

Use of masks by health care workers

Press release from the French National Academy of Medicine and the National Academy of Surgery

May 23, 2020

Wearing a mask has demonstrated its effectiveness to prevent the transmission of SARS-CoV-2. For healthcare workers, the choice of mask may vary depending on whether they are in contact with patients presumed to be healthy, suspect or affected by Covid-19, and according to the type of care.

In all cases, this choice is a compromise: the more effective a mask, the less "it is permeable", and the more uncomfortable it is to wear.

In the context of the COVID-19 pandemic, three types of masks are available to healthcare workers:

1. **Surgical masks**, also known as masks for medical use or anti-projection masks (standard EN 14683+AC August 2019), are medical devices. There are two types, depending on their degree of permeability;

- o **Type I surgical masks** (filtering > 95% of particles) aimed at reducing the risk of spreading infection from the wearer;

- o **Type II masks** (filtering > 98% of the particles) to additionally protect the wearer. **Type II R** (for "Splash Resistant") masks are intended for use in the operating room or similar. This additional protection reduces the "breathability" of the mask.

2. **FFP masks** (filtering facepiece - standard NF EN 149+A1, September 2009) are more specifically aimed at protecting the wearer. They are not medical devices. Their wearing is more restrictive than that of surgical masks.

FFP2 masks (filtering at least 94% of aerosols) without an exhalation valve are recommended to health professionals performing procedures that expose them to aerosols loaded with fine particles and viruses (the valve provides a better comfort but does not filter).

3. **"General public" masks**, still called "non-sanitary use" (UNS) or "barrier masks", are a category created by an inter-ministerial note of March 29, 2020 on the advice of the ANSM of March 24, 2020².

The National Academy of Medicine and the National Academy of Surgery recommend to healthcare personnel:

In civilian life, to wear a type I surgical mask or a standard "general public" mask, industrially manufactured or home-made, as soon as they leave their home. Each person should consider himself as a potential carrier of the virus and contagious, even when he is feeling healthy³. As a caregiver he needs to act as an example.

In the professional life, to wear a mask adapted to the risk of contamination:

- a **type II surgical mask** in community or hospital medicine, during direct contact with patients, especially if they show respiratory signs, a suspected or a confirmed infection, but only if they are not performing an invasive intervention on the respiratory tract;
- a type II or type I surgical mask for professionals in charge of first aid, or medical transport, or in contact with a fragile public (EHPAD and home care). These rules must apply even in the non-Covid sector, as any patient is a potential carrier of the coronavirus.
- **an FFP2 mask** without protection valve during acts exposing to fine particle aerosols or viruses (ENT examination, nasal sampling, intubation / extubation, bronchial fibroscopy, dental care, respiratory physiotherapy ...).

To consult, for correct use of the mask during fitting, wearing and removal, the tutorials⁴ and videos⁵ available online (AFNOR, INRS, ARS, etc.).

To choose an FFP2 mask according to the morphology of the face, a good fitting to the face being an essential condition for effectiveness. The simplest verification test is called "fit-check" or "negative pressure test". Soft masks ("duck's beak" & "pleated") appear to be more suitable than "hard shell" masks. The creation of abacuses from the morphological parameters of the face could help in the choice of a personalized mask.

To use over-gowns, gloves and goggles in addition to the FFP2 mask in certain circumstances, as SARS-CoV-2 contamination may pass through other entry points than the respiratory tract.

[1]

https://www.ansm.sante.fr/var/ansm_site/storage/original/application/8b84af4a1602bb9fe55d9ab6728982fa.pdf

[2] Press release from the National Academy of Medicine " Masks and Covid-19 ", March 22, 2020

[3] Press release from the National Academy of Medicine "Pandemic of Covid-19: reinforced barrier measures during containment and in the phase of exit from containment", April 2, 2020.

[4] <http://www.inrs.fr/media.html?refINRS=A%20759>

[5]

<https://www.facebook.com/140652982640095/posts/3152315051473858/?extid=qXEnWGqgTONXRI3T&d=null&vh=e>