

PROCEDURE FOR CARE OF SPECIAL OPERATING ROOM EQUIPMENT

1. Preparation of New Rubber Tubing:

It is extremely important to secure rubber tubing made from pur gum rubber of the highest possible standard. Ordinary tubing contains sulphur used in its manufacture, and when there is any question as to the presence of free sulphur in the tubing, it should be boiled for 5 minutes in a 0.1% solution of sodium hydroxide, later circulating the hot solution through the tubing by means of a syringe. Ordinarily, using good rubber, the following procedure will suffice:

Wash the new tubing thoroughly but rapidly by passing through it once, by means of a syringe, a flush of ether, and allow to dry.

Wash thoroughly with soap and water and rinse well.

Boil the tubing in 5% solution of sodium bicarbonate for one hour. During this process circulate the hot fluid through the tubing with a syringe, doing this several times.

Drain, and rinse with distilled water. Pass live steam through the tubing for one minute.

Attach a faucet and allow water to run through tubing for two hours, preferably for three hours.

Drain, and force at least one liter of distilled water through the tubing. Allow to drain.

Prepare for sterilization by autoclaving.

2. Preparation of Used Rubber Tubing:

In preparing ordinary intravenous sets, the sets should be cleaned and labeled for the same use as they were previously used. It is then a matter of cleansing and sterilizing both rubber, glass, and metal (the stop cock or clamp). Wash the entire set thoroughly in hot soap suds. Rinse in tap water, and drain. Pass live steam through the set for one minute. Attach to the faucet and allow tap water to run through it for 30 minutes. Force at least one liter of distilled water through the set. Drain. Prepare for sterilization by autoclaving.

If it is known or suspected that used tubing may have been used with any drug, such as histamine, neosalvarsan, etc., prepare the tubing the same as for new tubing.

3. Preparation of Used Transfusion Sets:

Every person having to do with blood transfusions must be instructed to rinse the entire set thoroughly immediately after its use, and the set should be sent without delay to the station where it is to be prepared for next use. This rule must be adhered to absolutely.

Rinse the entire set in clear, cold tap water. Force tap water through it by means of a bulb syringe. Remove any clots visible manually. Inspect particularly the glass portions inserted in the course of the tubing. Wash the entire set in warm soap suds. Rinse in tap water, and drain. Pass live steam through the set for one minute. Attach to faucet and allow tap water to run through the set for 30 minutes. Force at least one liter of distilled water through the set. Drain. Prepare for sterilization by autoclaving.

4. Miller-Abbott Tubes, etc.:

Tubes used for abdominal drainage, Levine tubes, nasal catheters for oxygen administration, Rehfus tubes, and other such rubber tubing may collect in or upon them all sorts of foreign material. This must be removed by forceful syringing with tap water and thorough washing in hot soap suds. If they have been additionally contaminated by pus they must be treated singly and separate from the general batch of tubing to be cleansed. All such tubing should be rinsed with distilled water after the soapy wash, and autoclaved in the usual manner.

5. Storage of Tubing:

All tubing must be clean, if not sterile, when it is put away. Furthermore, it must be dry, it must not be kinked (may be wound about a folded towel), and should be stored in a cool, dry place.

6. Care of Rubber Gloves:

As soon as possible after use, rubber gloves are put into cold plain water. It is seldom possible to obtain the cooperation of the surgeons in getting them to wash the gloves in cold water while still on their hands at the end of an operation. Wash gloves in hot soap suds, rinse well in tap water, hang up to dry, and reverse in order to dry the inside. Test the dry unsterile gloves. Mend those that are torn, and from there on keep the mended ones separate from the good ones. Powder gloves inside and out. Place a 3 x 3 gauze sponge within the glove, first turning the cuff back 2 inches. Place in envelope, wrap and autoclave.

(See Preparation of Talcum Powder, this section)

7. Needles (hollow):

Remove all gross foreign material by soap and water. Rinse in tap water. Place needle and stylet in distilled water, and force water through needle with needle blower. Remove from water, and blow air through needle until it is dry. Test for dullness or hooked end on tight wad of cotton. Sharpen if necessary. Put a very small drop of 3-inl oil in end of needle and run it through by inserting dry stylet. Remove stylet. With needle blower rinse needle well with ether. Dry by passing air through needle. Insert dry, uncoiled stylet from the top. Prepare suitably sized test tube by packing clean cotton in bottom, and then insert the needle, or needles, sharp end foremost. Close with a firm cotton plug, first putting a paper label in the tube, showing the needle size.

In autoclaving needles in tubes, the tube must be placed on its side in a horizontal position in the autoclave, else the air will not be driven out and steam cannot enter. Many such test tubes can be packed into one cannister and the whole batch autoclaved at one time. Also, ordinary petri dishes can be prepared with a thin layer of cotton in the bottom and a ball of cotton in the center, into which the ends of small needles, such as hypo needles can be placed. The cover is removed during autoclaving but is autoclaved separately at the same time and placed on the dish upon removal from the autoclave.

8. Care of Furniture, Tables, Spot Lights, etc.:

All the furniture and fixtures of the operating suite are kept in order by the enlisted personnel, and the condition of this equipment will be subject to inspection at regular intervals. Soap and water, bon ami, and metal polisher is available and is to be used freely to keep such equipment scrupulously clean at all times. Movable parts must be kept well lubricated. Dust is removed carefully every morning at least one-half an hour before any room is set up for an operation, and glass surfaces, as spot lights, are to be cleansed with chamois. Any necessary repairs or replacements will be effected as soon as possible after the need of such is noted.

Adhesive tape MUST NOT be stuck indiscriminately upon the walls, carts, or any fixtures or furniture. Not only is it a waste of supply, but it is a sign of poor housekeeping, and detracts greatly from the neatness of the room.

All electrical outlets and appliances must be inspected at least once every week, to make sure that connections are safe and in good working condition. No enlisted man will take it upon himself to repair or adjust any electrical or other complicated apparatus in the operating room. All such repairs must be reported to the nurse in charge of surgery.

9. Preservation of Linen:

Towels in surgery have one of two uses: either they are hand or bath towels, or they are to be used in the preparation of supplies and the draping of operative sites. TOWELS ARE NEVER CLEANING CLOTHES UNLESS IRREPARABLY WORN. Burning of linen during sterilization, ruination by acid, unwarranted rough handling of any linen supply, cutting of sheet drapes by the surgeons, and other unnecessary destruction must be controlled by the entire personnel working in surgery, including medical officers, nurses, and enlisted men. This in the interest of the smooth functioning of the operating suite.

Whenever it is feasible, and the volume of work allows, the chief nurse in surgery will attempt to supply specially tailored sheet drapes where such is deemed necessary and can be supplied. All surgeons are reminded that this hospital can not be equipped in the same manner as a high-class, private, well-endowed hospital in civilian practice.

10. Such special equipment as the urology table, the surgical x-ray unit, the eye magnets, the electro-surgical units, the anesthesia apparatus, the plaster room with its contents, and other pieces which are more or less assigned to a special surgical section and used by that section more than any other section, is kept in specified locations in the operating suite, and must always be returned to that place after use. The chief nurse in surgery must be aware of the fact when such equipment is being used by any other section than the usual one. The chief of each section of surgery must feel a certain responsibility in the maintenance of such equipment in proper working order.

11. Preparation of Talcum Powder:

Putup in bulk in any type of container, circulation of steam in the pressure sterilizer is impossible and steam sterilization should never be permitted. Even in the hot air over, because heat is transmitted through the air-filled powder so slowly, exposure should be not less than two hours at 320 degrees F. Containers for talcum in bulk should never be large because of this slow heating factor. Small salt shakers may be one-half filled with talcum and autoclaved for thirty minutes at 250 degrees F. with the top of the shaker removed.

Loose talcum, in thin layers within paper of muslin envelopes, may be autoclaved with safety, holding the temperature at 254 degrees F. for 30 minutes, with a long period of vacuum for thorough drying.

The loose powder on rubber gloves is readily sterilized by the usual autoclaving of the gloves.

12. Glassware of all types:

All types of glass articles used in surgery are expensive. This is true because they frequently are of specially made glass, are accurately calibrated, are transported with difficulty, and are made for special and complicated uses. Especially because replacement is difficult, all operating room personnel is urged to exert care in the handling of glassware.

For ordinary cleansing of glassware, soap and water scrub followed by a rinse in tap water (distilled water in special instances), and drying without wiping with a cloth is the proper procedure. Autoclaving is the ideal method of sterilization. Cracked glassware can never be used with safety where sterility is necessary.

The formula for the common chemical glass cleanser (never to be used where enameled or painted figures or letters are present) is:

Potassium bichromate	1 part
Sulphuric acid	1 part
Distilled water	10 parts

Dissolve the potassium bichromate in distilled water with heat, in a large (5 ~~or~~ 6 liter) flask. Cool. Cautiously add the sulphuric acid to the solution.

9. Preservation of Linen:

Towels in surgery have one of two uses: either they are hand or bath towels or they are to be used in the preparation of supplies and the draping of the sites. Towels are never cleaned unless irreparably worn. Bluing of Always pour the acid into the solution, never the reverse. The solution can be used over and over until it becomes green which indicates that the chromic acid has been converted into chromate and should be discarded.

This solution should be used on all NEW GLASSWARE, except that which has enameled or painted figures or letters on it. Whenever it is feasible, and deemed surgery will attempt to supply specially tailored sheet drapes where such is necessary and can be applied. All surgeons are reminded that this hospital is not equipped in the same manner as a high-class, private, well-endowed hospital in civilian practice.

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- Potassium dichromate 1 part
- Sulphuric acid 1 part
- Distilled water 10 parts

Dissolve the potassium dichromate in distilled water with heat, in a large (5 or 6 liter) flask. Cool. Gently add the sulphuric acid to the solution.