

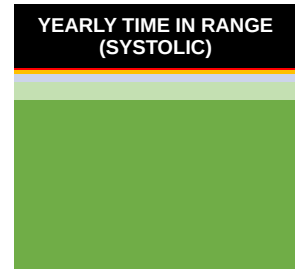
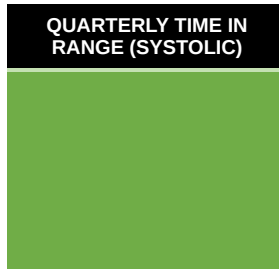


40 Mitchell Ave, Binghamton, NY 13903 Phone:(607) 723-1676

Patient Name: Ginny Nelson
Height: 5.5

MRN #: 7508
Weight: 220

Birth Year:
Hypertension: S1

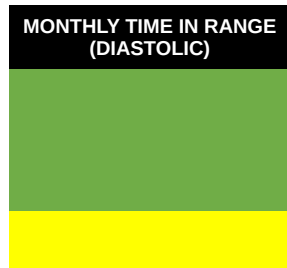
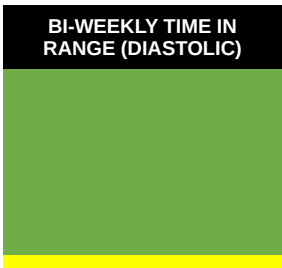


0% 0% 0% 13.33% 86.67%

0% 0% 0% 6.45% 93.55%

0% 0% 0% 2.2% 97.8%

0.82% 1.92% 4.67% 8.24% 84.34%



0% 0% 93.33% 6.67%

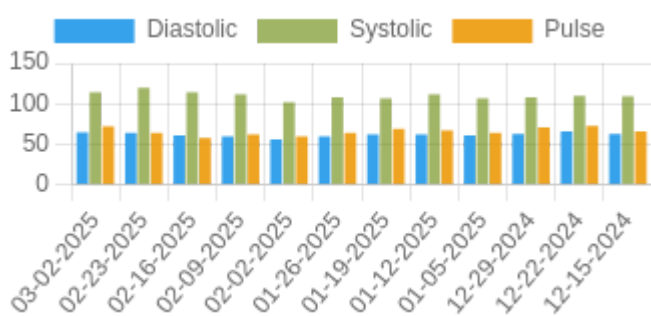
0% 0% 70.97% 29.03%

0% 1.1% 70.33% 28.57%

0% 2.47% 83.24% 14.29%

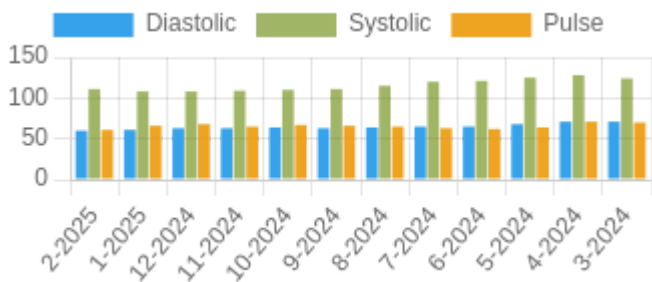
Blood Pressure Averages

Blood Pressure Averages: Weekly



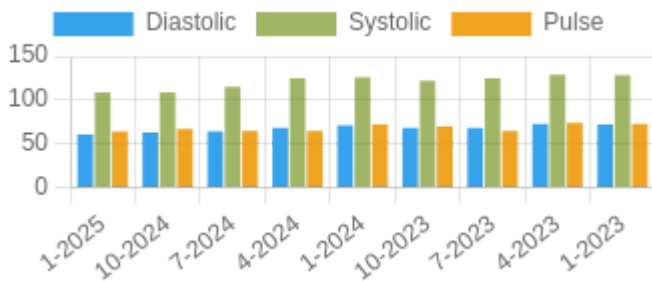
Week	Systolic(n)	Diastolic(n)	Pulse(n)
03-02-2025	114 (6)	65 (6)	72 (6)
02-23-2025	120 (7)	64 (7)	64 (7)
02-16-2025	114 (7)	61 (7)	58 (7)
02-09-2025	112 (7)	60 (7)	62 (7)
02-02-2025	102 (7)	56 (7)	60 (7)
01-26-2025	108 (7)	60 (7)	64 (7)
01-19-2025	107 (7)	62 (7)	69 (7)
01-12-2025	112 (7)	62 (7)	67 (7)
01-05-2025	107 (7)	61 (7)	64 (7)
12-29-2024	108 (7)	63 (7)	71 (7)
12-22-2024	110 (7)	66 (7)	73 (7)
12-15-2024	109 (7)	63 (7)	66 (7)

Blood Pressure Averages: Monthly



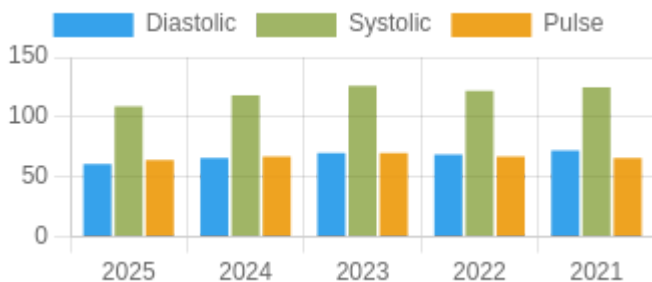
Month-Year	Systolic(n)	Diastolic(n)	Pulse(n)
2-2025	111 (28)	60 (28)	61 (28)
1-2025	108 (31)	61 (31)	66 (31)
12-2024	108 (31)	63 (31)	68 (31)
11-2024	109 (30)	63 (30)	65 (30)
10-2024	110 (31)	64 (31)	67 (31)
9-2024	111 (30)	63 (30)	66 (30)
8-2024	115 (31)	64 (31)	65 (31)
7-2024	120 (30)	65 (30)	63 (30)
6-2024	121 (30)	65 (30)	62 (30)
5-2024	125 (30)	68 (30)	64 (30)
4-2024	128 (30)	71 (30)	71 (30)
3-2024	124 (31)	71 (31)	70 (31)

Blood Pressure Averages: Quarterly



Quarter-Year	Systolic(n)	Diastolic(n)	Pulse(n)
1-2025	109 (59)	61 (59)	64 (59)
10-2024	109 (92)	63 (92)	67 (92)
7-2024	115 (91)	64 (91)	65 (91)
4-2024	125 (90)	68 (90)	65 (90)
1-2024	126 (79)	71 (79)	72 (79)
10-2023	122 (90)	68 (90)	70 (90)
7-2023	125 (91)	68 (91)	65 (91)
4-2023	129 (89)	73 (89)	74 (91)
1-2023	128 (29)	72 (29)	73 (29)

Blood Pressure Averages: Yearly



Year	Systolic(n)	Diastolic(n)	Pulse(n)
2025	109 (59)	61 (59)	64 (59)
2024	118 (352)	66 (352)	67 (352)
2023	126 (358)	70 (358)	70 (360)
2022	122 (338)	69 (338)	67 (344)
2021	125 (354)	72 (354)	66 (354)

Blood Sugar Averages

Week	Before breakfast	2 hours after breakfast	Before lunch	2 hours after lunch	Before dinner	2 hours after dinner	Bedtime
03-09-2025	120(7)						
03-01-2025	113(8)						
02-21-2025	109(8)						
02-13-2025	108(8)						

Month-Year	Before breakfast	2 hours after breakfast	Before lunch	2 hours after lunch	Before dinner	2 hours after dinner	Bedtime
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03-2025	120(8)						
02-2025	110(28)						
01-2025	112(31)						
12-2024	114(31)						

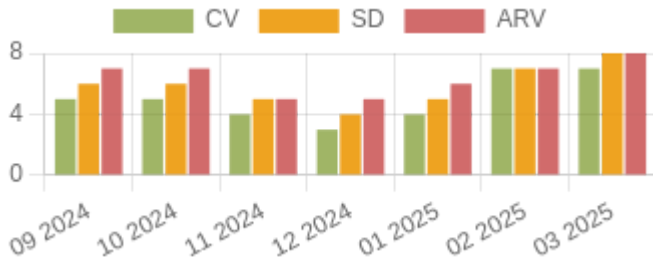
Year	Before breakfast	2 hours after breakfast	Before lunch	2 hours after lunch	Before dinner	2 hours after dinner	Bedtime
01-01-2025	112(67)						
01-01-2024	111(351)						
01-01-2023	106(216)	105(142)					

Chat

Sender	Receiver	Message	Date&Time
Ginny Nelson	R.A. Ramanujan , M.D.	thank you very much.. so sorry for this problem..	20-02-2025
null Lexi Matthias, LPN	Ginny Nelson	OK. FAXED TO BACK TO THE NUMBER ON THE FORM AND THE APPEALS DEPARTMENT.	20-02-2025
Ginny Nelson	R.A. Ramanujan , M.D.	I told Stephen you recd it.. he said that form is to get a formulary exception..	20-02-2025
Ginny Nelson	R.A. Ramanujan , M.D.	thank you very much! just do what you think is best! have a great day!	20-02-2025
null Lexi Matthias, LPN	Ginny Nelson	I DID RECEIVE THE FAX, BUT IT WAS JUST ANOTHER PRIOR AUTH FORM WHICH I'M NOT SURE IS THE RIGHT ACTION TO TAKE SINCE IT WAS ALREADY DENIED. USUALLY AT THIS JUNCTION AN APPEAL WOULD NEED TO BE INITIATED. I WILL SEND THIS NEW PRIOR AUTH FORM, BUT ALSO SEND AN APPEAL SO WE ARE COVERED ON BOTH ENDS. LEXI	20-02-2025
null Lexi Matthias, LPN	Ginny Nelson		20-02-2025
null Lexi Matthias, LPN	Ginny Nelson	GOOD MORNING,	20-02-2025
Ginny Nelson	R.A. Ramanujan , M.D.	sending to fax #607-772-6304	19-02-2025
Ginny Nelson	R.A. Ramanujan , M.D.	thank you.. from Stephen Sharp	19-02-2025
null Lexi Matthias, LPN	Ginny Nelson		19-02-2025
null Lexi Matthias, LPN	Ginny Nelson	WE HAVENT RECEIVED ANYTHING YET, BUT I WILL BE ON LOOK OUT FOR IT TOMORROW.	19-02-2025
Ginny Nelson	R.A. Ramanujan , M.D.	has been faxed..att Lexi., please let me know if you get the fax.. I have to let my agent know	19-02-2025
null Lexi Matthias, LPN	Ginny Nelson	HI GINNY I DID ALREADY GIVE THE INSURANCE THAT INFORMATION, BUT I WILL BE SURE TO INCLUDE IT IN MY APPEAL. LEXI	19-02-2025
Ginny Nelson	R.A. Ramanujan , M.D.	I contacted my insurance agent and he is faxing paperwork to your office to fill out re: monjareo.. I told him I had taken ozempic and had side effects and no side effects with monjareno . also keeping my A1C around 5! Ginny	19-02-2025

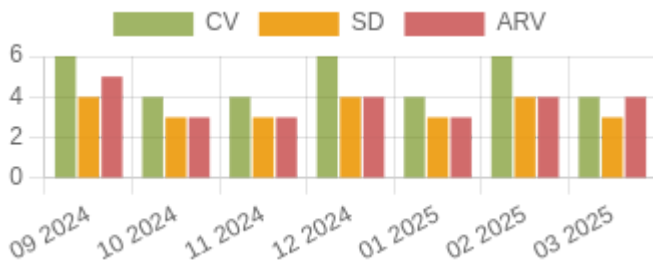
Ginny Nelson	R.A. Ramanujan, M.D.	have 60 days to appeal the decision	18-02-2025
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Systolic Variability Trends

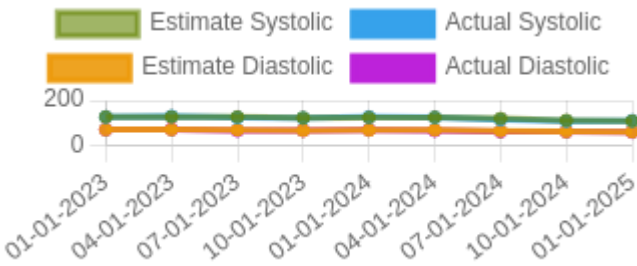


- 1. CV** –The coefficient of variation (CV) is the ratio of the standard deviation to the mean. The higher the coefficient of variation, the greater the level of dispersion around the mean, Units = mmHg.
- 2. ARV** – Average real variability (ARV) is a method for measuring short-term, reading-to-reading, 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

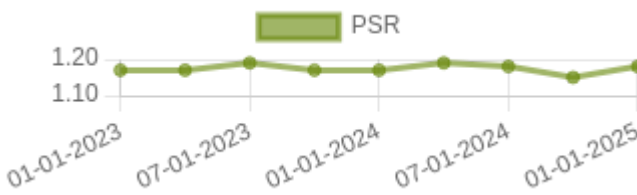


Kalman Trends



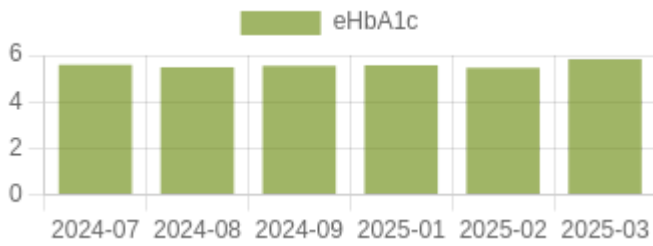
- 1. Mean(Arithmetic Mean)** – Mean is the average of a set of numbers
- 2. SD** – Standard deviation is a statistical measurement of variability. It measures how much variation there is from the average (mean).
- 3. V-** Variance determines the spread of numbers.. It measures how far each number in the set is from the mean (average) and from every other number in the set.

PSR



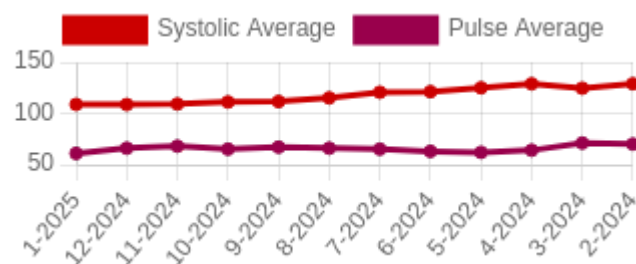
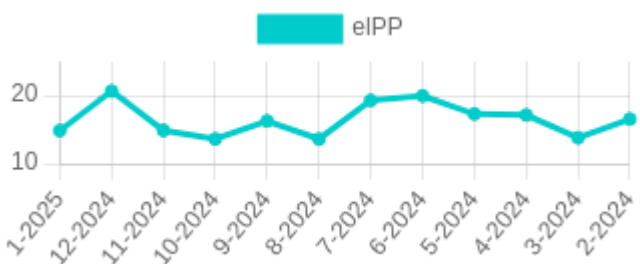
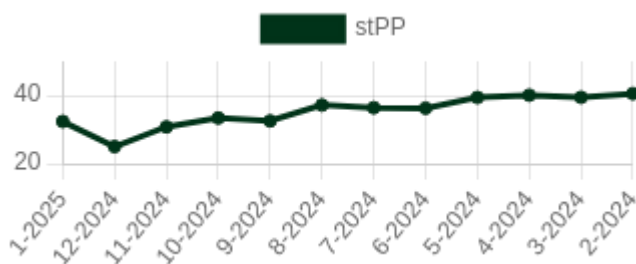
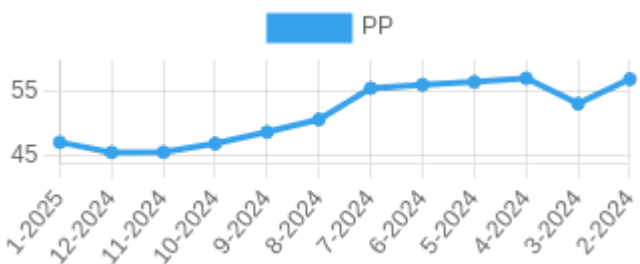
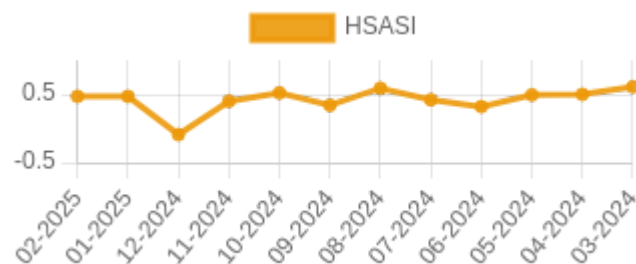
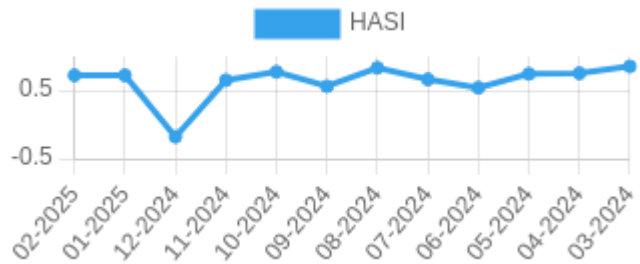
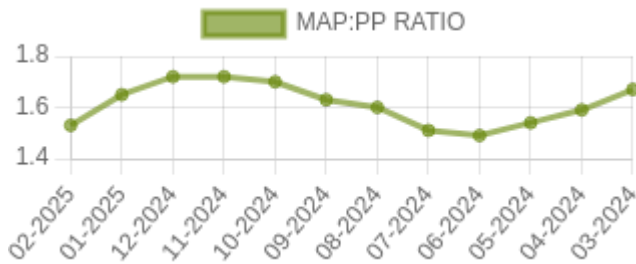
PSR: Pulse stiffening ratio (PSR) is the ratio between systolic and diastolic stiffness. It can be expressed as $PSR = \frac{[systolic\ stiffness]}{[diastolic\ stiffness]}$.

HbA1c Trends



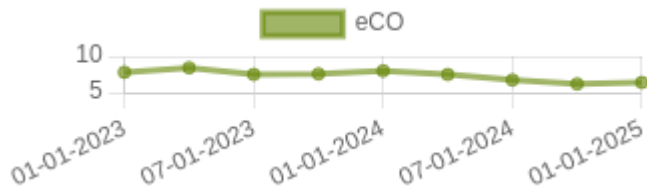
Estimated HbA1c - eHbA1c

Others Trends



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

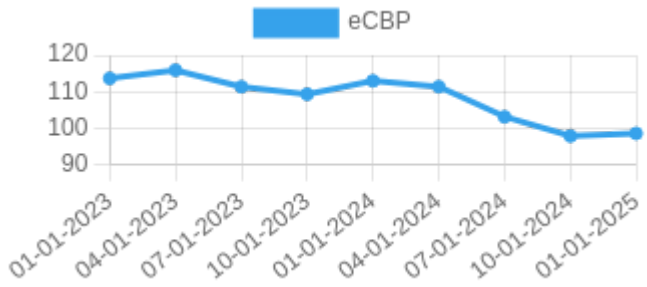
eCO graph



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

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

eCBP graph

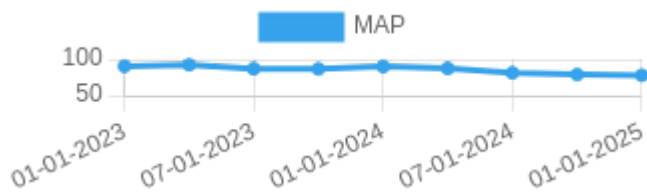


eCBP (Estimated Central Blood Pressure) normal range – 0 – 100 mmHg

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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