

**MEASURING BLOOD PRESSURE USING  
AUTOMATED DIGITAL BLOOD PRESSURE MONITOR**

# **MEASURING BLOOD PRESSURE USING AUTOMATED DIGITAL BLOOD PRESSURE MONITOR**

**Traditionally blood pressure is measured using mercury manometer. Physicians get adequate training in measurement of BP using the mercury manometer and stethoscope.**

**In the hands of trained physicians mercury manometer remains an excellent instrument for obtaining accurate and replicable measurement of blood pressure. However in recent years there have been concerns about environmental hazards posed by use of mercury and a tendency to look for alternative instruments for measuring blood pressure.**

**The aneroid blood pressure monitors have been used in many health care setting for the last few decades but remains the second choice of trained physicians.**

# **MEASURING BLOOD PRESSURE USING AUTOMATED DIGITAL BLOOD PRESSURE MONITOR**

Automatic digital blood pressure monitors are the preferred instrument for use when persons with hypertension monitor their BP and seek medical care when it is not under control or paramedical persons with limited training are given the responsibility of measuring blood pressure for health and nutrition surveys.

The instrument is fully automated and monitor provides the systolic, diastolic blood pressure and pulse rate reading.

In most surveys British Hypertension Society or European hypertension society validated brand of digital blood pressure monitors are being used .

Unlike other instruments used in surveys, individual BP monitors cannot be not tested for accuracy against the standard BP apparatus, because the procedure is cumbersome and is considered redundant as these machines have been validated by the manufacturer and certified by BHS/EHS for clinical use .

# **DIGITAL BLOOD PRESSURE MONITOR**

**Digital blood pressure monitor approved by European Society of Hypertension (EHS) and British Hypertension Society (BHS)**

**Specifications:**

**Measuring method: Oscillometric system**

**Indication: Digital display**

**Range: Blood Pressure: 40- 240mm Hg,**

**Pulse: 40-199beat/min**

**Measure twice with 5 min interval and record both measurements**

**Accuracy checking of Instruments: certified by manufacturer as BHS / EHS complaint**

# MEASURING BLOOD PRESSURE USING AUTOMATED DIGITAL BLOOD PRESSURE MONITOR



## **PROCEDURE FOR MEASURING BLOOD PRESSURE**

**Insert the air plug into the air jack.**

**The instrument should be on a level with the heart of the person whose BP is to be measured.**

**Put the person's arm through the cuff loops.**

**Position the arm correctly – The bottom edge of the cuff should be 1 or 2 cm above the elbow.**

**Marker (arrow under tube) is centered on the middle of inner arm.**

**Close the Velcro fastener when the cuff snugly encircles upper arm.**

**Press the START / STOP button.**

**Note down the reading of systolic, diastolic pressure, pulse rate**

**Take the reading again five minutes later and note the readings and remove cuff.**

**Take the average of two BP readings is the BP of the individual**

# **PROCEDURE FOR MEASURING BLOOD PRESSURE- POSITIONING OF THE ARM**



**Person sits on a chair.**

**Left arm is comfortably resting on the table.**

**The heart, the left arm and the digital BP apparatus are in the same horizontal plane.**



## WRAPPING THE CUFF AROUND THE ARM



**Put the person's arm through the cuff loops.**

**Position the arm correctly – The bottom edge of the cuff should be 1 or 2 cm above the elbow.**





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**Marker (arrow under tube) is centered on the middle of inner arm.**

# BP MEASUREMENT



Cuff of the BP apparatus has been snugly wound round the upper arm .

Start button has been pressed and the cuff is inflating automatically



**THE CUFF IS INFLATING**



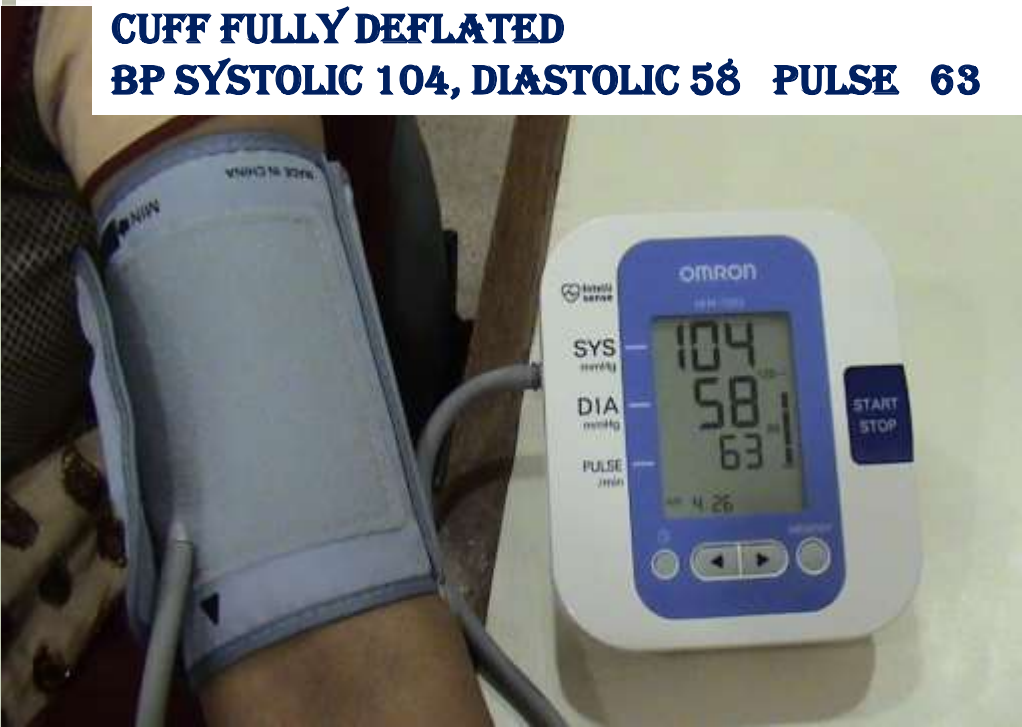
**AFTER REACHING THE REQUIRED LEVEL OF INFLATION, THE CUFF WILL START TO DEFLATE AUTOMATICALLY.**

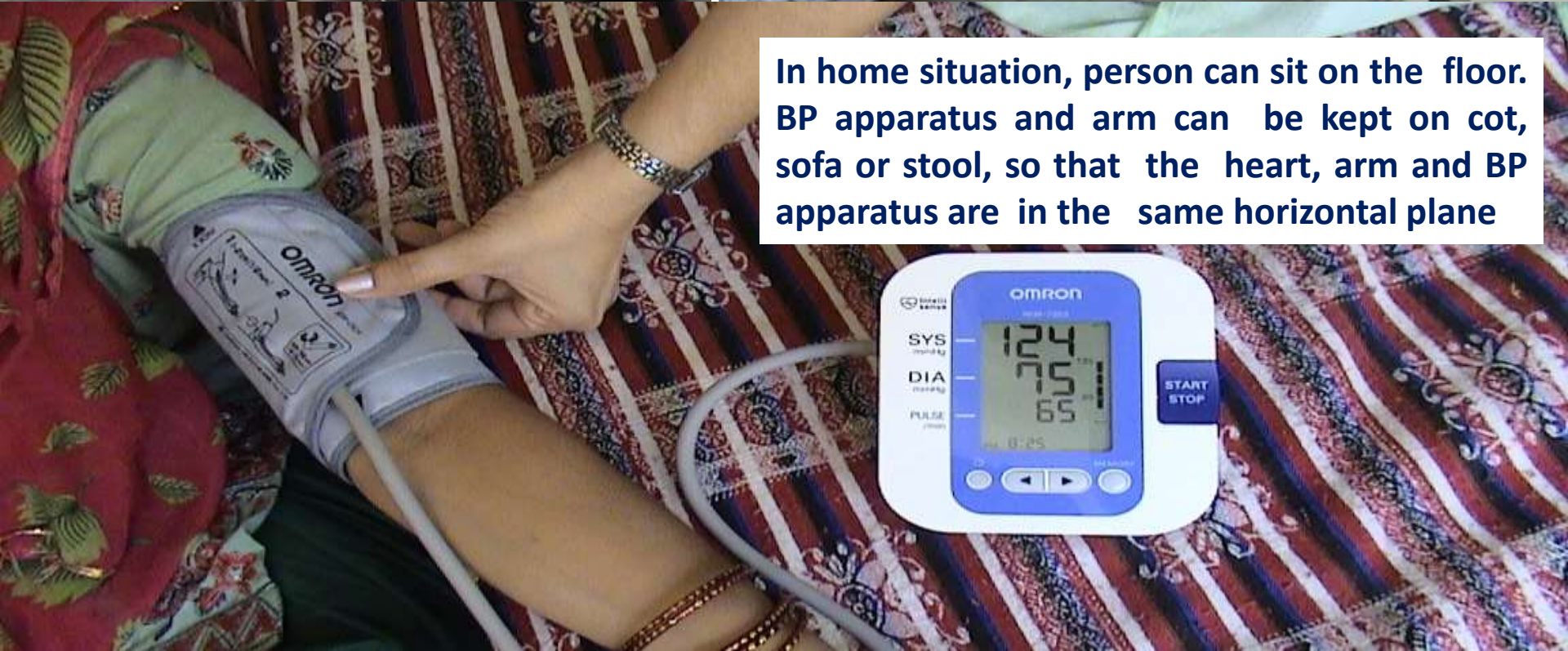


**THE CUFF IS DEFLATING. WAIT FOR COMPLETE DEFLATION**



**CUFF FULLY DEFLATED  
BP SYSTOLIC 104, DIASTOLIC 58 PULSE 63**





**In home situation, person can sit on the floor. BP apparatus and arm can be kept on cot, sofa or stool, so that the heart, arm and BP apparatus are in the same horizontal plane**

