

¿Qué tipo de mascarilla debe ser empleada por los sanitarios para protegerse de la infección COVID-19?

*Informe de la Unidad de Epidemiología Clínica y Biblioteca.
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O, dicho de otro modo

¿Ofrecen el mismo grado de protección frente al Covid-19 la mascarilla quirúrgica y las N95 o FFP2 o FFP3?

Para responder a esta pregunta hemos revisado por un lado las **recomendaciones** de las principales organizaciones de Salud Pública y Control de enfermedades del mundo: OMS, CDC y ECDC.

Por otro lado, hemos evaluado las **revisiones sistemáticas** pertinentes a la pregunta que han sido publicadas en los último 10 años respecto a enfermedades que comparten el mismo mecanismo de contagio.

No existen estudios experimentales que evalúen la pregunta con el Covid-19, pero dado que su medio de contagio es por gotas y por contacto, las organizaciones asumen la misma protección que para otras infecciones transmitidas del mismo modo.

La conclusión es que las guías recomiendan el uso de mascarilla quirúrgica en los procedimientos de atención sanitaria habituales.

Sólo para aquellos procedimientos que conllevan la generación de aerosoles, recomiendan la N95 o FFP2 (FFP3 el ECDC)

ORGANIZACIÓN MUNDIAL DE LA SALUD

La OMS establece claramente que los sanitarios deben llevar máscara médica (la de quirófano) y sólo llevarán la de alta protección en determinados procedimientos que producen aerosoles.

Encontramos esta respuesta a la pregunta en dos documentos de muy reciente publicación:

WHO: Advice on the use of masks in the community, during home care, and in health care settings in the context of COVID-19.

Interim guidance **19 March 2020**

Health care workers should:

- Wear a medical mask when entering a room where patients with suspected or confirmed COVID-19 are admitted;
- Use a particulate respirator at least as protective as a US National Institute for Occupational Safety and
- Health-certified N95, European Union standard FFP2, or equivalent, when performing aerosol-generating procedures, such as tracheal intubation, non-invasive ventilation, tracheotomy, cardiopulmonary resuscitation, manual ventilation before intubation, and bronchoscopy.

Rational use of personal protective equipment (PPE) for coronavirus disease (COVID-19).

Interim guidance **19 March 2020**

Table 1. Recommended personal PPE during the outbreak of COVID-19 outbreak, according to the setting, personnel, and type of activity^a

Setting	Target personnel or patients	Activity	Type of PPE or procedure
Health care facilities			
Inpatient facilities			
Patient room	Health care workers	Providing direct care to COVID-19 patients	Medical mask Gown Gloves Eye protection (goggles or face shield)
		Aerosol-generating procedures performed on COVID-19 patients	Respirator N95 or FFP2 standard, or equivalent. Gown Gloves Eye protection Apron
	Cleaners	Entering the room of COVID-19 patients	Medical mask Gown Heavy duty gloves Eye protection (if risk of splash from organic material or chemicals) Boots or closed work shoes
	Visitors ^b	Entering the room of a COVID-19 patient	Medical mask Gown Gloves

CENTER FOR DISEASE CONTROL

El CDC americano ofrece una guía adaptada (de publicación muy reciente) al Coronavirus que coincide con la recomendación de la OMS

Guidance for infection prevention and control in healthcare settings

Adapted from Pandemic Influenza: Guidance for Infection prevention and control in healthcare settings 2020

Issued jointly by the Department of Health and Social Care (DHSC), Public Health Wales (PHW), Public Health Agency (PHA) Northern Ireland, Health Protection Scotland (HPS) and Public Health England as official guidance.

Table 1: Transmission based precautions (TBPs): Personal protective equipment (PPE) for care of patients with pandemic COVID-19

	Entry to cohort area (only if necessary) no patient contact*	General ward *	High risk unit ICU/ITU/HDU	Aerosol generating procedures (any setting)
Disposable Gloves	No	Yes	Yes	Yes
Disposable Plastic Apron	No	Yes	Yes	No
Disposable Gown	No	No	No	Yes
Fluid-resistant (Type IIR) surgical mask (FRSM)	Yes	Yes	No	No
Filtering face piece (class 3) (FFP3) respirator	No	No	Yes	Yes
Disposable Eye protection	No	Risk assessment	Risk assessment (always if wearing an FFP3)	Yes

EUROPEAN CDC

El ECDC ofrece básicamente la misma respuesta que las dos organizaciones anteriores.

ECDC TECHNICAL REPORT Guidelines for the use of non-pharmaceutical measures to delay and mitigate the impact of 2019-nCoV. February 2020

Use of facemasks and respirators in healthcare settings

In healthcare settings, facemasks or respirators are used to reduce transmission and protect healthcare workers, patients and visitors against infection. Suspected 2019-nCoV cases should be offered a surgical mask which they should wear correctly while in public areas or while visiting areas where other people are present. Suspected cases arriving in healthcare settings should, where possible, immediately be offered a surgical mask in order to mitigate the risk of droplet spread when in triage or waiting areas or during transportation within the facility.

During the assessment of a suspected case or the management of a confirmed case, healthcare workers should use FFP respirators class 2 or 3 (FFP2 or FFP3) which protect both from droplet and aerosol transmission. In the absence of FFP respirators, a surgical mask should be worn that protects from droplet transmission. It is recommended that healthcare workers performing procedures that are likely generate aerosol should wear an FFP3 respirator. If FFP2 or FFP3 respirators are not available, the use of a surgical facemask is recommended. When using this type of PPE, the limitations and risks connected to its use should be assessed on a case-by-case basis.

Proper mask disposal and combined measures (e.g. proper hand hygiene) will probably increase the effectiveness of individual measures. For more information please consult the ECDC [document](#) on 'Infection prevention and control for the care of patients with 2019-nCoV in healthcare settings' [13]. ECDC has also published an [adaptable template leaflet](#) providing advice to healthcare workers on handling and caring for patients.

Las **revisiones sistemáticas** concluyen, al igual que las recomendaciones, que las mascarillas quirúrgicas en estas enfermedades de transmisión por gotas o contacto, son tan eficaces como las N95 y FFP2.

1. Physical interventions to interrupt or reduce the spread of respiratory viruses. *Cochrane Database of Systematic Reviews* **2011**, Issue 7. Art. No.: CD006207. DOI: 10.1002/14651858.CD006207.pub4.
2. Effectiveness of N95 respirators versus surgical masks against influenza: A systematic review and meta-analysis. *J Evid Based Med.* **2020**;1–9
3. Effectiveness of N95 respirators versus surgical masks in protecting health care workers from acute respiratory infection: a systematic review and meta-analysis. *CMAJ* May 17, **2016** 188 (8) 567-574; DOI: <https://doi.org/10.1503/cmaj.150835>
4. Physical Interventions to Interrupt or Reduce the Spread of Respiratory Viruses — Resource Use Implications: A Systematic Review. Canadian Agency for Drugs and Technologies in Health. **2011**.