A method for measuring blood pressure, comprising applying a compression cuff to the proximal part of the patient's limb, increasing the pressure in it to a value of 30-40 mm Hg above the patient's systolic pressure, gradually reducing the pressure in the compression cuff at a predetermined rate (1-2 mm Hg per heartbeat), for the period of heart contractions), simultaneous recording of the current pressure value in the compression cuff, rheograms of the proximal part of the arterial vessels under the compression cuff and the arterial vessels of the distal limb, measurement of the pressure in the compression cuff as systolic blood pressure (SBP) in the artery under the compression cuff, at the time of the last maximum of the rheogram of the vessels under the compression cuff, preceding the appearance of the first synchronous pulsation on the rheogram of the arterial vessels of the distal limb, the maximum of which Umax exceeds the established threshold UPor, measurement of pressure in the compression cuff as diastolic blood pressure (DBP) in the artery under the compression cuff at the moment of minimum Umin of the rheogram of the vessels under the compression cuff during the period of heart contractions, in which the time interval of signal values less than Umin+ Δ will be minimal, wherein the thresholds UPor and Δ for each i-th period of rheograms are made variable, additionally, a rheogram of a symmetrical proximal part of the patient's limb without a compression cuff is recorded, and UPor is found from the recorded data for each i-th period of rheograms.i and Δi .