

mercurial column "index" or "pointer" contained in the bulb expands on contact with the heat of the body and runs up the "bore" to the degree signifying that heat, and upon its accuracy as an indicator, depends the knowledge of the presence of a temperature. That the mercury remains stationary, owing to the introduction of self-registering thermometers, clearly shows the necessity, after noting the registration, of shaking the mercury down into the bulb again. The greatest care must be exercised in this respect; never use twice without shaking thoroughly, and the most reliable way is to have the index down to 95 deg. There is a right and a wrong way even to do this, and nurses and students should be taught early in their training not to use the arm so much as the wrist; it is much more expeditious, and also much less risk is run in breaking them. Take the stem firmly between the finger and thumb of the right hand, enveloping the end of it with the remaining fingers, when two or three quick, jerky movements are immediately effectual. The impression very commonly exists that a thermometer can be accurately tested by placing it in warm water and comparing it with another certified clinical thermometer. This, however, is an entirely mistaken notion, as practically no two thermometers are alike as regards conductivity, and one cannot be sure of the constant temperature of the water unless a standard instrument as previously described is used, and then it requires the greatest technical skill and experience.

There are eight respective stages in the construction of thermometers:—

1. The glass tubing ready for bulb to be blown.
2. The bulb blown.
3. The bulb then half filled with mercury.
4. The bulb then quite filled with mercury.
5. They are then deprived of any air or dampness ready for contracting.
6. Contracted.
7. Finished ready for engraving.
8. Finally finished ready for use.

When wanted for professional use they should be placed between the folds of the skin of the armpit or groin, in the mouth, rectum, or vagina.

1. In the armpit (axilla) the patient must be directed to hold it firmly by crossing the arm over the chest; if weak or unconscious, the nurse should do this, and, if necessary, hold it there. Before inserting, wipe away any perspiration with a dry, warm towel. It has been known to get broken even here, not only injuring the axilla, but severing the axillary artery, thus causing severe hæmorrhage.

2. In the groin, the patient must cross one leg over the other.

3. In the mouth, close the lips after the bulb has been carefully placed under one side of the tongue, or else the teeth will be closed upon it with disastrous results.

4. In the rectum for children and unconscious

patients, watched all the time, as easily broken with the least movement, mercury and glass disappearing into the bowel, causing serious complications and danger to life.

5. In the vagina on exceptional occasions.

Temperatures must always be taken in the same place; if begun in the axilla, continued there, and so on. To gain a steady temperature, the armpit or mouth should be kept closed from ten to fifteen minutes before insertion, and for very careful observation the index should remain stationary for five minutes. Should there be any doubt whatever if the glass had moved, if unexpectedly high or low, if the patient seems to have interfered with it, insert a second, or even a third time.

Temperatures should be taken regularly; if only necessary twice in the twenty-four hours, in the morning between six and eight, in the evening about 6 p.m., when the temperature is highest. In very serious illness, and after bad operations, take every four hours—10 a.m., 2 p.m., 6 p.m., 10 p.m., 2 a.m., 6 a.m.—the generally regulated hours.

When not in use, thermometers should be carefully washed and kept in an antiseptic solution, preferably carbolic or formalin. Owing to their fragileness, a piece of cotton-wool should be placed in the vessel they are put into. A few drops of formalin, renewed every two or three days, on the wool in a thermometer case is a safety guard when carried in the pocket from house to house. In the ward with several in use a small vase is handy. A later invention is a stand for holding separate test tubes filled with a solution, into each of which a thermometer can be placed, bulb downwards. A small india-rubber cap is fixed to the end of each to take hold of them by.

When important to have a single one for some infectious case, a small specimen glass is generally used.

The recording of temperatures taken by the clinical thermometer is made easy to the professional nurse by the clinical chart, costing 1d. each. The dots must not be too large nor too small, the lines fine and straight, figures clear, and any out-of-the-way details, such as the sponging of typhoids, the falling of the uterus into its normal position after labour, being clearly defined in red ink. The chart of many years' standing is likely to be superseded by a new one,* suggested by A. W. Mayo Robson, Esq., F.R.C.S., in which lines are used for pulse and respiration, as well as temperature, showing at a glance any variation in the condition of a patient.

"Rome was not built in a day," neither was the clinical thermometer, and boon, as it doubtless is, to the sick room, it is one the medical profession and nurses have not always possessed, at least in its present-day perfection. For many years thermometers of kinds have been in use; one of the

* This has been used for years in London hospitals.—Ed.

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