



Procedure of action for the services of prevention of occupational risks to deal the exposure to the new coronavirus

The recommendations included in this document are under continuous review according to the evolution and new information available about the infection by the new coronavirus (SARS-COV-2)

COORDINATION

Sub-department of General for Environmental Health and Occupational Health. General Department of Public Health, Quality and Innovation.
Presentation of Occupational Health of the CISNS Public Health Commission

ENTITIES INVOLVED IN THE DRAFTING:

Ministry of Labour and Social Economy, National Institute of Safety and Health at Work (INSST)
National Centre for Means of Protection (CNMP).

Ministry of Labour and Social Economy. Labour and Social Security Inspection (ITTS).

Spanish Society of Medicine and Safety at Work (SEMST).

Spanish Association of Specialists in Occupational Medicine (AEEMT).

Spanish Society for Occupational Health in the Public Administration (SESLAP).

Spanish Federation of Occupational Nurses (FEDEET).

Workers' Commissions (CCOO).

General Workers' Union (UGT).

National Association of External Prevention Services (ASPREN)

External Prevention Services ASPA-ANEPA

In the working environment, preventive measures are set out in Royal Decree 664/1997, of 12 May, on the protection of workers against risks related to exposure to biological agents at work, and damage, if it occurs, can be legally considered as an occupational contingency.

The periods of preventive isolation to which they are subjected as a result of the SARS-CoV-2 virus, will be considered as a situation of temporary incapacity derived from common illness

(Criterion 2/2020, General Directorate of Social Security Organisation).

The scope of application includes all workers involved in assistance work (including those carried out in isolation, transfers, cleaning work, waste disposal, etc.), as well as those in long-distance or international air, sea and rail transport, rescue groups (fire brigade, sea rescue, police, civil guard, etc.), public attention, hotels, service sector, etc. Given that contact with the virus can affect both health and non-healthcare environments, it is up to companies to assess the risk of exposure and follow the recommendations on this subject issued by the prevention service, following the guidelines and recommendations made by the health authorities.

Any protective measure must ensure that it adequately protects the worker from those risks to his or her health or safety which cannot be avoided or sufficiently limited by the use of collective protection means or by the adoption of work organisation measures. Information and training are essential in protecting persons in contact with investigated or confirmed cases and those at risk of exposure to the virus (Table 1.). It should be borne in mind that the dimension of protection goes beyond the worker and includes the rest of the people likely to come into direct or indirect contact with the case.

The number of people and the time of exposure shall be limited to the minimum possible and a list shall be established of exposed workers, the type of work carried out, as well as a record of the corresponding exposures, accidents and incidents. Written instructions shall be available to workers at the workplace and, where appropriate, notices shall be posted containing at least the procedure to be followed in the event of an accident.

Exposure of health-care and non-health-care workers who, on the basis of their personal characteristics or known biological state, due to previous pathologies, medication, immune disorders or pregnancy, are considered particularly sensitive to this risk, must be avoided. Healthcare workers who are not involved in the care of confirmed cases of COVID-19 and who are not exposed to environments likely to be contaminated by the virus should also receive general information and advice about the infection. Workers in subcontracted companies working in health care facilities should also be provided with general information and advice about the infection.

The levels and measures of protection that are established should be adjusted and applied according to the nature of the activities, the assessment of the risk for the workers and the characteristics of the biological agent.

GENERAL ISSUES

At workplace, preventive measures are framed in Royal Decree 664/1997, of 12 May, on the protection of workers against the risks related to exposure to biological agents during work, and damage, may be considered legal professional contingency.

The periods of preventive isolation to which workers are subjected as a result of the SARS-VOC-2 virus, shall be considered as a situation of temporary incapacity arising from common disease (Criterion 2/2020, Directorate-General for Social Security Organisation).

The scope of application includes all workers involved in health care work (including those in isolation, transfers, cleaning, waste disposal, etc.), as well as air, sea and long-distance or international rail transport, rescue groups (firefighters, Sea Rescue, Police, Civil Guard, etc.), public service, hospitality, service sector, etc. Since contact with the virus may affect health and non-health settings, it is up to companies to assess the risk of exposure and follow the recommendations issued by the prevention service, following the guidelines and recommendations made by the health authorities.

Any protective measure must ensure that it adequately protects the worker from risks to his health

or safety which cannot be avoided or sufficiently limited by the use of collective protection or the adoption of Work Organisation measures. Information and training are essential for the protection of persons in contact with research or confirmed csos and those at risk of exposure to the virus (Table 1). It should be borne in mind that the dimension of protection goes beyond the worker and includes all other persons liable to direct or indirect contact with the case.

The number of persons and exposure time shall be limited to the minimum possible and a list of exposed workers, the type of work carried out and a risk of the corresponding exposures, accidents and incidents shall be established. In turn, workers shall have at their disposal written instructions at the workplace and, where appropriate, notices containing at least the procedure to be followed in the event of an accident.

Exposure of Health and non-health workers who, depending on their personal characteristics or known biological status, due to previous pathologies, medication, immune disorders or pregnancy, are considered particularly sensitive to this risk should be avoided.

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Health workers who are not involved in the care of cases confirmed with COVID-19 and who are not exposed to environments likely to be contaminated by the virus should also receive general information and advice on the infection. Also workers in subcontracted companies who work in health centres.

The levels and protective measures to be established should be adjusted and implemented in accordance with the nature of the activities , the risk assessment for workers and the characteristics of the biological agent.

In this regard, the following premises should be kept in mind:

a) coronavirus SARS-VOC-2 is a new virus, previously unknown in human pathology, belonging to the family Coronaviridae. The reservoir of these viruses is an animal and some coronaviruses have the ability to transmit to people. It is thought that the first human cases were due to contact with an infected animal. From person to person it is transmitted through the respiratory tract of more than 5 microns, when the patient has respiratory symptoms (cough and sneezing) and contact with cheekbones. So far, there is no evidence that it can be transmitted from asymptomatic infected persons, aerial transmission by droplet or aerosol core (capable of being transmitted at a distance of more than 2 meters) has not been demonstrated for Sars-VOC-2. However, it is believed that this could occur during invasive respiratory tract care procedures. The incubation period can vary between 2 and 14 days.

(b) it is essential to strengthen personal hygiene measures in all areas of work and in the face of any exposure scenario. It's recommended:

- * Hand hygiene is the main measure of prevention and control of infection . If the hands are visibly clean hand hygiene will be done with alcohol based products; if dirty or stained with fluids will be done with water and antiseptic soap.

- * Nails should be worn short and carefully, avoiding the use of rings, bracelets, wrist watches or other ornaments.

- * Collect long hair in a low ponytail or bun, which can be helped from an operating room cap.

- * Avoid the use of lentilsa. If glasses are needed, they must be attached with adhesive tape from the glass bridge to the forehead.

- * It is recommended to remove make-up or other cosmetic products that may be a source of prolonged exposure if contaminated .

- * Respiratory label:

-If you have respiratory symptoms, your mouth and nose should be covered when coughing or

sneezing with a tissue that can be removed and thrown into a trash can. If you don't have a tissue, you should cough or sneeze on your arm at the inner corner of your elbow, so as not to contaminate your hands.

- If you have an unexpected cough and accidentally cover yourself with your hand, avoid touching your eyes, nose, or mouth.
- Any person with respiratory symptoms should wash hands frequently because they may accidentally have contact with secretions or surfaces contaminated with secretions.
- Washing hands with soap and water, or with alcohol-based solution, protects equally and should be done after contact with secretions and contaminated objects or materials .

(c) personal protective measures(including personal protective equipment (PPE)) should be appropriate and proportionate to the risk or risks against which protection should be offered in accordance with occupational or occupational activity.

(d) isolation measures in the case under investigation constitute the first barrier to the protection of both the worker and the other persons likely to come into contact with the case.

(e) appropriate use of structural protection elements, organisational controls and mediads of personnel, policies for cleaning and disinfecting reusable workplaces and work equipment are equally important preventive measures.

NATURE OF ACTIVITIES AND EXPOSURE RISK ASSESSMENT

Depending on the nature of the activities and transmission mechanisms of the new coronavirus SARS-VOC-2, we can establish the different risk scenarios in which workers can be found, which are presented in Table 1.

We mean by:

Risk exposure: work situations in which the relationship you may have with a probable or confirmed case does not include close contact.

Low-risk exposure: work situations in which the relationship you may have with a probable or confirmed case does not include close contact.

Low probability of exposure: workers who do not have direct attention to the public or, if they do, occurs more than two meters away, or have collective protective measures that prevent contact (glass screen, separation of ambulance cabin, etc.).

"Close contact" means:

- Any person who provides care in a likely or confirmed symptomatic case: health workers and other workers who will have other similar physical contact;
- Any worker who is in the same place as a probable or confirmed symptomatic case, at a distance of less than 2 meters(e.g. visits, meetings/ work trips);
- Members of crews serving symptomatic passengers returning from a risk zone are considered to be close contact in an aeroplane or other means of transport.

Table 1. Risk scenarios for exposure to coronavirus SARS-VOC-2 in the workplace

RISK EXPOSURE

Healthcare and non-healthcare personnel attending in a confirmed case or in symptomatic research. Sanitary transport technicians, if there is direct contact with the transferred patient.

Crew of means of transport (air, sea or land) attending during a trip a symptomatic case from a risk area.

Situations where close contact with a symptomatic case cannot be avoided (e.g. working meetings)

REQUIREMENT

Depending on the specific exposure risk assessment for each case: components of biological protective PPE and, in certain circumstances, protection against aerosols and splash.

LOW RISK EXPOSURE

Health personnel whose work activity does not include close contact with the confirmed case, for

example:

- escorts for transfer.
- Guards, stretchers, cleaners.

Laboratory personnel responsible for virological diagnostic tests.

Non-sanitary personnel who come into contact with potentially contaminated sanitary material, phomites or waste.

Home help contact asymptomatic.

REQUIREMENT

Depending on the specific risk assessment of each case: components of biological protection PPE.

LOW PROBABILITY OF EXPOSURE

Workers without direct attention to the public, or more than 2 meters away, or with collective protection measures that prevent contact, for example:

- Administrative staff
- Sanitary transport techniques with collective barrier, without direct contact with the patient.
- Public transport drivers.
- Security personnel.
- Police/Civil Guard
- Customs personnel
- Fire and rescue personnel

REQUIREMENT

No use of PPE

In certain situations (lack of co-operation of a symptomatic person):

- respiratory protection
- protective gloves

INDIVIDUAL PROTECTIVE EQUIPMENT

According to Io established in Royal Decree 773/1997, the equipment must be certified in accordance with regulation (EU) 2016/425 on personal protective equipment, which is evidenced by the CE conformity marking.

On the other hand, when products such as gloves or masks are intended for medical use in order to prevent a disease in the patient must be certified as medical devices (PS) in accordance with the provisions of royal decree 1591/2009, which regulate them.

The same product, for which a dual purpose is required, must comply simultaneously with both laws. This is the case with gloves or masks for dual use.

Generally, the recommendation is to use disposable PPE, or if not, which can be disinfected after use, following the manufacturer's recommendations.

PPE must be chosen in such a way that maximum protection is guaranteed with minimal discomfort for the user and it is critical to choose the size, design or size that suits it properly.

The correct placement of PPE is essential to avoid possible pathways of entry of the virological agent; equally important is the removal of the same to avoid contact with contaminated areas and / or dispersion of the infectious agent.

The following describes the PPE that may be necessary, as well as the characteristics or aspects thereof that may be remarkable in the working environment in question. It is not a description of all PPE that could protect against a biological risk, but of those indicated in the case of personnel potentially exposed in the management of persons under investigation or confirmed for infection with coronavirus. The assessment of the risk of exposure will make it possible to specify the need for the most appropriate type of protection.

1. Respiratory protection

In order to avoid contagion, confirmed and investigational cases should carry surgical masks. In the event that they carried a self-filtering mask instead of a surgical mask, in no case will it include exhalation valve since in this case the air is exhaled directly to the environment without any kind of retention and would favor, if necessary, the spread of the virus. Surgical masks must meet the standard UNE-en 14683: 2019 + AC: 2019). Placing the surgical mask on a person with respiratory symptoms is the first protective measure for the worker.

The respiratory protection generally recommended for health personnel who may be in contact less than 2 meters with investigated or confirmed cases is a self-filtering mask type FFP2 or half mask provided with P2 particulate filter.

Self-filtering masks (which must comply with UNE-en 149: 2001 + A1: 2009) or, where applicable, filters used (which must comply with UNE-en 143:2001) must not be reused and therefore discarded after use. Half masks (which must comply with UNE-en 140: 1999) must be cleaned and disinfected after use. To do this, the manufacturer's recommendations will be strictly followed and in no case should the user apply own disinfection methods since the effectiveness of the equipment may be affected.

When risk assessment results that in the development of the activity care procedures are performed in which bioaerosols can be generated in high concentrations, it is recommended the use by health personnel of self-filtering masks against FFP3 particles or half mask provided with P3 particulate filter.

Respiratory protection equipment should be removed last after removal of other components such as gloves, robes, etc.

2.2 protective clothing

As far as clothing is concerned, the worker's uniform must be protected from possible spillage of biological fluids or secretions from the confirmed or investigational patient being examined or treated.

This type of clothing, such as PPE, must comply with the UNE-en 14126: 2004 standard which includes specific tests of resistance to penetration of microorganisms. This type of clothing can offer different levels of waterproofness both in its material and in its design, partially covering the body such as robes, aprons, sleeves, leggings, etc., or the whole body. The designation includes Type and letter B (Biological).

Where additional protection is necessary in some area, such as some impermeability, chemical protection aprons complying with the UNE - UNE-en 14605 :2009 standard, called PB [3] and PB [4] types (PB comes from "Partial Body") may also be used which, although not specifically biological protection, may be suitable for the use of splash protection mentioned above or to supplement a dressing gown other than an PPE.

It is recommended that biological protective clothing be disposable as it has the advantage that when it is removed sources of possible contagion that may appear in the event that the disinfection of the equipment is not performed correctly are avoided.

3. Eye and face protection

Eye protection should be used when there is a risk of contamination of the eyes from splashes or drops (e.g., blood, body fluids, secretions and excretions).

The eye protectors certified according to the standard UNE-en 166: 2002 for protection against liquids ' can be integral glasses against drops or face screens against splashes (both, field of use 3), where what is evaluated is the tightness of the protector (in the case of the integral glass) or the area

of coverage thereof (in the case of the face screen).

It is possible to use another type of eye protector, as would be the case with universal mount glasses with lateral protection, to avoid contact of the conjunctiva with contaminated surfaces, for example; contact with hands or gloves. However, if due to the type of exposure it is necessary to guarantee a certain waterproofness of the orbital basins we must resort to integral glasses (fields of use 3, 4 or 5 according to UNE-en 166:2002, depending on the waterproofness required)* and, for the joint protection of eyes and face, face screens.

Eye protection is always recommended during aerosol generation procedures. When the joint use of more than one personal protective equipment is necessary, compatibility between them must be ensured, which is particularly important in the case of simultaneous respiratory and eye protection, so that the waterproofness of the same and therefore its ability to protect is not diminished.

4. Placement and removal of PPE

As indicated, PPE should be selected to ensure adequate protection according to the form and level of exposure and that it is maintained during the performance of the work activity. This should be taken into account when placing the different PPE in such a way that they do not interfere with and alter the specific protection functions of each equipment. In this regard, the manufacturer's instructions must be followed.

After use, it should be assumed that PPE and any protective elements used

1 there is no specific standard for eye protectors against microorganisms. The possible fields of use to be considered according to UNE en 166 would be: impact protection (all types of Mount), liquids (integral Mount/face screen), thick dust > 5 [JM (integral Mount), gas and fine dust < 5 pm (integral Mount).

* Fields of use: 3 (liquid drops, supports direct ventilation), 4 (coarse dust, supports indirect ventilation), 5 (gas and fine dust, does not support ventilation)

They may be contaminated and become new risk loco. Therefore, an inappropriate removal procedure may cause user exposure.

Consequently, a sequence of placement and removal of all detailed and predefined equipment must be developed and implemented and monitored.

PPE should be placed before initiating any activity likely to cause exposure and removed only after being outside the exposure area.

PPE should be avoided as a source of contamination, for example by leaving it on surfaces of the environment once it has been removed.

For WHO information on the introduction and withdrawal of PPE, please consult the following link: https://www.who.int/csr/resources/publications/PPE_EN_A1sI.pdf.

5. Disposal or decontamination

After removal, disposable PPE should be placed in appropriate waste containers and treated as Class III biosanitary waste.

If the use of reusable PPE cannot be avoided, it should be collected in appropriate containers or bags and decontaminated using the method indicated by the manufacturer before storage. The method must be validated as effective against the virus and be compatible with PPE materials, so that it is guaranteed that it is not damaged and therefore its effectiveness and protection is not compromised.

6. Storage and maintenance

PPE must be stored properly, following the instructions given by the manufacturer, in such a way as

to avoid accidental damage or contamination.

1. Law 31/1995, of 8 November, on the Prevention of occupational risks.
2. Royal decree 664/1997 of 12 May on the protection of workers against the risks related to exposure to biological agents at work.
3. Royal decree 773/1997, of 30 May, on minimum health and safety requirements relating to the use by workers of personal protective equipment.
4. Royal decree 1591/2009, of 16 October, regulating medical devices.
5. World Health Organization. Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected. Interim Guidance. Who: Geneva; 2020. Available INSST technical guide on the use of personal protective equipment at work Appendix 6 to the INSST Technical Guide on exposure to biological hazards
NTP 938: protective gloves against microorganisms

NTP 772: protective clothing against biological agents

NTP 813: footwear for personal protection: specifications, classification and marking

Personal protective equipment

Diptych: diptych respiratory Protection Equipment: Dual-Use glove
PPE selection and use tabs

UNE-en 14605: 2005 + A1: 2009, protective clothing against liquid chemicals. Performance requirements for clothing with liquid tight joints (Type 3) or with spray tight joints (type 4), including garments that provide protection only to certain parts of the body (types PB [3] and PB [4]).

UNE en 166:2002, personal eye protection. Specification.

Table 2

recommended personal protective equipment components for protection against New Coronavirus Sars-VOC-2

Respiratory protection:

self-filtering mask

mask+filto against particles

Conformity marking

EC as PPE + identification number of the control body

Marking related to the protection offered

Self-filtering marking:

FFP2 or FFP3

Marking filters:

P2 or P3

(white color code)

Applicable UNE rules

UNE-en 149 (self-filtering mask)

UNE-en 143 (particulate filter)

UNE-EN140 (masks)

Aspects to consider

Bioaerosols in high concentrations. FFP3 or mask +P3 is recommended

Surgical masks (UNE-en 14683) are P5 and not an PPE. However, there are surgical masks that can additionally protect health personnel against possible biological fluids. This additional benefit does not imply protection fente to the inhalation of a liquid aerosol.

