

## ESTIMATION OF NUTRITION MANNER OF YOUNG MEN IN PREMILITARY PERIOD

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Proper nutrition manner is one of the fundamental conditions of proper organism functioning. Therefore nutrition estimation is an important element to assess its positive or negative effects (10).

Methodology and nutrition manners examination range differentiate and depend on the aim and environmental conditions (3). Qualitative estimation besides quantitative one (content of energy and nutritive elements delivered with food) is important indicator in researches on nutrition manner of different social groups. Number of meals eaten daily, eating regularity and many others are the most frequently evaluated qualitative estimation distinguishers. Rational nutrition manner is particularly important for young people whose organism development is not finished yet because all nutritional abnormalities occurring in this time may have negative influence on both organism development and health state in the future.

Taking into consideration alimentation significance for the period of organism growth and development, estimation of young people nutrition manner was the aim of many researches (1, 2, 5, 9). Researches of such kind were done in the army and regarded nutrition manner of young men during military service (4, 6, 7, 8).

Men in premilitary period i.e. aged approx. 19–20, make a group of young people whose organism development is not finished yet and therefore estimation of nutrition manner is very important. It should be underlined that people coming from different social groups, indicating different habits and nutrition manners are enlisted. Their habits are not in accordance with proper nutrition rules.

### Aim of work

The aim of the work was estimation of society profile and nutrition manner of young men before beginning military service.

### Material and methods

Group of 142 young men beginning military service in 2002 were examined. Men were coming from three military units located in the central

Poland. Examination was done by inquiry method.

Social profile of young men beginning military service, structure and number of meals eaten daily in premilitary period were analysed. Regularity of daily consumption was taken into consideration. Dwelling place of examined (country, small town, big city) and education level (elementary, technical, secondary, post secondary) were taken into consideration during results interpretations.

Researches results were presented as percentage participation of inquired people within scheme of particular distinguishers.

### Researches results

Average age of examined men was  $21.1 \pm 1.5$ . Most of the inquired persons came from big cities (43.3%). Country and small towns were the dwelling place of 41.1% and 15.6% of examined respectively. Secondary educated was 43.3%, and technically educated 42.5% of inquired persons. Participation of elementary and post secondary educated persons was as follows: 4.3% and 9.9%. 48.9% of examined were professionally engaged, 22.0% were studying and 12.8% studying and working in premilitary period. 16.3% neither study nor work in analysed population (table 1).

Three meals alimentation system prevailed in examined population in premilitary period (47.9%). About 31.0% of examined ate four meals daily and 13.4% five meals. It should be underlined that 7.0% of examined ate only two meals daily. Incidences (0.7% inquired) that only one meal was eaten happened (table 2).

Among meals eaten most frequently were: breakfast (91.5% inquired), dinner (95.8%) and supper (97.2%). Lunch occurred in the menu of 43.0% examined persons and afternoon snack of 22.5% (table 2).

Highly unprofitable from nutritional point of view is fact that 19.0% of examined did not eat any meal in the morning, before leaving for school or work. Moreover 57.0% of analysed population declared irregularity in meals consumption. The most frequent reasons of such situation were lack of specified nutritional habits and daily schedule preventing from regular meals consumption (table 3).

Table 1

**Social profile of examined group of men beginning military service**

PARTICIPATION OF INQUIRED in %						
Parentage			Education			
Country	Small town	Big city	Elementary	Technical	Secondary	Post secondary
41.1	15.6	43.3	4.3	42.5	43.3	9.9
Kind of occupation in premilitary period						
Studying		Working		Working and studying		Not working or studying
22.0		48.9		12.8		16.3

Table 2

**Nutrition manner in premilitary period in examined group of young men beginning military service**

PARTICIPATION OF INQUIRED in %				
Structure of eaten meals				
Breakfast	Lunch	Dinner	Afternoon snack	Supper
91.5	43.0	95.8	22.5	97.2
Number of meals eaten daily				
5 meals	4 meals	3 meals	2 meals	1 meal
13.4	31.0	47.9	7.0	0.7
Percentage of persons eating meal before leaving house in the morning	Percentage of persons not eating meal before leaving house in the morning		Percentage of persons eating meals regularly	Percentage of persons eating meals irregularly
81.0	19.0		43.0	57.0

Table 3

**Basic reasons of irregular meals consumption in premilitary period in group of young men declaring irregular eating**

PARTICIPATION OF INQUIRED in %		
Lack of regular meals consumption habit	Daily schedule preventing from regular meals consumption	Other reasons *
48.2	46.9	4.9

\* lack of funds or appetite was declared as the most frequent reasons

Similar researches done by Radulski (7) in years 1989–1991 showed that in premilitary period 33.0% of examined declared consumption of 5 meals daily, 41.6% of examined ate 4 meals and 23.9 % and 1.5% 3 and 2 meals respectively. Results of current examinations differ from presented data of the period 1989–1991 (7). Significant decrease of percentage of persons eating 5 and 4 meals daily is observed. But increasing number of people

eating 3, 2, and even 1 meal daily is found. These tendencies are very unprofitable from nutritional point of view.

Similar observations indicating undesirable changes in current nutrition manner in premilitary period were found in range of irregular meals consumption. And so, 31.0% of examined declared irregular meals consumption in 1989–1991 (7), but now such nutrition manner indicated 57.0% of

inquired (table 2). Among fundamental reasons of this irregularity (table 3) lack of particular nutrition manners (48.2%) and unfavourable daily schedule were mentioned (46.9%).

As it results from data presented in table 4 the biggest percentage of examined youngsters eating

rationally i.e. eating 4 and 5 meals daily (49.2%) came from the country. This group of examined indicated the biggest percentage of persons eating regularly (55.9%). The less favourable parameters of displayed discriminants presented youngsters coming from small towns (table 4).

Table 4

**Nutrition manner in premilitary period in examined group of young men beginning military service considering dwelling place**

PARTICIPATION OF INQUIRED in %					
Structure of eaten meals					
Dwelling place	Breakfast	Lunch	Dinner	Afternoon snack	Supper
Country	91.5	45.8	96.6	23.8	94.6
Small town	85.7	38.1	100	23.8	100
Big city	93.5	41.9	93.5	21.0	98.4
Number of meals eaten daily					
Dwelling place	5 meals	4 meals	3 meals	2 meals	1 meal
Country	8.5	40.7	45.7	5.1	0.0
Small town	19.0	19.0	52.4	9.5	0.0
Big city	16.1	25.8	48.4	8.1	1.6
Percentage of persons eating meal before leaving house in the morning		Percentage of persons not eating meal before leaving house in the morning		Percentage of persons eating meals regularly	
Country	84.7	Country	15.3	Country	55.9
Small town	81.0	Small town	19.0	Small town	28.6
Big city	77.4	Big city	22.6	Big city	35.5
				Percentage of persons eating meals irregularly	
				Country	44.1
				Small town	71.4
				Big city	64.5

Table 5

**Elementary reasons of meals consumption irregularity in premilitary period among young men declaring irregular eating considering dwelling place**

PARTICIPATION OF INQUIRED in %					
Lack of regular meals consumption habit		Daily schedule preventing from regular meals consumption		Other reasons *	
Country	42.3	Country	57.7	Country	0.0
Small town	66.7	Small town	20.0	Small town	13.3
Big city	45.0	Big city	50.0	Big city	5.0

\* lack of funds or appetite was declared as the most frequent reasons

Data presented in table 6 show that the biggest number of examined using rational nutrition (4 and 5 meals daily) were secondary (48.4%) and technical (46.7%) educated. Lunches and afternoon

snacks were eaten in both groups as well. The less favourable situation was shown among elementary educated persons. Young people secondary educated revealed the most inappropriate nutrition

manner because 63.3% of examined declared irregularity of meals consumption (table 6). Alarming is that among all examined groups significant percentage (50% and more) of young people reveals irregularity of meals consumption.

It is interesting that among persons of the higher education (post secondary) the biggest number of examined (62.5%) declared lack of particular nutrition habits as the main reason of irregular meals consumption (table 7).

Table 6

**Nutrition manner in premilitary period in examined group of young men beginning military service considering education**

PARTICIPATION OF INQUIRED in %					
Structure of eaten meals					
Education	Breakfast	Lunch	Dinner	Afternoon snack	Supper
Elementary	100	16.7	100	0.0	100
Technical	91.9	46.8	93.5	25.8	98.4
Secondary	91.7	43.3	95.0	23.3	98.3
Post secondary	78.6	28.6	100	14.3	92.9
Number of meals eaten daily					
Education	5 meals	4 meals	3 meals	2 meals	1 meal
Elementary	0.0	16.7	66.6	16.7	0.0
Technical	17.7	29.0	43.5	9.8	0.0
Secondary	11.7	36.7	48.3	3.3	0.0
Post secondary	7.1	21.5	57.2	7.1	7.1
Percentage of persons eating meal before leaving house in the morning	Percentage of persons not eating meal before leaving house in the morning		Percentage of persons eating meals regularly	Percentage of persons eating meals irregularly	
Elementary 83.3	Elementary	16.7	Elementary	Elementary	50.0
Technical 83.9	Technical	16.1	50.0	Technical	50.0
Secondary 80.0	Secondary	20.0	50.0	Secondary	63.3
Post secondary 71.4	Post secondary	28.6	36.7	Post secondary	57.1
			Post secondary		
			42.9		

Table 7

**Fundamental reasons of irregular eating in premilitary period among young men declaring irregular consumption depending on education**

PARTICIPATION OF INQUIRED in %					
Lack of regular meals consumption habit		Daily schedule preventing from regular meals consumption		Other reasons *	
Elementary	0.0	Elementary	100	Elementary	0.0
Technical	51.6	Technical	45.2	Technical	3.2
Secondary	47.4	Secondary	44.7	Secondary	7.9
Post secondary	62.5	Post secondary	37.5	Post secondary	0.0

\* lack of funds or appetite were declared as the most frequent reasons

### Conclusions

Three meals alimentionation system prevailed in examined population of young men in premilitary period. Incidences that only two or even one meal was eaten daily were found.

Highly unprofitable from alimentary point of view is fact that 19.0% of examined did not eat any meal in the morning, before leaving for school or work.

Declared by most of examined irregularity of meals consumption resulting mostly from lack of specified nutritional habits and daily schedule may arise serious nutrition reservation.

### References

1. GACEK, M. Ocena sposobu żywienia studentów Akademii Wychowania Fizycznego w Krakowie w latach 1999–2000. *Żywnienie Człowieka i Metabolizm*, 2001, 28, supl. tom 2, 556–561.
2. GAJEWSKA, M. – SZEWCZYŃSKI, J. – OSTROWSKA, A., i wsp. Wstępna charakterystyka oceny jakościowej sposobu żywienia uczniów szkół ponadpodstawowych województwa mazowieckiego. Program i streszczenia Sympozjum: „Bezpieczna żywność i prawidłowe odżywianie podstawą profilaktyki zdrowotnej”, Wrocław, 19–20. 09. 2002, 180.
3. GRONOWSKA-SENGER, A. Ocena żywienia w: *Żywnienie Człowieka. Podstawy nauki ożywieniu*, red.: Gawecki, J., Hryniewiecki, L., Wydawnictwo Naukowe PWN, Warszawa, 2000, 468–494.
4. LITWA, W. – HAMUŁKA, J. – GRONOWSKA-SENGER, A. Ocena żywienia w wybranej jednostce wojskowej. *Żywnienie Człowieka i Metabolizm*, 2001, 28, supl. tom 2, 532–536.
5. OLEŹDZKA, R. – WIŚNIEWSKA, J. – ROGALSKA-NIEDŹWIEDŹ, M., i wsp.: Ocena sposobu żywienia studentów Wydziału Farmaceutycznego Akademii Medycznej w Warszawie w roku akademickim 1999/2000. *Żywnienie Człowieka i Metabolizm*, 2001, 28, supl. tom 1, 514–519.
6. RADULSKI, J. – ROZMYŚL, E. – KŁOS, A. Ocena żywienia młodych mężczyzn w trakcie pełnienia zasadniczej służby wojskowej. *Lekarz Wojskowy*, 1997, 1–2, 32–39.
7. RADULSKI, J. *Studia nad sposobem żywienia i stanem odżywienia żołnierzy służby zasadniczej wybranej jednostki wojskowej*. Praca doktorska, SGGW, Warszawa, 1994.
8. ROZMYŚL, E. – KŁOS, A. – BERTRANDT, J. Ocena sposobu żywienia młodych mężczyzn pełniących zasadniczą służbę wojskową w wybranej jednostce wojskowej. *Materiały Konferencji Naukowej: Żywność w początkowym i zaawansowanym okresie życia człowieka*, Kraków, 11–12. 06. 2001, 121.
9. STOPNICKA, B. – SZAMREJ, K. Ocena jakości indywidualnego żywienia dzieci, młodzieży szkół ponadpodstawowych i młodzieży akademickiej województwa podlaskiego na przestrzeni lat 1996–2000. *Żywnienie Człowieka i Metabolizm*, 2001, 28, supl. tom 2, 562–566.
10. SZPONAR, L. – TURLEJSKA, H. Sposób żywienia w zakładach żywienia zbiorowego. *Żywność Żywnienie a Zdrowie*, 1997, 4, 1, 77–80.

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