

How to carefully perform ambulatory blood pressure measurements (AMBP)?

The recorder

Make sure to choose a device validated and recommended by expert societies (ESH, BHS).

Measure blood pressure in the office

- At least 2 measures.
- On both sides, if comparison never made before.

The fitting of the blood pressure recorder

- Cuff adapted to arm circumference. Armband well-adjusted and correctly placed (in principle, on the non-dominant arm).
- Explain to the patient how the recorder is working and indicate the programmed measurement intervals.
- Explain to the patient that, if possible, he should keep his arm quiet during the measurements. No fancy position of the arm.
- Perform a "test" measurement before the patient leaves the office.
- Give him a diary and ask him to report his principal activities correctly, at least the bed and wake-up times.

Analysis of the recordings

- Minimum number of interpretable recordings:
 - day > 70%, at least 14
 - night > 70%, at least 7
- Failing (<70% valid measurements):
 - Inadequate fitting of the cuff, displacement of the cuff.
 - Weak and variable pulse wave (AFib, frequent extrasystoles, ...)
 - Technical (problem related to the device)
 - other
- Data editing:
 - In principle, do not edit / post process the recorded data or only values that are physiologically "out of range".

Presentation of the data:

Evaluate the quality of the recording:

- 70-80% valid measures: satisfactory
- 80-90% valid measures: good
- > 90% valid measures: excellent

At least, the following average values should be reported:

- Blood pressure [systolic, diastolic]
- Heart rate
- The three abovementioned average values should be reported for the 24 h period, for the awake and for the sleeping period.

Adequate nighttime dipping (10-20%)?

White coat component?

Normal values:

- 24h: <130/80 mmHg
- awake: <135/85 mmHg
- asleep: <120/70 mmHg (dipping between 10-20%)

For the elderly (> 80 years)

- awake: <145/85 mmHg (NICE guidelines 2011)

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