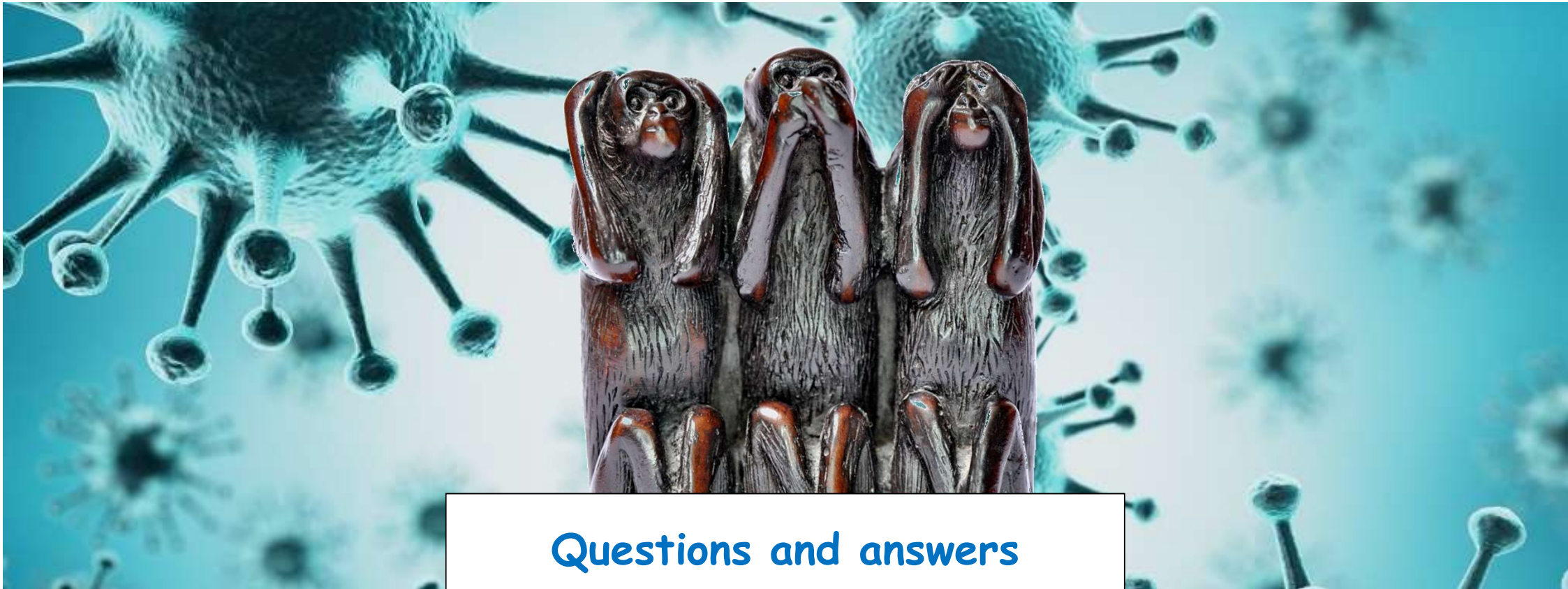


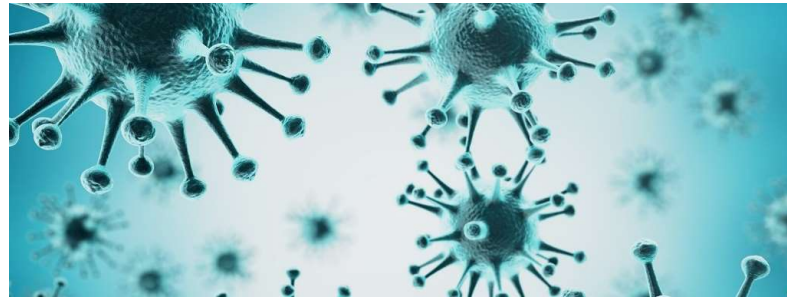
# Corona facemasks and visors

## Welcome to the jungle!



Questions and answers

## Purpose



Insight into,

- Types of masks and visors
- Their strenghts and weaknesses

## Who we are...



The specialists on physical, chemical and biological working environment at the Working Environment Section (AMS).

The way you plan, organize and perform your work

The surroundings you work in

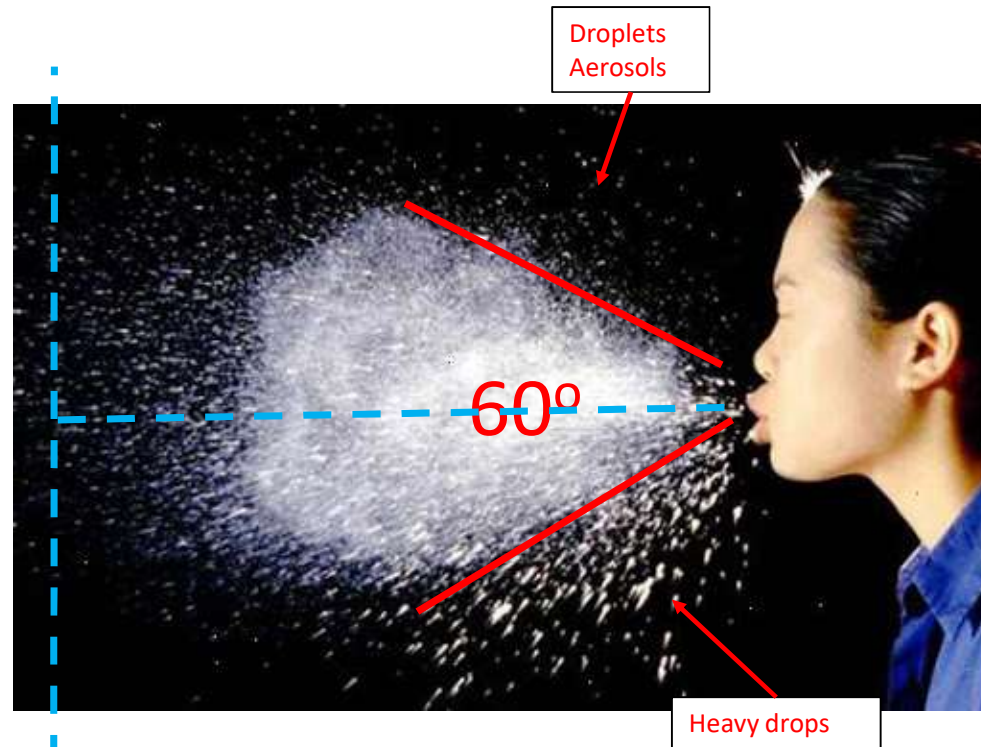
Your physical, chemical, and biological working environment

Tools and equipment that you use

Substances and materials that you use

Main contributing factors

# The anatomy of a sneeze





## A word on CE-marking



- An administrative marking indicating conformity with EU product directives and standards
- Not a quality indicator
- Not a certification mark
- Prerequisite: signed EU Declaration of Conformity



# What is a face mask?

In corona context any mask, that

- functions as a respiratory filter
- covers mouth and nose when it is carried
- fits tightly around the face (ear or neck attachment)



Corona face masks 😊



NOT corona face masks ☹️

# What are the categories of face masks?

2 main categories:

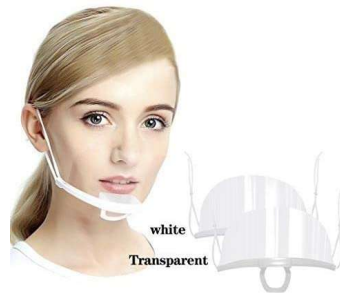
- Face masks (mainly) intended to protect others
  - Medical face masks, disposable
  - Textile (cloth) face masks, re-usable
  - Combination masks
- Respiratory protection equipment intended to protect the user
  - Most importantly filtering facepieces



# What is a visor (face shield or mouth shield)?

In corona context any screen, that

- is made of plastic (or glass)
- covers eyes, mouth and nose OR mouth and nose when it is carried
- do not fit tightly around the face



Corona visors 😊



NOT corona visors ☹️



# Does visors have the same effect as masks?

No, visors are personally carried barriers

- Same effect as static screens (more or less)
- Much greater leakage than masks
- Usable in a corona context
- Sometime used together with masks.



# What are the requirements for medical face masks?



Medical face masks are medical equipment

- Main use: preventing transmission of infective agents from medical staff to patients, f.x. during surgery
- Must bear CE marking indicating conformity with **Council Directive 93/42/EEC concerning medical devices**
- Must meet the requirements of **EN 14683:2019+AC:2019. Medical face masks – Requirements and test methods.**

Classification (apprev.)	Type I	Type II	Type IIR
Bacterial filtration efficiency (BFE)	> 95 %	> 98 %	> 98 %
Respirationsmodstand (Pa/cm <sup>2</sup> )	< 40 Pa/cm <sup>2</sup>	< 40 Pa/cm <sup>2</sup>	< 60 Pa/cm <sup>2</sup>
Splash resistance/Synthetic Blood Resistance	N/A	N/A	+16 kPa

# What are the requirements for textile (fabric) face masks?

Textile face masks can be medical equipment – or not!

- Main use: preventing transmission of infective agents from the user to others
- If CE marked as medical equipment → same requirements as medical face masks
- If not CE marked → no documented effect → 'citizen masks'
- 'It's a jungle out there'.



Textile fask mask (VRMUNDBIND)  
CE-marked  
3 layers of fabric



Textile face mask (Vistaprint)  
No CE-marking = 'citizen mask'  
National (AFNOR, France) specs  
for general purpose masks

# What are the requirements for filtering facepieces?



Filtering facepieces are respiratory protective devices.

- Main use: protecting the user from inhalation of particles, droplets and aerosols.
- Must bear CE marking indicating conformity with **EU-regulation 2016/425 on personal protective equipment**
- Must meet the requirements of **EN 149+A1:2009. Respiratory protective devices. Filtering half mask to protect against particles. Requirements, testing, marking.**
- Can be used at a maximum of 3 hours a day during work.

Class	FFP1	FFP2	FFP3
Filter penetration limit	> 80 %	> 94 %	> 99
Inward leakage	< 22 %	< 8 %	< 2 %

FFP1 offers protection against dust and liquid aerosols (limit value > 5 mg/m<sup>3</sup>).

FFP2 offers protection against most harmful and toxic dust and liquid aerosols.

FFP3 offers protection against most harmful and toxic dust and liquid aerosols AND radioactive dust, bacteria and viruses.

Note: Particular filters does NOT offer protection against vapor and gases.

# What are the requirements for visors (face shields and mouth shields)?







Visors are personal carried barriers

- Main use: protecting the user from splashes and large drops of liquid.
- Face shields must bear CE marking indicating conformity with **EU-regulation 2016/425 on personal protective equipment.**
- Must meet the requirements of relevant standard, f.x. **EN 166:2002. Personal eye protection. Specification.**
- Mouth shields are NOT considered PPE (most mouthshield are sanitary masks).



## What are the strengths and weaknesses of the different masks and visors?

	Type	Selfprotection	Protection of others	AMS recommendation
	Face mask	A: Limited B: Good	A: Good B: Good	Good for general use, if CE marked.
	Filtering facepiece	A: Limited B: Very good	A: Good B: Good	Good for general use, but short time use only. Are always CE-marked.
	Face shield	A: Good B: Poor	A: Good B: Poor	Alternative to face masks. Should be CE-marked. Recommended for long-term use - or if a face mask is inappropriate (health, large beard etc.).
	Mouth shield	A: Limited B: Poor	A: Good B: Poor	Not recommended

A. Splash, large drops  
B. Droplets, aerosols

# No protective equipment is better than the way it is used



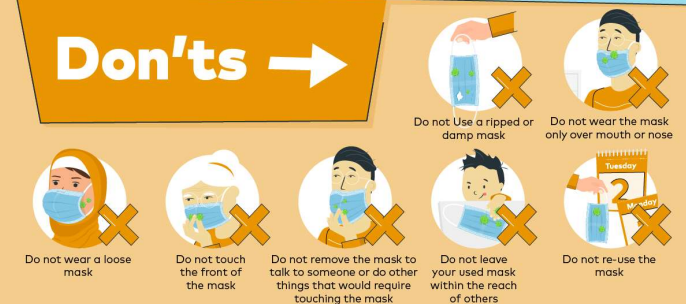
## HOW TO WEAR A MEDICAL MASK SAFELY

[who.int/epi-win](https://who.int/epi-win)

### Do's →



### Don'ts →



Remember that masks alone cannot protect you from COVID-19. Maintain at least 1 metre distance from others and wash your hands frequently and thoroughly, even while wearing a mask.

