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**New products and equipment**

# New products and equipment

Investing in new products and equipment can be costly. DD aims to provide unbiased information that is evidence based, so that customers can make an informed decision as to what may be required upon reopening practices. If new items are purchased, it is essential that manufacturer’s instructions are read carefully and followed. All staff who are intended to use new items should be adequately updated and trained to ensure safe and appropriate use.

### Respirators: FFP2/FFP3

There are two main types of face mask: fluid resistant surgical masks (Type IIR) CMH030, CHM040, CHM050, CHM051 & CHM055 and respirator masks: FFP2 CHM045 (pk 60) & CHM046 (pk 3) and FFP3. Whilst Type IIRs have been routinely used in dentistry prior to Covid-19, the respirators have not. Therefore, it is essential to update team members on their safe use prior to wearing these.

An FFP3 offers at least 99% filtration of particles compared to most FFP2s which offer at least 94%. PHE recommends using FFP3s when carrying out AGPs, during the current Covid-19 pandemic, but stipulates that when FFP3s are not available, FFP2s may be used. The WHO routinely recommend FFP2s.

HSE and PHE recommend a face-fit test is carried out by a competent person prior to the first wear of a respirator (<https://www.hse.gov.uk/news/face-mask-ppe-rpe-coronavirus.htm>). Local accredited fit testers can be found here at <https://www.fit2fit.org/find-a-tester/>. Fit-testing typically takes 30 minutes and comprises qualitative fit-testing (testing whether the wearer can taste an intensely bitter or sweet substance sprayed into the ambient air) or quantitative fit testing (measuring the ratio of particles in the air inside and outside the breathing zone when wearing the respirator).

Fit testing is a “formal” test required, performed by an accredited individual, prior to the first wear of a respirator. Fit checking or seal checking is “good practice”, performed by the wearer every time a respirator is donned to ensure a good seal.

### Non-contact thermometers – NFE130

To enable temperature screening when patients arrive.

### High volume aspiration

Research shows that high volume suction (whether internal or external apparatus), can significantly reduce the amount of aerosol in the environment. This is recommended for AGPs.

### Air filtration/purification

Research shows that air cleaning in enclosed spaces can be an effective tool to combat transmission via airborne particulate matter.

There are a variety of options on the market including wall and ceiling mounted air purification systems with HEPA filtration and other adjuncts such as UV light sources and plasma filters. There are also free   
  
  
  
  
standing or portable options available. DD recommends that practices research a range of options to make an informed decision as to which system may suit their needs.

### Pre-treatment mouth rinse

Although both chlorhexidine and H2O2 mouthwash have been shown to reduce the bacterial load of aerosols, chlorhexidine is not known to be effective against coronavirus. It has been suggested that since the virus may be vulnerable to oxidation, a pre-procedural mouth-rinse with an oxidising mouthwash may be worthwhile such as H2O2, Hypochlorus acid or povidone iodine. Please check the manufacturer’s details to establish safe concentrations.

### Rubber dam - EWS045, EWK250

Research shows that the use of rubber dam can reduce the biodiversity of aerosol. However, this is technique sensitive, so it is recommended that refresher training on the use of rubber dam is considered.

### Chemo-mechanical caries removal

In recent years there has been a move towards minimally invasive (MI) dentistry and including the use of protocols such as Atraumatic Restorative Treatment (ART).

Studies on clinical advantages and disadvantages of the different excavation methods indicate some evidence that hand or chemo-mechanical excavation is potentially advantageous towards selective removal of caries. These methods are also likely to be non-aerosol generating which could be beneficial during the pandemic. These technologies may also reduce pain and discomfort during treatment in comparison to the other methods.

### Single use instruments - Non Sterile Mirror (DIM104), Sterile Mirror (DMO205), Probe No.6 (DIR106), CPITN-C Probe (DIR200), Perio Kit (DPR274)

There are clear benefits to using more single use items during the pandemic in order to reduce the risk of transmission.

### Electric handpieces or lasers

There is research to show that this type of equipment could help to reduce the amount of aerosol produced in comparison to high speed handpieces.

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