

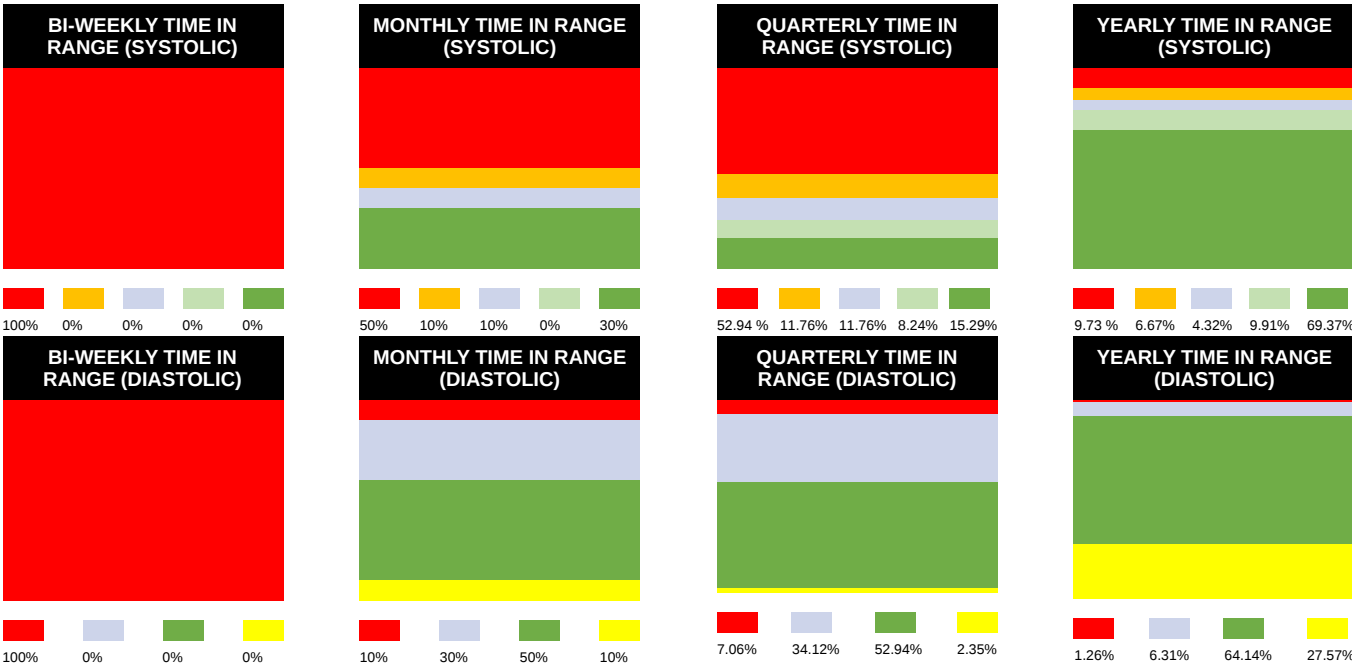


40 Mitchell Ave, Binghamton, NY 13903 Phone:(607) 723-1676

Patient Name: Barbara Tinklepaugh
Height: 0.0

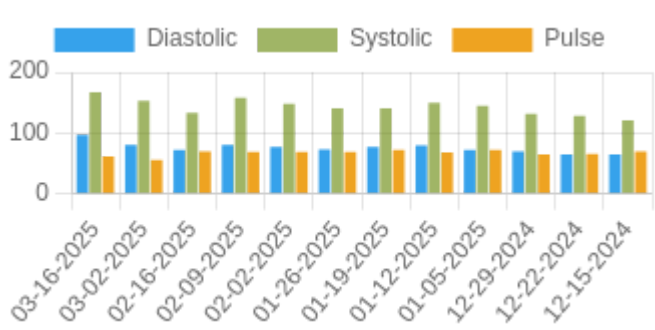
MRN #: 7460
Weight: 0

Birth Year:
Hypertension: S1



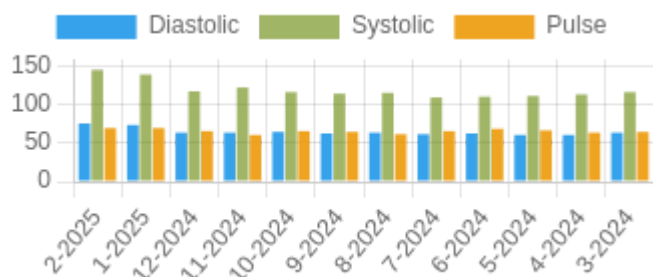
Blood Pressure Averages

Blood Pressure Averages: Weekly



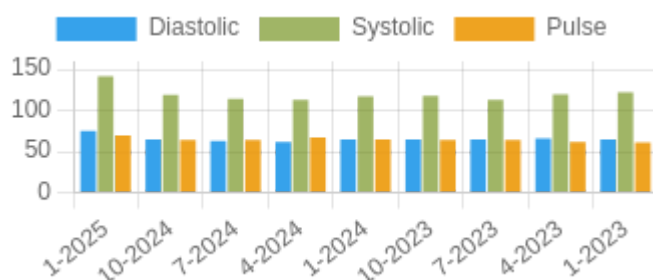
Week	Systolic(n)	Diastolic(n)	Pulse(n)
03-16-2025	167 (1)	97 (1)	62 (1)
03-02-2025	153 (1)	81 (1)	56 (1)
02-16-2025	133 (10)	72 (10)	70 (10)
02-09-2025	158 (5)	81 (5)	69 (5)
02-02-2025	148 (11)	77 (11)	69 (11)
01-26-2025	141 (19)	73 (19)	69 (19)
01-19-2025	141 (20)	77 (20)	72 (20)
01-12-2025	150 (3)	80 (3)	68 (3)
01-05-2025	145 (4)	72 (4)	72 (4)
12-29-2024	132 (5)	70 (5)	65 (5)
12-22-2024	128 (4)	65 (4)	66 (4)
12-15-2024	121 (6)	65 (6)	70 (6)

Blood Pressure Averages: Monthly



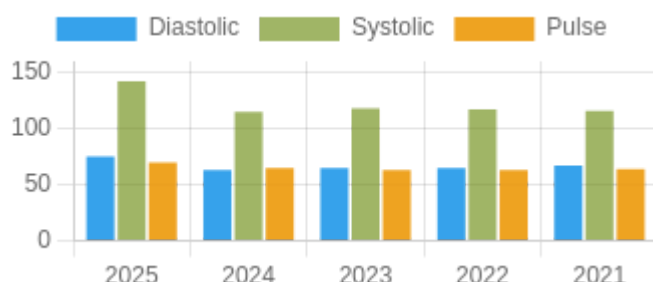
Month-Year	Systolic(n)	Diastolic(n)	Pulse(n)
2-2025	146 (32)	76 (32)	70 (32)
1-2025	140 (43)	74 (43)	70 (43)
12-2024	118 (38)	64 (38)	66 (38)
11-2024	123 (52)	64 (52)	61 (52)
10-2024	117 (58)	65 (58)	66 (58)
9-2024	115 (54)	63 (54)	65 (54)
8-2024	116 (53)	64 (53)	62 (53)
7-2024	110 (51)	62 (51)	66 (51)
6-2024	111 (49)	63 (49)	69 (49)
5-2024	112 (46)	61 (46)	67 (46)
4-2024	114 (58)	61 (58)	64 (58)
3-2024	117 (55)	64 (55)	65 (55)

Blood Pressure Averages: Quarterly



Quarter-Year	Systolic(n)	Diastolic(n)	Pulse(n)
1-2025	142 (75)	75 (75)	70 (75)
10-2024	119 (148)	65 (148)	64 (148)
7-2024	114 (158)	63 (158)	64 (158)
4-2024	113 (153)	62 (153)	67 (153)
1-2024	117 (136)	65 (136)	65 (136)
10-2023	118 (145)	65 (145)	64 (145)
7-2023	113 (160)	65 (160)	64 (160)
4-2023	120 (135)	66 (135)	62 (135)
1-2023	122 (54)	65 (54)	61 (54)

Blood Pressure Averages: Yearly



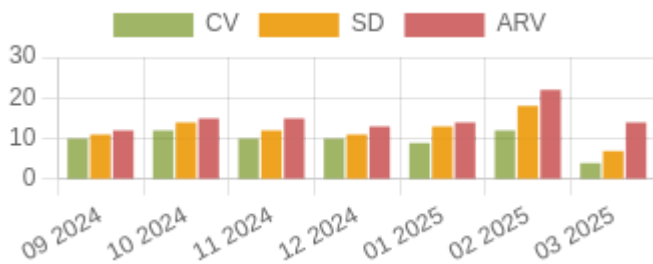
Year	Systolic(n)	Diastolic(n)	Pulse(n)
2025	142 (75)	75 (75)	70 (75)
2024	115 (595)	63 (595)	65 (595)
2023	118 (616)	65 (616)	63 (616)
2022	117 (652)	65 (652)	63 (652)
2021	116 (21)	67 (21)	64 (21)

Chat

Sender	Receiver	Messege	Date&Time
Barbara Tinklepaugh	R.A. Ramanujan , M.D.	I never feel it's high until I take it	21-03-2025
Barbara Tinklepaugh	R.A. Ramanujan , M.D.	Dr. Ram, took my blood pressure and very high, just took a Ramipril and will take it a little later. Every time I ready to take it I get so nervous. I need feel my pressure is high but then the numbers are high. Let me know what to do.	21-03-2025
R.A. Ramanujan , M.D.	Barbara Tinklepaugh	Please note; Your interaction through "CHECKMYVITALS" is not considered Telehealth visit . This service is to enable care coordination as need to address blood sugar, blood pressure, & pulse related concerns as it happens. Besides it helps to share other information un attended during clinic visit with less disruption.	18-03-2025

		Your interaction has been a rewarding lesson to us. Our administrators will update aspects missed in this brief note. Best wishes!	
null Sue Ward	Barbara Tinklepaugh	We have been informed that all insurances including Medicare will NOT be covering Telehealth (Video or Phone Call) visits after March 31, 2025. Keeping that in mind we will not be able to schedule any further Telehealth appointments. There will be no exceptions to his new insurance and office policy. All appointments will take place in the office. DCA Office Staff	18-03-2025
Barbara Tinklepaugh	R.A. Ramanujan , M.D.	Dr. Ram, yes I sleep somewhat better, not some nights, b/c I have some much going on so very fast. In just 2 months since lrv's passing I have made so many appointments regarding getting furniture and moving to Chesterfield. House goes up for sale April 4th. I'm leaving April 1st. Will stay with Nancy until my apartment is ready on the 21st of April. Looking forward to my new chapter in life. Will never forget you.	16-03-2025
R.A. Ramanujan , M.D.	Barbara Tinklepaugh	Wish them all safe trip. I will be contact you get updates. Best	26-02-2025
Barbara Tinklepaugh	R.A. Ramanujan , M.D.	Dr. Ram, I got my pneumonia vaccine today. More relaxed today, took the new prescription. My family is leaving tomorrow , I'm going to stay here to get everything settled and my house for sale. It seems all is working for us. Will certainly keep you posted.	26-02-2025
R.A. Ramanujan , M.D.	Barbara Tinklepaugh	Please do and Hito your daughter. Will call you soon Best	25-02-2025
Barbara Tinklepaugh	R.A. Ramanujan , M.D.	Dr. Ram, my daughter was very impressed with you, she mentioned that there should be more of you in the medical profession. I forgot to ask you concerning getting the pneumonia vaccine. Let me know what you think, I had one maybe 5 years ago. Thanks again. 🙏	25-02-2025
R.A. Ramanujan , M.D.	Barbara Tinklepaugh	Hell Barb, Have a safe trip. Best	21-02-2025
Barbara Tinklepaugh	R.A. Ramanujan , M.D.	Dr. Ram, leaving for home tomorrow. My daughter and son- in -law are coming too. I will be staying for awhile by myself until I get things settled with the house. I will see you next week. 😊	21-02-2025
R.A. Ramanujan , M.D.	Barbara Tinklepaugh	👍🙏	21-02-2025
Barbara Tinklepaugh	R.A. Ramanujan , M.D.	Dr.Ram, my latest numbers after I took a Ramipril as you instructed. Thanks again, see you soon.	20-02-2025
R.A. Ramanujan , M.D.	Barbara Tinklepaugh	Rx sent for Hydroxyzine.	13-02-2025
Barbara Tinklepaugh	R.A. Ramanujan , M.D.	Dr. Ram, I only have 3 more Hydroxyzine pills left, I only take maybe one a day. I won't have enough until I see you on February 25 th. Thanks again, I don't want to be annoying to you. I will overcome this situation very soon. 🙏	12-02-2025
Barbara Tinklepaugh	R.A. Ramanujan , M.D.	Dr. Ram, I took a Ramipril after my last reading and just took b/p again and it's down . I know everything will be fine when I see you 🙏	10-02-2025
Barbara Tinklepaugh	R.A. Ramanujan , M.D.	try me again now	10-02-2025
Barbara Tinklepaugh	R.A. Ramanujan , M.D.	Dr. Ram, I seem to have difficulty receiving your calls. I was right here	10-02-2025
Barbara Tinklepaugh	R.A. Ramanujan , M.D.	Dr. Ram, I seem to be missing your calls constantly, so sorry, I will keep my phone on me . I'm looking forward to my appointment with you. Thanks	10-02-2025
R.A. Ramanujan , M.D.	Barbara Tinklepaugh	Consider a minor change in med. Will talk to you soon. Best	10-02-2025

Systolic Variability Trends

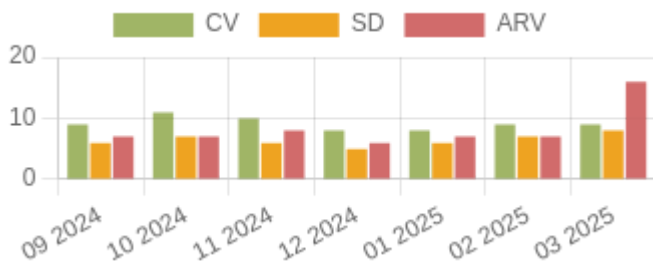


1. CV –The coefficient of variation (CV) is the ratio of the standard deviation to the mean. The higher the coefficient of variation, the greater the level of dispersion around the mean, Units = mmHg.

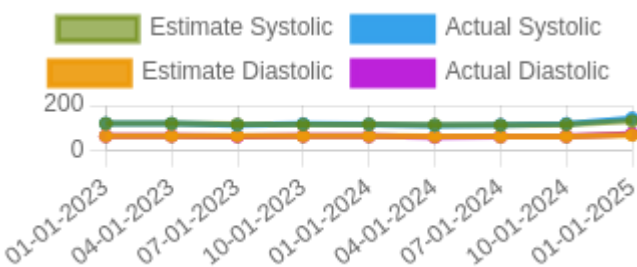
2. ARV – Average real variability (ARV) is a method for measuring short-term, reading-to-reading, within-subject variability. It is defined as the average of the absolute differences between consecutive readings, Units = mmHg.

3. SD – Standard deviation is a statistical measurement of variability. It measures how much variation there is from the average (mean), Units = mmHg.

Diastolic Variability Trends



Kalman Trends



1. Mean(Arithmetic Mean) – Mean is the average of a set of numbers

2. SD – Standard deviation is a statistical measurement of variability. It measures how much variation there is from the average (mean).

3. V- Variance determines the spread of numbers.. It measures how far each number in the set is from the mean (average) and from every other number in the set.

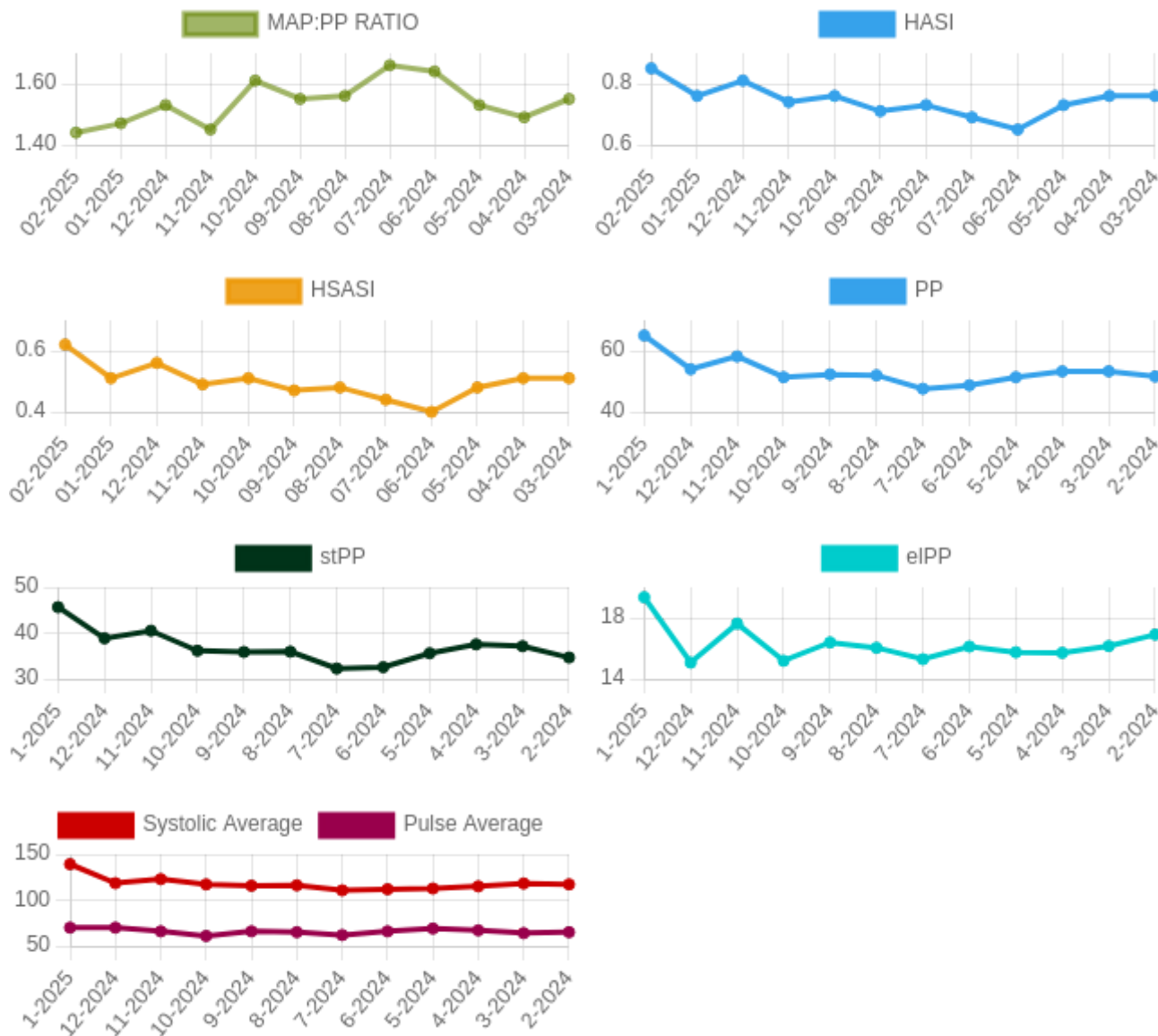
PSR



PSR: Pulse stiffening ratio (PSR) is the ratio between systolic and diastolic stiffness. It can be expressed as $PSR = \frac{[systolic\ stiffness]}{[diastolic\ stiffness]}$.

HbA1c Trends

Others Trends



1. **MAP:PP Ratio**- Mean Arterial Pressure : Pulse Pressure Ratio

2. **HASI**- Home arterial stiffening index

3. **HSASI**- Home Symmetric arterial stiffening index

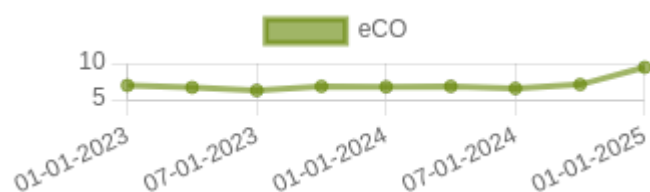
4. **PP**- Pulse Pressure

5. **WIF or widening factor number. WIF** = $K - 1 / \ln(K) - 1$, where K is the variability ratio ($K = \text{Systolic Std. Dev} / \text{Diastolic Std. Dev}$)

6. **eIPP**- Elastic component of pulse pressure. $eIPP = (PP - stPP)$

7. **stPP**- Stiffening component of pulse pressure. $stPP = PP / (1 + WIF)$

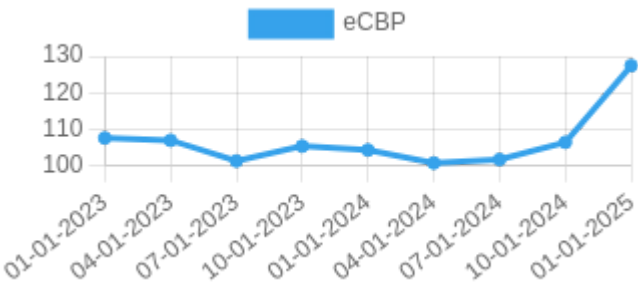
eCO graph



eCO (Estimated Cardiac Output) Normal range to be added 5 – 10 liters/minute

Units of eCO (Estimated Cardiac Output) – liters/minute

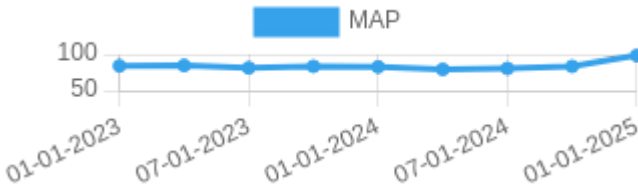
eCBP graph



eCBP (Estimated Central Blood Pressure) normal range – 0 – 100 mmHg

- 1. Cardiac output scale is in liters/minute. Normal range at rest is 5-6 liters/min and (with activity goes up to 30 -35 liters/min)
- 2. Central mean BP is Squared, Mean radial artery BP/diastolic BP in mmHg. Scale in mmHg and range is in mmHg and the scale Should be between 0-50 50-100, 150 and 200 mmHg. No established normal at the moment.

MAP graph



MAP -Mean arterial blood pressure. MAP = Diastolic blood pressure + 1/3(Systolic blood pressure – Diastolic blood pressure)

Reference & Abbreviations

Guide to abbreviations and blood pressure, pulse and other Metrics.

HBPM -Home blood pressure measurement.	HBS -Home blood sugar
PP -Pulse pressure	AP -Average pulse
BPV -Blood pressure variability	SV -Systolic variability
DV -Diastolic variability	PV -Pulse variability
ARV -Average real variability	CV -Coefficient of variation %
SD -Standard deviation	MAP -Mean arterial blood pressure
MAP: PP Mean Arterial Pressure : Pulse Pressure	HASI -Home arterial stiffness index
HSASI -Home Symmetric arterial stiffness index	Estimated CO -Cardiac output [CO=(PPxHR)x.002]
PSR Pulse stiffening ratio. (PSR = SBP/DBP or slope of systolic BP/slope of diastolic BP)	

Estimated central blood pressure ECBP (ECBP = brachial MBP2/brachial DBP or ECBP = radial MBP2/radial DBP)

Normal Ranges.

- Systolic BP 110 – 120 mm Hg
- Diastolic BP 70 – 80 mmHg
- Pulse 60 - 100/min
- Pulse pressure (PP) 40 mmHg (Low PP less than 25% of the systolic BP and high PP greater than 100 mm Hg)
- Normal stroke volume (SV) 60 -100 ml

Cardiac output (CO) $SV \times \text{pulse rate/min}$

Estimate Cardiac output = Stroke volume / m

Blood pressure variability; Not defined in USA. But desirable ranges ESH guidelines; Systolic day time BP less than 15 mmHg and Diastolic less than 7.9 mmHg and Weighted SD less than 12.8 mmHg for systolic

Definitions.

MAP:PP ratio not defined.

Pulse stiffening ration; Not defined. $\text{Pulse pressure} \times \text{inverse log} (\text{std. dev. systolic} / \text{std. dev. Diastolic}) / (\text{std. dev. systolic} / \text{std. dev. Diastolic}) - 1$ (Pulse pressure $\times \ln (K)/(K-1)$ where K is systolic Sd /diastolic SD.)

Home arterial stiffness index; Not defined

Home arterial symmetric arterial index: Not defined.

Central blood pressure:Not defined

References.

MAP;
Chemla D, Antony I, Zamani K, Nitenberg A. Mean aortic pressure is the geometric mean of systolic and diastolic aortic pressure in resting humans. *J Appl Physiol* (1985). 2005 Dec;99(6):2278-84. doi: 10.1152/japplphysiol.00713.2005. Epub 2005 Jul 28. PMID: 16051709. Tien LYH, Morgan WH, Cringle SJ, Yu DY. Optimal Calculation of Mean Pressure From Pulse Pressure. *Am J Hypertens*. 2023 May 21;36(6):297-305. doi: 10.1093/ajh/hpad026. PMID: 36945835; PMCID: PMC10200551.

PSR:

Gavish B, Izzo JL Jr. Arterial Stiffness: Going a Step Beyond. *Am J Hypertens*. 2016 Nov 1;29(11):1223-1233. doi: 10.1093/ajh/hpw061. PMID: 27405964.

DCBP:

Chemla D, Millasseau S, Hamzaoui O, Teboul JL, Monnet X, Michard F, Jozwiak M. New Method to Estimate Central Systolic Blood Pressure From Peripheral Pressure: A Proof of Concept and Validation Study. *Front Cardiovasc Med*. 2021 Dec 15;8:772613. doi: 10.3389/fcvm.2021.772613. PMID: 34977186; PMCID: PMC8714848.

CO

Koenig J, Hill LK, Williams DP, Thayer JF. Estimating cardiac output from blood pressure and heart rate: the liljestrand& zander formula. *Biomed Sci Instrum*. 2015;51:85-90. PMID: 25996703; PMCID: PMC5317099.

BP

Mean arterial blood pressure;

Guidelines recommend less than 125 mmHg Poon LC, Shennan A, Hyett JA, Kapur A, Hadar E, Divakar H, McAuliffe F, da Silva Costa F, von Dadelszen P, McIntyre HD, Kihara AB, Di Renzo GC, Romero R, D'Alton M, Berghella V, Nicolaides KH, Hod M. The International Federation of Gynecology and Obstetrics (FIGO) initiative on pre-eclampsia: a pragmatic guide for first-trimester screening and prevention. *Int J*

GynaecolObstet 2019;

145(Suppl 1):1–33.Not defined in general (desirable MAP ,90 mm Hg)Melgarejo JD, Yang WY, Thijs L, Li Y, Asayama K, Hansen TW, Wei FF, Kikuya M, Ohkubo T, Dolan E, Stolarz-Skrzypek K, Huang QF, Tikhonoff V, Malyutina S, Casiglia E, Lind L, Sandoya E, Filipovský J, Gilis-Malinowska N, Narkiewicz K, Kawecka-Jaszcz K, Boggia J, Wang JG, Imai Y, Vanassche T, Verhamme P, Janssens S, O'Brien E, Maestre GE, Staessen JA, Zhang ZY; International Database on Ambulatory Blood Pressure in Relation to Cardiovascular Outcome Investigators*. Association of Fatal and Nonfatal Cardiovascular Outcomes With 24-Hour Mean Arterial Pressure. *Hypertension*. 2021 Jan;77(1):39-48

We hope these complementary multiparametric data along with standard set used in daily practice helps to understand home blood pressure trend and other information they may potentially generate in the future to understand medication effects and patient management.

Terms & Conditions Accepted: YES

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