

SPHIGMOMANOMETER

4. Mercury Manometer:

It is the main element that displays blood pressure readings. It consists of a vertical glass tube filled with mercury. As pressure increases in the cuff, it causes the mercury column to rise. The height of the mercury column, measured in millimeters of mercury (mmHg), corresponds to the pressure exerted on the cuff.

5. Scale and Calibration:

The scale on the mercury manometer is calibrated to measure blood pressure in millimeters of mercury.

Calibration ensures the accuracy of the instrument.

NORMAL VALUE FOR BLOOD PRESSURE

Blood Pressure Categories



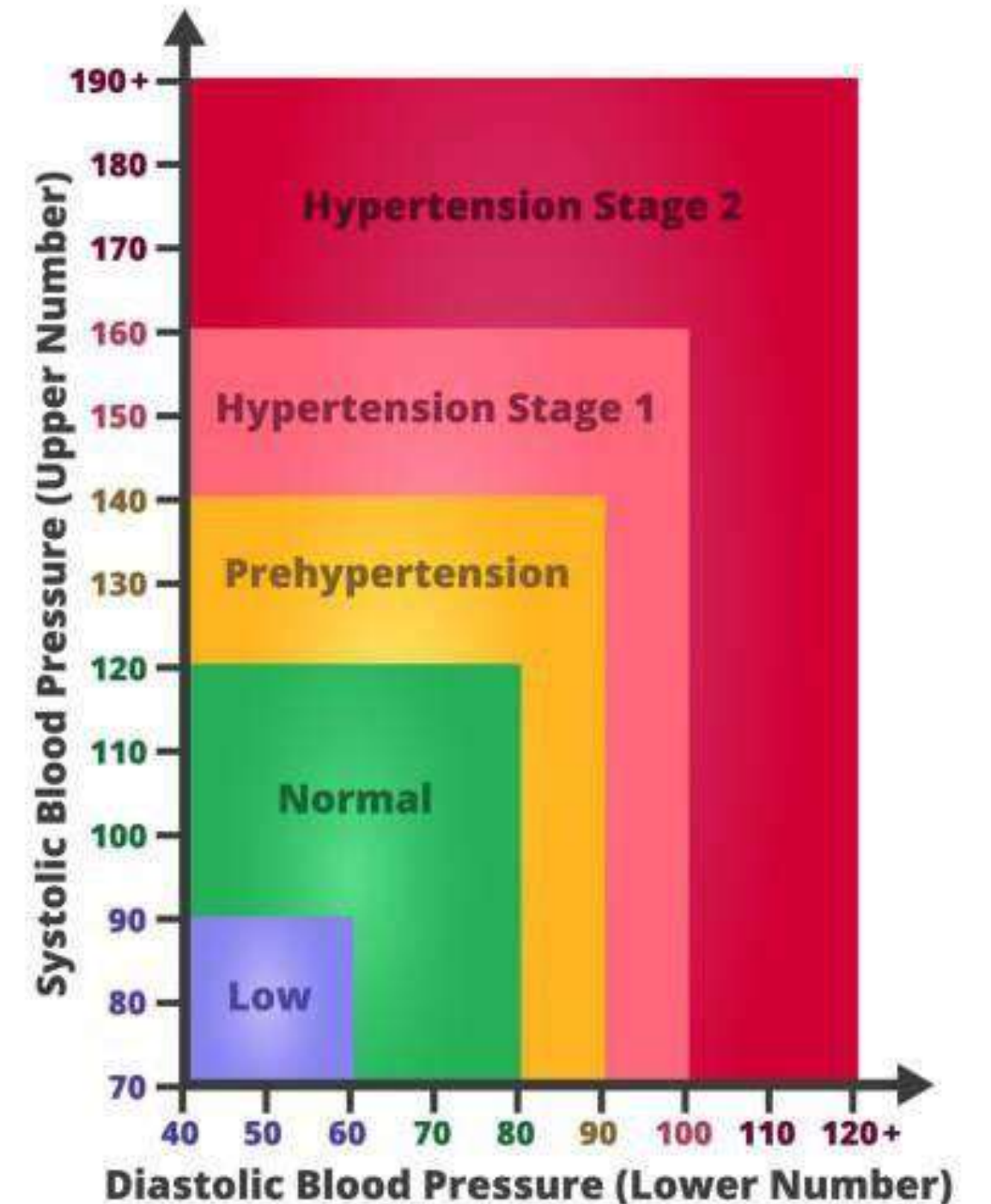
BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120 – 129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130 – 139	or	80 – 89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

NORMAL VALUE FOR BLOOD PRESSURE

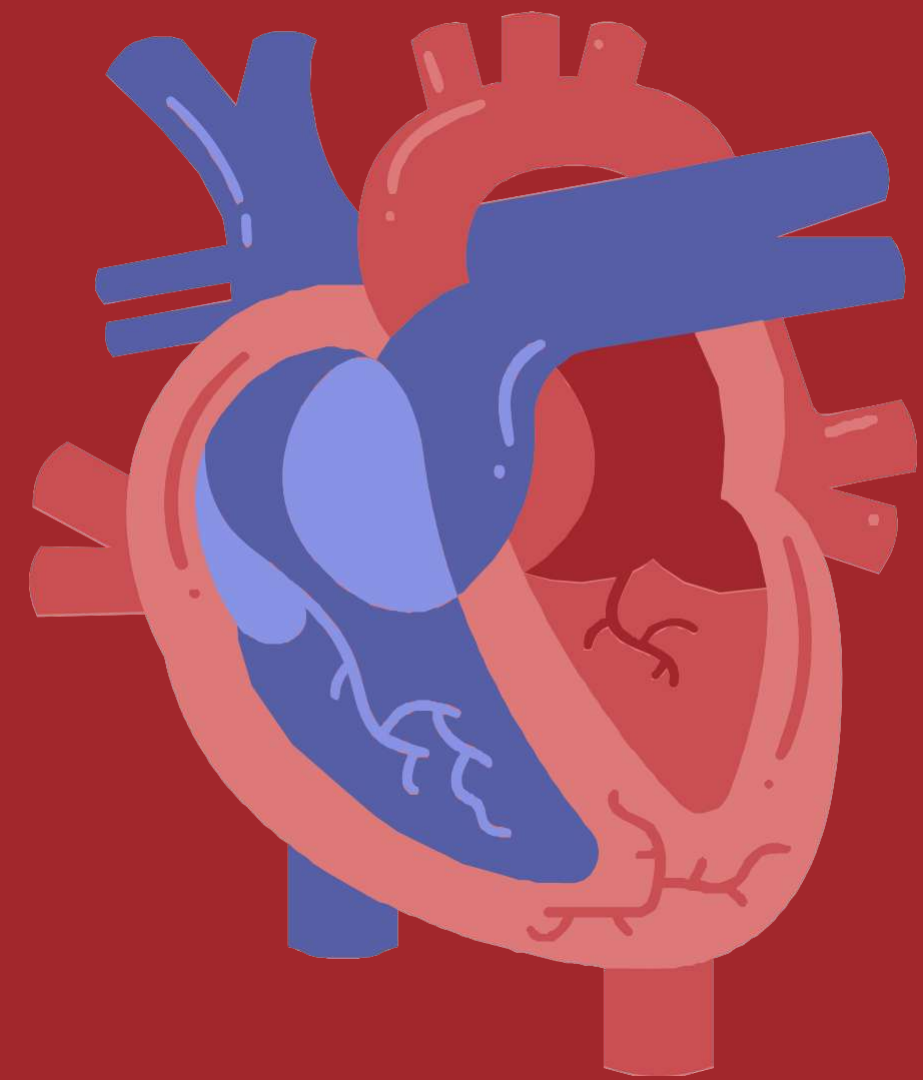
Blood pressure chart by age

Age	Min	Normal	Max
1 to 12 months	75/50	90/60	110/75
1 to 5 years	80/55	95/65	110/79
6 to 13 years	90/60	105/70	115/80
14 to 19 years	105/73	117/77	120/81
20 to 24 years	108/75	120/79	132/83
25 to 29 years	109/76	121/80	133/84
30 to 34 years	110/77	122/81	134/85
35 to 39 years	111/78	123/82	135/86
40 to 44 years	112/79	125/83	137/87
45 to 49 years	115/80	127/84	139/88
50 to 54 years	116/81	129/85	142/89
55 to 59 years	118/82	131/86	144/90
60 to 64 years	121/83	134/87	147/91

BLOOD PRESSURE CHART



DATA LOGS



No.	Name	Age	Weight	Morning			Evening		
				BP	Pulse	SPO2	BP	Pulse	SPO2
1	Upahar Mandal	23	68	125/82	74	98	126/80	88	98
2	Aditya Soni	21	75	132/79	75	98	130/80	84	99
3	Deepak Borole	21	70	125/78	83	94	127/79	86	95
4	Harsh Kangukar	21	58	115/74	81	95	120/75	85	96
5	Aazam Shah	23	65	130/85	72	99	131/80	90	99
6	BHAT Shahid	23	72	135/88	87	98	133/80	90	97
7	Ahtisham Peerzada	22	62	129/79	68	100	128/76	83	99
8	Goni Gulrukh	21	63	125/77	72	98	128/80	81	98
9	Sandeep	27	70	120/75	79	99	122/78	84	100
10	Ram Singh	29	61	110/70	73	100	116/75	84	99
11	Raviul Islam	23	62	112/73	71	97	117/75	80	95
12	Saraf	24	75	125/78	72	96	128/80	89	98
13	Abhinandan	24	63	120/78	74	92	125/79	83	91
14	Rupesh Shah	24	55	121/76	76	96	122/78	86	95
15	Robin Sharma	23	56	126/70	70	92	127/78	90	99
16	Durlabh Dadaiya	24	83	125/76	73	95	128/78	85	96
17	Suraj Sharma	22	63	126/80	77	89	128/81	89	91
18	Ankush Pradhan	23	82	122/76	80	98	126/78	89	96
19	Swagat Shalve	25	62	130/84	75	97	131/86	89	94
20	Aatif Khan	27	84	123/88	76	98	132/87	90	93
21	Mohd Altamash	23	63	112/88	77	92	120/75	91	91

22	Nishant Singh	27	91	110/71	68	72	120/75	75	72
23	Rituraj Singh	27	85	132/79	84	90	134/80	89	92
24	Rahul Baraiya	29	82	120/74	81	93	122/76	89	93
25	Varun Bariya	27	89	130/84	85	75	132/88	87	78
26	Aakif Khan	28	53	124/76	82	100	126/78	89	99
27	Harsh Singh	27	89	128/80	88	94	128/84	89	94
28	Shubham Pandit	25	65	129/85	78	92	130/80	88	93
29	Pawan Singh	27	94	129/83	73	90	133/84	85	91
30	Rahul Singh	25	91	135/86	75	88	132/88	89	89
31	Bike Kumar	28	80	125/79	72	89	131/80	86	90
31	Masrudhin Mohd	25	63	123/81	84	98	125/82	88	97
32	Muheeb Khan	27	72	110/70	68	86	115/74	71	88
33	Rajnish Kumar	26	77	120/88	79	100	124/80	85	88
34	Aakib Khan	26	71	122/84	78	97	131/88	86	97
35	Aquib	28	58	119/82	80	95	128/82	84	94
36	Satish Kumar	27	61	115/74	80	93	122/78	88	94
37	Aniket Wagh	25	59	123/81	79	99	126/80	84	98
38	Aditya Mahajan	26	62	119/80	78	94	124/82	86	95
39	Rahul Chakarwarty	27	65	130/85	83	88	131/85	88	87
40	Valeed Khan	27	68	126/80	80	86	135/83	88	87

41	Mushir	24	79	125/79	85	86	126/80	89	86
42	Jitendra Singh	26	72	122/80	81	88	130/86	90	89
43	Abbas Mohd	29	76	123/75	80	89	125/76	92	90
44	Neeraj Mehta	31	78	128/84	74	90	133/84	81	91
45	Vikram Danda	29	85	128/75	72	89	133/80	82	88
46	Amit Shah	28	88	121/72	73	85	126/78	84	86
47	Prasad Pandit	23	78	124/79	75	89	128/83	88	88
48	Vishal Chavan	24	72	119/81	76	93	125/83	89	94
49	Vijay Bhandh	23	68	124/78	71	88	128/87	84	88
50	Ravi	22	61	119/74	79	91	120/80	87	90
51	Attiya Malik	22	51	116/72	72	88	118/74	75	88
52	Mishal Yaseen	20	53	119/79	72	98	120/81	81	98
53	Aaliya Akbar	20	48	115/75	78	99	117/78	82	99
54	Areeba Abbas	21	55	119/76	76	99	122/78	82	99
55	Mehrun Nisha	23	60	125/80	69	99	128/80	74	98
56	Zuha Ahmed	21	60	120/80	78	99	119/80	82	98
57	Muneeba Farooq	21	53	120/81	80	98	122/76	83	98
58	Shraddha Patil	20	45	118/80	75	98	119/72	80	97
59	Alizeh	22	50	119/79	78	99	120/79	83	99
60	Jannat Fatima	22	53	110/80	76	99	113/75	83	99

61	Saima Siddiqua	22	49	120/80	76	99	123/83	82	99
62	Shweta	22	50	119/80	79	97	118/78	81	97
63	Frazia Khan	21	54	118/80	76	97	119/76	84	98
64	Shakira	20	42	119/80	79	98	121/80	79	98
65	Shahana	21	50	120/80	74	98	125/80	80	97
66	Sanju Dasaniya	22	45	115/80	76	99	119/79	79	99
67	Kanika Lanjewar	20	48	120/78	72	99	125/72	80	99
68	Tanya Baghel	24	60	119/76	75	97	122/79	88	96
69	Savita	22	55	115/79	78	95	119/79	83	94
70	kajal Khan	22	50	116/75	74	99	122/80	82	98
71	Ifrah	21	45	121/82	76	94	126/84	84	95
72	Sana	21	52	112/73	74	99	113/73	81	99
73	Alfiya	20	45	113/73	76	98	115/75	84	98
74	Anushri	19	48	116/75	78	94	120/79	86	94
75	Bharti	20	49	116/72	80	93	120/81	83	94
76	Yuvika	22	49	110/72	78	99	115/73	84	98
77	Uzma	22	54	109/71	80	98	112/73	82	98
78	Shabnam	22	53	118/76	79	95	121/78	85	98
79	Neha	22	58	119/79	76	97	120/80	89	97
80	Zeenat	22	55	125/80	78	98	128/81	88	99

81	Soumya	21	48	119/80	80	96	122/80	88	97
82	Samiksha	22	46	120/79	83	98	125/80	86	98
83	Anjali	22	54	121/83	81	98	127/84	89	98
84	Preeti Devi	24	42	125/79	84	99	119/80	89	99
85	Ifteshan	22	56	122/80	86	98	126/80	88	98
86	Milpreet	22	40	118/78	82	98	122/79	84	98
87	Laraib	22	49	118/79	80	99	125/82	85	99
88	Eshya	22	56	122/83	84	98	128/84	88	99
89	Zoha	21	50	118/78	81	97	119/79	82	96
90	Rufaida Mir	22	48	122/79	80	96	125/81	84	96
91	Sharwaq	21	51	117/76	78	95	120/78	80	95
92	Mashrat	22	57	120/80	79	98	123/82	81	98
93	Sarika	24	56	124/80	81	96	128/82	85	96
94	Palak	24	52	119/79	79	94	122/81	86	94
95	Yogalakshmi	26	51	122/78	80	96	126/79	89	96
96	Harshada	21	41	122/80	81	99	122/79	82	99
97	Riya	26	48	119/79	77	98	124/80	86	98
98	Bhawna	25	52	120/81	78	99	122/81	87	99
99	Priya	25	49	116/78	74	98	118/79	81	99
100	Vansika	24	50	119/80	78	99	122/80	83	100

STATISTICAL ANALYSIS

Characteristics of the study population: A total of 100 college students aged ≥ 18 years were screened for hypertension.

of the students 50 were males and 50 were females. About 17% had a family history of chronic diseases.

6% of the students were overweight.

Smoking, insufficient sleep, academic stress and alcohol consumption:

6% of the students reported smoking cigarettes, of whom 1 (50%) was a daily smoker. About 32% reported not getting enough sleep and 22% of them suffer from academic stress.

About 17% of the students consumed alcohol daily.

The mean (#SD) sleep duration for the students was 5 hrs.

STATISTICAL ANALYSIS

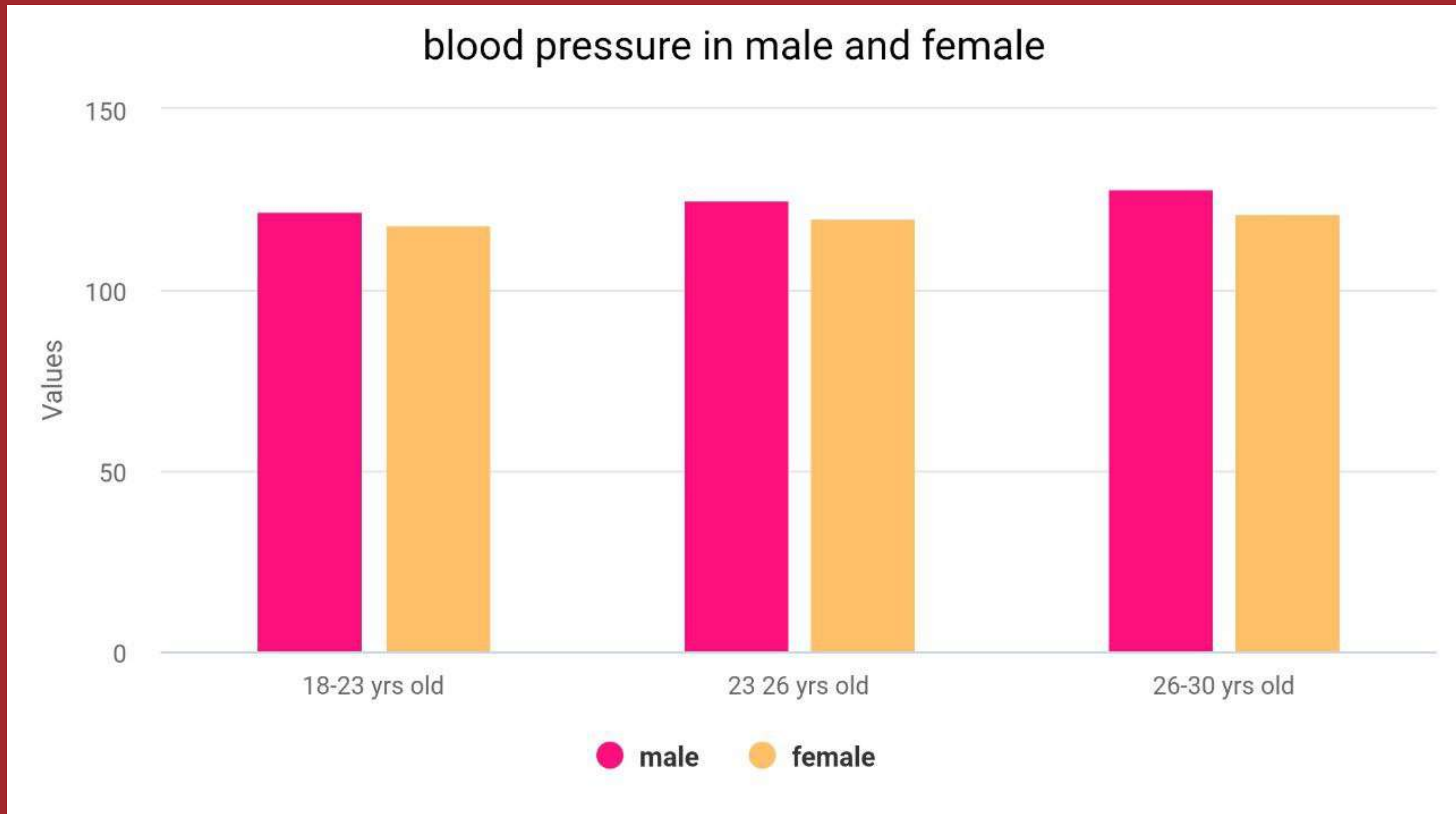
Physical activity level:

About 20% (24% of the males and 11% of the females) were classified as having a high (vigorous) physical activity level. Only 15% had a moderate physical activity level, and the rest 65% had a low physical activity level.

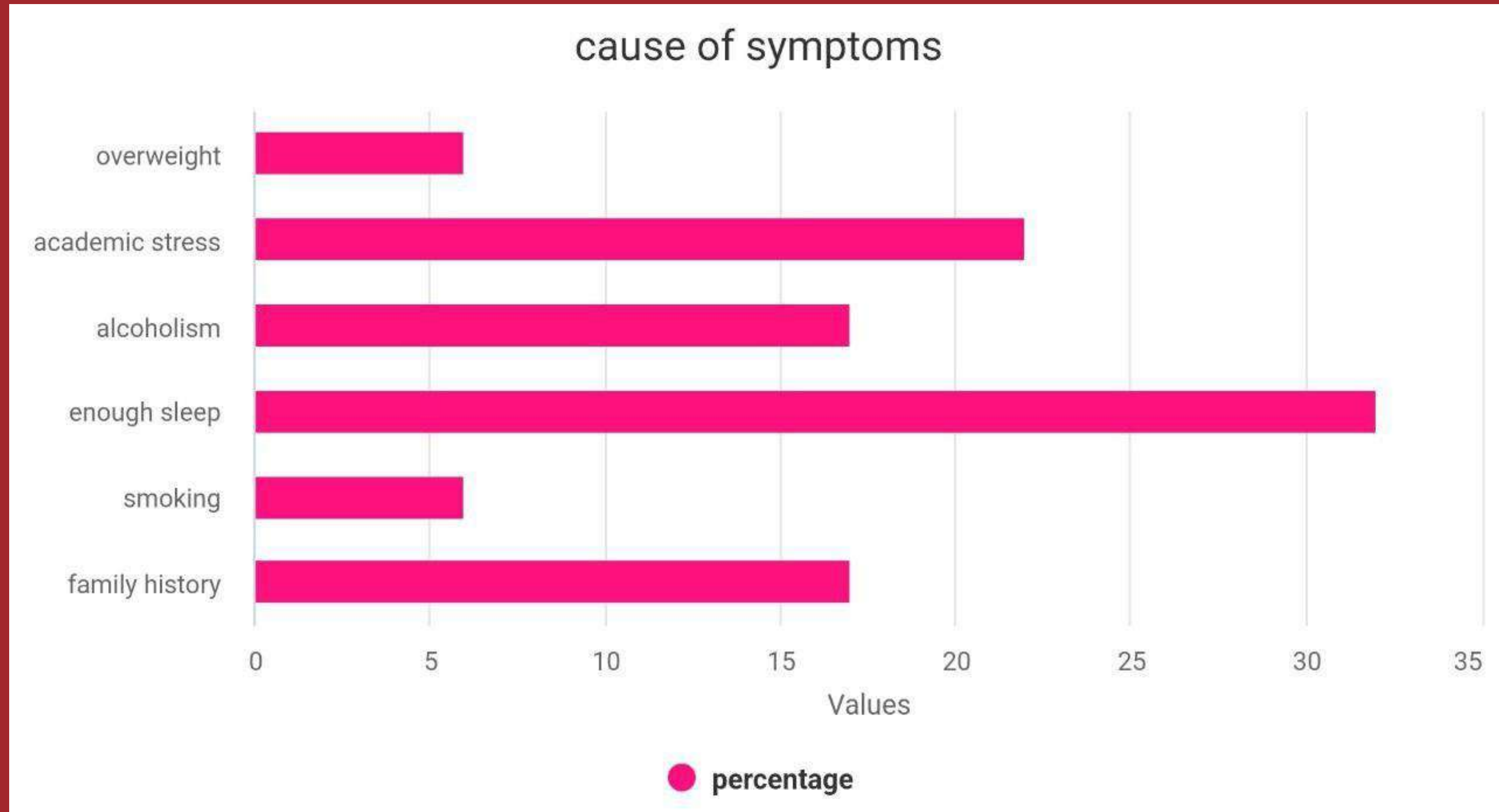
Blood pressure:

A total of 8 (8%) students were hypertensive. About 36% and 55% had pre-hypertensive and normal blood pressure, respectively. The rest 2% had hypertensive blood pressure.

GRAPHICAL INTERPRETATION

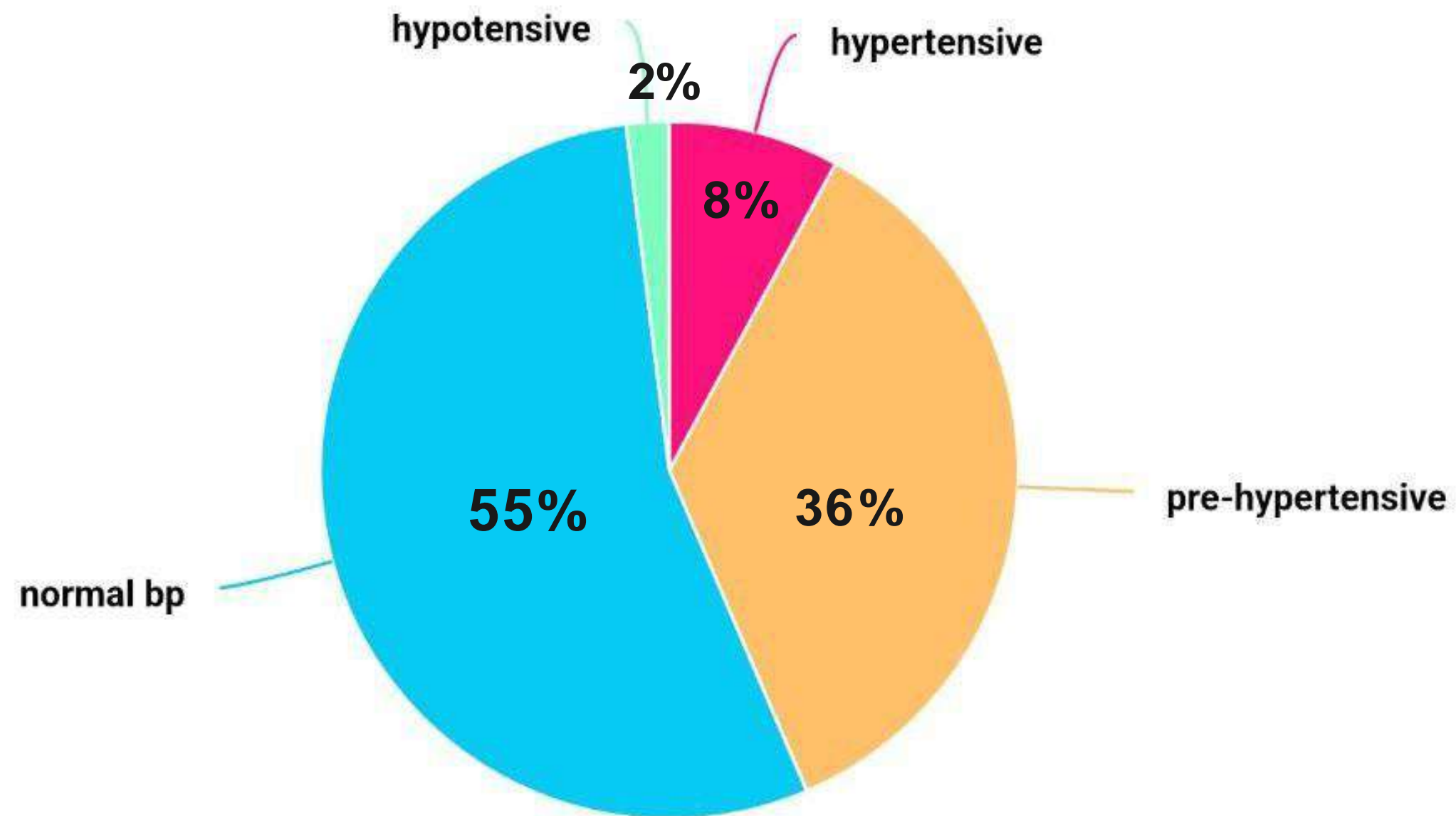


GRAPHICAL INTERPRETATION



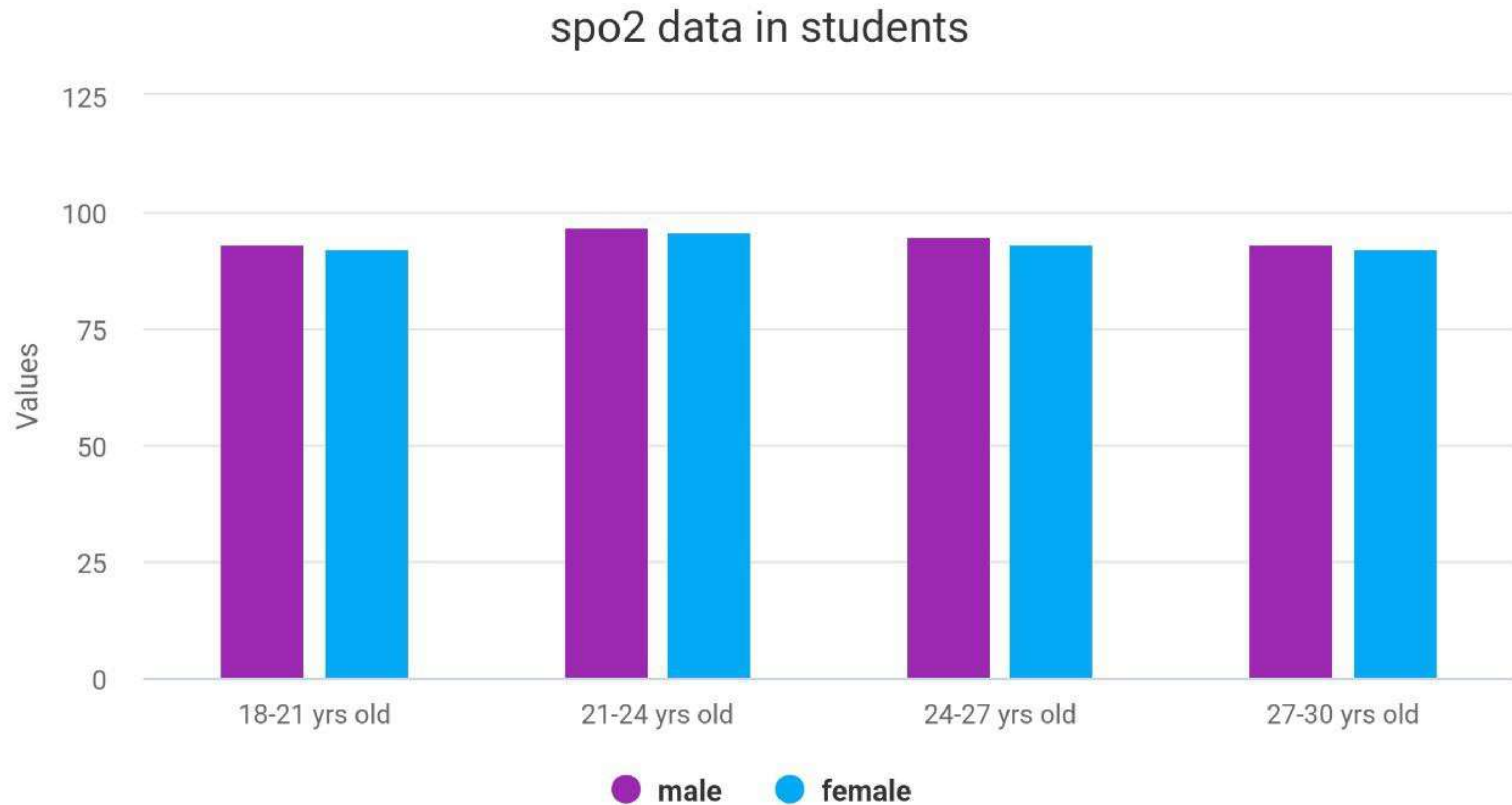
GRAPHICAL INTERPRETATION

blood pressure in students



● hypertensive ● pre-hypertensive ● normal bp ● hypotensive

GRAPHICAL INTERPRETATION



GRAPHICAL INTERPRETATION

pulse rate differentiation

