



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

Patient Name: Carol Benjamin  
Height: 5.9

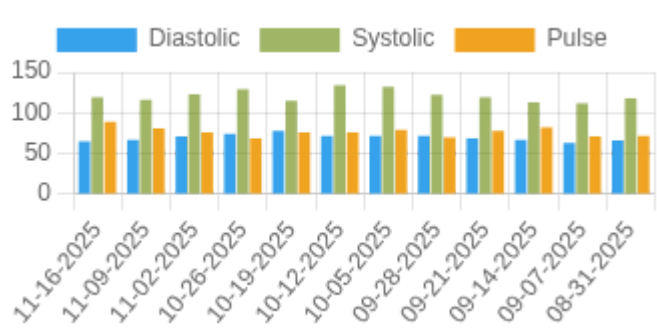
MRN #: 250  
Weight: 0

Birth Year:  
Hypertension: S1



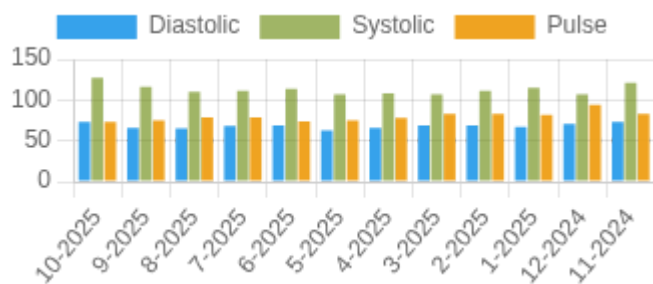
Blood Pressure Averages

Blood Pressure Averages: Weekly



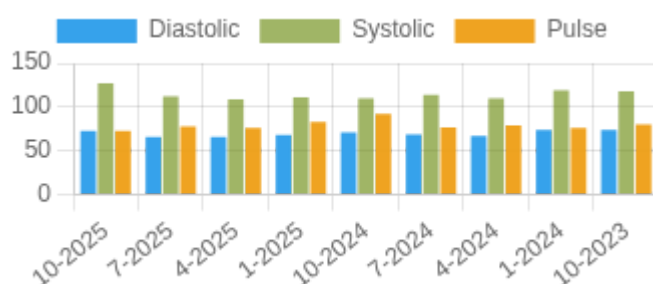
| Week       | Systolic(n) | Diastolic(n) | Pulse(n) |
|------------|-------------|--------------|----------|
| 11-16-2025 | 119 (3)     | 65 (3)       | 89 (3)   |
| 11-09-2025 | 116 (7)     | 67 (7)       | 81 (7)   |
| 11-02-2025 | 123 (7)     | 71 (7)       | 76 (7)   |
| 10-26-2025 | 129 (7)     | 74 (7)       | 69 (7)   |
| 10-19-2025 | 115 (1)     | 78 (1)       | 76 (1)   |
| 10-12-2025 | 134 (1)     | 72 (1)       | 76 (1)   |
| 10-05-2025 | 132 (6)     | 72 (6)       | 79 (6)   |
| 09-28-2025 | 122 (7)     | 72 (7)       | 70 (7)   |
| 09-21-2025 | 119 (7)     | 69 (7)       | 78 (7)   |
| 09-14-2025 | 113 (7)     | 67 (7)       | 82 (7)   |
| 09-07-2025 | 112 (7)     | 63 (7)       | 71 (7)   |
| 08-31-2025 | 118 (7)     | 66 (7)       | 72 (7)   |

Blood Pressure Averages: Monthly



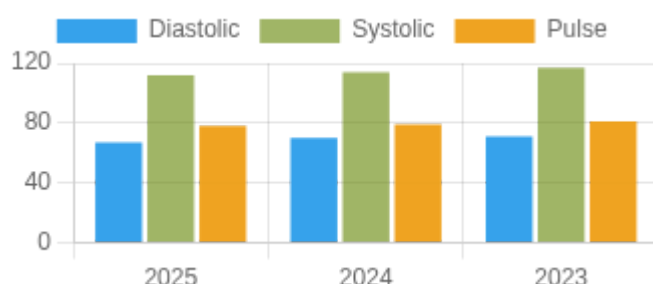
| Month-Year | Systolic(n) | Diastolic(n) | Pulse(n) |
|------------|-------------|--------------|----------|
| 10-2025    | 127 (18)    | 73 (18)      | 73 (18)  |
| 9-2025     | 116 (30)    | 66 (30)      | 75 (30)  |
| 8-2025     | 110 (31)    | 65 (31)      | 79 (31)  |
| 7-2025     | 111 (32)    | 68 (32)      | 79 (32)  |
| 6-2025     | 114 (31)    | 69 (31)      | 74 (31)  |
| 5-2025     | 107 (31)    | 63 (31)      | 75 (31)  |
| 4-2025     | 108 (26)    | 66 (26)      | 78 (26)  |
| 3-2025     | 107 (24)    | 69 (24)      | 83 (24)  |
| 2-2025     | 111 (19)    | 69 (19)      | 83 (19)  |
| 1-2025     | 115 (22)    | 67 (22)      | 82 (22)  |
| 12-2024    | 107 (13)    | 71 (13)      | 94 (13)  |
| 11-2024    | 121 (3)     | 73 (3)       | 83 (3)   |

## Blood Pressure Averages: Quarterly



| Quarter-Year | Systolic(n) | Diastolic(n) | Pulse(n) |
|--------------|-------------|--------------|----------|
| 10-2025      | 127 (18)    | 73 (18)      | 73 (18)  |
| 7-2025       | 112 (93)    | 66 (93)      | 78 (93)  |
| 4-2025       | 109 (88)    | 66 (88)      | 76 (88)  |
| 1-2025       | 111 (65)    | 68 (65)      | 83 (65)  |
| 10-2024      | 110 (16)    | 71 (16)      | 92 (16)  |
| 7-2024       | 114 (30)    | 69 (30)      | 77 (30)  |
| 4-2024       | 110 (45)    | 67 (45)      | 79 (45)  |
| 1-2024       | 119 (51)    | 74 (51)      | 76 (51)  |
| 10-2023      | 118 (19)    | 74 (19)      | 80 (19)  |

## Blood Pressure Averages: Yearly



| Year | Systolic(n) | Diastolic(n) | Pulse(n) |
|------|-------------|--------------|----------|
| 2025 | 112 (264)   | 67 (264)     | 78 (264) |
| 2024 | 114 (142)   | 70 (142)     | 79 (142) |
| 2023 | 117 (91)    | 71 (91)      | 81 (91)  |

## Blood Sugar Averages

| Week       | Before breakfast | 2 hours after breakfast | Before lunch | 2 hours after lunch | Before dinner | 2 hours after dinner | Bedtime |
|------------|------------------|-------------------------|--------------|---------------------|---------------|----------------------|---------|
| 11-22-2025 | 185(4)           |                         | 178(2)       |                     | 204(4)        |                      | 202(3)  |
| 11-14-2025 | 146(8)           |                         | 165(3)       |                     | 175(6)        |                      | 195(7)  |
| 11-06-2025 | 142(8)           |                         | 164(6)       |                     | 190(7)        |                      | 197(7)  |

| Month-Year | Before breakfast | 2 hours after breakfast | Before lunch | 2 hours after lunch | Before dinner | 2 hours after dinner | Bedtime |
|------------|------------------|-------------------------|--------------|---------------------|---------------|----------------------|---------|
| 11-2025    | 150(18)          |                         | 161(9)       |                     | 187(16)       |                      | 195(16) |

|         |         |        |         |  |         |        |         |
|---------|---------|--------|---------|--|---------|--------|---------|
| 10-2025 | 151(18) |        | 179(6)  |  | 172(11) | 161(1) | 164(13) |
| 09-2025 | 137(30) |        | 147(10) |  | 147(21) |        | 151(24) |
| 08-2025 | 146(32) | 205(1) | 152(21) |  | 149(30) |        | 166(29) |

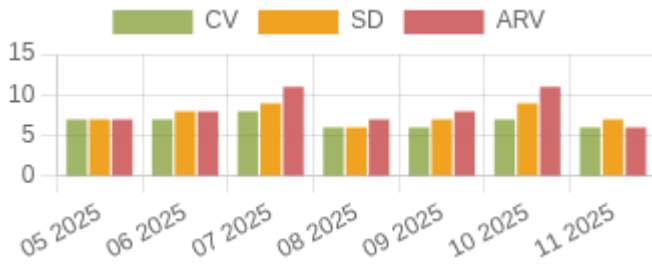
| Year       | Before breakfast | 2 hours after breakfast | Before lunch | 2 hours after lunch | Before dinner | 2 hours after dinner | Bedtime  |
|------------|------------------|-------------------------|--------------|---------------------|---------------|----------------------|----------|
| 01-01-2025 | 151(304)         | 179(4)                  | 161(157)     | 186(11)             | 166(224)      | 201(2)               | 194(250) |
| 01-01-2024 | 146(282)         | 81(2)                   | 162(156)     | 217(8)              | 186(192)      | 190(5)               | 221(224) |
| 01-01-2023 | 146(178)         |                         | 134(134)     |                     | 149(142)      | 189(1)               | 178(129) |

## Chat

| Sender                | Receiver              | Messege   | Date&Time  |
|-----------------------|-----------------------|---|------------|
| R.A. Ramanujan , M.D. | Carol Benjamin        | Happy Thanksgiving!   | 26-11-2025 |
| Carol Benjamin        | R.A. Ramanujan , M.D. | Am in a lot of pain as night and today in my back and neck. Waiting for the nurse to come today so she can check me out. Called D.Jayaraman...waiting fr him to call back. Hoping to get some blood work done to see if it a reaction to the infusion. Paperwork from infusion office said a reaction could happen between 1 and 8 days after the one dose infusion.  | 20-11-2025 |
| R.A. Ramanujan , M.D. | Carol Benjamin        | 🙏 for the update and best   | 20-11-2025 |
| Carol Benjamin        | R.A. Ramanujan , M.D. | Had iron infusion yesterday Nov. 18th. Today my blood sugar levels are high and have bone pain. my color is better. Took 15 units of Toujeo tonightcab before bed. I haven't been eating much so I can't blame the rising blood sugar levels on that. Dr Marahaba felt I should be on the Mounjero 2.5. He said to stop the Metamucil and use MiraLAX on a daily basis and continue to take Amitiza twice a day...at breakfast time and dinner time. He will see me in 3 months or before...if necessary. My upper back and shoulders are very sore...this morning it was hard to breathe...with the pain! My O2 numbers are fine. Am assuming the pain in my shoulders and upper back was a reaction to the infusion! Who knows...Kelly rubbed me down when she got home from work and put my tens unit on again. Will keep you updated... concerned about my bs numbers!!! 🙏🙏🙏                    | 19-11-2025 |
| Carol Benjamin        | R.A. Ramanujan , M.D. | Have to have an iron infusion on Monday. Am still having difficulty moving my bowels even though I am taking Metamucil 2tsp. daily w/ occasionalcab MiraLAX.Stool is soft but just doesn't seem to want to pass. If I don't go...I gain a little weight. when I go it drops back down. I feel my numbers are high considering what I am eating. I'm afraid the Mounjero is causing my lack of bowel action...otherwise I seem to be doing ok on it. But, the bowel problem is bad enough to cause me concern. I'd really like to continue SLOWLY with it but am concerned about the continuing bowel issue! I also go to see my gastroenterologist on Monday...perhaps he can shed so light on the situation! Will let you know what Dr. Marahaba has to say after I see him on Monday. I go right from his office to the iron infusion at General Hospital. Thank you for keeping track of me! 🙏🙏🙏 | 14-11-2025 |
| Carol Benjamin        | R.A. Ramanujan , M.D. | I will need a prescription for Mounjero 2.5 to start the Mounjero. You can send it to CVS on Upper Front Street and Kelly will pick it up. In the meantime I will be taking the Toujeo 14 units at bedtime. I will let you know when I start the Mounjero. OK? Please let me know when you sent it in so we will be on the "lookout" for the Mounjero 2.5 prescription. Gratefully, cab 🙏🙏🙏   | 01-11-2025 |
| R.A. Ramanujan , M.D. | Carol Benjamin        | GM, Great! Wii track and trend  | 01-11-2025 |
| R.A. Ramanujan , M.D. | Carol Benjamin        | Please start today 10 units long acting insulin and Mounjaro please.  | 31-10-2025 |
| Carol Benjamin        | R.A. Ramanujan , M.D. | No! Am only controlling bs by what I eat. NO medication AT ALL ...no insulin, no Ozempic, no Monjero, no Toujeo.....nothing medication wise!!!! I am hoping you will come up with something that will be best for my bs, heart, and kidneys but start slowly . It appears my reaction to Monjero was the constipation. Otherwise nothing  | 31-10-2025 |

|                         |                       |  |            |
|-------------------------|-----------------------|--|------------|
|                         |                       | else. I have IBS and I guess the constipation interfered with the fluid restriction and use of Bumex which the change the dose regularly, depending on my bloodwork. It's hard to regulate all my systems...I'm a real "puzzle"! Hard for all my specialists to coordinate and make it all work together. Now Lexi arranged for me to have my bloodwork drawn at my home, so if you need regular bloodwork, so you can keep better track, it will be easier for me. She is a great asset!!! 🙏🕊️  |            |
| R.A. Ramanujan , M.D.   | Carol Benjamin        | GM, RU back on your old combination for diabetes ??  | 31-10-2025 |
| Carol Benjamin          | R.A. Ramanujan , M.D. | Will you get back to me about my blood sugars and what I should do. Am worried about this. I am still only trying to control it by how much and what I eat. 🙏🕊️  | 27-10-2025 |
| R.A. Ramanujan , M.D.   | Carol Benjamin        | Glad to know U R home.   | 27-10-2025 |
| Carol Benjamin          | R.A. Ramanujan , M.D. | I also think that you need to know that I haven't had any Monjero or anything to control my blood sugar since Friday October 10, 2025. I was not on a diabetic diet in the hospital, so I picked and chose as best I could to keep my numbers under control. I asked for my bs# to be checked and best I can say is the highest was around 230 and the lowest about 130. Not bad but would like to improve...but only as fast as my body will allow. That's why my well thought out suggestion what I just express. Again...I am grateful!!cab   | 26-10-2025 |
| Carol Benjamin          | R.A. Ramanujan , M.D. | drugs can be mixed and matched...how often I can take them WITHOUT HARMING my KIDNEYS! I feel I am taking too much of any doctor's time and NO ONE doctor has the time to address this issue! This is what I would like to try! I would like to reduce the Monjero to a beginning dose, let me take something that I can adjust my blood sugar levels with, and gradually increase the Monjero so that I can control my bowels with something that keeps my whole body systems without causing problems for my kidney and metabolic system! I DO WANT to gradually increase the Monjero...I agree!! But, I think my body needs time to adjust. Otherwise, I wind up wasting everyone time bouncing back and forth to the ER and admissions to the hospital! I'm sorry there so many errors in getting this message across but I ma not very techie! Thank you for your patience, and peserverance with me. I am very grateful! cabwith | 26-10-2025 |
| Carol Benjamin          | R.A. Ramanujan , M.D. | Dr. Ram, I believe my reaction to the Monjero was that caused my IBD to flair and that's what caused the perfect storm that sent me to the hospital for 10 days. You ask if I will increase....the Monjero...the Hospitalist on discharge (at my request) suggested backing off the Monjero and slowly increasing it so I can better control my bowels. I am trying not to get diarrhea but keep my back from being hurt by excessive straining. My problem is I don't know what over the counter  | 26-10-2025 |
| Carol Benjamin          | R.A. Ramanujan , M.D. | Thank you Lexi for arranging bloodwork directly from Home Health Care for me!!!!❤️❤️❤️❤️❤️❤️ I now have tele visits ...not sue how long that can last...I could tell you what my needs are...not sure who else I can call...right now you and DR. Ram seem to be the ones concerned with me and my health whole body health care. If you can help with coordinating my total body health care ...that would take my stress levels DOWN tremendously!!!   | 26-10-2025 |
| R.A. Ramanujan , M.D.   | Carol Benjamin        | Next lab please have them include Magnesium with calcium. Sodium looks much better. Please consider going up on Mounjaro.  | 14-10-2025 |
| null Lexi Matthias, LPN | Carol Benjamin        | HI CAROL, I TRIED TO CALL YOU BACK BUT IT WENT TO VOICEMAIL. I SPOKE TO AMY AT THE LAB WHO STATED SHE'S NOT SURE WHY YOU WERE TOLD DR. RAM WAS "BLOCKED" SHE'S NOT FAMILIAR WITH THAT TERM . DO YOU REMEMBER THE NAME OF THE PERSON YOU SPIKE WITH? IN ANYCASE, SHE DIDN'T SEE ANY REASON WHY Dr. RAM WOULDN'T BE ABLE TO SEE THE RESULTS AND FAXED US A COPY. I ALSO FAXED AN ORDER FOR HOME DRAW TO DO LAB WORK. THEY SHOULD BE IN CONTACT THIS WEEK TO LET YOU KNOW WHAT DAY THEY WILL BE AT YOUR HOUSE. LET ME KNW HOW ELSE I CAN HELP. LEXI   | 13-10-2025 |
| Carol Benjamin          | R.A. Ramanujan , M.D. | I am sorry if I offended you in some way. It certainly was not my intention as I am MOST grateful for you being there and giving me advice when I felt that you were the one doctor who cares the most about his patients and their well being.I would NEVER want to hurt you IN ANY WAY! cab  | 08-10-2025 |
| Carol Benjamin          | R.A. Ramanujan , M.D. | You also, I assume you want me to continue taking the Mounjero as directed by you for my diabetes, continue to send daily information to you via the portal,and call for an appropriate time for an office visit that Kelly can get me to, regardless of anything  | 08-10-2025 |

## Systolic Variability Trends

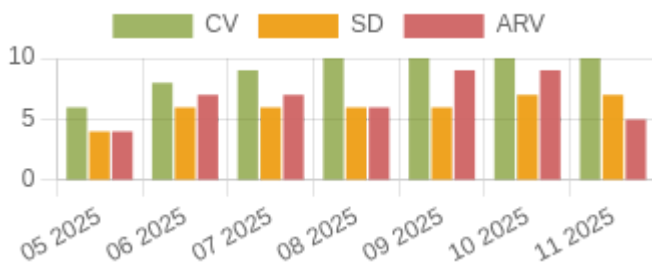


1. **CV** –The coefficient of variation (CV) is the ratio of the standard deviation to the mean. The higher the coefficient of variation, the greater the level of dispersion around the mean, Units = mmHg.

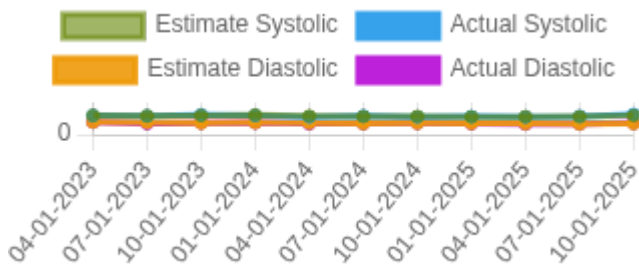
2. **ARV** – Average real variability (ARV) is a method for measuring short-term, reading-to-reading, within-subject variability. It is defined as the average of the absolute differences between consecutive readings, Units = mmHg.

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).

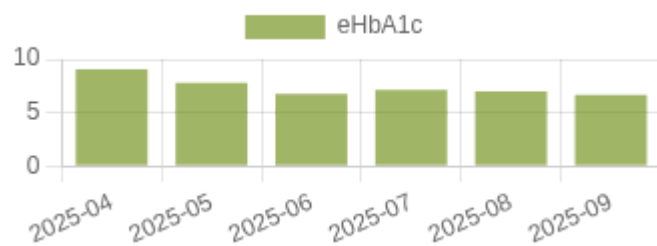
3. **V**- Variance determines the spread of numbers.. It measures how far each number in the set is from the mean (average) and from every other number in the set.

## PSR



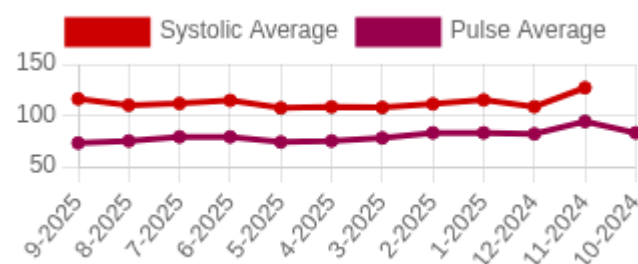
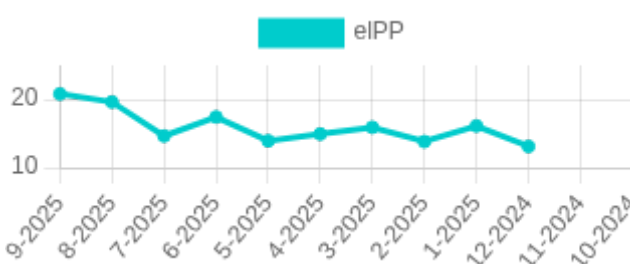
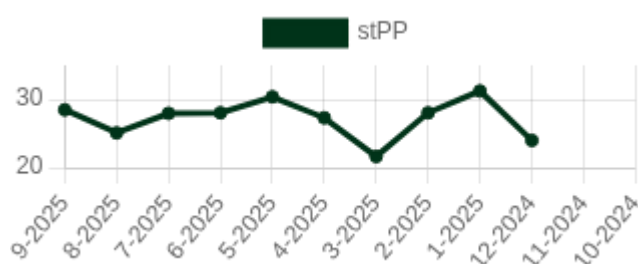
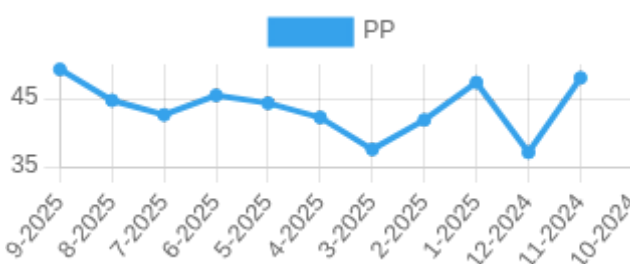
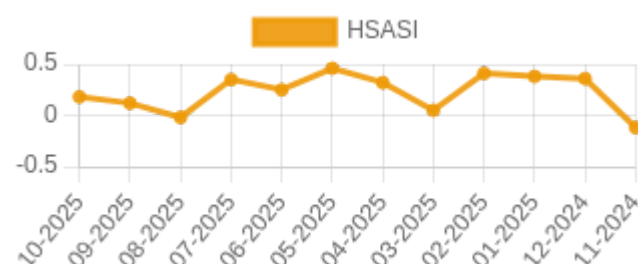
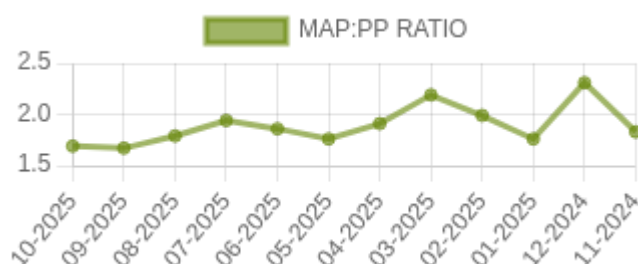
**PSR:** Pulse stiffening ratio (PSR) is the ratio between systolic and diastolic stiffness. It can be expressed as  $PSR = \frac{[systolic\ stiffness]}{[diastolic\ stiffness]}$ .

## HbA1c Trends



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

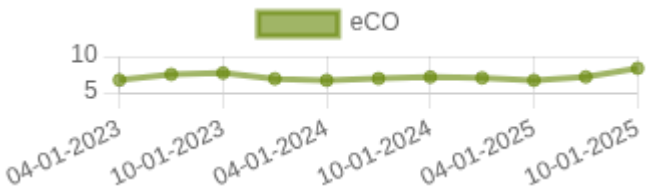
4. PP- Pulse Pressure

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

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

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

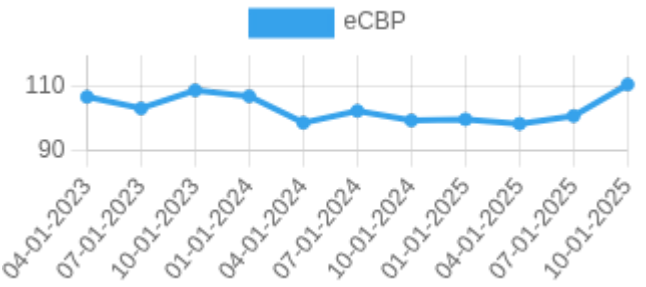
eCO graph



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

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

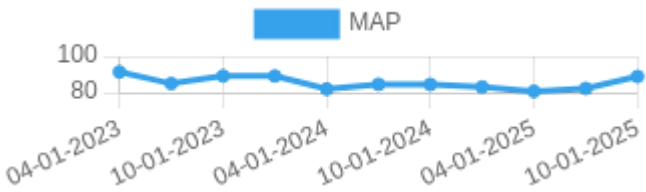
eCBP graph



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) |   |



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



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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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