

Publication of the Oncology Nursing Society (“ONS”)

Personal Protective Equipment

Recommendations for what personal protective equipment (PPE) to wear whenever handling chemotherapy or contaminated materials are consistent across several groups including the National Institute for Occupational Safety and Health (NIOSH), Occupational Safety and Health Administration (OSHA), American Public Health Association (APHA), and ONS. These recommendations don't differentiate between high- and low-risk situations, as there is always the potential for contamination and no known minimum safe exposure.

Double chemotherapy-tested gloves, protective gowns, and protective eyewear (if there is potential for splashing) should be worn whenever handling hazardous drugs or contaminated items (e.g., administration materials, body fluids). These recommendations are based on increasingly strong research that indicates that surface and air contamination occur throughout chemotherapy preparation, administration, and disposal areas and that those who work in those areas can be exposed repeatedly to these agents at low, chronic levels.

ONS recommends the following up-to-date resources.

- The ONS [Chemotherapy and Biotherapy Guidelines and Recommendations for Practice](#) (2009) states the following in the Safe Handling section 6., “Guidelines regarding PPE” section.
- Types of apparel:
 1. Gloves: Wear disposable gloves that are powder-free and have been tested for use with HDs. Latex gloves provide protection but should be used with caution because of latex sensitivity. Gloves made of nitrile, . . . polyurethane, or neoprene may provide protection. . .
 2. Gowns: Wear a disposable, lint-free gown made of a low-permeability fabric, such as polyethylene-coated materials. . . . The gown should have a solid front, long sleeves, tight cuffs, and back closure. . .
 3. Eye and face protection: Wear a face shield or a combination of mask face and face shield that provides splash protection whenever there is a possibility of splashing (pp. 74-75).
- The NIOSH [Alert on Preventing Occupational Exposures to Antineoplastic and other Hazardous Drugs in Healthcare Settings](#) was released in 2005. These federal standards include detailed recommendations about safe handling practices. In the “[Recommendations](#)” section, the alert states the following.
- Wear PPE (including double gloves, goggles, and protective gowns) for all activities associated with drug administration—opening the outer bag, assembling the delivery system, delivering the drug to the patient, and disposing of all equipment used to administer drugs.

The OSHA Technical Manual, Section VI: Chapter 2, “[Controlling Occupational Exposure to Hazardous Drugs](#)” includes more details than the NIOSH alert. In section V.C.2. Drug Administration, the manual states the following.

Personal Protective Equipment. The National Study Commission on Cytotoxic Exposure has recommended that personnel administering HD's wear gowns, latex gloves, and chemical splash goggles or equivalent safety glasses as described under the PPE section, preparation.

Please note that non-latex gloves may be substituted if they have been tested for permeability with chemotherapy.

The ONS publication [Safe Handling of Hazardous Drugs](#), 2nd Ed. (2011) goes into detail about many aspects of safe handling, including evidence of risk, routes of exposure, methods for preventing exposure, medical surveillance, and staff education.

The American Society of Health-System Pharmacists (ASHP) [Guidelines on Handling Hazardous Drugs](#) also addresses the various aspects of this issue.