

**Knowledge domain: Plumbing**  
**Unit: Blockages**  
**Skill: Cleaning Valves and Tubes**

**Tools and Parts Required:**

- 1) BP Apparatus or Stethoscope
- 2) Water
- 3) Soft, lint-free cloth or Wipes
- 4) Steel wire brush
- 5) Long metal wire

**Introduction**

There are many potential reasons a BP apparatus does not function properly. One common problem is blockages in the tube or valve. Valves are inside blood pressure apparatuses. Valves control the pressure in the cuff. Sometimes dirt obstructs the valves. The dirt inhibits the apparatus from working correctly. The valves must be cleaned often to remove dirt. Sometimes, dirt obstructs the tubes of the BP apparatus. The tubes occasionally need to be cleaned.

**Example**

Below is a picture of a BP apparatus. The BP apparatus has been disassembled for cleaning.



**Identification and Diagnosis**

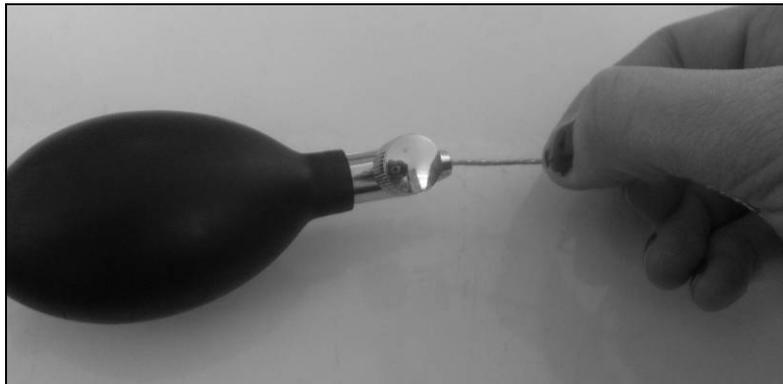
Test the BP apparatus for accuracy. Use the column of water approach (described in the BTA skill *Mechanical-Calibration-BP Apparatus*). If the BP apparatus does not give accurate readings, check for leaks. Use the BTA skill *Plumbing-Leaking-Holes* to identify holes. Repair leaks. If there is no leak, there may be a blockage.

## Procedure

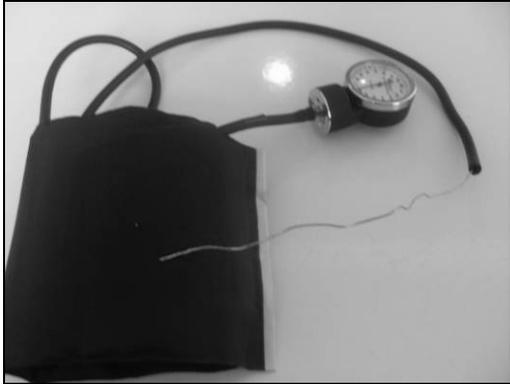
Carefully separate the bulb and the tube. Carefully separate the manometer and the tube. Use a damp cloth to clean the valve. Use the cloth to gently rub the valve several times. If you identify mineral build-up, refer to the BTA skill *Plumbing-Blockages-Descaling*.



If you identify non-mineral build-up, use a steel wire brush to clean the valve. Insert the steel wire brush into the valve to unclog the airway. Use the steel wire brush to rub away dirt build-up.



Sometimes dirt accumulates in the tube, too. The dirt impedes air flow through the tube. To remove the dirt, insert a long wire into the open tube end. Gently push the wire into the tube until the wire reaches the cuff. Pull out the wire.

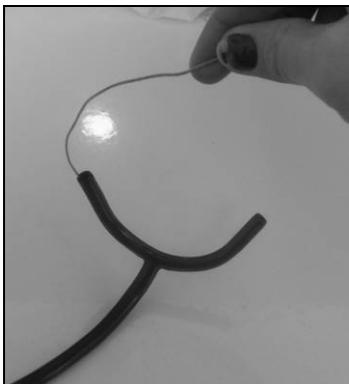


Reattach the bulb to the tube. Reattach the manometer to the tube. Test the accuracy of the BP apparatus using the column of water approach.

Stethoscopes may also acquire blockages. To remove blockage, first remove the metal earpiece from the tube.



Use a steel wire brush to clean the earpiece and tube. If the blockage occurs in the middle of the tube, insert a long wire. Push the wire inside the tube. The wire eliminates blockages.



Reattach the earpiece before returning the stethoscope to service.

**Exercise**

Your instructor will give you a BP apparatus. Clean the valve and tube. Use a damp cloth and a steel wire brush.

Your instructor must verify your work before you continue.

**Preventative Maintenance and Calibration**

See the module called Calibrating a BP Apparatus for more information.

Always calibrate every medical device before returning it to use.