

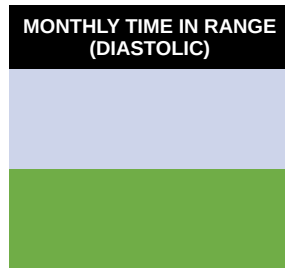
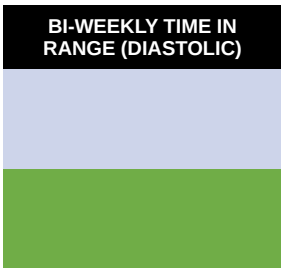
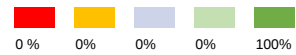
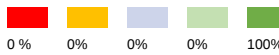


40 Mitchell Ave, Binghamton, NY 13903 Phone:(607) 723-1676

Patient Name: Ariana Koniuto
Height: 5.9

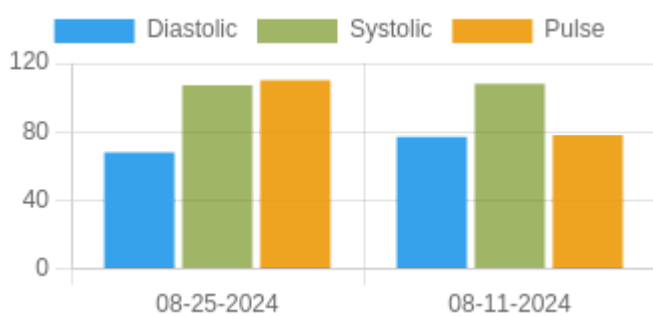
MRN #: 8163
Weight: 190

Birth Year:
Hypertension: S1



Blood Pressure Averages

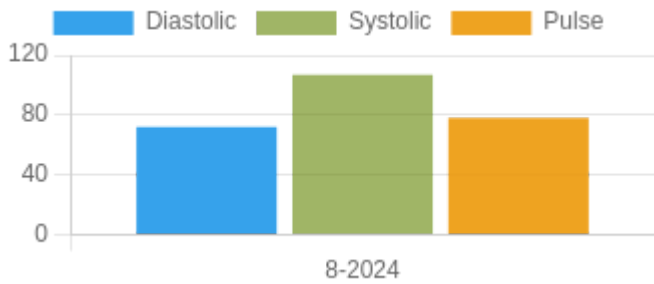
Blood Pressure Averages: Weekly



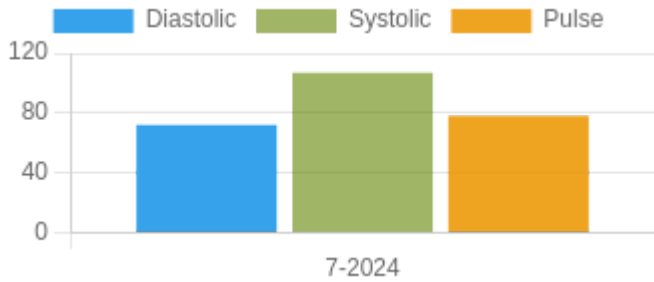
Week	Systolic(n)	Diastolic(n)	Pulse(n)
08-25-2024	107 (1)	68 (1)	110 (1)
08-11-2024	108 (1)	77 (1)	78 (1)

Blood Pressure Averages: Monthly

Month-Year	Systolic(n)	Diastolic(n)	Pulse(n)
8-2024	107 (2)	72 (2)	78 (79)

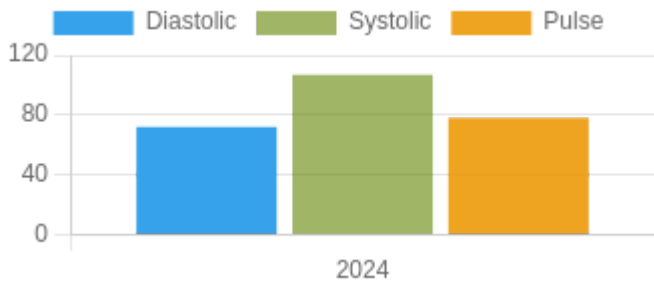


Blood Pressure Averages: Quarterly



Quarter-Year	Systolic(n)	Diastolic(n)	Pulse(n)
7-2024	107 (2)	72 (2)	78 (79)

Blood Pressure Averages: Yearly



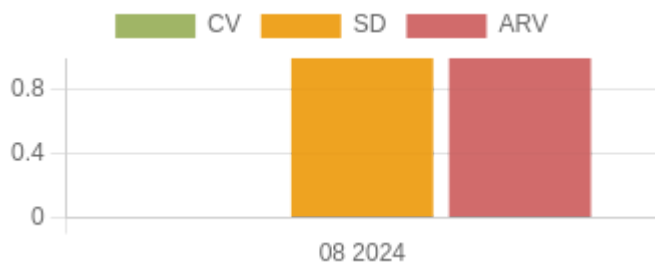
Year	Systolic(n)	Diastolic(n)	Pulse(n)
2024	107 (2)	72 (2)	78 (79)

Chat

Sender	Receiver	Messege	Date&Time
R.A. Ramanujan , M.D.	Ariana Koniuto	Please do and if you wish to try alternative send us a note	04-09-2024
Ariana Koniuto	R.A. Ramanujan , M.D.	I think I'm going to stop the Phentermine too - my heart just raced into the 130s/140s without cause...	04-09-2024
R.A. Ramanujan , M.D.	Ariana Koniuto	Please alert if it fails. 🙏	01-09-2024
Ariana Koniuto	R.A. Ramanujan , M.D.	Constipation resolved today - I ended up taking colace to help. I am going to resume phentermine tomorrow. I am hoping for no side effects. Were you able to see my Endwell Family or Quest Diagnostics labs? I'm wondering if there is anything more we should be checking with my thyroid. Thank you!	01-09-2024
Ariana Koniuto	R.A. Ramanujan , M.D.	indigestion/heartburn and constipation is not completely resolved but getting better - I didn't take phentermine yesterday or today due to my stomach upset. Will resume tomorrow.	31-08-2024
R.A. Ramanujan , M.D.	Ariana Koniuto	Yes	29-08-2024
Ariana Koniuto	R.A. Ramanujan , M.D.	still take phentermine?	29-08-2024

R.A. Ramanujan , M.D.	Ariana Koniuto	Hold Rybelsus and update how you feel day after please. 🙏	29-08-2024
Ariana Koniuto	R.A. Ramanujan , M.D.	yes	29-08-2024
R.A. Ramanujan , M.D.	Ariana Koniuto	Did you take Rybelsus today or yesterday ??	29-08-2024
Ariana Koniuto	R.A. Ramanujan , M.D.	Heartburn is back today.	29-08-2024
Ariana Koniuto	R.A. Ramanujan , M.D.	Dr Ramanujan - Just an update! Yeast infection has cleared. Constipation is still present after taking magnesium every evening. Heartburn is gone. Today around 10:45 am my heart raced a little when going from sitting to walking. You can see it under the vitals part of the app. I have also felt like my breathing has been a little shallow at times. This is what I saw Dr. DePersis for and he could not find a cause. However, overall I am feeling well. I updated my blood pressure too and that was normal for me. Thank you!	28-08-2024
Ariana Koniuto	R.A. Ramanujan , M.D.	thank you!	23-08-2024
R.A. Ramanujan , M.D.	Ariana Koniuto	Will send Rx for Fluconazole tab x 3 days (Note even one might be adequate to resolve. Best	23-08-2024
Ariana Koniuto	R.A. Ramanujan , M.D.	Fails to resolve on its own or with OTC treatment?	23-08-2024
R.A. Ramanujan , M.D.	Ariana Koniuto	GM Arian, If the yeast infection fails to resolve alert. Will be glad to have you adopt proactive plan. Best	23-08-2024
Ariana Koniuto	R.A. Ramanujan , M.D.	2 doses have helped me produce a couple small bowel movements. I no longer have heartburn. However, I am experiencing some vaginal itching that usually precedes a yeast infection (I have them a handful of times a year). In the past I have taken Diflucan or something OTC...can Onuse one of those remedies and start a probiotic?	23-08-2024

Systolic Variability Trends

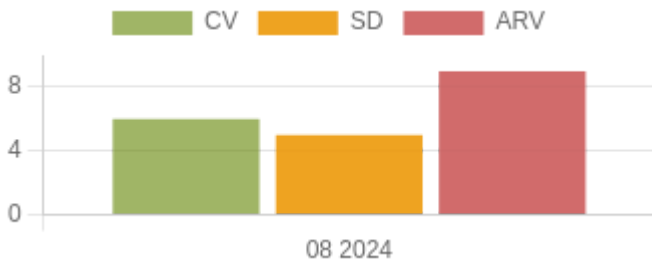


1. CV –The coefficient of variation (CV) is the ratio of the standard deviation to the mean. The higher the coefficient of variation, the greater the level of dispersion around the mean, Units = mmHg.

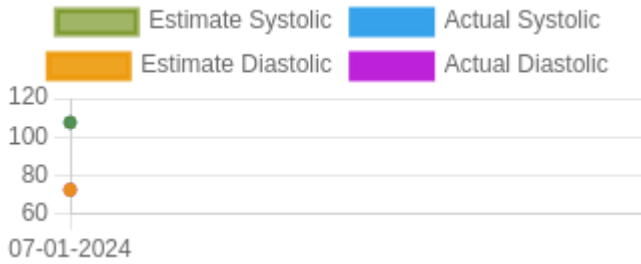
2. ARV – Average real variability (ARV) is a method for measuring short-term, reading-to-reading, within-subject variability. It is defined as the average of the absolute differences between consecutive readings, Units = mmHg.

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.

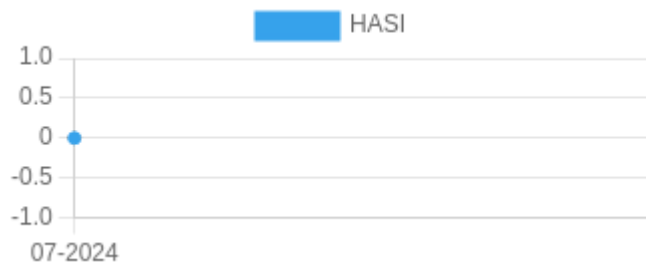
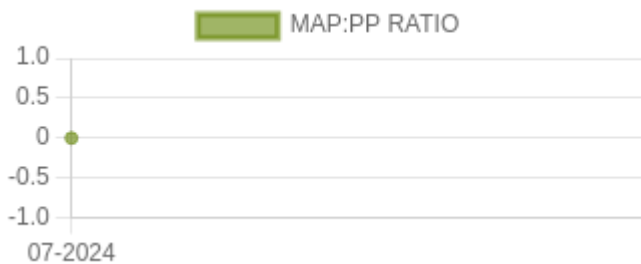
PSR

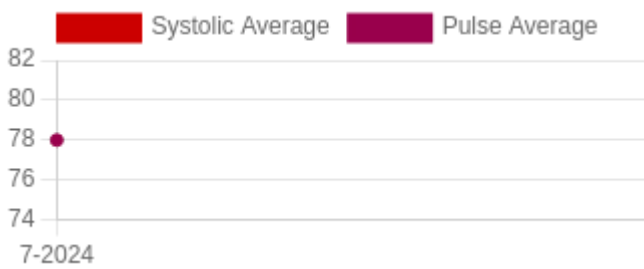
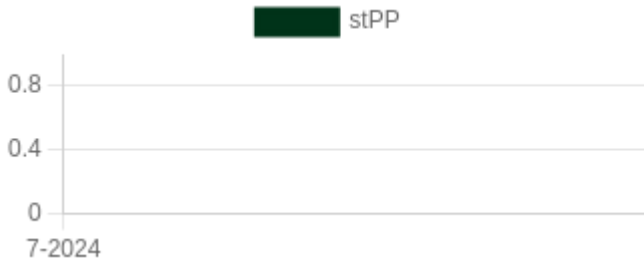
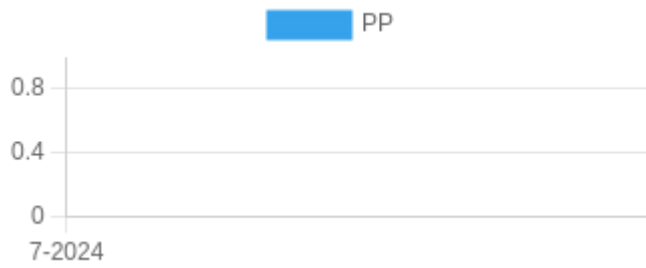
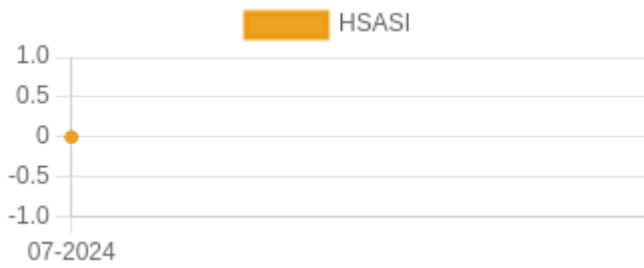


PSR: Pulse stiffening ratio (PSR) is the ratio between systolic and diastolic stiffness. It can be expressed as $PSR = \frac{[systolic\ stiffness]}{[diastolic\ stiffness]}$.

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



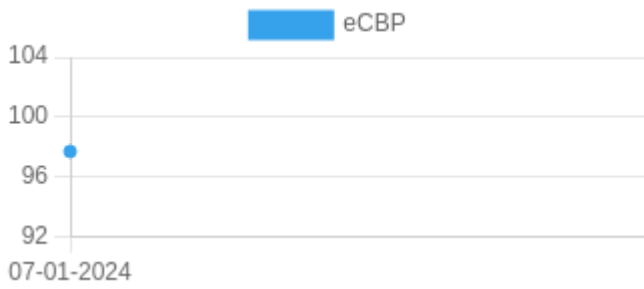
eCO (Estimated Cardiac Output) Normal range to be added 5 – 10 liters/minute

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

eCBP graph

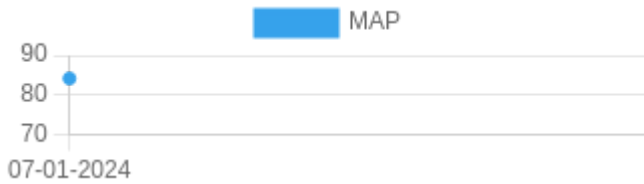
eCBP (Estimated Central Blood Pressure) normal range – 0 – 100 mmHg

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

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 ilijstrand& 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.

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