

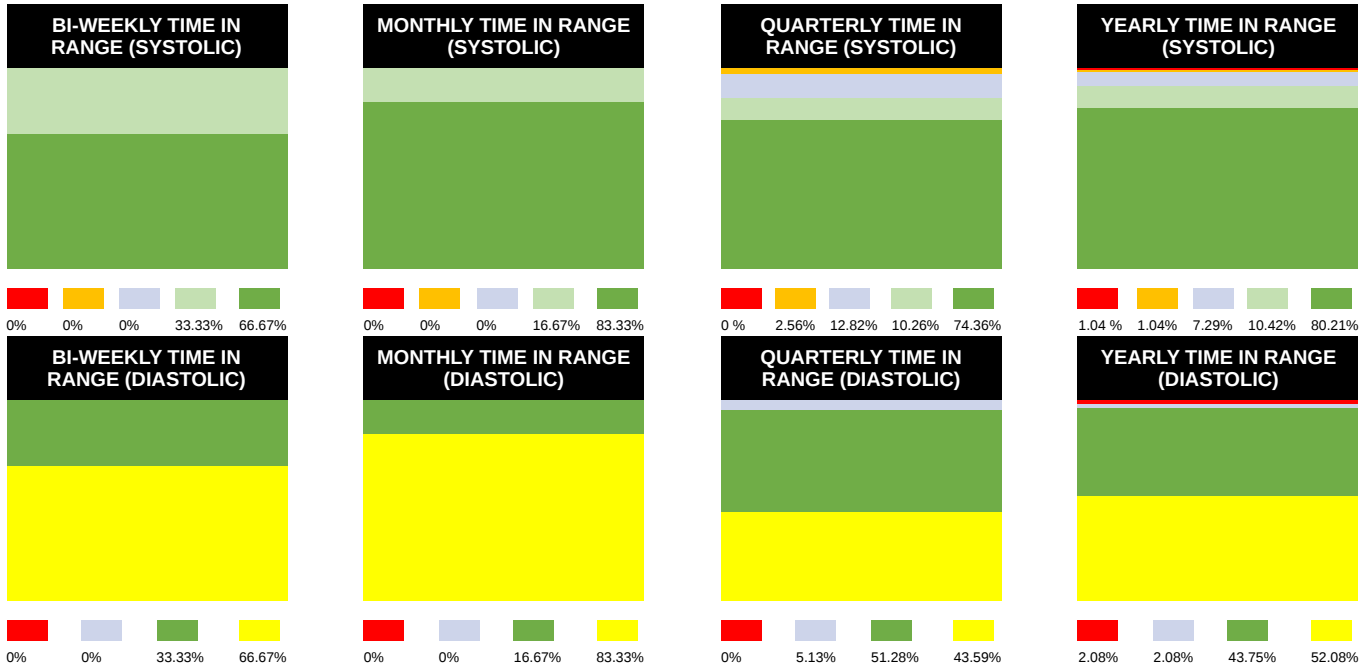


40 Mitchell Ave, Binghamton, NY 13903 Phone:(607) 723-1676

Patient Name: Karen Carkees
Height: 5.3

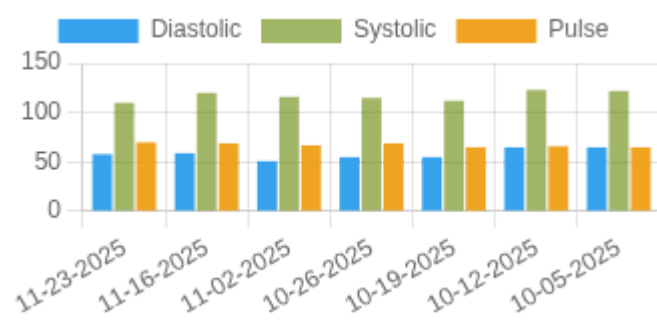
MRN #: 7958
Weight: 289

Birth Year:
Hypertension: S1



Blood Pressure Averages

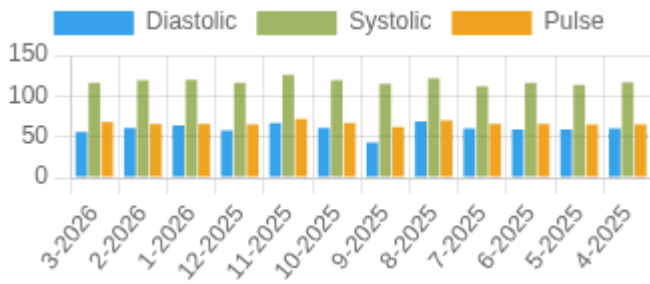
Blood Pressure Averages: Weekly



Week	Systolic(n)	Diastolic(n)	Pulse(n)
11-23-2025	110 (1)	58 (1)	70 (1)
11-16-2025	120 (2)	59 (2)	69 (2)
11-02-2025	116 (1)	51 (1)	67 (1)
10-26-2025	115 (2)	55 (2)	69 (2)
10-19-2025	112 (2)	55 (2)	65 (2)
10-12-2025	123 (5)	65 (5)	66 (5)
10-05-2025	122 (3)	65 (3)	65 (3)

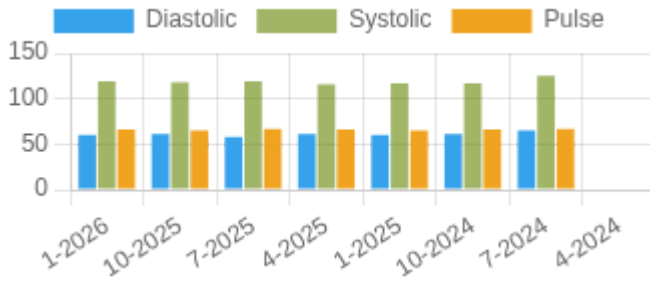
Blood Pressure Averages: Monthly

Month-Year	Systolic(n)	Diastolic(n)	Pulse(n)
3-2026	116 (4)	56 (4)	68 (4)
2-2026	119 (12)	61 (12)	66 (12)
1-2026	120 (14)	64 (14)	66 (14)
12-2025	116 (11)	58 (11)	65 (11)



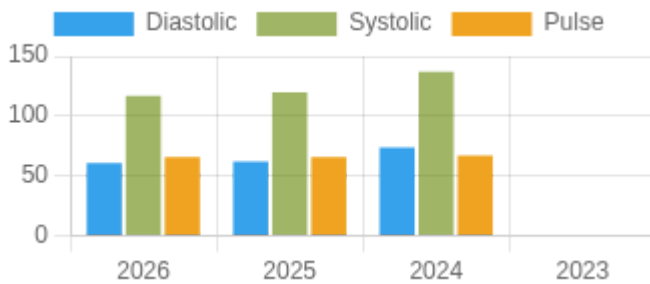
11-2025	126 (1)	67 (1)	72 (1)
10-2025	119 (2)	61 (2)	67 (2)
9-2025	115 (1)	43 (1)	62 (1)
8-2025	122 (6)	69 (6)	70 (6)
7-2025	112 (12)	60 (12)	66 (12)
6-2025	116 (10)	59 (10)	66 (10)
5-2025	114 (18)	59 (18)	65 (18)
4-2025	117 (17)	60 (17)	65 (17)

Blood Pressure Averages: Quarterly



Quarter-Year	Systolic(n)	Diastolic(n)	Pulse(n)
1-2026	119 (16)	60 (16)	66 (16)
10-2025	118 (25)	61 (25)	65 (25)
7-2025	119 (4)	58 (4)	67 (4)
4-2025	116 (28)	61 (28)	66 (28)
1-2025	117 (61)	60 (61)	65 (61)
10-2024	117 (88)	61 (88)	66 (88)
7-2024	125 (79)	65 (79)	67 (79)
4-2024	0 (0)	0 (0)	0 (0)

Blood Pressure Averages: Yearly



Year	Systolic(n)	Diastolic(n)	Pulse(n)
2026	117 (73)	61 (73)	66 (73)
2025	120 (236)	62 (236)	66 (236)
2024	137 (13)	74 (13)	67 (13)
2023	0 (0)	0 (0)	0 (0)

Blood Sugar Averages

Week	Before breakfast	2 hours after breakfast	Before lunch	2 hours after lunch	Before dinner	2 hours after dinner	Bedtime
04-13-2026					145(1)		143(2)
04-05-2026	198(1)					201(1)	156(4)
03-28-2026	146(3)		152(3)	177(3)	126(2)	164(2)	153(6)
03-20-2026	180(1)	238(1)	313(1)		140(4)	174(4)	158(6)

Month-Year	Before breakfast	2 hours after breakfast	Before lunch	2 hours after lunch	Before dinner	2 hours after dinner	Bedtime
04-2026	198(1)				145(1)	201(1)	152(5)
03-2026	145(7)	212(2)	179(6)	180(5)	151(10)	187(10)	154(19)
02-2026	138(9)	198(2)	133(12)	148(11)	138(15)	155(15)	145(25)
01-2026	135(18)	186(6)	135(14)	137(12)	127(20)	150(16)	153(22)

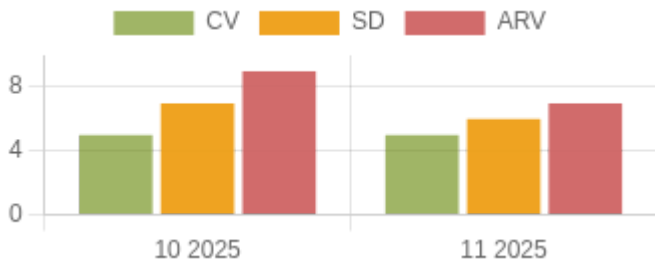
Year	Before breakfast	2 hours after breakfast	Before lunch	2 hours after lunch	Before dinner	2 hours after dinner	Bedtime

01-01-2026	139(35)	193(10)	142(32)	149(28)	136(46)	162(42)	151(71)
01-01-2025	138(197)	154(63)	128(196)	143(175)	124(235)	139(231)	135(287)
01-01-2024	139(340)	156(53)	128(191)	138(159)	125(284)	148(198)	144(309)

Chat

Sender	Receiver	Message	Date&Time
Karen Carkees	R.A. Ramanujan , M.D.	thank you hope you had a great Easter	09-04-2026
R.A. Ramanujan , M.D.	Karen Carkees	Happy Easter!	05-04-2026
R.A. Ramanujan , M.D.	Karen Carkees	Lexi in the office can help with cost	17-03-2026
Karen Carkees	R.A. Ramanujan , M.D.	Sorry for all the back and forth about meds, trying to find the best effective for cost for the Synjardy. Can I take Farxiga instead of Synjardy because the Farxiga is incredibly cheaper by \$379 for 90 days.	17-03-2026
null Lexi Matthias, LPN	Karen Carkees	OK THE RX WILL BE SENT. LEXI	12-03-2026
Karen Carkees	R.A. Ramanujan , M.D.	but whatever one you think is best, for me thanks	12-03-2026
Karen Carkees	R.A. Ramanujan , M.D.	I want to try to get the Synjardy at Walmart since it was covered at Walgreens in January. The pharmacy at Walmart which is now my primary pharmacy can't tell me how much the Synjardy will be without a prescription from your office	12-03-2026
R.A. Ramanujan , M.D.	Karen Carkees	Your next best option is Jardiance 25 mg or Farxiga 10 mg with Metformin. Check with your pharmacy and contact.	12-03-2026
Karen Carkees	R.A. Ramanujan , M.D.	Lexi Matthias so I went to Walmart to pick up the new prescription that will replace the synjardy the cost for one month was \$295.00 not happening! so can we see how much the synjardy will be for 90 days ? and go from there so very sorry about all this. thanks I have to get something because I haven't had it for a week and I'm testing anywhere from 180 to 200 without it	12-03-2026
Karen Carkees	R.A. Ramanujan , M.D.	oh ok I'll call them tomorrow thank you 😊	10-03-2026
R.A. Ramanujan , M.D.	Karen Carkees	Sent long time ago	10-03-2026
Karen Carkees	R.A. Ramanujan , M.D.	Lexi Matthias I don't know if Dr. Ram sent a prescription to Walmart yet, but I haven't got anything need something to replace the synjardy Ty	10-03-2026
Karen Carkees	R.A. Ramanujan , M.D.	thank you have a great weekend	06-03-2026
null Lexi Matthias, LPN	Karen Carkees	I WILL HAVE DR RAM SEND THE PRESCRIPTION THIS AFTERNOON. LEXI	06-03-2026
Karen Carkees	R.A. Ramanujan , M.D.	Dr.Ram took my last synjardy this morning just checking in to see if you sent a new prescription to Walmart Oneonta for one of the ones that will be cover with my new prescription plan thanks 😊	06-03-2026

Systolic Variability Trends

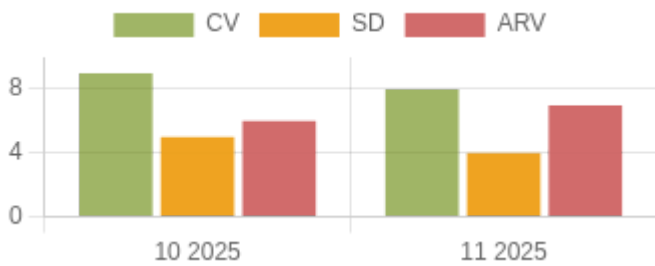


1. **CV** –The coefficient of variation (CV) is the ratio of the standard deviation to the mean. The higher the coefficient of variation, the greater the level of dispersion around the mean, Units = mmHg.

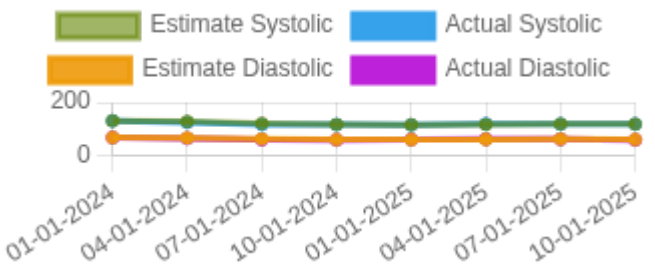
2. **ARV** – Average real variability (ARV) is a method for measuring short-term, reading-to-reading, within-subject variability. It is defined as the average of the absolute differences between consecutive readings, Units = mmHg.

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).

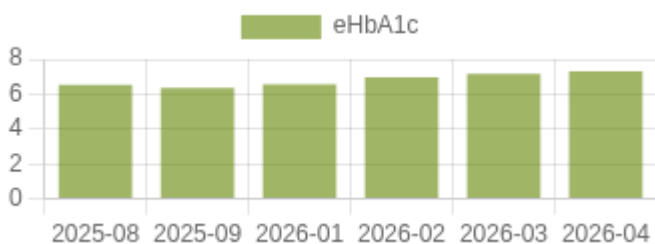
3. **V**- Variance determines the spread of numbers.. It measures how far each number in the set is from the mean (average) and from every other number in the set.

PSR



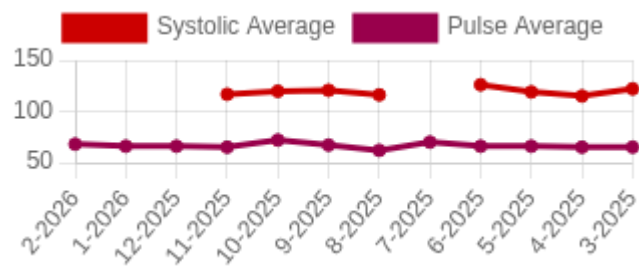
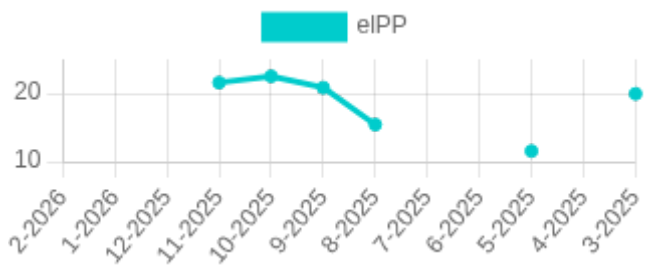
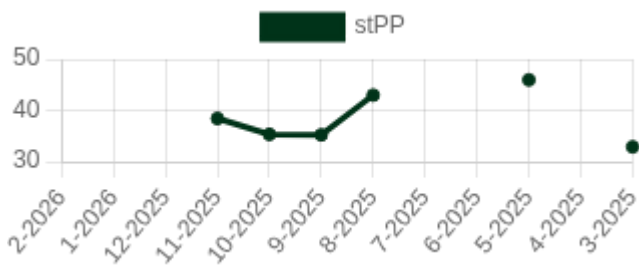
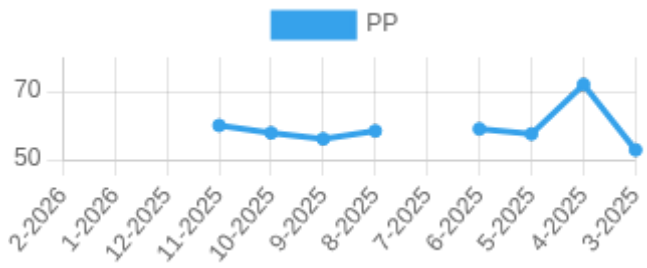
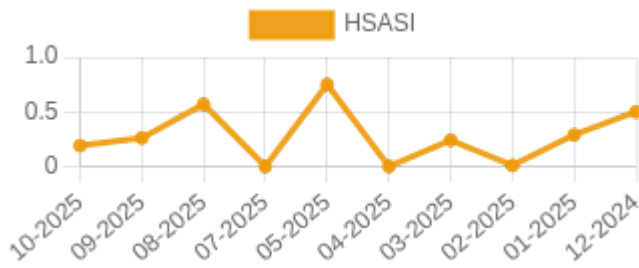
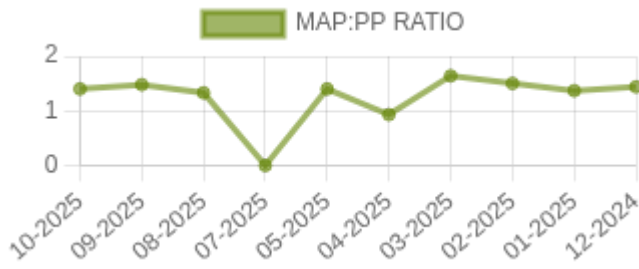
PSR: Pulse stiffening ratio (PSR) is the ratio between systolic and diastolic stiffness. It can be expressed as $PSR = \frac{[systolic\ stiffness]}{[diastolic\ stiffness]}$.

HbA1c Trends



Estimated HbA1c - eHbA1c

Others Trends

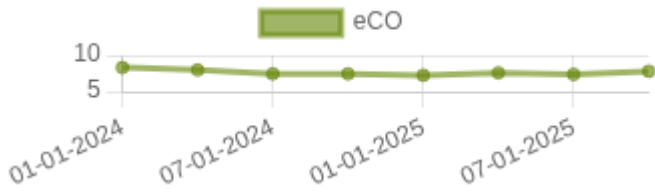


1. **MAP:PP Ratio**- Mean Arterial Pressure : Pulse Pressure Ratio
2. **HASI**- Home arterial stiffening index
3. **HSASI**- Home Symmetric arterial stiffening index
4. **PP**- Pulse Pressure
5. **WIF or widening factor number**. $WIF = K - 1 / \ln(K) - 1$, where K is the variability ratio ($K = \text{Systolic Std. Dev} / \text{Diastolic Std. Dev}$)
6. **eIPP**- Elastic component of pulse pressure. $eIPP = (PP - stPP)$
7. **stPP**- Stiffening component of pulse pressure. $stPP = PP / (1 + WIF)$

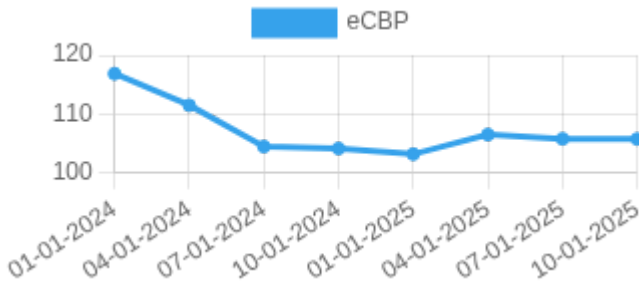
eCO graph

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

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



eCBP graph

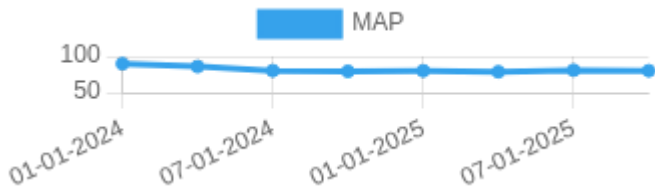


eCBP (Estimated Central Blood Pressure) normal range – 0 – 100 mmHg

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. $MAP = Diastolic\ blood\ pressure + \frac{1}{3}(Systolic\ blood\ pressure - Diastolic\ blood\ pressure)$

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 x 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. Pulse pressure * inverse log (std. dev. systolic / std. dev. Diastolic) / (std. dev. systolic / std. dev. Diastolic) - 1 (Pulse pressure X 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/jappphysiol.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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