

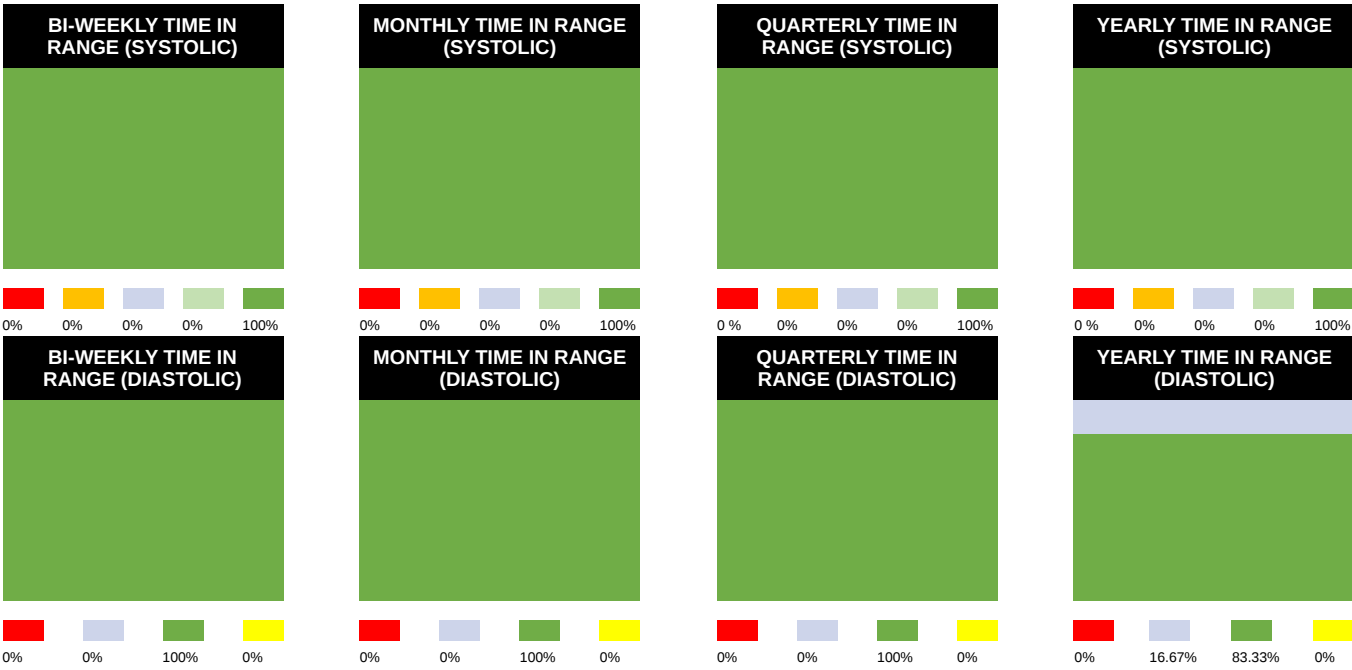


40 Mitchell Ave, Binghamton, NY 13903 Phone:(607) 723-1676

Patient Name: Alissa Mrva  
Height:

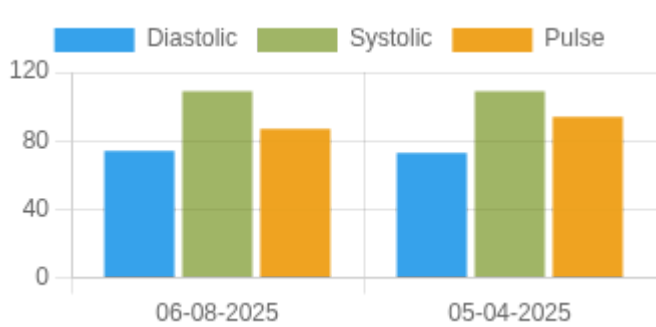
MRN #: 8158  
Weight:

Birth Year:  
Hypertension: S1



Blood Pressure Averages

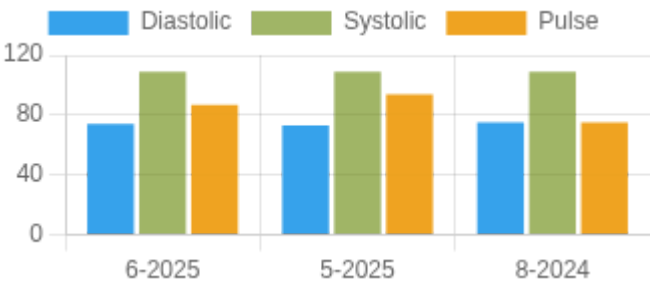
Blood Pressure Averages: Weekly



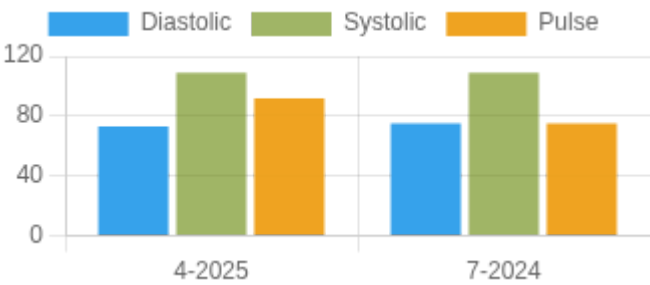
Week	Systolic(n)	Diastolic(n)	Pulse(n)
06-08-2025	109 (1)	74 (1)	87 (1)
05-04-2025	109 (2)	73 (2)	94 (2)

Blood Pressure Averages: Monthly

Month-Year	Systolic(n)	Diastolic(n)	Pulse(n)
6-2025	109 (1)	74 (1)	87 (1)
5-2025	109 (2)	73 (2)	94 (2)
8-2024	109 (3)	75 (3)	75 (3)

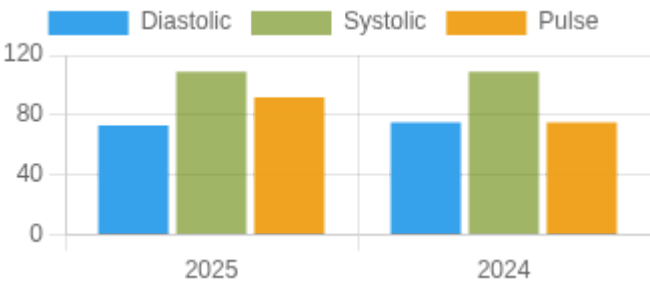


Blood Pressure Averages: Quarterly



Quarter-Year	Systolic(n)	Diastolic(n)	Pulse(n)
4-2025	109 (3)	73 (3)	92 (3)
7-2024	109 (3)	75 (3)	75 (3)

Blood Pressure Averages: Yearly



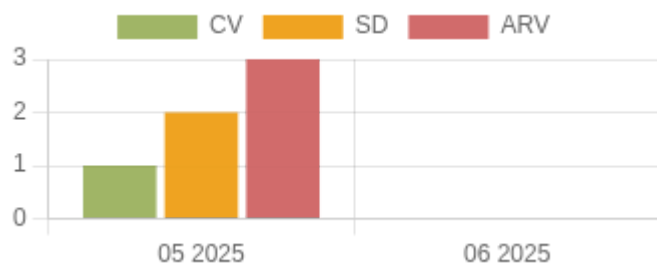
Year	Systolic(n)	Diastolic(n)	Pulse(n)
2025	109 (3)	73 (3)	92 (3)
2024	109 (3)	75 (3)	75 (3)

Chat

Sender	Receiver	Messege	Date&Time
R.A. Ramanujan , M.D.	Alissa Mrva	👍	10-08-2025
Alissa Mrva	R.A. Ramanujan , M.D.	can you please fill the wegovy? also is it possible to go up a bit in the dosage?	10-08-2025
Alissa Mrva	R.A. Ramanujan , M.D.	I did want to check on the hair shedding I am experiencing. I have had a noticeable change in my hair in the last 3 ish years, I noticed it following having covid, but noticed a lot more shedding in the last month. Is this side effect of the medication? Is so, is there anything I can do for this? There are so many supplements (nutrafol seems to be popular) and medications (“hers” is minoxidil based and “musley” is Minoxidil, Spironolactone and Dutasteride) out there now that I want to be cautious, since I typically don’t take much at all. But the shedding is noticeable and happens even when I’m not touching my hair so I’m starting to get nervous	30-07-2025
Mr. Anu Banerjee	Alissa Mrva	Hello Patient with Android devices, Good evening, and hope you are having a great weekend. This message is to inform you that all Android issues have been resolved at this time. If you receive a message after upgrading your app, please allow permission to access your steps and exercise data. No confidential data is shared from your phone. We appreciate your patience and understanding as we undergo some upgrades. Again, this message is only for patients with Android devices, not iPhone devices. Thank you CMV Support Staff	28-07-2025

R.A. Ramanujan , M.D.	Alissa Mrva	👍	27-07-2025
Alissa Mrva	R.A. Ramanujan , M.D.	can you please process a refill for phentermine?	27-07-2025
Allison , M.D.	Alissa Mrva	Good afternoon! I have some exciting news for our patients who are currently using a Dexcom or Libre CGM! Diabetic Care Associates has partnered with Center Health to provide even more exceptional care to our patients. You may have already received a link to join, but if you haven't, you can use this web address: <a href="https://center.health/dca">https://center.health/dca</a> to sign up. Our Practice Code is QJ2M25. ** It is important to note that you will also need to have either the Dexcom or Libre app already installed on your phone in order to participate. When you are linking Center Health to your Dexcom or Libre app, you will also need the password to your Dexcom or Libre app in order to link it appropriately. ** Center Health allows our providers the ability to monitor your levels in between your visits, in order to better personalize your treatment and receive alerts if you ever develop high risk patterns. At this time only Dexcom and Libre CGM's are supported. After you are enrolled, there is nothing else for you to do! You will receive a confirmation text or email which will include information on the Center Health Diabetes App (WHICH IS COMPLETELY FREE TO USE AS A PATIENT OF DCA ON A CGM). This app is NOT a requirement to participate with Center Health; the Center Health app is just an added perk which would allow you to do things like sync your fitness trackers & CGM and have access to Center Health's virtual diabetes assistant Aria; she can even give you menu and recipe recommendations! Have a great day!	23-07-2025
Mr. Anu Banerjee	Alissa Mrva	We are still experiencing some server issues. We are actively working on mediating these issues so that it does not impact data entries. We have asked for external consultant help to help us with this problem. We expect to get this issue resolved by this week. We apologize for any inconvenience that it has created and the slowness on your end. Thank you for your patience.	21-07-2025
Amy Burpee , MS, RD, CDE	Alissa Mrva	👍	15-07-2025
Alissa Mrva	R.A. Ramanujan , M.D.	ok so that's probably roughly the same as what one taking now, ok no worries	15-07-2025
Amy Burpee , MS, RD, CDE	Alissa Mrva	It looks like Lexi sent in for Wegovy 1.0mg weekly (starting dose is 0.25mg) -- next dose up from 1.0mg is 1.7mg and the maximum dose is 2.4mg weekly. You can increase whenever you feel the current dose is not therapeutic -- just let us know.	15-07-2025
Alissa Mrva	R.A. Ramanujan , M.D.	thank you! I just spoke to Alexis reg. moving to the wegovy. can you help me understand how the dosing will work for that? do I have to do the step approach to dosing like I did with the zepbound?	15-07-2025
Mr. Anu Banerjee	Alissa Mrva	Good morning. Due to a technical server issue there was a glitch in the system since yesterday that caused patients not to enter data. That glitch is now been fixed. Please go ahead and use the application normally. We apologize for any inconvenience caused. Thank you for your patience.	14-07-2025
R.A. Ramanujan , M.D.	Alissa Mrva	They are note similar. Besides, if you had tried and failed or suffered side effect they may !!! take in to consideration.	09-07-2025
Alissa Mrva	R.A. Ramanujan , M.D.	is it about equivalent? this one had a huge impact on my stomach issues I'm just hoping it will be similar enough that they won't come back	09-07-2025
Alissa Mrva	R.A. Ramanujan , M.D.	ok thank you, I guess let's give it a shot then with the new medication	09-07-2025
R.A. Ramanujan , M.D.	Alissa Mrva	Unless you indicate you had severe adverse reaction they are very likely, denial is routine by insurance vendors.	09-07-2025

## Systolic Variability Trends

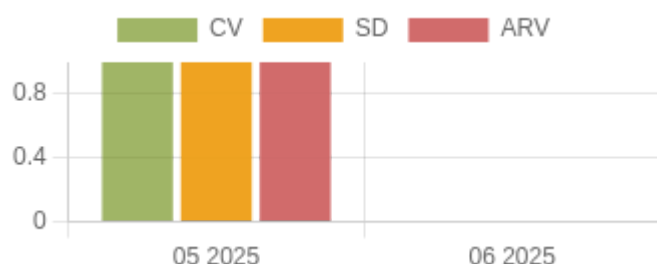


1. **CV** –The coefficient of variation (CV) is the ratio of the standard deviation to the mean. The higher the coefficient of variation, the greater the level of dispersion around the mean, Units = mmHg.

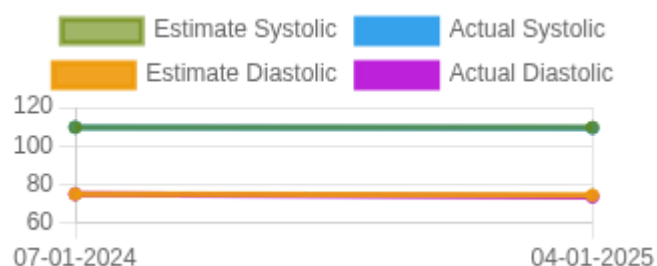
2. **ARV** – Average real variability (ARV) is a method for measuring short-term, reading-to-reading, within-subject variability. It is defined as the average of the absolute differences between consecutive readings, Units = mmHg.

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.  $stPP = PP / (1 + WIF)$

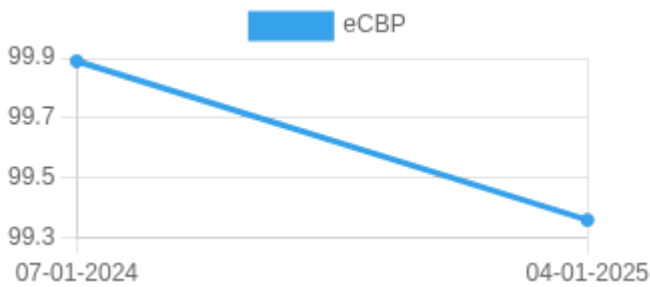
## eCO graph



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

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

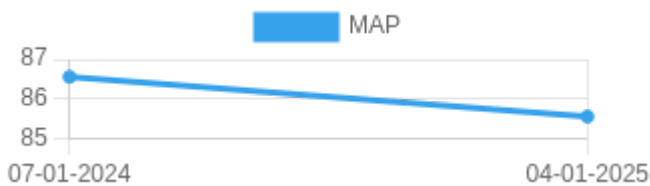
## eCBP graph



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.

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

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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.  $\text{Pulse pressure} \times \text{inverse log (std. dev. systolic / std. dev. Diastolic)} / (\text{std. dev. systolic} / \text{std. dev. Diastolic}) - 1$  (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.

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