PROCURE
HEALTHCARE PRODUCTS

How to Choose an Exam Glove

A practical guide to when gloves are needed, how to put them on and take them off safely, and which material fits the job.

Why the right glove, used the right way, matters

Medical gloves protect both sides of care. They keep healthcare workers' hands from becoming contaminated and help reduce the spread of germs between patients, staff and the environment. But gloves only work when two conditions are met: they are worn for the right tasks, and hand hygiene is performed at the right moments, before putting gloves on and immediately after taking them off.

Gloves are not a substitute for hand hygiene. Wearing them when they are not needed wastes resources and can actually increase the risk of transmitting germs, while a glove that is torn or punctured should be changed as soon as possible. Just as important is technique: gloves must be put on and taken off in a way that keeps hands clean.

Then choosing the right material: nitrile, latex and vinyl differ in protection, allergens, strength, fit and chemical resistance. The pages that follow walk through each decision.

Guidance in this brochure is adapted from the World Health Organization (WHO) *Glove Use Information Leaflet*, part of WHO's hand hygiene tools for infection prevention and control.

When gloves are needed

The WHO glove pyramid sorts everyday tasks by the risk of contact with blood, body fluids or a contaminated environment.

STERILE GLOVES INDICATED

Any surgical procedure; vaginal delivery; invasive radiological procedures; vascular access and procedures (central lines); preparing total parenteral nutrition and chemotherapeutic agents.

EXAMINATION GLOVES INDICATED IN CLINICAL SITUATIONS

Potential for touching blood, body fluids, secretions, excretions and items visibly soiled by body fluids.

Direct patient exposure: contact with blood, mucous membranes or non-intact skin; potential presence of highly infectious and dangerous organisms; epidemic or emergency situations; IV insertion and removal; drawing blood; discontinuing a venous line; pelvic and vaginal examination; suctioning non-closed endotracheal tube systems.

Indirect patient exposure: emptying emesis basins; handling or cleaning instruments; handling waste; cleaning up spills of body fluids.

GLOVES NOT INDICATED (except for contact precautions)

No potential for exposure to blood or body fluids, or a contaminated environment.

Direct patient exposure: taking blood pressure, temperature and pulse; dressing the patient; transporting a patient; caring for eyes and ears (without secretions).

Indirect patient exposure: using the telephone; writing in the patient chart; giving oral medications; distributing or collecting dietary trays; changing bed linen; placing non-invasive ventilation equipment and oxygen cannulas; moving patient furniture.

WHO recommendations on glove use

- **A** In no way does glove use modify hand hygiene indications or replace hand hygiene action by rubbing with an alcohol-based product or by handwashing with soap and water.
- **B** Wear gloves when contact with blood or other body fluids, mucous membranes, non-intact skin or potentially infectious material can reasonably be anticipated.
- **C** Remove gloves after caring for a patient. Never wear the same pair for more than one patient.
- **D** Change or remove gloves when moving from a contaminated body site to another site on the same patient or the environment (including a mucous membrane, non-intact skin or a medical device).
- **E** Reusing gloves after reprocessing or decontamination is not recommended.

Source: World Health Organization, *Glove Use Information Leaflet* (glove pyramid and recommendations).

Donning and removing non-sterile exam gloves

Before you start: when hand hygiene is indicated before a contact that requires gloves, rub hands with an alcohol-based handrub or wash with soap and water.

I. HOW TO DON GLOVES



1. Take a glove out of its original box.



2. Touch only a restricted area of the glove at the wrist (the top edge of the cuff).



3. Don the first glove.



4. Take the second glove with the bare hand and touch only a restricted surface of glove corresponding to the wrist.



5. To avoid touching forearm skin with the gloved hand, slip the gloved fingers under the folded outer cuff of the second glove and pull it on.

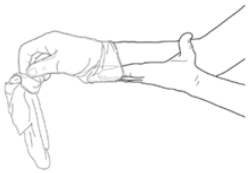


6. Once gloved, touch nothing that is not part of the task the gloves are indicated for.

II. HOW TO REMOVE GLOVES



1. Pinch one glove at the wrist, without touching forearm skin, and peel it away so it turns inside out.



2. Hold the removed glove in the gloved hand. Slide bare fingers between the second glove and the wrist, roll it down the hand and fold it over the first.



3. Discard the removed gloves.

4. Then perform hand hygiene by rubbing with an alcohol-based handrub or washing with soap and water.

Nitrile, latex or vinyl?

Once you know the procedures you perform, weigh barrier protection, allergens, strength, elasticity, fit and chemical resistance.

	Nitrile	Latex	Vinyl (PVC)
Barrier protection	GOOD CHOICE Reliable barrier protection.	BEST CHOICE Reliable barrier protection.	NOT RECOMMENDED Can tear under significant stress, which limits protection.
Allergen content	GOOD CHOICE No latex proteins; may contain low levels of chemical allergens and curing agents.	NOT RECOMMENDED Contains protein and chemical allergens. Check the manufacturer's allergen data.	GOOD CHOICE No latex proteins; may contain some curing agents and other chemicals.
Strength & durability	GOOD CHOICE Moderate tensile strength that meets ASTM requirements.	BEST CHOICE Moderate tensile strength that meets ASTM requirements.	NOT RECOMMENDED Can break or puncture under tensile strain.
Elasticity	GOOD CHOICE Adequate flexibility, with some memory and moldability.	BEST CHOICE High flexibility and memory.	GOOD CHOICE Some stretch and memory.
Fit & comfort	GOOD CHOICE Comfortable fit thanks to good memory and elasticity.	BEST CHOICE Excellent comfort and fit; holds its shape during demanding manipulation.	NOT RECOMMENDED Limited elasticity; wide wrists can turn baggy at the cuff over extended use.
Chemical resistance	BEST CHOICE Resists many chemicals. See the chart on page 5.	GOOD CHOICE Resists many chemicals. See the chart on page 5.	NOT RECOMMENDED Easily permeated by organic solvents.

Chemical resistance ratings for nitrile & latex gloves

In some healthcare settings, chemical resistance is one of the most important factors in choosing an exam glove. These ratings cover chemicals commonly found in healthcare.

CHEMICAL	NITRILE RATING	LATEX RATING
Acetaldehyde*	Good	Good
Ammonium Hydroxide	Very Good	Very Good
Citric Acid (10%)	Very Good	Very Good
Cyclohexanol	Very Good	Fair
Ethyl Alcohol	Very Good	Very Good
Ethyl Ether*	Good	Good
Formaldehyde	Very Good	Very Good
Formic Acid	Very Good	Very Good
Hydrogen Peroxide (30%)	Good	Good
Lactic Acid (85%)	Very Good	Very Good
Oleic Acid	Very Good	Very Good
Oxalic Acid	Very Good	Fair
Palmitic Acid	Very Good	Very Good
Phenol	Fair	Fair
Potassium Hydroxide	Very Good	Very Good
Propyl Alcohol (Iso)	Very Good	Very Good
Sodium Hydroxide	Very Good	Very Good
Tannic Acid	Very Good	Very Good
Triethanolamine (85%)	Very Good	Very Good
Xylene*	Fair	Poor

* Chemicals marked with an asterisk are for limited use. This chart is not all-inclusive.

Note: when selecting chemical-resistant gloves, always consult the manufacturer's recommendations, especially if gloved hands will be immersed in the chemical.

Source: adapted from OSHA's Chemical Resistance Selection Chart for Protective Gloves (OSHA 3151, *Personal Protective Equipment*).

Key messages for practical glove use

Gloves work when…

they are used appropriately **and** hand hygiene is performed on time, by handrubbing or handwashing. Together, they prevent contamination of workers' hands and reduce pathogen transmission.

Technique is safety

Use the correct technique to put gloves on without contaminating them, and to take them off without contaminating your hands (see page 3).

Don't over-glove

Unnecessary or inappropriate glove use wastes resources and may increase the risk of germ transmission.

Plan the sequence

Train staff to plan procedures in a rational order and use non-touch techniques, so gloves need changing less often.

Damaged glove? If a glove is punctured or otherwise compromised, change it as soon as possible and perform hand hygiene.

Key messages adapted from the World Health Organization *Glove Use Information Leaflet*.

Sources & further reading

World Health Organization. *Glove Use Information Leaflet* (hand hygiene tools, infection prevention and control). cdn.who.int/media/docs/default-source/integrated-health-services-(ihs)/infection-prevention-and-control/hand-hygiene/tools/glove-use-information-leaflet.pdf

Occupational Safety and Health Administration (OSHA). *Personal Protective Equipment* (OSHA 3151), including the Chemical Resistance Selection Chart for Protective Gloves. osha.gov/sites/default/files/publications/OSHA3151.pdf