any official standards. They are not like respirators which are PPE and compliant to Regulation EU/2016/425. Nor are they like face masks which are medical devices and compliant to Regulation EU/2017/745 or 93/42/EEC). Employers will need to use different criteria to choose a face covering that is suitable.

There have been some recommendations for standards for face coverings, listed below, and these have been summarised into the advice on the following page 'How to Choose a Face Covering'

The European Committee for Standardization (CEN) Workshop Agreement CWA 17553:2020:

In response to undefined labelling, design, and efficacy requirements CEN released the Workshop Agreement titled 'Community face coverings – Guide to minimum requirements, methods of testing and use', This specifies the minimum requirements for reusable or disposable face coverings intended for the general public.

The British Standards Institution (BSI) has launched a BSI Kitemark for Face Coverings which assesses face coverings to a technical specification that requires 70% particle filtration and breathability tests. In addition, it provides independent approval of the quality of the fitting, and the instructions provided to the wearer to minimize the chances of transmission.

British Retail Consortium (BRC) released a specification, in June 2020, for Textile Barrier Face Coverings designed for both disposable and reusable coverings. This sets out the design, performance and chemical requirements of coverings, as well as labelling instructions. The performance requirements do not include tests for filtration efficiency which are incorporated under the CEN guidelines.



The difference between a face covering, a face mask and a respirator (dust mask).

It's important to distinguish between face coverings, face masks and PPE such as respirators.



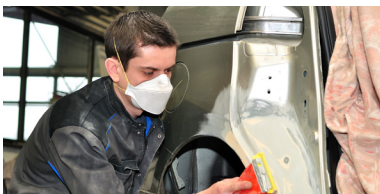
Face Coverings

Face coverings are not manufactured to a recognised standard and do not require CE marking. Face coverings are not the same as face masks. They are not classed as personal protective equipment (PPE) or medical devices and should not be used as an alternative as they do not provide protection against risk in the workplace.



Face Masks

A face mask, also known as medical or surgical masks, is a loose-fitting disposable mask that creates a physical barrier around the wearer's nose and mouth to stop contaminants, they can also be resistant to droplets of fluid and splashes. Face masks are manufactured to specifications for medical/ surgical masks (which are deemed as medical devices in accordance with the EU Medical Device Regulations) and classified as Type I, Type II or Type IIR.



Respirators or Dust Masks

A respiratory protective device is designed to achieve a very close facial fit and very efficient filtration of airborne particles. Also known as Filtering Face Piece they are manufactured to recognised standards for PPE and are classified as FFP1, FFP2, or FFP3.

How to choose a face covering

When choosing a face covering, select one that will offer adequate protection by following the guidelines below.

Performance Efficiencies	What to look for
Filtration efficiency (FE): is the efficiency of the material(s) to act as a barrier to penetration. The higher the filtration efficiency the more of a barrier provided by the fabric.	Look for a filtration efficiency of greater than or equal to 70% for solid particles or liquid particles (droplets). ⁷ Choose face coverings that have been tested in accordance with any of the following standards: - EN 14683:2019+AC:2019 - Medical face masks - Requirements and test methods - EN 13274-7 Respiratory protective devices - Methods of test - Part 7: Determination of particle filter penetration - EN ISO 16890-2 Air filter for general ventilation - EN ISO 21083-1 Test method to measure the efficiency of air filtration media against spherical nanomaterials
Bacterial Filtration Efficiency: is a measure of a material's resistance to penetration of bacteria.	Look for a bacterial filtration efficiency of 70% and over. Choose face coverings that have been tested in accordance with: - EN 14683:2019+AC:2019 - Medical face masks
Breathing Resistance: is the resistance of the face covering to the flow of inhaled air or exhaled air. This is illustrated by differential pressure i.e. the air permeability of the mask	Look for a breathability resistance (DP) of less than 70 Pa/cm ² and ideally lower ⁵ . Choose face coverings that have been tested in accordance with any of the following standards: - EN 14683:2019+AC:2019 Medical face masks - Requirements and test methods - EN 13274-3 Respiratory Protective Devices - Methods of Test - Part 3: Determination of Breathing Resistance - EN ISO 9237 Determination of permeability of fabrics to air

How to choose a face covering continued

Face Covering Feature	What to look for	Benefits to wearer
Shape There are two common shapes: Flat- folded face coverings are made from fabric and are rectangular often with pleats to let it stretch over your face. Curved & shaped 'duck bill' face coverings are designed to follow the shape of your face – these may provide a better coverage and fit.	Snug Fit It is important that face covering fits the face snugly with minimal gaps around the nose, chin and the sides of the mouth.	A snug fit will protect others by preventing leakage of any droplets from the top, the bottom and the sides of the face covering. It will also prevent external air penetrating the mask. Studies have suggested that gaps (as caused by an improper fit of the mask) can result in over a 60% decrease in the filtration efficiency. ⁵
Fastenings & Ties There are four main types of fastening: a) Four ties to be tied at the back of the head b) Two elasticated bands, one at the top and one at the bottom to be passed around the head, c) Two ear loops d) One or more touch and close fasteners that are adjustable	Secure fastening, comfortable fit Fastenings should <ul style="list-style-type: none"> - allow for adjustment of fitting, - hold the face covering securely in place - hold the covering close enough to the face to provide a snug fit. - be simple to use so that it is easy to remove the face covering just using the straps 	A comfortable fit will enable the face covering it to be worn for long periods without the wearer wanting to remove it. A secure fastening will prevent the wearer from having to adjust the face covering, reducing the risk of touching their face or the front of the mask.
Nose adjuster	In a flat face covering look for a nose adjuster or clip that will can be shaped to fit across the bridge of the nose.	A nose adjuster will help with a snug fit and will keep the face covering closer to the nose. They can be beneficial if you wear glasses, as it can prevent them steaming up.
Washability	Choose a face covering that can be washed with other items of laundry, according to standard washing instructions. Make sure that your mask that can be dried without it being damaged.	A face covering will need to be washed regularly. Ensure that it is quick and easy to do so.

Avoid		
Coatings	Avoid fabrics with compounds like wax as they may block the pores.	The mask may be difficult to breathe through and unfiltered air may more likely escape the sides of the mask on exhalation.
Small parts	Avoid masks with adornments with small parts i.e. buttons, beads or sequins.	Small parts may present a choking hazard.
Fibrous fabrics	Avoid face coverings made with a fabric that may shed fibres during use.	The fibres may be inhaled by the wearer.
Chemical dyes & allergenic materials	Face coverings are worn next to the skin on the face. They should not be dyed with inappropriate chemicals or contain any allergenic materials, such as latex in elastic or head attachments. Check with the manufacturer that any dyes used comply with the REACH regulations.	Chemical dyes may contain poisons that could be ingested and allergenic materials could lead to reactions which may be severe or even fatal.

Evidence to support the use of face coverings

Two new reports have been published providing evidence on the efficacy of face masks and coverings and on the use of face coverings.



The DELVE masks report² presents mounting evidence that masks, including cloth masks, prevent onward transmission of infection. It also presents new evidence suggesting that face coverings could also provide protection to the wearer.

Universal mask use, including cloth masks, is strongly supported for two reasons.

1. Contagiousness of asymptomatic infected people

Prolonged contagiousness (approx 4 days) of asymptomatic infected people means that there is a high potential for disease transmission at a time when they are actively engaging with others.

2. Increasing evidence that mask use prevents transmission.

There is increasing evidence that mask use prevents transmission of the COVID-19 virus. Evidence continues to accrue that masks, including cloth face coverings, prevent onward transmission of infection. Evidence is also accumulating that they may additionally protect the wearer.

The new evidence strongly supports use of masks, including cloth masks, in all circumstances where physical distancing of more than one meter cannot be maintained, and no physical barriers exist, including in shops, office buildings and public settings.

Use of clear plastic face shields for those who cannot use masks

The report also cites new evidence that the use of clear plastic face shields can prevent onward transmission of droplets and aerosols. This addresses concerns from individuals and communities who/that cannot use masks, e.g., deaf people and individuals with breathing disorders,

The Royal Society's SET-C (Science in Emergencies Tasking – COVID-19) group report³

looks at the effectiveness of different face mask types and coverings and isolates behavioural factors that have limited adherence. The report concludes that cloth face masks and coverings are effective in improving both source protection and wearer protection:

1. source protection

i.e., reduced virus transmission from the wearer.
The masks must be

a. of optimal material and construction. Optimal cloth face coverings are made from specific material, (e.g., high grade cotton), hybrid and multilayer constructions (e.g., silk-cotton).

b. fitted correctly

2. wearer protection

i.e., reduced rate of infection of those who wear them.

The report also identified behavioural factors relating to public adherence to wearing face masks and coverings, amongst others these include:

- public understanding of virus transmission

including efficacy of source versus wearer protection, diagnostic uncertainty and inability to self-diagnose.

- risk perception

an individuals' underestimation of health risks and perception that protection is only relevant for vulnerable groups, or outside of their proximity. Also, individual characteristics, such as younger people and men having a lower threat perception and compliance with interventions.

- perceived barriers,

lack of supply of surgical masks and perceived competition with medical resources, resource constraints to obtain coverings, comfort and fit.

Using a face covering - Do's and Don'ts

Always wear correctly and use alongside other control measures

PUTTING ON AND TAKING OFF A FACE COVERING



Do wash hands before & after touching



Do handle only by the straps, ties or clips

GETTING THE RIGHT FIT

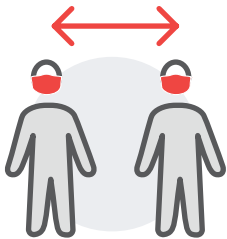


Do make sure the it covers your nose & mouth



Do make sure it fits snugly – no gaps

WHILE WEARING YOUR FACE COVERING



Use alongside social distancing & hand hygiene



Don't keep touching it and taking it off once it's fitted

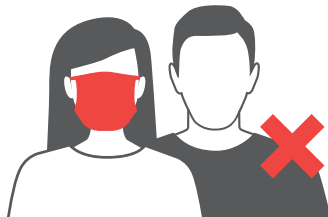


Don't wear it on your neck or forehead

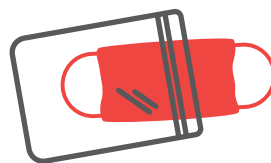


Remember the virus can be spread on your hands

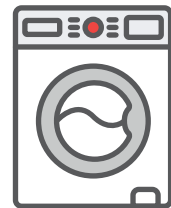
CARING FOR YOUR FACE COVERING



Don't give it to someone else to use



Do keep used face coverings in a plastic bag until they can be washed



Do wash according to manufacturer's instructions

Sources and useful references.

1. World Health Organisation: Transmission of SARS-CoV-2: implications for infection prevention precautions <https://www.who.int/publications/item/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations>
2. The Royal Society Delve Committee: Report on Face Masks for the General Public - An Update: Jul 7, 2020 <https://rs-delve.github.io/addenda/2020/07/07/masks-update.html>
3. The Royal Society's SET-C (Science in Emergencies Tasking – COVID-19) group report: Face masks and coverings for the general public: Behavioural knowledge, effectiveness of cloth coverings and public messaging <https://royalsociety.org/-/media/policy/projects/set-c/set-c-facemasks.pdf?la=en-GB&hash=A22A87CB28F7D6AD9BD93BBCBFC2BB24>
4. Health and Safety Executive Face coverings and face masks at work during the coronavirus (COVID-19) pandemic <https://www.hse.gov.uk/coronavirus/ppe-face-masks/face-coverings-and-face-masks.htm#face-coverings>
5. <https://pubs.acs.org/doi/10.1021/acsnano.0c03252#>
6. * European Committee for Standardisation Workshop Agreement CWA 17553:2020, "Community face coverings – Guide to minimum requirements, methods of testing and use". https://www.cenelec.eu/research/CWA/Documents/CWA17553_2020.pdf
7. AFNOR Spec