

CASE REPORT / PRACA KAZUISTYCZNA

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PRO-HEALTH CONDITIONS IN PATIENTS WITH ISCHEMIC HEART DISEASE

WARUNKI PROZDROWOTNE U PACJENTÓW Z CHOROBAŁ NIEDOKRWIENNAŁ SERCA

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S u m m a r y

I n t r o d u c t i o n . Man, undertaking specific pro-health activities, resisting other, anti-health behavior, can not only avoid deterioration of health, but also improve psycho-physical condition.

P u r p o s e o f t h e s t u d y . The purpose of this study is description of prophylactic activities undertaken by patients with ischemic heart disease, focused on maintaining good health and prevention of its deterioration and establishing if social factors and lifestyle influence pro-health activities in their patients.

M a t e r i a l a n d m e t h o d s . The study encompassed 100 patients (55 men and 45 women) aged between 40 and 70 (aver. Age 58.3±6.3 years) with ischemic heart disease, qualified to operation within the range of the cardiac muscle. Material was collected with the use of the questionnaire, containing „open” questions, which were easily answered by participants and „closed” questions, requiring selection of one or several answers from possibilities given by the authors. Participants described activities within fields mentioned in the questionnaire: eating habits (regularity and quality of meals), physical activity (movement and sports), sleep hygiene, avoiding stimulants, managing stress and taking advantage of medical counseling.

R e s u l t s . 66.7% of women and 61.9% of men seem to be consistent when it applies to reduction of fats of animal origin in diet, unfortunately only 27.8% of women and 24.4% of men responded that fruits and vegetables are an inseparable

element of their daily diet. 87% of patients living in villages eat regular breakfast, and only 18.2% of those living in towns; frequency of eating the remaining meals is the same and amounts to 38.2% and 58.2%, respectively. Unfortunately, only 11.1% of women and 14.5% of men reported that they are systematically involved in some form of activity, whereas 24.4% of women and 25.5% of men do not exercise at all. From among participants, 49% do not smoke, although only 9% have never smoked. The highest percentage of habitual smokers, amounting to as much as 17.4%, was reported among residents of villages. In big cities and small towns it amounted to, respectively, 6.8% and 6.1%. 13% of patients see alcohol drinking as the solution for their problems and 11% in taking antidepressants. Men (20%) reach for alcohol more often than women (4.4%), whereas women (20%) more frequently take antidepressants than men (3.6%). Regular rhythm of sleep and activity is maintained by 31% of participants; 33% state that they undergo systematic medical examinations, although the largest group is the oldest patients, between 60 and 70 years of age.

C o n c l u s i o n s . 1. People from the oldest age group are most concerned for their health; they more often undergo medical examinations, abide by sleep hygiene and avoid bad habits. 2. People with ischemic heart disease do not take advantage of an opportunity for improvement of their health, a significant percentage of them get involved in anti-health activities.

Streszczenie

Wstęp. Człowiek, podejmując szczególne działania prozdrowotne, pokonując inne, antyzdrowotne zachowania, może nie tylko zapobiec pogarszaniu się stanu zdrowia, ale także poprawić kondycję psychofizyczną.

Celem niniejszego opracowania jest opis działań profilaktycznych podejmowanych przez pacjentów z chorobą niedokrwienną serca, ukierunkowanych na utrzymanie dobrego stanu zdrowia i zapobieganie jego degradacji oraz ustalenie, czy czynniki społeczne i styl życia wpływają na prozdrowotne działania tych pacjentów.

Materiał i metody. Badanie obejmowało 100 pacjentów (55 mężczyzn i 45 kobiet) w wieku od 40 do 70 (średnia wieku $58,3 \pm 6,3$ roku) z chorobą niedokrwienną serca, zakwalifikowanych do operacji w zakresie mięśnia sercowego. Materiał zebrano przy użyciu kwestionariusza zawierającego pytania „otwarte”, na które było łatwo odpowiedzieć uczestnikom, i pytania „zamknięte”, wymagające wyboru jednej lub kilku odpowiedzi podanych przez autorów. Uczestnicy opisali działalność w dziedzinach wymienionych w kwestionariuszu: nawyki żywieniowe (regularność i jakość posiłków), aktywność fizyczna (ruch i sport), higiena snu, unikanie używek, zarządzanie stresem i korzystanie z poradnictwa medycznego.

Wyniki. 66,7% kobiet i 61,9% mężczyzn wydaje się zgodne w odniesieniu do redukcji tłuszczów pochodzenia zwierzęcego w diecie. Niestety, tylko 27,8% kobiet i 24,4% odpowiedziało, że owoce i warzywa są nieodłącznym

elementem ich codziennej diety. 87% pacjentów mieszkających na wsi je regularne śniadanie, a tylko 18,2% osób mieszkających w miastach; częstotliwość jedzenia posiłków pozostałych jest taka sama i wynosi odpowiednio 38,2% i 58,2%. Niestety, tylko 11,1% kobiet i 14,5% mężczyzn stwierdziło, że systematycznie uczestniczy w jakiejś formie aktywności, podczas gdy 24,4% kobiet i 25,5% mężczyzn nie ćwiczy w ogóle. Spośród uczestników 49% nie pali, ale tylko 9% nigdy nie paliło. Najwyższy odsetek nałogowych palaczy, nawet do 17,4%, odnotowano wśród mieszkańców wsi. W dużych miastach i małych miasteczkach wynosił on odpowiednio 6,8% i 6,1%. 13% pacjentów podało picie alkoholu jako rozwiązanie dla swoich problemów, a 11% przyjmowanie leków przeciwdepresyjnych. Mężczyźni (20%) sięgają po alkohol częściej niż kobiety (4,4%), natomiast kobiety (20%) częściej biorą leki przeciwdepresyjne niż mężczyźni (3,6%). Regularny rytm snu i aktywności jest utrzymywany przez 31% uczestników, 33% deklaruje, że poddaje się systematycznym badaniom lekarskim, największa grupa to najstarsi z pacjentów – między 60. a 70. rokiem życia.

Wnioski. 1. Osoby z najstarszej grupy wiekowej są najbardziej zaniepokojone o swoje zdrowie, częściej przechodzą badania lekarskie, przestrzegają higieny snu i unikają złych nawyków. 2. Osoby z chorobą niedokrwienną serca nie korzystają z szansy na poprawę ich zdrowia, znaczna część z nich wykazuje zachowania antyzdrowotne.

Key words: ischemic heart disease, pro-health activities

Słowa kluczowe: choroba niedokrwienna serca, działania prozdrowotne

„You cannot stop any day,
but you can prevent losing it.”

Health as a value functions on two platforms; one of them is declarations of people, whereas the second one regards values that are actually carried out. In declarations, health is the main and priceless value; however, in daily life it appears that there are many other values, for which people sacrifice their health; they include welfare of one's family, career and high financial status.

Discrepancies between high evaluation of health in theory and reaching to achieve it in practice can be confirmed by an analysis of information acknowledging the health condition of today's man. Results of studies presented by many authors indicated that this condition is not satisfactory, although there are realistic possibilities for its improvement. Man, undertaking specific pro-health activities, resisting other, anti-health behavior, can not only avoid deterio-

ration of health, but also improve his psycho-physical condition.

PURPOSE OF THE STUDY

The purpose of this study is:

- 1) description of pro-health activities undertaken by patients with ischemic heart disease, focused on maintaining good health and prevention of its deterioration,
- 2) establishing if social factors and lifestyle influence pro-health activities in these patients.

MATERIAL AND METHODS

The study encompasses 100 patients (55 men and 45 women) aged between 40 and 70 (aver. Age

58.3±6.3 years) with ischemic heart disease, qualified to revascularization of coronary arteries at the Cardiac Surgery Clinic of the University Hospital CM in Bydgoszcz, UMK in Toruń between January 2004 and February 2007.

In order to collect research material, the authors used their own questionnaire. It contained 'open' questions, which were easily answered by participants by filling an answer, according to their opinion, as well as 'closed' questions, requiring selection of one or several answers.

Participants answered questions regarding their eating habits (quality and regularity of meals), physical activity, sleep hygiene and quality (sleepiness, sleeplessness), dealing with daily problems (managing on one's own, assistance of other people), continuing addiction and taking advantage of medical counseling.

RESULTS

Results obtained in the study indicate that the pro-health level in the scope of eating meals is average. The group, which indicates the most pro-health attitudes in this field, is the group of people aged between 60 and 70, which is the oldest. On the other hand, the most undesired behavior is reported by participants aged between 40 and 50. However, no relevant differences ($p < 0.01$) in regularity of consumed meals have been noticed as regards place of residence, except for breakfast – percentage of people eating regular breakfast was much higher ($p < 0.001$) in the group living in villages and amounted to 87%, whereas in the group living in towns it amounted to only 18.2%. 35.6% of women and 38.2% of men eat regular breakfast, 86.7% of women and 58.2% of men eat regular lunch, and 53.3% of women and 34.5% of men declare regular consumption of dinner.

Just like in the scope of regularity of consumed meals, in the area regarding their quality, the level of pro-health activities in patients is average. The vast majority of participants (66.7% of women and 61.9% of men) seem to be consistent when it applies to reduction of fats of animal origin in diet. Reduction of sugar was declared by only 35.6% of women and 32.8% of men. A small percentage of participants, i.e. 27.8% of women and 24.4% of men, responded that fruits and vegetables are an inseparable element of their daily diet.

Results obtained in the study confirm that just as in the scope of regularity and quality of consumed meals

where the pro-health level is average, in physical activity this level is very low. Only 11.1% of women and 14.5% of men reported that they are systematically involved in some form of activity. The highest percentage of participants (64.5% of women and 60.0% of men) is sporadically involved in physical activity. Unfortunately, as much as 24.4% of women and 25.5% of men do not exercise at all, only 3.5% of participants exercise 3-4 times a week according to doctor's recommendations. Among the people who spent their free time getting involved in physical activity, the most popular form of activity is walking, although 76.4% of participants walk only sometimes. 58.9% of participants exercise from time to time, 63% ride bicycle, 43.2% swim and 21.4% run.

For 32% of participants, the reason for such low physical activity is blockade of motivational-personality nature, for 29% lack of funds, for 27% difficulties in the access to gyms, and 12% participants indicated lack of time as the reason for this behavior, although no relation between sex and age of participants ($p < 0.006$ and $p < 0.008$) was noticed.

From among participants, 49% do not smoke, although only 9% have never smoked, and the remaining 40% quit smoking after 17-23 years (aver. 21.4 years). The percentage of men who have never smoked (58.2%) is higher in comparison with women who have never smoked (37.8%). People aged between 61 and 70 i.e. the oldest participants are the most concerned about their health, in which the percentage of non-smokers amounted to 64.7% and was significantly higher ($p < 0.05$) than in the group of people aged between 40 and 50, where it amounted to 36.1%. The highest percentage of „habitual” smokers, amounting to as much as 17.4%, was reported among residents of villages, whereas among people living in big and small towns it amounted to 6.8% and 6.1%, respectively.

Only 19% of participants indicated attitudes the most expected from the point of view of mental hygiene, which means that they tried to find a reasonable solution for the situation that was the reason of stress. A worrying signal is the fact that as much as 23% of hospitalized patients see solution to their problem in drinking alcohol and 21% in taking antidepressants, although the biggest group – in both cases – is aged between 40 and 50. In stressful situations, men (20%) more frequently than women (4.4%) reach for alcohol, whereas women take antidepressants more frequently (20%) than men (3.6%).

Our results let us confirm that men approach problems more rationally than women, which can be

acknowledged by the fact that 27.3% of men look for a reasonable solution to problems, whereas this percentage among women amounts to only 8.9%.

A decidedly regular rhythm of sleep and activity is maintained by 31% of participants; 54.7% try to go to bed and get up at the same time, 33% state that they undergo systematic medical examinations, although the largest group (52.9%) are the oldest patients, whereas people in the youngest group account to only 22.2%.

Results of the study were presented in Tables 1 and 2.

counteracting health problems and/or facilitating recuperation in case of disease.

Accepting a theoretical model of multi-factor conditioning of health, literature [8] frequently uses two qualifications of factors determining health: the first one contains restorative medicine, genetic factors, physical and social environment, and lifestyle, whereas the second one includes health care, inheritance and human biology, natural and social environment, and lifestyle.

The term 'lifestyle' is used not only in colloquial

Table 1. *Regularity and quality of consumed meals*

		Regularity of eating (%)					Quality of meals			
		1st breakfast	2nd breakfast	lunch	afternoon snack	dinner	fruits and vegetables every day	reduced animal fats	Reduced sugar and sweets	habitual smoking
Sex	women	35.6	68.9	86.7	15.6	53.3	24.4	26.7	53.3	11.1
	men	38.2	7.3	58.2	30.0	34.5	27.3	18.2	32.8	7.3
Age (years)	40-50	22.2	44.4	58.3	13.9	44.4	25.0	30.6	41.7	13.9
	51-60	29.8	23.4	70.2	21.3	31.9	25.5	49.9	46.8	6.4
	61-70	88.2	47.1	100.0	47.1	70.6	29.5	35.3	47.1	5.9
Place of residence	big city	18.2	40.9	65.5	22.7	40.9	27.3	27.2	45.6	6.8
	small town	27.3	33.3	69.7	24.2	39.4	24.2	24.2	48.4	6.1
	village	87.0	26.1	82.6	21.7	52.2	26.1	8.7	39.2	17.4

Table 2. *Pro-health activities*

		Physical activity (%)			Undergoing medical examinations			Handling difficult situations				
		systematically	sporadically	never	systematically	sporadically	never	1	2	3	4	5
Sex	women	11.1	64.5	24.4	33.3	20.0	15.6	8.9	31.1	35.6	4.4	
	men	14.5	60.0	25.5	32.7	21.8	16.4	27.3	27.3	21.8	20.0	20.0
Age (years)	40-50	13.9	63.9	22.2	22.2	22.2	27.8	11.1	25.0	27.8	25.0	3.6
	51-60	12.8	63.8	23.4	34.1	23.4	10.6	12.8	36.2	34.0	6.4	11.1
	61-70	11.8	52.9	35.3	52.9	11.8	5.9	52.9	17.6	11.8	5.9	10.6
Place of residence	big city	13.6	56.8	29.6	34.1	20.5	13.6	18.2	34.1	22.7	13.6	11.8
	small town	12.1	66.7	21.2	36.4	21.2	12.1	18.2	33.3	27.3	12.1	15.4
	village	13.0	65.2	21.8	26.1	21.7	26.1	21.7	13.0	39.1	13.1	139.1.1

DISCUSSION

In terminology used in relation to 'behaviors related to health', there are many names and definitions of significantly varied character and a considerable freedom in their interpretations, since many scientific fields such as medicine, sociology, psychology and pedagogy show interest in 'health behaviors'.

Health behaviors are all activities recognized by individuals and social groups, which directly or indirectly influence human health. They are divided into pro-health activities and anti-health activities.

Pro-health activities, in contrast to anti-health activities, are those which are conducive to health, contribute to its maintaining and strengthening, reaching good psychical and mental condition,

speech, but has also a permanent place in scientific language. According to WHO, the term 'lifestyle' is used to describe a way of life based on mutual relation between living conditions, in a broad sense, and individual patterns of behaviors determined by social-cultural factors and individual characteristics [4].

This study was dedicated to psycho-social conditions of pro-health activities in people with ischemic heart disease undergoing revascularization of coronary arteries as well as determination of the pro-healthiness level reflected by the lifestyle of these patients. The entry point for searching for these factors, conditioning involvement in pro-health activities, was to establish possible relations between these behaviors and demographic factors. These factors, related to people and their setting in the environment, can – in a more or less indirect way – determine lifestyle, and, at the same time, healthy behaviors.

Results of the study allow us to confirm that women eat healthier than men, slightly more often undergo medical examinations and abide by sleep hygiene. On the other hand, men slightly better handle stressful situations, trying to find a reasonable solution. In addition, the percentage of habitual smokers among the examined patients is lower among men than women, which in the context of obtained results of pro-health activities among women is quite surprising.

People from the oldest age group are most concerned about their health. They more often undergo medical examinations than the remaining groups, have more rational approach to problems, generallyly abide by sleep hygiene, and a lower percentage of them are habitual smokers; in the remaining aspects, they do not differ from other patients.

The results in the scope of regularity and quality of consumed meals do not look that good. While it had been hustified and popular in Poland before the transformation in 1989 and the situation on the market did not allow abiding by nutritional requirements in patients with heart diseases, then after transition into market oriented economy, considering popularization of the new 'lifestyle', it is quite disturbing [6].

According to the results, too few patients eat their meals in accordance with recommendations, i.e. 4-5 meals a day; in addition, a small percentage of women (27.3%) and men (24.4%) declare that fruit and vegetables are an inseparable element of their daily diet. Just like the reasons for irregular eating can be seen in the fact that a significant percentage of patients (67.2%) are working people, then quality of eating can result from negligence of attachment to traditional food, containing meals rich in meat, animal fats, potatoes and bread, which, in opinion of their authors, are a source of proper dose of energy.

Involvement in physical activity by participants presents them also in an unfavorable light. It appeared that only 11.1% of women and 14.5% of men said that they were systematically involved in some form of activity. The highest percentage of participants, since as much as 64.5% of women and 60% of men are sporadically involved in physical activity. The most popular form of acitivity in the entire group of participants (71.4%) was walking and cycling, whereas swimming and team sports were the least popular.

The most frequent reason for such rare involvement in physical activity, given by participants, is motivational-personality blockade (32%), followed by lack of funds (29%), difficulties in the access to proper

equipment and gyms (27%), and lack of time (12%). Is it true that recreational involvement in sports requires funds? Surely it requires good will, since according to participants of the study, just like money, they lack strong will.

It seems that similarly to bad eating habits, we need to look for the reason of resistance to physical activity in the area of motivation, subjective feelings and convictions, and deep-rooted habits. It is also curious that people from the oldest group, having an unlimited free time, are decidedly less frequently involved in physical activity than working people.

Kordas [5], making an attempt to describe health-related behaviors of Poles in the scope of physical activity, reached the conclusion that behaviors of people with ischemic heart disease and people from other social groups are very similar. It means that more or less the same number of people does not take advantage of an opportunity to improve their own health provided by regular exercising and active recreation; at the same time – in a conscious or unconscious way – they are involved in anti-health activities such as habitual smoking, excessive alcohol drinking, taking antidepressants and sleeping pills.

If the study had not covered patients with ischemic heart disease, the pro-health level in the scope of smoking would have been rather satisfactory, since 11.1% of women and 7.3% of men declared nicotine addiction. A more detailed analysis of answers confirmed that only 9% of patients from the group of non-smokers had never smoked, whereas 40% had quit the addiction after – on average – 21.4 years. The highest percentage of smokers, since as much as 17.4%, are patients living in villages, whereas patients living in big cities and small towns account for 6.6% and 6.1%, respectively. As it was earlier stated, the group of patients living in villages had been also characterized by bad eating habits, as regards both regularity and quality of consumed meals.

It is obvious that both bad nutrition, loaded with animal fats, and tobacco smoking constitute the main factors of atherosclerosis, and, at the same time, ischemic heart disease. We should not, however, forget about the effect of stressogenic factors on the human body – an omnipresent and unavoidable element of life, attention of specialists from many fields. Fighting stress comprises two components – solving problems and self-control over bad experiences. The first component takes place when an individual tries to change his present situation to a better one, by altering

his own adaptive activity. The second component is reflected by managing one's own reactions, preventing breaking of mental resistance and social functioning of an individual. In practice, it can be expressed by improvement of one's mental state with the use of such means as denial, rationalization, avoiding unpleasant thoughts, alcohol drinking and taking antidepressants. Thanks to the use of such means, an individual can feel better, although these methods do not change the actual relation between the subject and his surrounding.

In this study, only 19% of participants showed an attitude, which is most anticipated from the point of view of mental hygiene, meaning that they try to find a reasonable solution for the situation that is the reason of stress. It is worrying that as much as 13% of patients with ischemic heart disease, hospitalized in the Cardiac Surgery Department, see alcohol drinking as the solution for their difficult situation. There is also a significant percentage (11%) of people taking antidepressants. The biggest group, comprising as much as 29% of participants, includes people who fight stress by 'rejection of the problem' or 'denial'.

In the examined group, men (20%) reach for alcohol more often than women (4.4%), whereas women (20%) more frequently than men (3.6%) save themselves with antidepressants. The problem is approached in the most reasonable way by the oldest patients, which can be confirmed by the fact that 52% of them try to find a reasonable solution for the problem, whereas in the youngest group this percentage accounts for only 11.1%.

Failure to follow recommended diet, physical activity and stimulants are generally known forms of patient's departure from health activities advised by a physician [7]. It also applies to the failure to follow the needs of the human body as regards sleep, which is the main need of every man, enabling satisfaction with his proper physical and mental state. In order to achieve that, man has to sleep on average 7-8 hours per day. Unfortunately, only 47.2% of the examined patients with ischemic heart disease meet this condition, 36.3% does it frequently, whereas 13.8% sporadically. These results would not be alarming in case of healthy people, changing their rhythm of activity on the occasion of their days off work, additional work, family and social duties.

In addition, in the scope of systematic medical control declared by participants, there are many irregularities. People with obvious ischemic heart disease, in the group of special risk, should undergo

systematic blood pressure measurements, control of lipids level, sugar level and weight control. Appreciating the importance of prophylaxis regarding health and assuming that systematic health control is one of the essential conditions of health care, participants gave unsatisfactory answers. Only 33% of patients declared that they undergo systematic medical examinations, 31% try to do in on regular basis, 21% does it sporadically, and 15% only in case of ailments.

Pro-health activities can be undertaken within various fields of human activity. Studies, presented in this work, covered only selected fields of activity, which seem the most important for health. However, the description of the analyzed behaviors is not sufficient to characterize the behavior typical of people with ischemic heart disease, since it does not capture the individual configuration of patients' behaviors, a configuration described as lifestyle. Daily behaviors, regarding eating habits, physical activity during free time, sleep, avoiding addictions and undergoing regular medical examinations can be composed in a specific way, unique to a concrete individual or group.

For instance, some people can follow healthy diet, ignoring physical activity; whereas others can focus more on recreation, sacrificing daily sleep requirements; another group can include people who eat properly, are involved in sports and avoid stimulants. Therefore, an individual can get involved in pro-health activities in various fields of his life, with a higher or lower frequency, less or more regularly, to a larger or lesser extent [1, 3].

The results obtained in this study are not satisfactory, since they cover people who – in many regards – should go beyond the average, which can be recognized as allowable in healthy people.

Therefore, we can confirm that people with ischemic heart disease should verify their lifestyles and broaden their knowledge on pro-health activities.

CONCLUSIONS

1. People from the oldest age group are most concerned about their health; they more often undergo medical examinations than the remaining groups, abide by sleep hygiene and a lower percentage of them are habitual smokers.
2. People with ischemic heart disease do not take advantage of an opportunity for improvement of their health, which can be achieved by regular

exercising, regular and quality nutrition, and breaking with addictions.

3. The results obtained in this study are not satisfactory, since in people with ischemic heart disease they should go beyond the average. Therefore, these patients should not only verify their pro-health activities, but necessary broaden their knowledge on ischemic heart disease and its complications.

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