

Transcribed by: Lois W. Machida

Mid-panel, major section

Title: NORMAL BLOOD PRESSURE

There is no single value of blood pressure for normal subjects in their usual activities. Rather, there is a wide range of values depending upon individual sex of subject and activity.

This will be followed by the record of the normal recording (Epstein). Use much smaller lettering (not typewritten).

The range is not unusual for an active male and demonstrates the normal variability with excursions into hyper- and hypotensive values (by usual criteria).

This will be separated by female record and clinical data, same size.

Normal female records usually show less variation, including a smaller value with sleep, lower systolic pressure and pulse pressure, and increased heart rate.

Continuing on down the middle section, there will be four graphs showing normal ranges and underneath that characteristics of normal 24-hour ambulatory records including:

- Wide range of pressure and heart rate with normal activity, which may include;
- Subject in significant periods of elevated pressure (by either standard);
- A significant value in blood pressure and heart rate with sleep;

If these become difficult spelling out blood pressure and heart rate, use BP and HR or even DBP (diastolic blood pressure) or SBP (systolic blood pressure).

- Sleep provides the most consistent range of values in normal subjects;
- A significant elevation in blood pressure and heart rate immediately after sleep;
- Female systolic and pulse pressure are characteristically lower than male.

Heading: VALIDATION AND CALIBRATION

Each patient had simultaneous comparisons of blood pressure recorder and auscultatory/sphygmomanometer values in standing, sitting and supine positions. Approximately 2,000 comparisons of such values have been made in our validation series. The results of such a series are shown here.

Moving on to the third section/panel, a large and major heading:

HIGH BLOOD PRESSURE

Record

Clinical Data

Then:

This record demonstrates a common pattern found in hypertension. The variability is "normal" but the systolic, diastolic, and pulse pressures are elevated and there is a significant fall with sleep.

Record

Data

A significant number of hypertensives show much less variation including little or no fall with sleep. Patients exhibiting such elevated "flat" records may label the class of more severe hypertension.

Title: DRUG THERAPY (followed by larger, intermediate-size lettering)

Drug effects are time and activity dependent. These effects are often unseen, hence, unknown.

There will be a break here.

This record documents more precisely the effects of a drug and variation in its dosage. Serial records during treatment can document efficacy, duration of action and undesirable effects such as hypotension and changes in heart rate.

Bottom of third panel

CONCLUSION

It is now practical to routinely record ambulatory blood pressure and heart rate by indirect techniques under a wide range of normal activities. The methodology used produces results consistent with the usual manual techniques including accuracies comparable to physicians.

---Normal subjects ^{have} ~~for~~ a wide range of pressures depending upon individual's sex and activity.

---Therefore a significant fall in pressure with sleep and sleeping pressures may represent the closest approach to a standard.

---Extended ambulatory recordings provide much greater results into a patient's true pressure and are especially valuable in a number of clinical situations including: labile and borderline hypertension, severe hypertension, drug therapy and clinical research.