

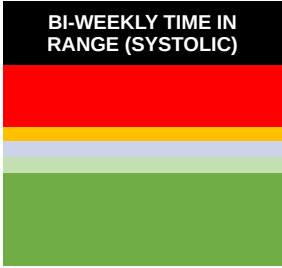


40 Mitchell Ave, Binghamton, NY 13903 Phone:(607) 723-1676

**Patient Name:** Joseph Mollo  
**Height:** 6.0

**MRN #:** 2353  
**Weight:** 170

**Birth Year:**  
**Hypertension:** S1



30.77% 7.69% 7.69% 7.69% 46.15%



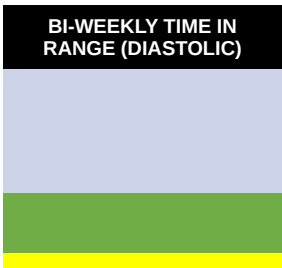
16% 4% 16% 8% 56%



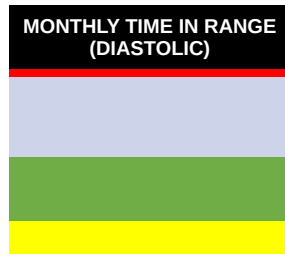
14.08% 8.45% 14.08% 11.27% 52.11%



14.08% 8.45% 14.08% 11.27% 52.11%



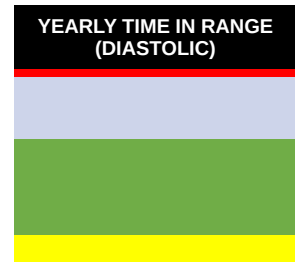
0% 61.54% 30.77% 7.69%



4% 40% 32% 16%



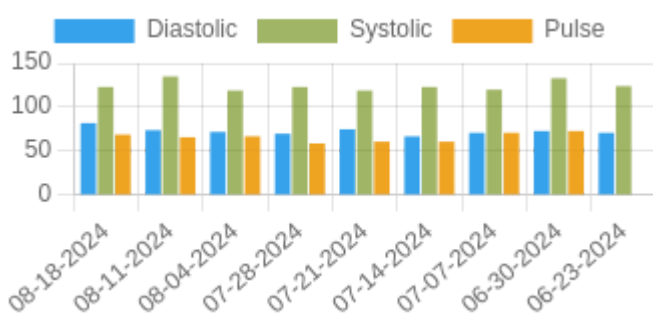
4.23% 30.99% 47.89% 12.68%



4.23% 30.99% 47.89% 12.68%

## Blood Pressure Averages

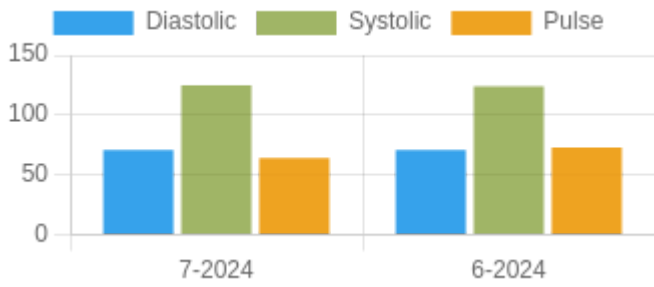
### Blood Pressure Averages: Weekly



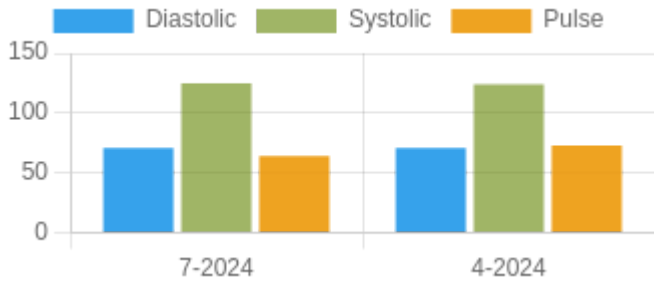
Week	Systolic(n)	Diastolic(n)	Pulse(n)
08-18-2024	123 (1)	82 (1)	69 (1)
08-11-2024	135 (7)	74 (7)	66 (7)
08-04-2024	119 (5)	72 (5)	67 (5)
07-28-2024	123 (2)	70 (2)	59 (2)
07-21-2024	119 (7)	75 (7)	61 (7)
07-14-2024	123 (15)	67 (15)	61 (15)
07-07-2024	120 (13)	71 (13)	71 (13)
06-30-2024	133 (14)	73 (14)	73 (14)
06-23-2024	124 (7)	71 (7)	0 (7)

### Blood Pressure Averages: Monthly

Month-Year	Systolic(n)	Diastolic(n)	Pulse(n)
7-2024	125 (49)	71 (49)	64 (47)
6-2024	124 (7)	71 (7)	73 (7)

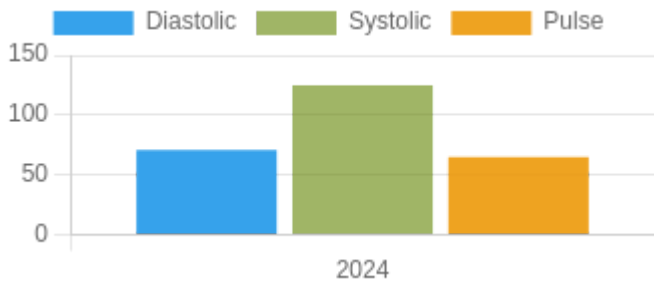


## Blood Pressure Averages: Quarterly



Quarter-Year	Systolic(n)	Diastolic(n)	Pulse(n)
7-2024	125 (49)	71 (49)	64 (47)
4-2024	124 (7)	71 (7)	73 (7)

## Blood Pressure Averages: Yearly



Year	Systolic(n)	Diastolic(n)	Pulse(n)
2024	125 (56)	71 (56)	65 (54)

## Blood Sugar Averages

Week	Before breakfast	2 hours after breakfast	Before lunch	2 hours after lunch	Before dinner	2 hours after dinner	Bedtime
08-25-2024	127(4)		237(4)		157(5)		249(1)
08-17-2024	220(5)		204(4)		267(5)		281(2)
08-09-2024	165(4)		231(2)		228(3)		
08-01-2024	111(2)		120(1)		153(2)		

Month-Year	Before breakfast	2 hours after breakfast	Before lunch	2 hours after lunch	Before dinner	2 hours after dinner	Bedtime
08-2024	175(13)		222(10)		216(13)		270(3)
07-2024	127(22)	228(9)	170(21)	185(10)	170(21)	221(13)	201(6)
06-2024	193(3)	268(2)	252(4)	268(2)	248(5)	267(4)	

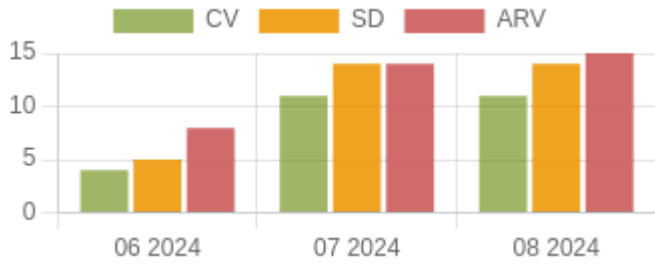
Year	Before breakfast	2 hours after breakfast	Before lunch	2 hours after lunch	Before dinner	2 hours after dinner	Bedtime
01-01-2024	148(38)	235(11)	194(35)	199(12)	195(39)	232(17)	224(9)

## Chat

Sender	Receiver	Message	Date&Time
R.A. Ramanujan , M.D.	Joseph Mollo	GM, Round it 100 fasting not more than 2 HR 180 after meals. Best	21-08-2024
Joseph Mollo	R.A. Ramanujan , M.D.	Dad's waking sugar after 30 units of glargine was 97. Dad thinks that is low. It is my understanding that that is a good waking sugar. Could you please let me know what the optimal range is for a type 2 diabetic, and what a good waking sugar is for him?	21-08-2024
R.A. Ramanujan , M.D.	Joseph Mollo	Can you help me with details on recent heart problem, blood and urine test (Details)test to share directly wisdom for considering the combination.	21-08-2024
Joseph Mollo	R.A. Ramanujan , M.D.	Hi- the Va did not approve the ozempic. They said their criteria is very strict and Dad's sugar is fairly controlled....it's fairly controlled because he's been taking samples of meds he can get approval for, and because myself and the hospital took care of his meals! Not sure about next steps but they're supposed to call your office.	21-08-2024
R.A. Ramanujan , M.D.	Joseph Mollo	Please do make correction. He will be on 25 mg of Jardiance as before.. I will make the change at my end. Best	19-08-2024
R.A. Ramanujan , M.D.	Joseph Mollo	Please request for Mounjaro and notify type 11 diabetes and recent heart and kidney related concern. Reason to justify the need of this class of medication. Thanks	31-07-2024
Joseph Mollo	R.A. Ramanujan , M.D.	My brother's wife, Lisa Mollo, will be by the office tomorrow to get Rybelsus samples. I'll call the VA about getting the prescription mailed.	31-07-2024
R.A. Ramanujan , M.D.	Joseph Mollo	I shared your dilemma with Amy, She would like to chat with you about better options. Best	30-07-2024
Joseph Mollo	R.A. Ramanujan , M.D.	Is the pharmacy the VA?	30-07-2024
R.A. Ramanujan , M.D.	Joseph Mollo	Can you check with Pharmacy and ? reason for hold-up	30-07-2024
Joseph Mollo	R.A. Ramanujan , M.D.	Still waiting on Rybelsus to arrive	30-07-2024
Joseph Mollo	R.A. Ramanujan , M.D.	Nurse just left. Sugar was 230. Waking sugar was 180 she said. He said he took 24 units of lantus last night. He has been on his own since dinner last night.	30-07-2024
Joseph Mollo	R.A. Ramanujan , M.D.	🙄	28-07-2024
R.A. Ramanujan , M.D.	Joseph Mollo	GM, No change. Effect may last more than 24- 48 hours.	27-07-2024
Joseph Mollo	R.A. Ramanujan , M.D.	Since he won't have Rybelsus tomorrow, how many units of lantus should he take?	27-07-2024
Joseph Mollo	R.A. Ramanujan , M.D.	My husband has monitored his sugar today and says it's high. Waking sugar was 130 (7:30) Cream of wheat and an egg for breakfast. At 9:30 it was 202. He didn't eat much for lunch- some fruit. I told him for dinner to do steak, a salad, and a sweet potato.	27-07-2024
Joseph Mollo	R.A. Ramanujan , M.D.	I'm so sorry, I didn't see the notification and told him to take 3.	27-07-2024
R.A. Ramanujan , M.D.	Joseph Mollo	Space them.	26-07-2024
Joseph Mollo	R.A. Ramanujan , M.D.	Thank you. Should he take the last three pills tomorrow or space them out? Rx comes to the house so I hope they'll get here Monday.	26-07-2024

R.A. Ramanujan , M.D.	Joseph Mollo	Rx for 14 mg sent. One daily please	26-07-2024
--------------------------	--------------	-------------------------------------	------------

### Systolic Variability Trends

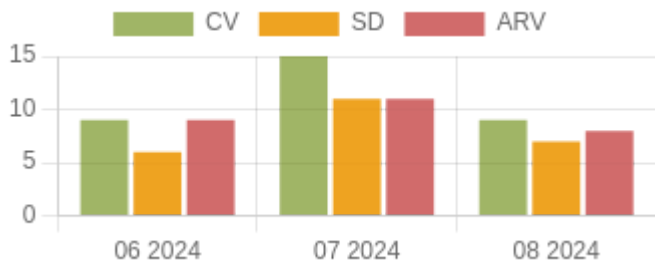


**1. CV** –The coefficient of variation (CV) is the ratio of the standard deviation to the mean. The higher the coefficient of variation, the greater the level of dispersion around the mean, Units = mmHg.

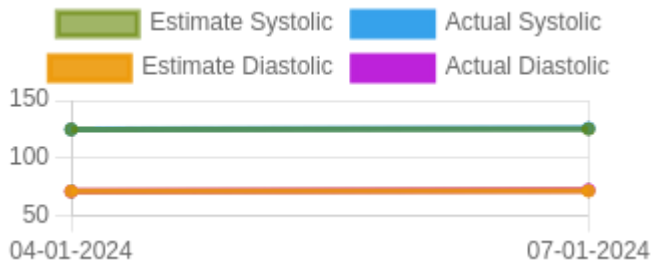
**2. ARV** – Average real variability (ARV) is a method for measuring short-term, reading-to-reading, within-subject variability. It is defined as the average of the absolute differences between consecutive readings, Units = mmHg.

**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).

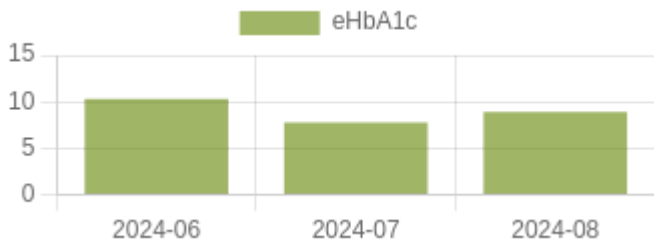
**3. V-** Variance determines the spread of numbers.. It measures how far each number in the set is from the mean (average) and from every other number in the set.

### PSR



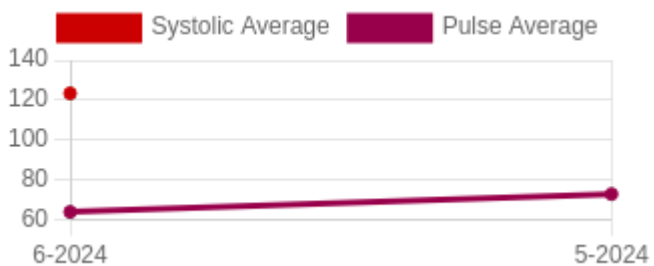
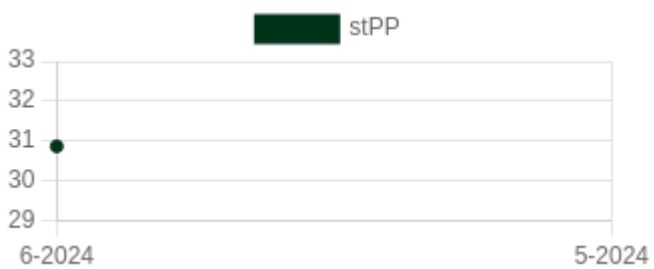
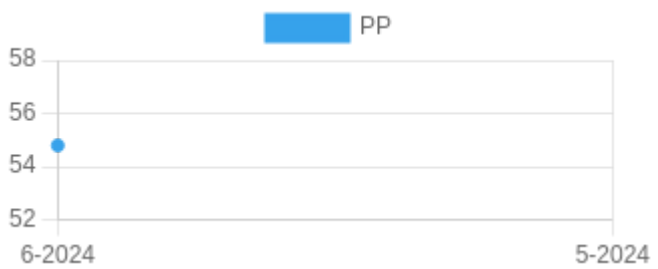
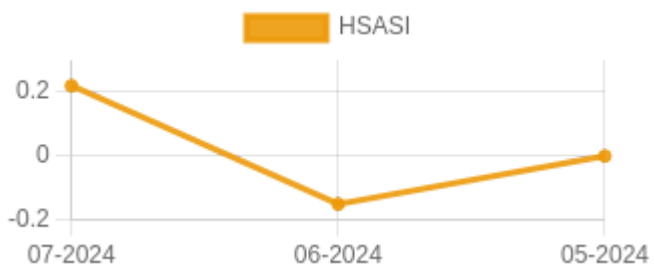
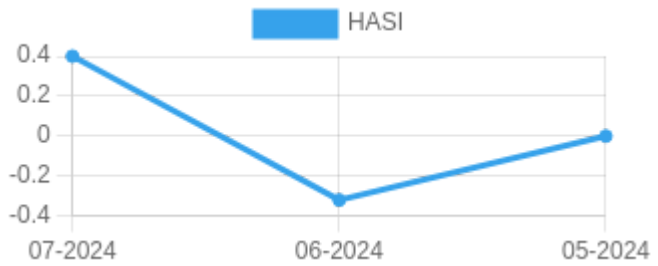
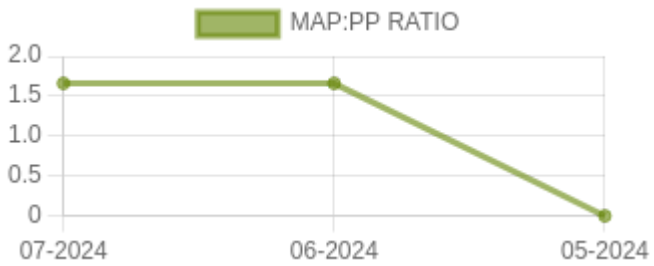
**PSR:** Pulse stiffening ratio (PSR) is the ratio between systolic and diastolic stiffness. It can be expressed as  $PSR = \frac{[systolic\ stiffness]}{[diastolic\ stiffness]}$ .

### HbA1c Trends



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

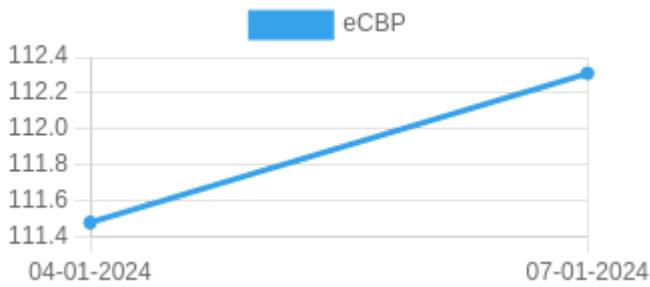
## eCO graph



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

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

## eCBP graph

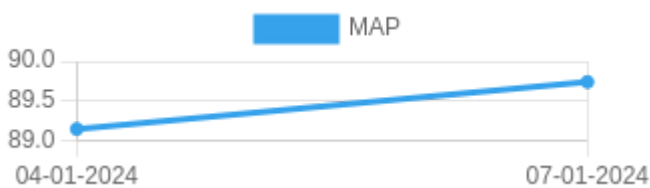


eCBP (Estimated Central Blood Pressure) normal range – 0 – 100 mmHg

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.

<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 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

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**

**Attention:**

This electronic pdf file contain information intended for the exclusive use of the individual or entity.