

CNS-R-01 — STANDARD OPERATING PROCEDURE – OCEHOUR AMBULATORY BLOOD PRESSURE MEASUREMENT (ABPM)**Equipment**

- Ambulatory blood pressure monitor (e.g. the 90207 ABP Monitor from Spacelabs Healthcare)
- ABP Cuffs (different sizes)
- ABP carrier pouch
- Belt/shoulder strap
- 4AA rechargeable batteries (2 sets)
- Battery charger
- Subject activity diary
- Tape measure

Method

- Patient preparation
 - Explain to the subject the importance of the readings and the need for their compliance in wearing the ABP cuff and monitor further during the readings they may feel some discomfort in their arm.
 - Quiet atmosphere, give the patient the opportunity to ask any questions or queries they may have regarding the procedure.
 - Ask the subject which is their dominant arm and then, due to the inconvenience of the cuff, use the non-dominant arm. Choose the correct cuff size.

Cuff Size	Bladder Size
Extra-small	12-20cm
Small	17-26cm
Regular	24-32cm
Large	32-42cm

- The width of the bladder should be 40% of the circumference of the midpoint of the arm and the length should be 80% of the arm circumference.
- A material casing surrounds the bladder. This should be secured around the non-dominant arm by the velcro fastenings. Position the centre of the bladder (the cuff displays an arrow and the wording "ART" to aid this process) over the brachial artery, with the rubber inflation tube running down the inner elbow and in line with the middle finger.
- Position the lower edge of the cuff so it sits 2-3cm above the pulse point of the brachial artery. The rest of the cuff should occupy the remaining 80% of the upper arm. It should sit comfortably on the arm; not so tight that it impairs blood circulation or so loose that it twists around or drops out of alignment.
- Be sure to instruct the subject how to apply and align the cuff. This will enable the subject to reposition the cuff at home if it becomes misaligned.
- The patient has the possibility of taking a bath or shower, but in this case must be instructed on how to stop and start the readings. The patient should also be instructed to time his or her bathing to commence immediately after the last reading.
- Instruct the subject that during monitoring the cuff arm should remain still and at heart level when ever possible. Unnecessary movement will impair readings.
- Instruct the patient to keep a diary during the 24 hour ABPM (see instructions in diary).

- **Equipment preparation**
 - Within 24 hours before the Procedure the batteries must be loaded.
 - On the day of the procedure the ABP Monitor must be initiated.
 - Enter the requested data.
 - Ask the patient, what time he/she usually gets up and usually goes to bed.
 - Daytime measurements are carried out 4 times per hour
 - Nighttime measurements are carried out twice an hour
 - The monitor must be set, so that an acoustic signal audibly announces a daytime measurement, but the visual display must be deactivated. The acoustic signal should be deactivated for nighttime measurements.
 - Ensure that after the activation the correct time will be displayed.
 - Attach the rubber tubing from the cuff onto the luer lock attachment on the monitor. Place the remaining tubing comfortably for the subject.
 - Ask the patient, if he would prefer to wear the monitor in a shoulder bag or to attach it to his belt.
 - Once the cuff and the monitor are properly attached, initiate the first measurement; instruct the patient to remain near the outpatient clinic for 15 min after this initial measurement and to consult the staff, if the second measurement doesn't start after 15 min
 - Ensure that the patient leaves with the diary to record events.
 - 24 hours after the first measurement the patient can turn of the monitor and can take off the BP Cuff
 - After the subject submits the monitor and the diary to the research center, connect the monitor to the computer ABP program and download the recordings.