

Is Your Mercury Sphyg. Accurate?

Over 100 years have passed since Dr. Nikolai Korotkov, a Russian doctor introduced his theory of blood pressure measurement. Since then, the mercury sphygmomanometer has been used as the gold standard of blood pressure measurement.

Recently, awareness of the issue of environmental conservation has been increasing and the use of mercury has become a worldwide concern. However, mercury sphygmomanometers are still being used daily even in some modern countries and many doctors do not hesitate to place their absolute trust in these mercury columns.

But we are asking you to consider how reliable your mercury sphygmomanometer really is.

Even though your mercury sphyg. is regularly calibrated by your technician (as illustrated in Figure 1), it is common to overlook the following important point:

"Is the drop speed of your mercury sphyg. sluggish?"

Official Japanese guidelines state that a mercury sphyg. should adhere strictly to the following:

1. Mercury should always remain at zero (0) when the sphyg. is vertical.
2. Inflate the cuff to 200mmHg and close the exhaust valve completely. After 3 minutes, the reading should not drop more than 2mmHg (to 198mmHg).
3. The dropping speed from 200mmHg to 0mmHg should be about 1 second when the air line tubing is removed from the mercury container." (see Figure 2)

If the drop speed of your sphyg. takes more than 1 second, you should be concerned about the reliability of your sphyg.'s blood pressure values because if the drop speed is too slow, it would be easy to make a mistake and overestimate a patient's blood pressure.

This slow drop of mercury can be caused by the following:

1. Filter clogging
2. Contamination of glass tube
3. Dust or air in mercury

The first reason is easily visible. There are two filters in a mercury sphyg. (see figure 2) and the area at the top of glass tube can become clogged very easily. Once mercury touches the filter following over-inflation or improper handling (leaving mercury in the glass tube and not returning it to the mercury container), the filter clogs. As the result, the flow of air is impeded and the drop speed of the mercury slows down.

The second reason is due to the fact that mercury is a heavy metal and contains impure material, which contaminates the glass tubing over a prolonged period of time. This clogging of the tubing slows down the mercury.

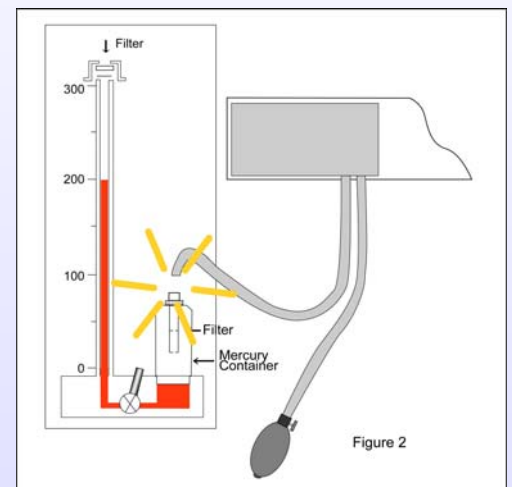
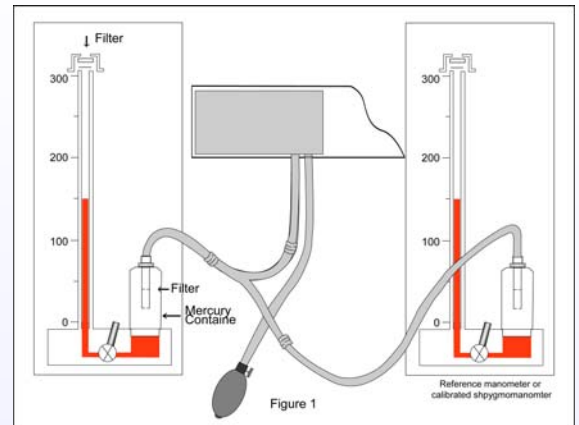
The third reason is caused by the surrounding environment and improper handling of a mercury column. Dust comes through the air line (bulb – bladder – tubing) and occasionally a piece of latex from the bladder can clog the filter. The movement of a portable mercury sphyg. without transferring the mercury back into the container and leaving the valve open can produce an air bubble in the mercury.

Once again, ask yourself if your mercury sphyg. is accurate.

We ask you to consider our UM-101 Mercury-Free Sphygmomanometer.

1. Mercury free (protect your patients, yourself, your staff and your local environment)
2. You are free from all of the above concerns with our Mercury-Free sphyg.
3. The Mercury-Free sphyg. is as accurate as a mercury column (No training is necessary)

The UM-101. The only real mercury-free sphygmomanometer for you.



UM-101