

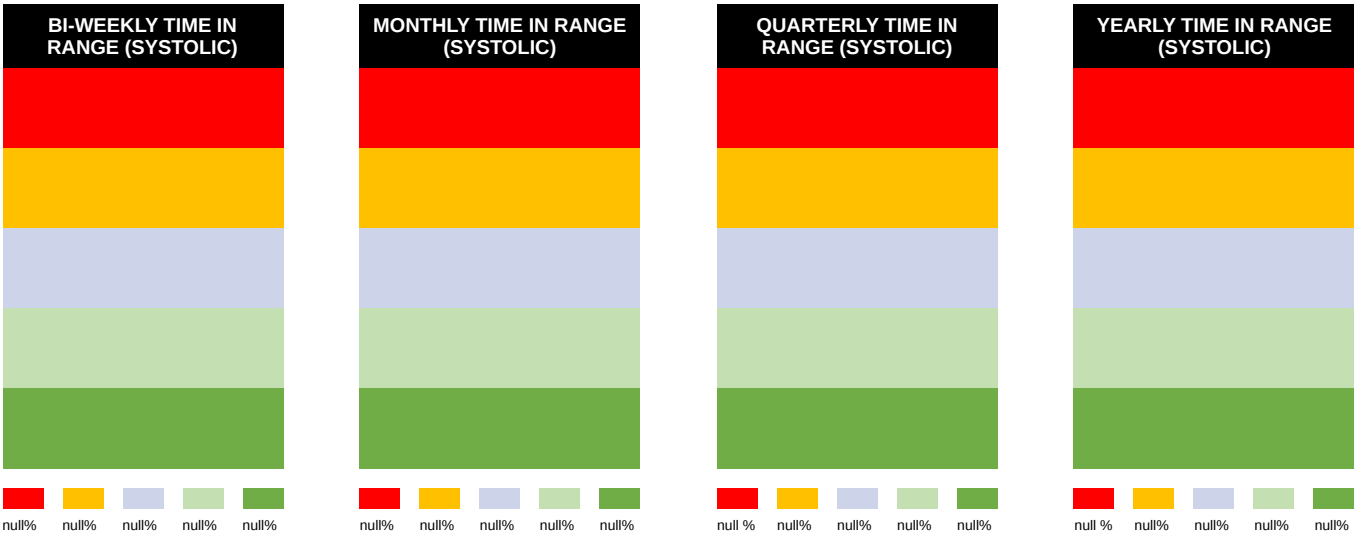


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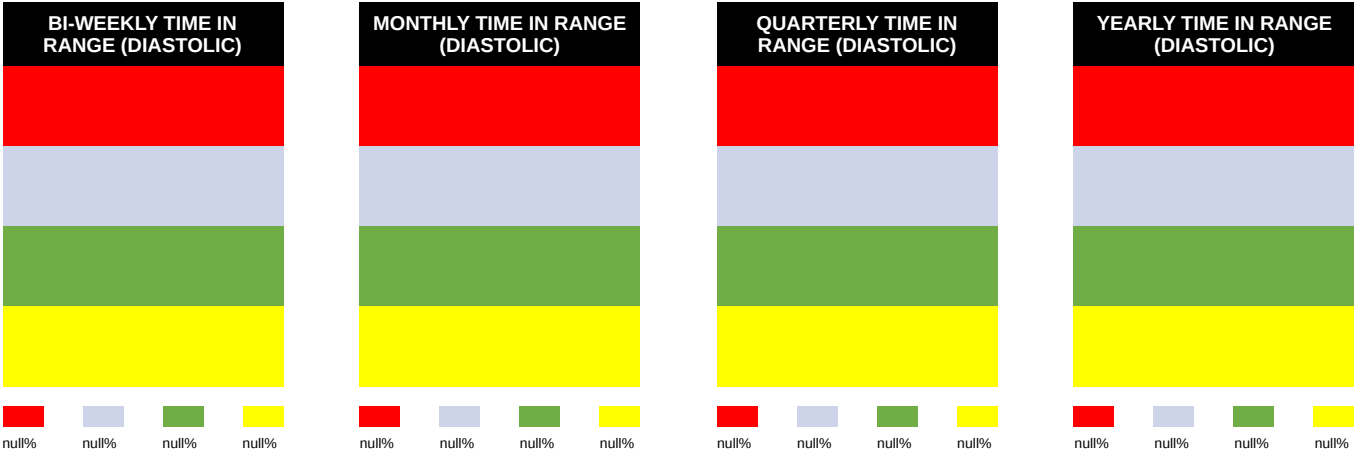
Patient Name: Suzette Bailey
Height: 5.6

MRN #: 4911
Weight: 163

Birth Year:
Hypertension: S1



140 & above 136-139 129-135 Fair 126- 130 Good 125 and below optimum



85 & above 76-84 60-75 Optimum Below 60

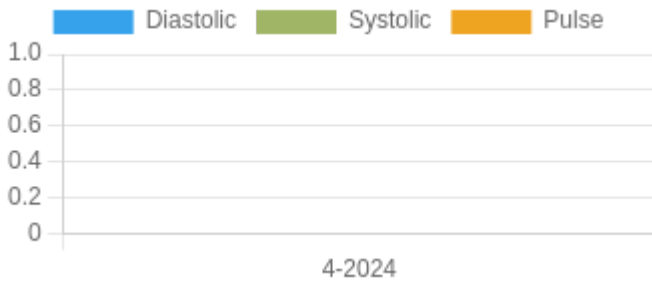
Blood Pressure Averages

Blood Pressure Averages: Weekly

Week	Systolic(n)	Diastolic(n)	Pulse(n)
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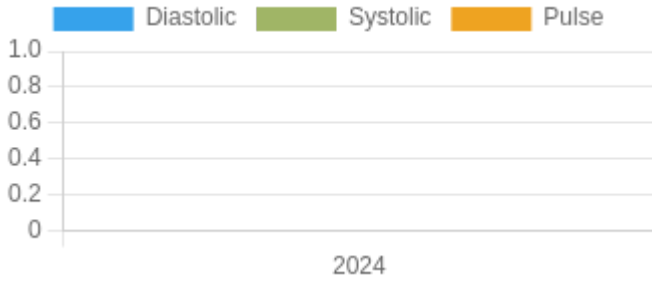
Blood Pressure Averages: Monthly

Blood Pressure Averages: Quarterly



Quarter-Year	Systolic(n)	Diastolic(n)	Pulse(n)
4-2024	0 (0)	0 (0)	0 (0)

Blood Pressure Averages: Yearly



Year	Systolic(n)	Diastolic(n)	Pulse(n)
2024	0 (0)	0 (0)	0 (0)

Blood Sugar Averages

Week	Before breakfast	2 hours after breakfast	Before lunch	2 hours after lunch	Before dinner	2 hours after dinner	Bedtime
06-09-2024	153(4)		135(4)		150(4)		
06-01-2024	172(1)		250(1)		169(1)		
05-24-2024	181(5)		240(5)		243(3)		
05-16-2024	217(8)		252(8)		192(7)		

Month-Year	Before breakfast	2 hours after breakfast	Before lunch	2 hours after lunch	Before dinner	2 hours after dinner	Bedtime
06-2024	153(4)		135(4)		150(4)		
05-2024	187(21)		235(21)		216(17)		
04-2024	175(14)		277(12)		252(12)		

Year	Before breakfast	2 hours after breakfast	Before lunch	2 hours after lunch	Before dinner	2 hours after dinner	Bedtime
01-01-2024	179(39)		238(37)		221(33)		

Chat

Sender	Receiver	Message	Date&Time
null Lexi Matthias, LPN	Suzette Bailey	https://cardiex.com/research-contest-voting/?utm_source=email&utm_medium=email&utm_campaign=carifinalistvoting&utm_content=rr	31-05-2024
null Lexi Matthias, LPN	Suzette Bailey	Please help support Dr. Ram by casting your vote for our office to Beta test a new Arterial Blood Pressure device. He is up against 11 other providers, so your vote would be helpful. Please follow the link below to vote. Voting ends June 10th 2024. Thank you in advance. Lexi	31-05-2024
R.A. Ramanujan	Suzette Bailey	👍👏	15-05-2024

, M.D.			
Suzette Bailey	R.A. Ramanujan, M.D.	you got it...they have been much higher the last couple days and im not sure why...yhey were getting better	15-05-2024
R.A. Ramanujan, M.D.	Suzette Bailey	30 Am ---10 @ Noon and 15 @ supper 🙏🙏	15-05-2024
Suzette Bailey	R.A. Ramanujan, M.D.	so 30, 10, 15? she is doing 25,10,10 now	15-05-2024
R.A. Ramanujan, M.D.	Suzette Bailey	GM, your assessment is correct, Sensor readings trail BS. Please increase insulin by 5 units AM and Supper time. Best	15-05-2024
Suzette Bailey	R.A. Ramanujan, M.D.	quick question... her sugars have been higher the last couple days so i had her take it with her finger as well...the libre is reading about 25 points higher than her finger pricks... is that normal and should we be doing something different?	14-05-2024
Suzette Bailey	R.A. Ramanujan, M.D.	she has an appt at 1 so i will stop in at some point this afternoon	07-05-2024
R.A. Ramanujan, M.D.	Suzette Bailey	Please	06-05-2024
Suzette Bailey	R.A. Ramanujan, M.D.	yep i can stop tuesday	06-05-2024
R.A. Ramanujan, M.D.	Suzette Bailey	GM, RX will be sent pending can you have some on take some samples ??	05-05-2024
Suzette Bailey	R.A. Ramanujan, M.D.	we will need an rx for the jentadueto we are almost done with the sample boxes you gave me	05-05-2024
Suzette Bailey	R.A. Ramanujan, M.D.	ok thank you	03-05-2024
R.A. Ramanujan, M.D.	Suzette Bailey	When you have CGM contact Amy .	03-05-2024

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

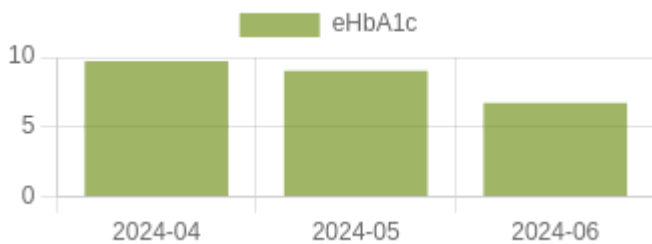
2. SD – Standard deviation is a statistical measurement of variability. It measures how much variation there is from the average (mean).

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 ($K = \frac{Systolic\ Std.\ Dev}{Diastolic\ Std.\ Dev}$)

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

7. stPP- Stiffening component of pulse pressure. $stPP = \frac{PP}{1 + WIF}$

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. *FrontCardiovasc 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 liljestrands& 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, Gillis-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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