

# Study on Occupational Hazards and Self-Protection in Operating Room Nurses

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**Abstract:** Objective To explore the particularity of the operating room environment, enhance the awareness of nurses in the operating room and reduce occupational hazards. Methods By referring to relevant literature research, it is summarized, analyzed, summarized and summarized. Results By paying attention to self-protection and taking effective measures to reduce occupational hazards in the operating room. Conclusion The nurses in the operating room should pay attention to their own protection, which is a more effective way to reduce occupational hazards.

## 1. Introduction

The operating room is the most important place in the surgical treatment of patients [1], the operating room has a fast pace of work, and there are many types of diseases, and it is also the most concentrated place for various pathogens. Due to its uniqueness, the operating room is relatively special, and the operating room staff are often exposed to risk factors such as blood, body fluid contamination, sharp damage, and harmful gases of radiation [2, 3], and due to the heavy workload in the operating room. The rhythm is tight and the environment is high, which makes the nurses in the operating room suffer from physical and mental health. Therefore, the nurses in the operating room must have a high degree of protection awareness, pay attention to the existence of occupational hazards in the operating room, take effective measures, pay attention to their own protection, and reduce occupational injuries. .

## 2. Special operating room and special instrument use

The operating room is a special working environment [4], disinfection of surgical rooms and surgical items, soaking of specimens, etc., using volatile chemical disinfectants such as formalin and iodine. When the environment is polluted for a long time, the toxic effect of the surgical staff is mixed with several harmful substances for a long time, and the clinical symptoms caused by the environmental diseases are not typical. Must pay attention to and protect.

Electrical appliances used in the operating room: noise caused by ventilators, monitors, suction devices, etc., due to our long-term contact, causing psychological strain and distraction, affecting the quality of work, and the volume is placed in low decibels during use.

Use of precision instruments during surgery: Microscopes, glass-cutters, and super-emulsions have potential hazards of static electricity to prevent electric shock and burns from occurring on the ground.

When using the C-arm, the radiation to the human body should use lead clothing and lead shielding.

The application of ultraviolet light and laser surgery causes damage to the skin and eyes of workers.

## 3. Use of sharp instruments in the operating room

Operating room nurses often come into contact with the patient's blood, body fluids, secretions, needle stick injuries during surgery,

Knife cuts, blood splashes into the skin and eyes and other accidental injuries. Especially

hepatitis B virus, hepatitis C

The chances of inflammation and HIV transmission through blood-borne diseases are higher than in the general population [5, 6].

#### **4. The particularity of the operating room**

Due to the large workload of the operating room, physical fatigue, stress, and continuous work in a closed environment

The body is in a chronic hypoxia state, intense work, concentration, and these high-intensity work

Make the nurse feel psychologically anxious and tired of work.

The duration of the operation is uncertain. There is no special situation in the middle of the process. The hand washing nurse will not replace it.

Standing and long-term fasting work have occupational hazards to the human body.

#### **5. Self-protection measures**

Self-protection against infectious factors

Know the patient's condition before surgery, and take precautions against hepatitis B and hepatitis C positive patients.

The patient's infection is indicated on the operation list; the operation is performed in the infected operation room; the staff should do well

Self-examination, hand skin damage is temporarily unable to participate in surgery. After the contamination surgery, it is treated as usual. One person, one use

Replacement, the dressing used for tuberculosis hepatitis B is filled into the bag of yellow bag, and the mouth of the yellow plastic bag is forbidden to open.

Law burning [6. The instrument used was disinfected by supplying 2000 mg/L of effective chlorine and soaking in disinfectant for 30 min.

The floor is mopped with a mop and rag containing effective chlorine 2000mg/L disinfectant for half an hour, then cleaned and spared.

It should be disinfected. The operation room and supplies should be treated in time for air culture, and can be used after passing the test.

Treatment of accidental injury from surgical instruments: nurses in the operating room should be strictly regulated to avoid sharps

Mechanical damage, damage to contaminated equipment, disinfection of wounds should be promptly treated.

The dressing used is incinerated, the equipment and the ground are specially treated.

Correctly recognize the mental stress caused by various factors in the work, prevent and improve through psychological adjustment

Self-cultural quality, enrich your spare time, and cultivate healthy and uplifting life. Communicate with doctors often, so that

They recognize the importance of the safety of operating room care. Master the skills of the specialist, the nurse can take the self

Letter and enthusiasm to cooperate with every operation.

Electric knife, smoke generated by electrocoagulation, exhaust gas from CO<sub>2</sub> exhaled by staff in the operation room and patients, long-term connection

Touch can cause spontaneous abortion, the operating room is a fully enclosed space, air purification requires laminar flow, long-term

Air conditioning, cooling and heating to maintain a constant temperature can cause rheumatism, joint pain, and insufficient oxygen content in the closed operation room.

Hypoxia causes headache, dizziness, and sleepiness.

Because of the disinfection of surgical items and the soaking of specimens, volatile chemicals such as formalin and glutaraldehyde should be used.

These disinfectants have certain adverse effects on the skin, nervous system, gastrointestinal tract and respiratory tract of the human body.

Lead to the decline of immunity, bone cement in joint replacement and orthopedic surgery, bone cement pungent

The smell will make the staff working in the entire operation room feel uncomfortable, and dizziness, nausea, and memory will occur during prolonged contact.

Reliance of the memory, bone cement degradation of contact lenses lead to blurred vision, and even damage the cornea, the use of bone cement hands

You can't wear contact lenses.

Strict infection surgery management system, except for infection surgery, indicating the type of infection on the operation notice, emergency surgery

Should be treated as an infection, the special infection surgery should be notified to the operating room in advance, so as to arrange the necessary items reasonably.

Strictly follow the operating room handling principles. Special infection surgery should be performed in the infection room, hepatitis B antigen positive

Surgery strengthens management to prevent pollution.

Prevent unnecessary noise. The operation room is the most noisy during the preparation phase, and the intraoperative noise is about 65 decibels from the ventilator.

The suction device is about 73 decibels, and the operating room staff talks 60 decibels. These noises lead to judgment and sustainability.

And memory loss, also affect the smooth progress of surgery.

## **6. Protection against occupational diseases**

Conditions, saving physical strength and energy, improving working conditions, alternating lower limbs during surgery, and strengthening physical exercise.

Wearing elastic socks can effectively prevent varicose veins in the lower extremities.

For the possible diseases, prevent active treatment as soon as possible, arrange diet reasonably, and work in the operating room.

Breakfast should eat high-calorie, nutrient-rich solid foods, prolong gastric emptying time, appropriate for major surgery

It is unfavorable for the people to eat. Nurses work long hours, are strong, and sometimes have difficulty caring for their families.

Family members should be fully understood, and they should learn to adjust their mentality and maintain good interpersonal relationships.

Develop a protective system (1) All patients' blood, body fluids and items contaminated by blood and body fluids are

It is considered to be a contagious source material, and medical personnel must take protective measures when using it to properly use personal protective equipment. (2) The aseptic operating table is specially equipped with the sharpening area. Most of the sharp injuries are caused by the contact between the hand and the hand in the transmission. Therefore, the sharps such as scalpels and scissors must be transmitted with the curved disc [7]. (3) In addition to CO2 lasers, you can wear special goggles in order to prevent accidental damage to the eyes [8]. (4) For the operation of urology, obstetrics and gynecology, orthopedic arthroscopy and other intraoperative fluids, the medical staff should wear disposable aprons and waterproof shoe covers. (5) For endoscopic surgery using carbon dioxide, an exhaust pipe with a carbon dioxide fumes under the endoscope must be used to avoid occupational exposure of surgical smoke to the surgeon. (6) Pay attention to radiation protection. Performing special person shooting, special person responsible for management, configuration of adequate protective equipment, surgical personnel must wear X-ray personal dose detector. Reason analysis for exceeding the standard. (7) Select the appropriate elastic socks, the scientific elastic stockings pressure should be 15~20mmHg, too tight will cause blood circulation disorder, too loose to achieve the purpose of promoting venous return, suitable pressure of the elastic stockings can prevent feet and legs fatigue.

With the development of medical science and the advancement of the operating room nursing profession, we should pay attention to operating room protection.

The occupational protection of the taxi, the development of a feasible and scientific management method, so that the operating room nurses master their own duties

Industry characteristics, strict and cautious, constantly improve self-protection, improve their physical quality, professional quality, in order to protect

The successful completion of the surgical task of the hospital.

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