

# Cytotoxic Drugs – Know The Laws of Your Province



BC has the most detailed OHS cytotoxic drugs exposure and safety requirements.

Cytotoxic, sometimes referred to as antineoplastic, drugs are used in healthcare settings to treat cancer, arthritis and other conditions by killing or altering the cells that cause the disease. Workers who use, mix, handle, dispose of or work near those drugs can suffer health harms ranging from skin rash to cancer and long-term reproductive damage. Currently, only 5 jurisdictions have adopted OHS regulations specifically requiring employers to address cytotoxic drugs hazards'although most have published guidelines for their safe use, storage and disposal. Here's a summary of the OHS rules across Canada where they do exist.

## OHS Cytotoxic Drugs Requirements Across Canada

### FEDERAL

OHS regulations don't specifically address cytotoxic drugs

### ALBERTA

OHS regulations don't specifically address cytotoxic drugs

## BRITISH COLUMBIA

If worker is or may be exposed to a cytotoxic drug, employer must: 1. Implement exposure control plan meeting requirements of Sec. 5.54 of Reg.; 2. Make information readily available to worker on drug's: (a) acute and chronic toxicity, including any potential reproductive hazard, (b) acute exposure treatment, and (c) safe handling; 3. Ensure that container of a cytotoxic drug and shelf or bin where it's regularly stored is appropriately labelled; 4. Post clearly visible warning signs that clearly state the identified hazards in all areas where cytotoxic drugs are stored or mixed; 5. Ensure cytotoxic drugs storage and preparation areas are posted with a list of all cytotoxic drugs present in the workplace; 6. When a cytotoxic drug is received, prepared, administered, stored or disposed of, written safe work procedures that are readily available to workers and conspicuously posted must be implemented for receiving, storage, preparation, administration and waste handling; 7. If a worker is exposed to a cytotoxic drug that's a reproductive toxin, employer must develop policy and procedures appropriate to the risk, which may include protective reassignment, that inform workers about the reproductive toxin and identify ways to minimize exposure to the reproductive toxin for a worker who advises the employer of pregnancy or intent to conceive a child; 8. Worker involved in any aspect of handling a cytotoxic drug must receive pre-job education and on-the-job training on (a) known health risks, including any potential reproductive hazards, (b) techniques and procedures for safe handling, (c) proper use of protective equipment and materials, and (d) spill and waste disposal procedures; 9. Worker involved in any aspect of cytotoxic drug handling must be effectively supervised; 10. Employer must maintain a record of all workers who prepare or administer cytotoxic drugs, including the name of the drugs handled, and when practicable, the number of preparations or administrations per week; Exposure records must be maintained for duration of employment plus 10 years, and training records

for 3 years from date training occurred; 11. All mixing, preparation and priming of administration sets with a cytotoxic drug must be performed in one centralized area in a specially designated Class II Type B biological safety cabinet that (a) is exhausted to the outside atmosphere in a manner that prevents recirculation into any work area, (b) has exhaust and ventilation systems that remain in operation long enough to ensure that no contaminants escape from the biological safety cabinet into the workplace, and (c) is equipped with a continuous monitoring device to permit confirmation of adequate airflow and cabinet performance; 12. Safe work procedures must be used for administering cytotoxic drugs; 13. Syringes and intravenous sets used for cytotoxic drugs must have appropriate fittings, such as Luer locking fittings, which prevent accidental disconnection; 14. Adequate PPE must be provided and worn whenever there's a risk of contact with a cytotoxic drug, including (a) medical gloves manufactured and designed for use when handling cytotoxic drugs, (b) a moisture resistant, long-sleeved gown with cuffs, (c) if there's risk of contact with aerosols, an approved respirator, and (d) if there's risk of eye contact, eye and face protection; 15. Used gowns and gloves must not be worn outside the preparation, administration or storage area and must be handled as hazardous waste or contaminated linen and all other non-disposable PPE must be cleaned immediately after use; 16. Eating, drinking, smoking, application of cosmetics or storage of food is prohibited in any area where a cytotoxic drug is mixed, administered or stored; 17. Adequate, leak-proof waste disposal containers, including sharps and solids containers, and distinctive plastic waste bags must be available in every area where cytotoxic drugs are prepared, administered or stored, and all cytotoxic drug-related waste must be placed into these containers or bags; 18. Written emergency procedures to address spills of a cytotoxic drug must be developed and implemented which address requirements for small spill cleanup, both inside and outside the biological safety cabinet, large spill cleanup, and personal

decontamination; and 19. Spill kits, clearly labelled, must be kept in or near cytotoxic drug preparation, administration and storage areas and a sign detailing spill procedures must be posted in all such areas (*OHS Reg, Part 6*)

## **MANITOBA**

OHS regulations don't specifically address cytotoxic drugs

## **NEW BRUNSWICK**

OHS regulations don't specifically address cytotoxic drugs

## **NEWFOUNDLAND**

OHS regulations don't specifically address cytotoxic drugs

## **NOVA SCOTIA**

OHS regulations don't specifically address cytotoxic drugs

## **ONTARIO**

1. Employer must, in consultation JHSC or health and safety rep, develop, establish and put into effect written measures and procedures to protect workers who may be exposed to antineoplastic agents or material or equipment contaminated with antineoplastic agents, including: (a) procedures for storing, preparing, handling, using, transporting and disposing antineoplastic agents and material contaminated with antineoplastic agents; (b) emergency procedures in the event of a worker's exposure to antineoplastic agents by a needle puncture, inhalation or skin contact; (c) procedures for maintenance and disposal of equipment contaminated with antineoplastic agents; (d) measures for use of appropriate engineering controls, work practices, hygiene practices and facilities or PPE; and

(e) measures for use of an appropriate biological safety cabinet for preparation of antineoplastic agents; and 2. Employer must provide training and instruction in the above measures and procedures described in subsection (2) to workers who may be exposed to antineoplastic agents or material or equipment contaminated with antineoplastic agents (OHS Reg. for *Health Care & Residential Facilities*, Sec. 97)

## **PRINCE EDWARD ISLAND**

OHS regulations don't specifically address cytotoxic drugs

## **QUÉBEC**

OHS regulations don't specifically address cytotoxic drugs

## **SASKATCHEWAN**

1. Employer must take all practicable steps to minimize workers' exposure to cytotoxic drugs or materials or equipment contaminated with cytotoxic drugs; 2. If workers prepare parenteral cytotoxic drugs on a frequent and continuing basis, employer must provide, maintain and ensure workers safely use an approved biological safety cabinet that's: (a) inspected and certified by a competent person at least annually and when the biological safety cabinet is moved; and (b) used and maintained according to an approved procedure or the manufacturer's recommendations; 3. Employer must, in consultation with JHSC, develop a written program to protect workers who prepare, administer, handle or use cytotoxic drugs or are likely to be exposed to cytotoxic drugs that includes: (a) measures to identify, store, prepare, administer, handle, use, transport and dispose of cytotoxic drugs and materials contaminated with cytotoxic drugs; (b) emergency steps in the event of: (i) a spill or leak of a cytotoxic drug; or (ii) worker

exposure to cytotoxic drugs by a puncture of the skin, absorption through the skin, contact with an eye, inhalation of drug dust or ingestion of a contaminated substance; (c) methods of maintaining and disposing of equipment contaminated with cytotoxic drugs; (d) engineering controls, work practices, hygiene practices and facilities, approved respiratory protective devices, approved eye or face protectors and other PPE and decontamination materials and equipment appropriate in the circumstances; and (e) use to be made of an approved biological safety cabinet for the preparation of cytotoxic drugs and the methods to be followed in maintaining the cabinet; 4. Employer must implement and ensure all workers who may be exposed to cytotoxic drugs or materials or equipment contaminated with cytotoxic drugs are trained in the program and make a copy of the program readily available for reference by workers (*OHS Regs.*, Sec. 31-5)

## **NORTHWEST TERRITORIES & NUNAVUT**

1. Employer must to the extent that is reasonably possible, take steps to minimize workers' exposure to cytotoxic drugs or materials or equipment contaminated with cytotoxic drugs; 2. If workers prepare parenteral cytotoxic drugs on a frequent and continuing basis, employer must provide, maintain and ensure workers safely use an approved biological safety cabinet that's: (a) inspected and certified by a competent person at least annually and when the biological safety cabinet is moved; and (b) used and maintained according to an approved procedure or the manufacturer's recommendations; 3. Employer must, in consultation with workplace JHSC or safety rep., develop a written program to protect workers who prepare, administer, handle or use cytotoxic drugs or are likely to be exposed to them that includes: (a) measures to identify, store, prepare,

administer, handle, use, transport and dispose of cytotoxic drugs and materials contaminated with them; (b) emergency steps in the event of (i) a spill or leak of a cytotoxic drug, or (ii) worker exposure to cytotoxic drugs by a puncture of the skin, absorption through the skin, contact with an eye, inhalation of drug dust or ingestion of a contaminated substance; (c) methods for maintaining and disposing of equipment contaminated with cytotoxic drugs; (d) details about appropriate engineering controls, work practices, hygiene practices and facilities, approved respiratory protective devices, approved eye or face protectors and other PPE and decontamination materials and equipment that are appropriate in the circumstances; and (e) details of approved biological safety cabinets for the preparation of cytotoxic drugs and the methods for maintaining them; and 4. Employer must: (a) implement the above program; (b) ensure workers who could be exposed to cytotoxic drugs or to materials or equipment contaminated with cytotoxic drugs are trained in it; and (c) make copies of the program readily available for reference by workers. (*OHS Regs.*, Sec. 466)

## **YUKON**

OHS regulations don't specifically address cytotoxic drugs.

TABLE 1

## Personal protective equipment to be worn throughout the medication circuit

Circuit step	Gloves	Gown	Respiratory protection	Face protection	Cap	Shoe covers
Unpacking and cleaning	Yes (2 pair)	Yes				
Sterile preparations	Yes (2 pair)	Yes		Yes	Yes	Yes
Nonsterile preparations						
Counting solid oral forms	Yes (1 pair)	Yes				
Preparing creams, ointments, and oral solutions, and crushing tablets	Yes (2 pair)	Yes				
Route of administration						
Liquid <sup>a</sup>	Yes (1 pair)	Yes		Yes <sup>b,c</sup>		
Solid oral (tablets) <sup>d</sup>	Yes (1 pair)					
Topical (creams, ointments) <sup>b</sup>	Yes (2 pair)	Yes		Yes		
Aerosolized <sup>e</sup>	Yes (1 pair)	Yes	Yes	Yes <sup>b</sup>		
Patient care	Yes (1 pair)	Yes		Yes <sup>b,f</sup>		
Management of						
Extravasation	Yes (1 pair)	Yes				
Contaminated bedding on the wards	Yes (1 pair)	Yes				
Waste collection and transport	Yes (1 pair)					
Spill or damaged or broken container	Yes (2 pair)	Yes	Yes <sup>g</sup>	Yes		Yes <sup>h</sup>
Cleaning of						
Sterile preparation room and airlock	Yes (1 pair)	Yes			Yes	Yes
Preparation cabinets (hoods)	Yes (2 pair)	Yes	Yes	Yes	Yes	Yes
Other oncology pharmacy rooms and care units or clinics	Yes (1 pair)					

<sup>a</sup> Intravenous, subcutaneous, intramuscular, intravesical, intraperitoneal, intrathecal, liquid oral.

<sup>b</sup> If risk of splashing.

<sup>c</sup> For example, bladder installation or nasogastric, gastric, or jejunostomy tube.

<sup>d</sup> Although the risk of contamination with oral medications is minimal, the working group believes that consistency of practice for any handling of cytotoxic drugs is of primary importance, and the preference is to wear a standard chemotherapy glove.

<sup>e</sup> For example, ribavirin, pentamidine (although cytotoxic, they are not neoplastic).

<sup>f</sup> For example, disposal of bodily fluids.

<sup>g</sup> If suspicion of powder or aerosolization is raised.

<sup>h</sup> If on the floor.

Source: [National Centre for Biotechnology Information](#)