GP explains everything we need to know about face masks during the Covid-19 pandemic

Dr Gero Baiarda makes the subject of masks for Covid-19 easy and understandable

NHS GP Dr Gero Baiarda is one of the hundreds of GPs currently on-call at GPDQ - the UK's leading GP-on-demand service – he is also a partner at the Clarence Medical Centre in Windsor.

Since launching his 'myth-busting' series at the start of the Covid-19 pandemic in the UK, Dr Baiarda has become the media 'go-to' for information on what to believe in the interest of our health. This latest advice cuts through the noise to provide all the information we need to make the best decisions on what masks to wear, when and for how long, to stay safe.

The UK Government has now received official scientific advice on the use of face masks. The Scientific Advisory Group for Emergencies (Sage) is rightly mindful of protecting the supply of medical-grade face masks needed by frontline NHS workers so that they can continue to work safely. They have suggested, however, that the general public considers using scarves or bandanas to cover their noses and mouths, two of the major sites of entry for Covid-19.

Professor Trish Greenhalgh from the department of Primary Care Health Sciences at Oxford University recently completed a review of face masks. She encourages their use in public and went

as far as to suggest using an old T-shirt combined with an inner kitchen paper filter. She continued that this would be 95% effective in reducing droplet spread to others.

The World Health Organization (WHO) is very clear in its advice that only two groups of people should wear protective masks. This is limited to those who are:

- sick and symptomatic
- caring for people suspected to have Covid-19

They say that medical masks should be reserved for healthcare workers only. The reason that medical-grade face masks are not recommended for the general public is because they:

- Can be contaminated by other people's coughs and sneezes – the droplets can land on them and stay on them until the virus denatures, which can take hours.

- Can mean that wearers can inadvertently become contaminated when putting them on or taking them off – clumsy removal could mean the wearer is at risk of being contaminated by what has landed on the outside.

- Often give a sense of false security. Wearers can feel impervious to infection and take less care with handwashing and social distancing when wearing a mask.

Compare and contrast this standpoint with countries that have been far more effective than us at controlling the spread of Covid-19; China, Singapore and South Korea are all nations of habitual mask-wearers. In fact, if you are not sporting a face mask in China, you are not allowed to use taxis or public transport. You cannot even enter businesses on foot without one.

Although the **European Centre for Disease Prevention and Control** agrees that surgical face masks should be reserved for healthcare workers only, it also states that non-surgical face masks may reduce the spread of the virus by people who are infected but asymptomatic. Social distancing remains vitally important, but there are some situations in which proximity is unavoidable, such as in supermarkets and on public transport, and this kind of face-covering is likely to be of use in such scenarios.

Coronavirus can be spread very effectively by droplets ejected when we cough or sneeze. Although there is often a sense of reassurance to be had from wearing even an improvised mask, the truth of the matter is that they are more likely to protect others from you by catching the droplets you might produce.

More than 100 doctors recently wrote to The Times saying they were "alarmed at official inaction over the need for the public to wear homemade face masks." They continued that it was "illogical" to advise people to wear masks only if they are showing symptoms when it is accepted knowledge that symptomless Covid-19 sufferers are also capable of spreading the virus. And while the WHO has not changed its advice, its special envoy Dr David Nabarro believes that "some form of facial protection is going to become the norm" across society.

What type of masks do health workers use?

In medical settings, face masks are graded by the degree of protection they offer. The most protective is an FFP3 (Full Face Protection level 3), closely followed by an N95 or an FFP2.

FFP1 masks

NHS staff working in lower risk situations such as when performing surgery wear a surgical mask. These are used by healthcare workers working within one metre of a patient with possible or confirmed Covid-19. Surgical masks are water-resistant rather than fully waterproof and protect the wearer from droplets but not smaller airborne particles such as those potentially generated by a nebuliser. They are very loose-fitting and allow potential leakage around their periphery. They are meant to be used once and disposed of. They are designated as FFP1.

FFP2/N95 and FFP3 masks

FFP2 and N95 masks are water-resistant, very tight fitting, allow minimal peripheral leakage, and filter out at least 95 percent of airborne particles. They are not intended for multiple uses, but many clinicians use them more than once. These masks are in critically short supply and should not be used by the general public. They should only be used by frontline NHS staff, and even then, only in aerosol-generating situations. FFP3 masks cover the whole face and usually have a self-contained visor.

A tight facial seal cannot be achieved in those with beards, and neither type of mask is designed or intended for children. Broadly speaking, FFP2 & 3 masks are intended for medical use while N95 masks are designed for use in construction.

Neither type of mask should be shared, and particular care and attention should be paid to their removal to ensure that any contaminants that may have landed on them whilst being worn are not transferred to the face or hands.

What can we make face masks from at home?

These can be as simple as scarves wrapped around the nose or mouth, or can be made from any clean, tight weave textile such as old T-shirts or bedding. Reusing the same homemade mask without washing it is not recommended as they are easily saturated with moisture from the breath of saliva, and these can act like reservoirs for virus-laden droplets. It is likely that even the best homemade mask will offer a level of protection below FFP1.