

Unmasking the issue: face coverings explained

In the context of the coronavirus (COVID-19) outbreak, ensuring that the correct provision and use of face coverings and personal protective equipment in the workplace has become paramount. Employers have a [legal responsibility](#) to protect workers and others from risk to their health and safety, meaning that they need to think about the risks they face and do everything reasonably practicable to minimise them.

Awareness of several safety standards and regulations has led to an [unprecedented, global demand for personal protective equipment](#), resulting in the UK government requesting businesses to help in the supply of essential PPE. However, there is [no universal guidance](#) on the use of face coverings due to the variety of work environments and industries. This paper will explore the use of face coverings, masks and shields in order to shed some light on the benefits of each.

It is important to note that the use of PPE needs to be used alongside a strict system of control in the [management of COVID-19 in the workplace](#), including social distancing, high standards of hand hygiene, increased surface cleaning, fixed teams or partnering, and other measures such as using screens or barriers to separate people from each other.

Is a face covering the same as a face mask?

A [face covering](#) can be very simple and may be worn in enclosed spaces where social distancing isn't necessarily easy or even possible, and just needs to cover your mouth and nose. They help prevent respiratory droplets from travelling into the air and onto other people, and also trap bacteria when the person wearing one coughs, sneezes or talks. It is not the same as a face mask, such as the surgical masks or respirators used by health and care workers, so if employees do choose to wear a face covering, normal policies relating to occupational workwear and PPE will continue to apply.

Medical-grade masks form a small part of PPE, and unlike cloth face coverings, they are required to conform with [Standard AS/NZS 1716:2012 'Respiratory protective devices'](#) and are not reusable. The FDA states that [disposable facemasks](#), such as surgical or medical masks, act as a protective barrier to prevent splashes, sprays, large droplets, or splatter from entering the wearer's mouth and nose. They are not respirators and do not protect the wearer from breathing in small particles, gases, or chemicals in the air. Disposable face masks also help prevent the wearer from spreading respiratory droplets.

Wearing a face covering *can* be beneficial as a precautionary measure, but this will largely be to protect others and not the wearer themselves, as face coverings are not classed as [personal protective equipment](#). They are generally not manufactured to a recognised standard, as per [PPE Regulations](#), as such do not carry a CE mark and should not be sold

or donated as PPE or medical devices. Similarly, face coverings are not the same as the PPE used to manage risks like dust and spray in an industrial context.

However, face coverings can be sold or supplied to others outside your immediate household if they meet the requirements laid out by the [General Product Safety Regulations](#), but it should be recognised that these are not medical devices and are not medically regulated products. The [evidence of the benefit of using a face covering is weak](#) and the effect is likely to be small, therefore face coverings are not a replacement for medical-grade face masks.

Outside of the medical and care environments, [the Centers for Disease Control and Prevention](#) says cloth face coverings can help slow the spread of the virus, because they can prevent larger expelled droplets from evaporating into smaller droplets that can travel farther. But the main benefit of face coverings occurs when everyone is wearing such coverings, referred to as [Universal Source Control](#). In turn, we are then all protecting each other, which has become the basis of mandatory face coverings issued by the government in certain circumstances.

The bottom line is that any mask that covers the nose and mouth will be of benefit when it comes to reducing risk, outside of the medical and care environments.

Why has there been a resistance to the use of masks, then?

The ambiguity around the science of face masks and their preventative benefits will explain the different approaches different countries have taken – and the evolving rules around wearing them. Surely if the science was clear, then the wider use of face masks would be fully adopted by all, however, many have had concerns that recommending the wider use of face masks could [exacerbate the acute shortages of PPE among healthcare workers](#) that many have been grappling with.

On top of PPE shortages, many people still resist wearing masks because they can be uncomfortable and some people claim they can't breathe well while wearing them. Surgical masks are generally more protective than cloth masks, and some people find them lighter and more comfortable to wear, however, the fact that they are not reusable has led to conservationists issuing warnings that the pandemic could spark a huge surge in ocean pollution, with an estimated [194 billion disposable masks and gloves being used worldwide every month](#).

This has resulted in the UK seeing a massive rise in the amount of littering on high streets, beaches and in canals and rivers as a result of single use masks. Conservationists are encouraging people to use reusable face masks to help cut down on tens of thousands of tonnes of extra plastic waste. Face shields may also be considered to be a superior option in reducing pollution levels, as shields can be easily cleaned with soap and water, or household disinfectants, and ["reused indefinitely."](#) Unlike face coverings, shields are recognised as PPE as they do protect the wearer from infection, rather than protecting others from an infected mask wearer.

Face shields can also help to reduce the risk of occupational hazards of long-term wearing face masks, for example, painful/damaged ears and nose bridges. They also make communication easier as people can see your whole face for expressions and lip-reading; there are no issues with verbal and non-verbal communication, and the [psychological and social benefits are significant](#).

Are face shields the superior option, then?

As there has become a clearer understanding that both pre-symptomatic and asymptomatic transmission are possible, and even common, and that speaking is enough to expel virus-carrying droplets, the more masks worn means a more effective source control and should be actively encouraged. However, one factor to remember is that the virus can still be carried through the membranes in the eyes, [a risk that the mask does not eliminate](#).

It goes without saying that the skin is incredibly important to protect in specific industries, however, the eyes, nose, and mouth, are particularly vulnerable. Masks are source control protecting others, whereas [face shields are both source control and protecting yourself](#) from the droplets landing anywhere on your face. As a mask only covers the mouth and nose, the use of a mask alone is insufficient to provide the adequate level of protection, and other equally relevant measures should be adopted. On top of social distancing, handwashing and additional hygiene measures, masks need to be combined with goggles or a face shield/visor in order for them to offer real high-level protection against COVID-19.

As COVID-19 is known to spread from person-to-person within approximately 6 feet of each other through respiratory droplets passed on from an infected person, these droplets can land in the mouths, noses or eyes of people nearby and potentially infect them. With this in mind, it's important that employers protect their workers and their customers through the use of a protective visor.

Face shields, also known as visors or protectors, have proved to be an essential tool that workers and the public are using to prevent the spread of COVID-19. Unlike masks, which help prevent users from spreading COVID-19, face shields also protect those wearing them from infection. The clear visor covers the entire face, including the eyes, nose and mouth, therefore, providing a protective barrier from droplets (in breath, coughs and sneezes).

It also prevents the wearer from touching their face and potentially spreading the virus this way. Layered cloth masks can filter some of the tiny, virus-sized particles that fly out when people cough, sneeze, talk or breathe, however, those that wear both surgical and homemade cloth masks are invariably touching their face constantly to adjust it. Face shields reduce the potential for autoinoculation (meaning implanting the virus into our own bodies after touching a contaminated surface) by preventing the wearer from touching their face.

A study published in 2014 in the [Journal of Occupational and Environmental Hygiene](#) analysed how well face shields block aerosol droplets, and by using cough simulators, researchers found that face shields reduced exposure to inhaling cough droplets by 96

percent. Another study in the [Lancet](#) suggested that face shields, visors or goggles might significantly reduce the chance of viral infection or transmission, from 16 per cent with a face covering but no eye covering, to six per cent.

The plastic face shields can also protect the face from exposure to certain hazards in the workplace too, doubling up as PPE in the industrial environments. A large proportion of impact injuries in the workplace come from flying objects, sparks which strike the eye area, and particles entering the eyes or mouth, therefore, a face shield acts as a key item which can help to provide effective protection to the facial area. The increased stringency in implementing workplace safety solutions due to COVID-19 in several end-user industries will no doubt lead to an increase in the use of face shields, as the construction industries already depend on PPE.

When it comes to protecting ourselves from COVID-19, it must remain clear that PPE is only part of the story. Experts agree that covering your face is only one aspect of stemming transmission, and we, as individuals, must all take [vigilant steps](#), regardless of where we work, to protect people from the transmission of the virus. These include social distancing of 2 metres unless absolutely necessary, self-isolating if you or someone you live with become symptomatic, and employing good hand hygiene with thorough and regular handwashing.

[For employers](#), they can ensure that their employees are safe at work by altering their business-as-usual ways of working to ensure social distancing can take place, and that signs are visible in the workplace to constantly remind employees of the symptoms to watch out for (including high temperature and persistent cough).

Signage should also remind employees to continuously uphold good hygiene, and to avoid touching their eyes, nose, mouth and unwashed hands. One of the benefits of using a face shield/visor, is that it prevents the wearer from touching their face and potentially spreading the virus, as we know that touching your face is one routine mechanism for reinfection. That being said, [a cloth mask is better for filtering out smaller particles](#) than a face shield would when it comes to prolonged contact with others, so the use of both together offers the best protection from COVID-19 when social distancing is impossible.

All the types of face coverings are just one prevention approach that shouldn't be a replacement for, or lessen the importance of, physical distancing and vigilant hygiene measures. That being said, when social distancing is difficult, the use of a face mask alone is insufficient in the protection of the wearer and should be used with a face shield. The use of both a face shield and a reusable cloth face covering helps to relieve some of the pressure that countries are experiencing when it comes to shortages of PPE, and reduces pollution of disposable face masks.