

# International Hazard Datasheets on Occupation



## Nurse, intensive-care

### What is a Hazard Datasheet on Occupation?

This datasheet is one of the International Datasheets on Occupations. It is intended for those professionally concerned with health and safety at work: occupational physicians and nurses, safety engineers, hygienists, education and Information specialists, inspectors, employers' representatives, workers' representatives, safety officers and other competent persons.

This datasheet lists, in a standard format, different hazards to which nurse, intensive-cares may be exposed in the course of their normal work. This datasheet is a source of information rather than advice. With the knowledge of what causes injuries and diseases, is easier to design and implement suitable measures towards prevention.

This datasheet consists of four pages:

- Page 1: Information on the most relevant hazards related to the occupation.
- Page 2: A more detailed and systematized presentation on the **different hazards** related to the job with indicators for preventive measures (marked as and explained on the third page).
- Page 3: Suggestions for **preventive measures** for selected hazards.
- Page 4: **Specialized information**, relevant primarily to occupational safety and health professionals and including information such as a brief job description, a list of tasks, notes and references.

### Who is an intensive-care nurse?

An intensive care nurse is a healthcare worker who is a professional registered nurse and works in an intensive-care unit. The job includes receiving patients into the ward, giving them the necessary personal treatment, connecting them to the appropriate medical system (e.g. respiratory, artificial feeding, etc.), conducting a health condition follow-up, and assisting the medical doctor in situations requiring resuscitation and other emergency procedures.

### What is dangerous about this job?

- Intensive-care nurses are exposed to all of the acute hazards existing in the intensive-care facility.
- Intensive-care nurses may be exposed to infectious diseases due to direct contact with patients.
- Intensive-care nurses use cleaning, disinfecting, and sterilizing agents that may damage the skin, mucous membranes, and respiratory system.
- Intensive-care nurses may be exposed to anesthetic gases, drugs, and radiation.
- Intensive-care nurses may be injured by sharp objects (needles, blades, etc.).
- Contact with hot surfaces, faulty electric equipment, etc., may cause skin burns.
- They may suffer from musculoskeletal problems and back pain resulting from the handling of heavy patients. Continuous work while standing or walking causes fatigue and leg problems.
- Intensive-care nurses may suffer from stresses and burnout caused by shift and night work, and by other psychological and organizational factors.

### Hazards related to this job

Specific preventive measures can be seen by clicking on the respective in the third column of the table.

Accident hazards		
	<ul style="list-style-type: none"> <li>• Slips, trips, and falls on wet floors, especially during emergency situations.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Stabs and cuts from sharp objects, especially needle-sticks and cuts by blades.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Burns and scalds from contact with hot sterilizing equipment or hot water and steam pipes.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Electrical shock from faulty or improperly grounded equipment or equipment with faulty insulation.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Injuries to legs and toes caused by falling objects, e.g., medical instruments.</li> </ul>	

	<ul style="list-style-type: none"> <li>Acute back pain resulting from awkward body position or from overexertion when handling heavy patients.</li> </ul>	
<b>Physical hazards</b> 	<ul style="list-style-type: none"> <li>Exposure to radiation from x-ray and radioisotope sources.</li> </ul>	6
<b>Chemical hazards</b> 	<ul style="list-style-type: none"> <li>Danger of exposure to anesthetic gases (ethyl bromide, ethyl chloride, ethyl ether, halothane, nitrous oxide, etc.).</li> </ul>	7
	<ul style="list-style-type: none"> <li>Skin defatting, irritation, and dermatoses because of frequent use of soaps, detergents, disinfectants, etc.</li> </ul>	
	<ul style="list-style-type: none"> <li>Irritation of the eyes, nose, and throat because of exposure to airborne aerosols or contact with droplets of washing and cleaning liquids.</li> </ul>	7 8
	<ul style="list-style-type: none"> <li>Chronic poisoning because of long-term exposure to medications, sterilizing fluids (e.g., glutaraldehyde), anesthetic gases, etc.</li> </ul>	
	<ul style="list-style-type: none"> <li>Latex allergy caused by exposure to natural latex gloves and other medical devices.</li> </ul>	9
<b>Biological hazards</b> 	<ul style="list-style-type: none"> <li>Hazard of contracting a communicable disease from the patients.</li> </ul>	
	<ul style="list-style-type: none"> <li>Infections due to the exposure to blood, body fluids or tissue specimens possibly leading to blood-borne diseases such as HIV, Hepatitis B and Hepatitis C.</li> </ul>	10 11 12 13
<b>Ergonomic, psychosocial and organizational factors</b> 	<ul style="list-style-type: none"> <li>Fatigue and lower back pain due to the handling of heavy patients and to long periods of work in a standing posture.</li> </ul>	14
	<ul style="list-style-type: none"> <li>Stress, strained family relations, and burnout due to shift and night work, overtime work, and contact with sick patients, especially accident victims and their relatives.</li> </ul>	
	<ul style="list-style-type: none"> <li>Exposure to severely traumatized patients, multiple victims of a disaster or catastrophic event or severely violent patients may lead to post-traumatic stress syndrome.</li> </ul>	15

## Preventive measures

- 1 Wear shoes designed for nurses, with non-slip soles.
- 2 Handle sharp objects with extreme care; use special safety receptacles to store used hypodermic needles until disposal. Use safety needles, if available.
- 3 Install ground fault circuit interrupters; call a qualified electrician to test and repair faulty or suspect equipment.
- 4 Comply with all safety instructions on the installation and periodic inspection of electrical medical equipment.
- 5 Keep all passages clearly visible and uncluttered.
- 6 Wear a radiation dosimeter (badge or other) when exposed to radiation; comply with all safety instructions to reduce exposure to a minimum.
- 7 Install air conditioning with effective general ventilation in the intensive-care unit to reduce heat stress and remove odors, gases, and vapors.
- 8 Provide eye wash bottles or fountains.

Nurses sensitive to natural latex must use non-latex or powder-free latex gloves and avoid contact with

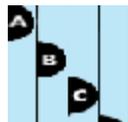
- 9 other latex products.
- 10 Follow established appropriate infection control precautions assuming blood, body fluids and tissue are infectious
- 11 Routinely use barriers (such as gloves, eye protection (goggles or face shields) and gowns)
- 12 Wash hands and other exposed skin surfaces after coming into contact with blood or body fluids
- 13 Follow appropriate procedures in handling and disposing of sharp instruments or needles
- 14 Provide lifting aids for the lifting and transport of heavy patients; consult an occupational safety specialist on the safe handling of heavy patients.
- 15 Procedures and counselling services should be available to workers exposed to post-traumatic stress syndrome

## Specialized information

**Synonyms** Intensive-care room/unit/ward nurse

### Definitions and/or description

An intensive-care nurse is a professional registered nurse who works in an intensive-care unit. Receives the patient into the ward; gives him/her the necessary personal treatment; connects him, according to need, to the appropriate medical system (e.g. respiratory instruments, artificial-feeding set-up, blood and plasma transfusion system, measuring and monitoring systems, etc.); conducts a follow-up of his health condition and has to be aware of any change in the health situation of the patient. Assists the medical doctor in the treatment in extreme events of required resuscitation and in connecting into the necessary instrument systems. This nurse has to comply with all the educational, legal, and training requirements to practice as a professional nurse, as required by a State Board of Nursing or similar licensing body.



### Related and specific occupations

Other patient-care nursing occupations classified according to ward, e.g. operating-room nurse, intensive-care nurse, pediatric nurse, etc.

### Primary equipment used

Catheters; masks; medical supplies (syringes, needles, bandages, gauze, sterile pads, scalpels, plaster dressings, etc.); monitoring equipment; sterilization equipment; stethoscope; sphygmomanometer; thermometers; watch

### Workplaces where the occupation is common

Intensive-care unit in a hospital

### References

Encyclopaedia of Occupational Health and Safety, 4th Ed., ILO, Geneva, 1998, Vol.1, p. 6.12; Vol.2, p. 97.34; 99.4.



Encyclopaedia of Occupational Health and Safety, 3rd Ed., ILO, Geneva, 1983, Vol.1, p. 150, Vol.2, 1480-1482.

Occupational Disease - a Guide to their Prevention. DHEW- NIOSH Pub. 77-181,1977 (Multiple pages - see entry "Nurses" in index).

Production of this hazard hatasheet was sponsored by Israel Institute for Occupational Safety and Hygiene