



## Metabolic Syndrome in Women of Childbearing Age State of the Main Components

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**Abstract:** 169 women aged 15 to 49 years were under observation. At the same time, we analyzed the data obtained during the study of a representative sample (929 people) of the unorganized female population of fertile age (from 15 to 49 years), conducted in Tashkent.

**Key words:** fertile age, metabolic syndrome.

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The following methods were used: epidemiological, survey, biochemical, and instrumental.

Epidemiological methods include a population-based approach, representative sampling, adequate population response, and the use of standardized and integrated methods recommended by WHO for population surveys.

The distribution of the main components of MS was studied. This approach is currently explained by the fact that it is the leading cause of death in the population. The distribution of the main components of MS was studied. This approach is currently explained by the fact that it is the leading cause of death in the population.

The results of the study show that the tested fertile age component of arterial hypertension (AH) is very common among women (Table 1).

**Table 1. Fertile age prevalence of female arterial hypertension**

Age	No AH	AH is available
15-19	100,0% RT	0,0% RT
	4,1% KT	0,0% KT
	3,8% GT	0,0% GT
20-29	97,2% RT	2,8% RT
	32,5% KT	11,8% KT

	30,1% GT	0,9% GT
30-39	94,2% RT	5,8% RT
	39,5% KT	30,9% KT
	36,6% GT	2,3% GT
40-49	84,1% RT	15,9 % RT
	23,9% KT	57,4 % KT
	22,2% GT	4,2 % GT
19-49	861 (92,7%)	68 (7,3%)
$X^2$ , DF, Reliability level	39 426; 3; P <0,0001	

**Note.** The table shows the significance of differences in comparison with the previous age group.

Then, the average values of blood pressure levels were studied. According to the data obtained, the level of blood pressure increases with age (Table 2). The greatest increase in blood pressure begins in the age group of 30-39 years, and in the age group of 40-49 years, this indicator increases significantly.

**Table 2. Average systolic blood pressure in women of childbearing age**

Age	15-19	20-29	30-39	40-49
n	35	288	361	245
Average	100 486	103 375 375	106 717 717	114 063
QD	10 2624	10 4464	12 1490	18 4685
PKД	0,1021	0,1001	0,1128	0,1621
СЭМ	1,7347	0,6156	0,6394	1,1799
Level of reliability	0,2255	<0,0001	<0,0001	<0,0002

**Table 3. Average level of diastolic blood pressure in women of childbearing age**

Age	15-19	20-29	30-39	40-49
N	35	288	361	245
Average	65 657	67 819	70 601	74 441
QD	6.4075	8.7055	9.1722	12.2676
PKД	0,09759	0,1284	0,1299	0,1648
СЭМ	1.0831	0,5130	0,4827	0,7837
Level of reliability	0,0725	<0,0001	<0,0001	<0,0001

Indicators of diastolic blood pressure have a steady tendency to increase with the age of women.

The data obtained show the importance of detecting and preventing blood pressure. These data allow us to conclude that the age period in the female population is 30-39 years, which is critical for hypertension, 30-39 years. However, it should be noted that blood pressure and hypertension levels in women in age groups begin to deviate from the norm after 20 years.

Obesity and overweight are one of the leading components of the metabolic syndrome. Therefore, the frequency of different body weight categories among women of reproductive age was studied. The results of the study (Fig.1) show that the frequency of individual gradations of body weight is not the same in women of different ages. Weight loss (15-29 years) is more common in young women than in older women (30-49 years). More than half of young women (15-29 years old) they have a normal body weight (59.73%), and women aged 30-49 years are slightly less (38.5%). Thus, the expected results were obtained, which revealed an increase in women's body weight with increasing age.

When the frequency of overweight and the frequency of obesity depend on the age of women, the situation is different. Almost one in four women aged 15-29 has an overweight or are obese. Among older women, the incidence of overweight and obesity is 2 times higher (55.13%). However, the frequency of excess overweight in women aged 30-49 years is 1.8 times higher than in young women. However, obesity is more common in women aged 30-49 years than in women aged 15-29 years (4.2 times). From these data, we can conclude that there is a high incidence of overweight and obesity among women of reproductive age.

Women aged 30-49 years are at greater risk of weight gain and obesity than women aged 15-29 years. However, the risk of obesity at the age of 30-49 years is higher in women aged 15-29 years than the risk of BMI compared to similar indicators.

The most dangerous conditions include a combination of MS components, since they together significantly increase the risk of cardiovascular diseases.

The relationship between blood pressure and Quetelet indices was studied using the Pearson correlation coefficient for mean systolic blood pressure (SBP), diastolic blood pressure (DBP), and the Quetelet index of height and body weight.

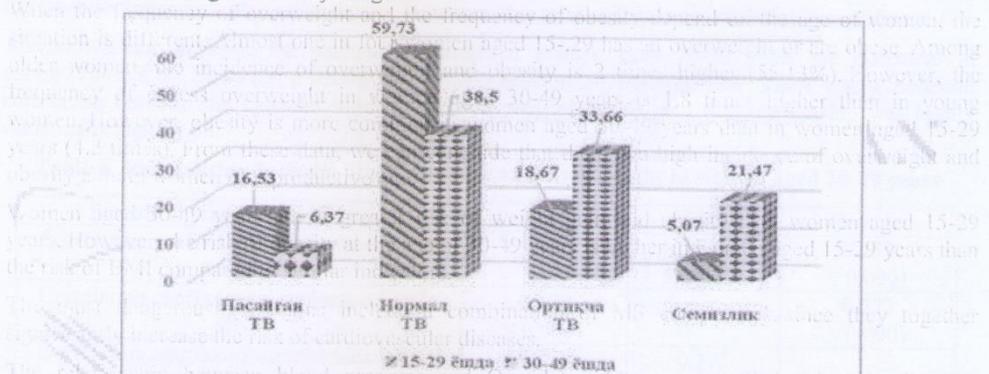


Figure 1. Frequency of different body weight levels in women.

There was a strong and reliable correlation between SBP and DBP women of childbearing age (15-49 years) in general (Table 4). The correlation between SBP and DBP and Quetelet indices was moderately strong. However, this relationship had a high level of trust. The data obtained reflect the relationship between blood pressure and body weight in general in all examined women of childbearing age (15-49 years).

Table 4. The relationship between blood pressure and body weight in women aged 15-49 years.

Statistical processing indicators		SBP	DBP	Quetelet
Correlation coefficient	SBP	-	0,771	0,352
Significance Level R			<0,0001	<0,0001
Correlation coefficient	DBP	0,771	-	0,373
Significance Level R		<0,0001		<0,0001
Correlation coefficient	Quetelet	0,352	0,373	-
Significance Level R		<0,0001	<0,0001	

At the same time, the ratio of these indicators in different age groups is of particular interest. Table 5 shows the correlation between blood pressure and body weight in the age group of women aged 15-19 years. In women of this age, the correlation coefficients between SBP and DBP indicate that there is a strong correlation and that these correlations are highly reliable.

**Table 5. Relationship between blood pressure and body weight in women aged 15-19 years**

Statistical processing indicators	SBP	DBP	Кетле
Correlation coefficient significance level r SBP	-	0,534 ≤ 0,0010	0,067 0,7040
Correlation coefficient significance level r DBP	0,534 ≤ 0,0010	-	0,284 0,0984
Correlation coefficient significance level r Quetelet	0,067 0,7040	0,272 0,0984	-

Among women aged 15-19, body weight had a weak correlation with weak indicators, and this relationship was not statistically significant. The correlation coefficient between the DBP levels and the Quetelet index indicates a correlation. However, this relationship is not statistically significant.

All correlations between the studied indicators in women aged 20-29 years are statistical in nature (Table 3.6). However, a strong and reliable relationship between SBP. There was a moderate correlation between the Quetelet index and blood pressure levels, and this relationship was highly statistically significant.

**Table 6. Relationship between blood pressure and body weight in women aged 20-29 years**

Statistical processing indicators	SDP	DBP	Quetelet
Correlation coefficient significance level r SBP	-	0,670 ≤ 0,0001	0,259 ≤ 0,0001
Correlation coefficient significance level r DBP	0,670 ≤ 0,0001	-	0,272 ≤ 0,0001
Correlation coefficient significance level r Quetelet	0,259 ≤ 0,0001	0,272 ≤ 0,0001	-

In women aged 30-39 years, the correlation coefficients between SBP and DBP levels show a strong correlation between these indicators. In addition, this connection layer is very reliable. A statistically significant association between body weight and SBP and DBP levels was also found.

It should be noted that the value of all identified correlation coefficients in women aged 30-39 years was higher than in young women (20-29)

**Table 7. Relationship between blood pressure and body weight in women aged 30-39 years.**

Statistical processing indicators		SBP	DBP	Quetelet
Correlation coefficient Significance level r	SBP	-	0,742 <0,0001	0,291 <0,0001
Correlation coefficient Significance level r	DBP	0,742 <0,0001	-	0,303 <0,0001
Correlation coefficient Significance level r	Quetelet	0,291 <0,0001	0,303 <0,0001	-

The highest values of correlation coefficients between the considered groups were found in women aged 40-49 years (Table 8). The correlation coefficient for SBP and DBP levels in this group was 0.816 and reflected a strong relationship. However, the values of the correlation coefficients showed the average strength of the relationship between the Quetelet indices and the blood pressure indices (0.336 for SBP and 0.371 for DBP).

**Table 8. Relationship of blood pressure and body weight in women aged 40-49 years.**

Statistical processing indicators		SBP	DBP	Quetelet
Correlation coefficient	SBP	-	0,816	0,336
Significance level r			<0,0001	<0,0001
Correlation coefficient	DBP	0,816	-	0,371
Significance level r		<0,0001		<0,0001
Correlation coefficient	Quetelet	0,336	0,371	-
Significance level r		<0,0001	<0,0001	

It should be noted that all identified correlations are statistically significant (P < 0,0001).

Thus, the obtained data indicate the presence of a direct and reliable relationship between the level of blood pressure and body weight. The situation of the studied indicators is specific for all age groups. However, the correlation between blood pressure and body weight increases with age. There is also an increased correlation between systolic and diastolic blood pressure.

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