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## DEFICIENCY OF PHYSICAL ACTIVITY IN OLDER PEOPLE IN POLAND

### Introduction

According to population estimates, by the middle of the 21st century Poland will become one of the countries in which the process of population aging is one of the most advanced in Europe, and in which people aged 65 and over will constitute 30% of the population (in 2016 they amounted to 16.4%). The population aging process is affected by a number of demographic determinants of social processes (fertility, mortality and foreign migration)<sup>1</sup>. On the other hand, there is an issue of individual aging affected by many interrelated, individual factors impinging on the quality of life in the old age. We can enumerate here genetic, personal factors (illness, disability, obesity, etc.); life choices and behaviour (physical activity, nutrition, lifestyle); life events and mental pressure (stress); socio-economic status and social, professional, family activity; physical and social environment (health care, social welfare) as well as culture and gender<sup>2</sup>. The theory of aging is a basis for the explanation of varied pace of this process and the role of activity in it<sup>3</sup>. Generally, aging of the body is affected by biological conditions and, first and foremost, conditions of life and lifestyle (the latter determines health of the person to the greatest degree), which in turn makes us realise that man himself greatly influences the state of his or her health by leading a proper lifestyle. The essential elements of this lifestyle are, in turn, various types of activity, including social and physical activity.

It is impossible to stop the natural processes of aging completely, but it is possible, thanks to systematic physical activity, to partially mitigate or delay it. Therefo-

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<sup>1</sup> M. Kubiak, *Współczesne wyzwania demograficzne państw Unii Europejskiej*, [in:] *Edukacja dla bezpieczeństwa. Paradygmaty jutra. Wyzwania dla nauk społecznych wynikające z zagrożeń współczesnego świata*, ed. A. Piotrowski, M. Ilnicki, Poznań 2012, pp. 332-336; J. Stańczak, D. Szałtys, *Sytuacja demograficzna Polski na tle Europy*, [in:] *Perspektywy demograficzne jako wyzwanie dla polityki ludnościowej Polski*, ed. J. Hryniewicz, A. Potrykowska, Warszawa 2016, pp. 24-49.

<sup>2</sup> W. Osiński, *Gerokinezoologia. Nauka i praktyka aktywności fizycznej w wieku starszym*, Warszawa 2013, p. 6.

<sup>3</sup> P. Czekanowski, *Społeczne aspekty starzenia się ludności w Polsce. Perspektywa socjologii starości*, Gdańsk 2012, pp. 77-86.

re, it should be a priority to make society aware of the fact that an integral part of successful, healthy aging is, first of all, maintaining proper functional efficiency determined by lifestyle.

As the aging process progresses, the level of self-reliance decreases, which in turn generates an increasing need for support. However, it must be stressed at the same time that earlier response to fitness deterioration can slow down the decline of self-reliance in self-service and household activities. In this context, insufficient development of prophylactic and preventive activities in health care is stressed. A result of paying more attention to the prevention of disease (in all phases of life) may be a lower level of morbidity in elderly age<sup>4</sup>. In the European Union it has been strongly emphasized for several years that unless there is a change in the overall health of the population and adequate reform of social security systems to promote healthy and active aging, demographic processes will increase the burden on public health and long-term care budgets<sup>5</sup>.

### Reasons for and barriers of a low level of physical activity in seniors

Even in advanced age it is possible to improve health through own effort (or at least slow down the progression of adverse changes in the body), for example, through physical activity. This raises a question about the level of physical activity of seniors in Poland and the factors that prevent them from practicing it. As the reality shows, the proportion of people over 65 who exercise regularly (at least 30 minutes of physical exercise) is relatively low and unfortunately decreases with age<sup>6</sup>. According to *Social Diagnosis*, only 2 out of 10 seniors (that is half as many as in the case of the younger population) practice any form of sport or physical activity<sup>7</sup>. Seniors sporadically participate in sports and leisure activities (13.2%), and only one in ten attends them regularly (11.4%)<sup>8</sup>. Some of them undertake (moderate or intense physical activity) at least

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<sup>4</sup> P. Błędowski, *Polityka wobec starzenia się i starości. Zakres i definicje*, [in:] *Polityka wobec starości i starzenia się w Polsce w latach 2015–2050. Aspekty teoretyczne i praktyczne*, ed. P. Błędowski, Z. Szweđa-Lewandowska, Warszawa 2016, p. 39.

<sup>5</sup> *Aktywność osób starszych i solidarność międzypokoleniowa. Statystyczny portret Unii Europejskiej 2012*, Luksemburg 2011, pp. 74–75.

<sup>6</sup> In subsequent age groups, daily physical activity was undertaken respectively by: 65–74 years of age: 44,9%, 75–84 years of age: 32,6%, 85 years of age and over – 23,4%, *Aktywność osób starszych i solidarność międzypokoleniowa*, pp. 77–78.

<sup>7</sup> Among physically active seniors (older and younger ones) the most popular are cycling (from 43 to 70% – depending on age), running/Nordic walking (14 to 22%) and swimming (from 12 to 21%), J. Czapiński, P. Błędowski, *Aktywność społeczna osób starszych w kontekście percepcji Polaków. Diagnoza społeczna 2013. Raport tematyczny*, Warszawa 2014, pp. 38.

<sup>8</sup> *Uczestnictwo Polaków w sporcie i rekreacji ruchowej w 2012 r.*, GUS, Warszawa 2013, p. 36; [http://stat.gov.pl/cps/rde/xbcr/gus/KTS\\_uczestnictwo\\_polakow\\_w\\_sporcie\\_2012.pdf](http://stat.gov.pl/cps/rde/xbcr/gus/KTS_uczestnictwo_polakow_w_sporcie_2012.pdf) [4.05.2017].

once a week, that is very rarely<sup>9</sup>. Older men declare both regular and sporadic physical activity more frequently than women<sup>10</sup>. On the one hand, it is possible to look with optimism at the fact that on the basis of studies of older people in Gdansk – 36.3% declared practicing some sport discipline and physical activity (20.7% often and 15.6% rarely), but on the other hand this also means that 2/3 of the surveyed population is not involved in physical activity at all<sup>11</sup>. In addition to the abovementioned connection with gender and age, the level of physical activity of seniors is also linked, among others, with education and self-assessment of the economic situation. A significant interdependence between physical activity and health is also confirmed<sup>12</sup>.

It can be argued that physical fitness deteriorates with age, but age itself should not be a factor limiting physical activity. It is also possible to point to several reasons for reducing physical activity of modern man, such as, among others, avoiding physical discomfort, available facilities and modernisation, as well as diseases, contusions and injuries. Here one can ask about determinants of the low level of physical activity among seniors. Among the main obstacles in practising physical activity the most common are: age (47.7%), health (27%), lack of interest (11.5%) and lack of spare time (4.9%)<sup>13</sup>. Stereotypes and subjective convictions about the low level of physical activity also play an important role, as expressed by 38.2% (only 17.9% of those over 60 had a positive opinion on this matter)<sup>14</sup>.

Avoiding physical effort may also result from ignorance or insufficient information on the pro-health role of properly done physical activity. It has been shown that the majority of seniors have a sedentary lifestyle and low level of readiness to increase regular physical activity (42% of older people are unaware of the importance of physical activity for health)<sup>15</sup>. We can also point to the problems inherent in seniors'

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<sup>9</sup> Physical activity was undertaken at least once a week by 76.5% of men and 74.7% of women in the age group 60–69, 51.6% of men and 45% of women in the age group 70–79, 33.8% of men and 22.9% of women among persons 80+, R. Topór-Mądry, M. Michalejko, M. Bała, *Zdrowie Polaków w wieku 50+ na tle wybranych krajów europejskich*, [in:] *Portret generacji 50+ w Polsce i w Europie. Wyniki badania zdrowia, starzenia się i przechodzenia na emeryturę w Europie (SHARE)*, ed. A. Chłoń-Domińczak, Warszawa 2014, p. 59.

<sup>10</sup> *Uczestnictwo Polaków w sporcie i rekreacji ruchowej w 2012 r.*, pp. 35-36.

<sup>11</sup> P. Czekanowski, J. Załęcki, M. Brosz, *Gdańska starość. Portret socjologiczny mieszkańców Gdańska w wieku 65+*, Gdańsk 2013, p. 116.

<sup>12</sup> Older people who practice sport much more frequently define their health as “good or rather good” (55.4%) than those who do not (25.8%), the former less frequently use health services, moreover, people who engage in physical activity perceive themselves and their own old age in a better way, and feel lonely less often, *Ibidem*, pp. 117-118.

<sup>13</sup> *Uczestnictwo Polaków w sporcie i rekreacji ruchowej w 2012 r.*, p. 58.

<sup>14</sup> *Ibidem*, p. 31.

<sup>15</sup> K. Szczerbińska, B. Piórecka, M. Malinowska-Cieślak, *Fazy gotowości do zmiany zachowań i ich uwarunkowania a zachowania w sferze aktywności fizycznej i żywienia wśród starszych pacjentów objętych w Krakowie opieką pielęgniarek środowiskowo-rodzinnych. Implikacje dla promocji zdrowia*, „Zdrowie Publiczne i Zarządzanie”, vol. IX, 2011, no. 1, p. 73.

cultural, educational and mental barriers<sup>16</sup>. At this level the reasons for a (mainly) passive way of spending time by seniors can be found in the absence of appropriate habits and reliable knowledge. A problem in this regard is the lack of physical activity in earlier developmental periods and the absence of good models. Some researchers divide the barriers preventing seniors from undertaking physical activity into the internal and external ones. The former include, among others: fear of falling, possibility of contusions and injuries, pain associated with exercise, increased weight, lack of motor skills and lack of pleasure from physical activity. In turn, the most important external barriers are: the economic sphere (limited funds, lack of mobility opportunities and technical conditions, lack of a support group or partners for exercising, insufficient training and weather conditions, inadequate facilities and areas for people with lower efficiency (toilets, catering, lighting, slippery floors)<sup>17</sup>. Another problem is the advice that seniors receive from the environment to be cautious in making any effort. Such advice often becomes some kind of permission to avoid any activity, which in turn causes deterioration of the health of the elderly. It is also a fault of doctors who provide general health advice, prescriptions and directions for taking medicines but rarely stress the importance of a necessary dose of exercise or do not recommend it<sup>18</sup>.

### Consequences of the low level of physical activity for the elderly

In the course of evolution human body adapted to high level of physical activity. In contrast, modern lifestyle (especially in highly-developed countries) affects the necessary psychophysical balance in a negative way, threatening human health. Sedentary lifestyle is also conducive to the occurrence and development of civilisation diseases (ischemic heart disease, hypertension, obesity, type 2 diabetes) and accelerates the aging process<sup>19</sup>. Resignation from activity results in general weakening of

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<sup>16</sup> E. Kozdroń, *Możliwości uczestnictwa ludzi starszych w zorganizowanych formach rekreacji ruchowej na terenie Warszawy*, [in:] *Uczestnictwo Polaków w rekreacji ruchowej i jego uwarunkowania*, ed. A. Dąbrowski, Warszawa-Płock 2003, pp. 145–156.

<sup>17</sup> J. Rottemund, A. Knapik, A. Wąsiński, M. Szyszka, *Motywowanie osób starszych do aktywności fizycznej*, [in:] *Institutionalne i pozainstitutionalne formy wsparcia osób starszych*, ed. M. Szyszka, P. Dancák, A. Wąsiński, J. Daszykowska, *Czesko-Polsko-Słowackie studia z zakresu andragogiki i gerontologii społecznej*, Stalowa Wola-Bratysława 2014, pp. 179-180.

<sup>18</sup> Ibidem, s. 181.

<sup>19</sup> W. Drygas, M. Kwaśniewska, D. Kaleta, J. Ruskowska-Majzel, *Increasing recreational and leisure time physical activity in Poland – how to overcome barriers of inactivity*, „Journal of Public Health” 2008, no. 16, pp. 31-36; K. Nazar, H. Kaciuba-Uściłko, *Znaczenie aktywności ruchowej w zapobieganiu chorobom cywilizacyjnym*, [in:] *Fizjologiczne podstawy wysiłku fizycznego*, ed. J. Górski, issue II, Warszawa 2006, p. 546; E. Kozdroń, A. Leś, *Aktywność ruchowa w wychowaniu ku starości*, 2014, p. 22, <https://ncbkf.pl/media/ewyd/bibl/Aktywnosc%20ruchowa%20w%20wychowaniu%20ku%20sta%20rosci.pdf> [7.05.2017].

the body and thus creates conditions for the onset of a disease<sup>20</sup>. As for cardiovascular diseases (coronary heart disease, heart failure, hypertension), it should be emphasised that they contribute to half of all deaths in Poland<sup>21</sup>. Studies show that ischemic heart disease and mortality due to a heart attack are more probable in the case of people with sedentary lifestyle than in the case of those who are physically active. The results of these studies justify the inclusion of low motor activity in the group of so-called heart disease risk factors including both biological characteristics of the body as well as lifestyle factors increasing the risk of developing these diseases<sup>22</sup>. Older people often have abnormal body mass, i.e. most of them are overweight or obese (only one in four has normal body weight), which is caused by inappropriate diet and insufficient motor activity (hypokinesia)<sup>23</sup>. Gerontologists claim that less active people are more prone to pathological processes accelerating the speed of aging. Physical impairment is primarily caused by changes in the postural control system and sensory impairment, physical capability is reduced by changes in the cardiovascular and respiratory system as well as sarcopenia (age-related loss of muscle weight and strength)<sup>24</sup>. Among factors responsible for the loss of muscle mass, in addition to growth hormone deficiency, adverse changes such as limitation of physical activity, smoking, malnutrition and poor health are indicated. A result of involuntional changes in the muscular system, enhanced by the lack of activity, is the loss of the ability of the muscles to generate sufficient force to maintain balance and posture, which leads to imbalance, falls and injuries. Repeated falls not only cause injuries, but also a reduction in functional efficiency as far as self-service activities and activeness are concerned. In old age even short-term cessation of physical activity can lead to rapid reduction in muscle strength and decline in fitness which

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<sup>20</sup> E. Kozdroń, *Rekreacja ruchowa osób „trzeciego wieku”*, [in:] *Zarys teorii rekreacji ruchowej*, ed. A. Dąbrowski, Warszawa 2006, pp. 108–134.

<sup>21</sup> E. Chilińska-Kopko, S. Kopko, Z. Dziecioł-Anikiej, K. Kaniewska, *Aktywność fizyczna jako profilaktyka pierwotna i wtórna schorzeń układu sercowo-naczyniowego*, [in:] *Wybrane choroby cywilizacyjne XXI wieku*, ed. K. Kowalczyk, E. Krajewska-Kułak, M. Cybulski, vol. 1, issue 1, Białystok 2016, pp. 130–135.

<sup>22</sup> K. Nazar, H. Kaciuba-Uściłko, *Znaczenie aktywności ruchowej*, p. 548.

<sup>23</sup> Of the surveyed people 42% walked fewer than 5,000 steps (which indicates in principle sedentary lifestyle), 15% walked from 5 to 7 thousand steps (small physical activity), and 12% from 7.5 to 9.9 thousand. In turn, 31.5% of the respondents exceeded the recommended 10 thousand steps, D. Włodarek, M. Majkowski, L. Majkowska, *Aktywność fizyczna starszych osób mieszkających w gminie Koprzywnica*, „Rocznik Państwowego Zakładu Higieny” 2012, 63, no. 1, pp. 111–117.

<sup>24</sup> The loss of muscle mass observed between 30 and 80 years of age is accompanied by a decrease in their strength and power. For example, the handgrip strength decreases on average by 2–2.8% a year, while before the age of 60 it does not exceed 2% a year, after 70 years of age it reaches 3.4% a year, K.Y. Forrest, J.M. Zmuda, J.A. Cauley, *Patterns and determinants of muscle strength change with aging in older men*, “Aging Male” 2005, no. 5, pp.151–156 [cited in:] A. Skalska, *Ograniczenie sprawności funkcjonalnej osób w podeszłym wieku*, „Zdrowie Publiczne i Zarządzanie” 2011, vol. IX, no. 1, p. 51.

causes further functional limitations and poses a risk of subsequent falls. In turn, uncontrolled falls of seniors can result in various injuries, such as: fractures, sprains, dislocations, wounds and hematomas. In the case of femoral neck fractures (90% of which are the result of a fall), half of the patients lose their ability to walk. Sometimes a consequence of this is also the so-called post-fall syndrome – a person who has experienced a fall, fearing next ones, limits his/her activity (as a consequence, their fitness deteriorates and the risk of a subsequent fall increases). Immobilisation of a senior in bed promotes social isolation and significantly increases the risk of thrombotic, respiratory, urinary and other infections. All this raises the risk of social isolation, worsens subjective quality of life, necessitating caring activities and increasing dependency<sup>25</sup>. As far as decreasing the risk of a senior's falls is concerned, it is necessary, on the one hand, to take into account elements of safe environment (avoiding steep stairs or slippery floors) and, on the other hand, to motivate this person to exercise<sup>26</sup>. Exercises aimed at balance stabilisation, muscle strength increase and movement coordination are the most important in minimising the risk of falls in the elderly<sup>27</sup>.

If there is a clear connection between reduced physical efficiency and the occurrence of limitations in daily functioning (the following are important for maintaining efficiency in everyday activities: muscle strength, efficiency and speed of walking, the ability to keep balance and the occurrence of falls), it is expedient to take steps to improve physical fitness, which will also result in improved daily functioning<sup>28</sup>. In turn, the consequences of functional disability are not only the increased need for family or social care and institutionalisation, but also an increased risk of falls and injuries and a higher risk of death. It can be added that although the cessation of physical activity is often forced by the presence of ailments or illnesses, in some cases it is the lack of need to undertake it. The lack of movement, in turn, not only affects the ability to move, circulatory and respiratory capacity, but also the mood and the general frame of mind<sup>29</sup>.

### **Benefits of physical activity for seniors and examples of initiatives in this area**

The multifaceted positive effect of increased physical activity on the state of human health lies in the improvement of the function of certain organs and systems as a result

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<sup>25</sup> M. Szpringer, B. Wybraniec-Lewicka, G. Czerwiak, M. Michalska, J. Krawczyńska, *Upadki i urazy wieku geriatrycznego*, „Studia Medyczne” 2008, no. 9, p. 79.

<sup>26</sup> Ibidem, p. 80.

<sup>27</sup> L. Wdowiak, A. Budzyńska-Kapczuk, *Wielkie problemy geriatryczne – zaburzenia mobilności, równowagi i upadki*, „Pielęgniarka i Położna” 2004, no. 8, pp. 20-26; J. Twardowska-Rajewska, *Krótki program usprawniania seniorów w celu minimalizowania zaburzeń równowagi. Doniesienie wstępne*, „Gerontologia Polska” 2006, vol. 14, no. 1, pp. 43-44.

<sup>28</sup> A. Skalska, *Ograniczenie sprawności funkcjonalnej osób w podeszłym wieku*, p. 51.

<sup>29</sup> Ibidem, p. 55.

of developing training changes. Physical activity also has a positive effect on metabolism, efficiency and fitness. Moreover, it reduces the risk of cardiovascular diseases, obesity and diabetes<sup>30</sup>. A higher level of physical activity (along with nutrition) significantly slows down the progression of disability in older people, and workouts reduce the amount of fatigue that occurs in daily life (effort connected with home activities, ascending stairs, doing shopping). Increased physical activity diminishes the burden on the motor system and internal organs caused by such efforts. Increased muscle strength is also essential in preventing motor system overload and degenerative changes<sup>31</sup>. The retention of muscle strength, especially in the period of old age, can reduce the frequency of functional limitations and be a factor in maintaining fitness. In turn, enhancing the efficiency of movement, nimbleness and balance, good coordination of movements is important in preventing bone fractures and other injuries. Physical activity of an old person is a stimulator of his/her fitness and independence, facilitates participation in social contacts, is a condition of lifelong learning, enables a generally good adaptation in the environment, thus largely determines the quality of his/her life<sup>32</sup>. A particularly important role is attributed to exercising and practicing a sport in their preventive dimension. Physical activity in an unexaggerated dosage increases satisfaction with life, diminishes the likelihood of a serious illness, and reduces the number of illness symptoms<sup>33</sup>. Even only systematic walks can reduce physical efficiency limitations of older people and affect higher levels of satisfaction with their physical condition and well-being, higher satisfaction with life and health assessment<sup>34</sup>. After the effort, the body and brain are tired, resulting in deep night sleep during which regeneration takes place. Regular physical activity is conducive to intellectual activity, vitality, and helps to feel and look younger<sup>35</sup>. It proves a positive correlation between consistent motor activity and the psycho-physical condition of seniors, including better acceptance of aging and reduction of the effects of aging. In general, physically active people deal better with emotions and stress<sup>36</sup>.

Apart from the beneficial physiological and psychological effects, there are social effects of increased physical activity of the elderly, such as reducing the cost of health

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<sup>30</sup> K. Nazar, H. Kaciuba-Uściłko, *Znaczenie aktywności ruchowej*, p. 546.

<sup>31</sup> K. Prączko, T. Kostka, *Aktywność fizyczna a występowanie infekcji górnych dróg oddechowych u osób w starszym wieku*, „Gerontologia Polska” 2005, vol. 13, no. 3, pp. 195-199.

<sup>32</sup> K. Bogus, E. Borowiak, T. Kostka, *Otyłość i niska aktywność ruchowa jako ważne czynniki determinujące jakość życia osób starszych*, „Geriatrics” 2008, no. 2, pp. 116-120.

<sup>33</sup> J. Czapiński, P. Błędowski, *Aktywność społeczna osób starszych w kontekście percepcji Polaków. Diagnoza społeczna 2013. Raport tematyczny*, p. 40.

<sup>34</sup> M. Guszowska, A. Kozdroń, *Wpływ ćwiczeń fizycznych na stany emocjonalne kobiet w starszym wieku*, „Gerontologia Polska” 2009, vol. 17, no. 2, pp. 71-78; K. Szczerbińska, B. Piórecka, M. Malinowska-Cieślak, *Fazy gotowości do zmiany zachowań i ich uwarunkowania*, pp. 60–75.

<sup>35</sup> B. Jakimowicz-Klein, *Poradnik na drugą połowę życia*, Warszawa 2012, p. 133.

<sup>36</sup> M. Merska, *Znaczenie aktywności ruchowej dla osób w starszym wieku*, Warszawa 2010, pp. 17-26.

care or increasing older people's ability to work and promoting a positive and active image of the elderly<sup>37</sup>.

Regular physical exercise is not only a potential factor delaying aging, but also has a positive effect on the mental efficiency of the elderly<sup>38</sup>. It has been noted that mental efficiency and well-being at a later age are closely connected with physical activity. It has been demonstrated that older, physically active persons have better physical and mental health, are less affected by cardiovascular diseases, and are less likely to need hospital care<sup>39</sup>. It is worth noting that increasing the activity of older people also prevents loneliness and isolation, as well as helps to maintain self-reliance until later in life. Elderly people with higher or secondary education who constantly deepen their knowledge are healthier as well as more physically and intellectually active compared to inactive persons of the same age<sup>40</sup>. That is why it is important to improve the mind by learning, even in advanced age.

When skilfully dosed, physical activity fosters the possibility of prolonging creative and active life. It is important that elderly people remain in the state of maximum efficiency, autonomy and self-reliance as long as possible. People become more and more aware of the need to take action to prevent certain diseases. They would like to enjoy good health and wellbeing until later in life, but many of them do not know what action to undertake to achieve this goal. Thus, in the case of the elderly ignorance or insufficient information about the healthy role of properly done physical activity often contribute to low motivation and little interest in recreation and the need to practice it. Since there is probably no better recipe for longer life and successful old age than properly selected, planned and consistently undertaken physical activity, popularising it among older people can improve not only the image of old age but also its quality<sup>41</sup>.

It seems that there is a need to stimulate the activeness of seniors and create a lifestyle which will provide the elderly with satisfaction and make them more publicly useful.

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<sup>37</sup> J. Opara, Program zdrowotny *Rehabilitacja i wspieranie aktywności ruchowej dla seniorów, mieszkańców miasta Częstochowy na lata 2013–2017*, [http://www.czestochowa.pl/data/other/opara\\_program\\_rehabilitacji\\_dla\\_seniorow\\_1.doc](http://www.czestochowa.pl/data/other/opara_program_rehabilitacji_dla_seniorow_1.doc), p. 3 [11.05.2017].

<sup>38</sup> A. Grzanka-Tykwińska, K. Kędziora-Kornatowska, *Znaczenie wybranych form aktywności w życiu osób w podeszłym wieku*, „Gerontologia Polska” 2010, vol. 18, no. 1, pp. 29-32.

<sup>39</sup> A. Gębska-Kuczerowska, *Charakterystyka grupy osób, w podeszłym wieku uczestniczących w badaniu zależności między aktywnością a stanem zdrowia*, „Przegląd Epidemiologiczny” 2002, vol. 56, no. 3, pp. 463-470; A. Gębska-Kuczerowska, *Ocena zależności między aktywnością a stanem zdrowia ludzi w podeszłym wieku*, „Przegląd Epidemiologiczny” 2002, vol. 56, no. 3 pp. 471-477.

<sup>40</sup> M. Kaczmarczyk, E. Trafiałek, *Aktywizacja osób w starszym wieku jako szansa na pomyślne starzenie*, „Gerontologia Polska” 2007, vol. 15, no. 4, pp. 116-118; D. Kozieł, E. Trafiałek, *Kształcenie na Uniwersytetach Trzeciego Wieku a jakość życia seniorów*, „Gerontologia Polska” 2007, vol. 15, no. 3, pp. 104-108.

<sup>41</sup> E. Kozdroń, A. Leś, *Aktywność ruchowa w wychowaniu ku starości*, p. 23.



In recent years, a wide range of activities promoting healthy lifestyle have been undertaken as a part of health promotion resulting, for instance, in a diminished number of tobacco smokers, reduced fat intake and increased interest in sport and recreation. The aim of health promotion programmes should be primarily to increase the level of older people's awareness of and knowledge about the recommended forms of physical activity (according to the state of health, individual preferences and capabilities) and the resulting benefits. Such programmes should be addressed not only to seniors, but also to health care workers, social workers, employees of spas and numerous leisure organisations<sup>42</sup>. If a large proportion of older people are not involved in a regular motion therapy, it is a task for those working with seniors to break down the barriers that prevent them from physical activity. The primary factor of prophylaxis is to motivate them to change their lifestyle and pursue greater physical activity conducive to good health. Motivation to take up physical activity by people in late adulthood is fundamental. The literature enumerates basic motives leading to undertaking physical effort which can be grouped into three categories: connected with health, utilitarian and social ones. The first type includes activity in the sense of revitalisation and prophylaxis, that is countering the occurrence of diseases or improving the health condition at the onset of an illness. Utilitarian motives are present in the desire to maintain efficiency in daily activities, such as personal hygiene and that of the surroundings, getting dressed, preparing meals (aspirations to maintain independence and self-reliance in daily life). On the other hand, social motives are related to satisfying the need for affiliation, being among people, being needed, preventing loneliness, boredom and exclusion<sup>43</sup>.

Through dissemination of knowledge about health prophylaxis, healthy lifestyle and change of behaviour, health education plays here a key role, as it is conducive to achieving the best possible health and the longest self-reliance. Even in the situation of being dependent on others in the old age, gained knowledge enables better functioning without the need for continuous family care<sup>44</sup>. Particular attention should be devoted to persons with a low level of education and those who are in a difficult socio-economic situation due to poor health and low level of awareness (as a group more vulnerable to lack of physical activity)<sup>45</sup>. A strategic action from

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<sup>42</sup> K. Szczerbińska, B. Piórecka, M. Malinowska-Cieślak, *Fazy gotowości do zmiany zachowań*, p. 73.

<sup>43</sup> I. Wierzbicka-Damska, R. Szafraniec, *Zdrowotne znaczenie aktywności ruchowej u osób starszych*, [in:] *Znaczenie aktywności ruchowej dla zdrowia*, ed. E. Murawska-Ciałowicz, M. Zatoń, Wrocław 2005, pp. 67–82.

<sup>44</sup> E. Piłat, *Edukacja osób starszych jako cywilizacyjna konieczność*, [in:] *Starzejące się społeczeństwa nowe zadania dla polityk publicznych*, „Małopolskie Studia Regionalne” 2014, no. 2–3/31–32, pp. 84–85.

<sup>45</sup> It turns out that the most active seniors are people who are on average 63 years old, the best educated ones in the best financial situation and assessing their health condition in the best way, A. Molesztak, *Nordic walking jako współczesna forma aktywności seniorów*, „Journal of Education, Health and Sport” 2016, no. 6(12), pp. 372–373.

the public health point of view also seems to be the intensification of health intervention programmes building healthiness and delaying development of chronic illnesses which target people over 50 years of age<sup>46</sup>.

Due to many initiatives of both the public administration and third sector organisations working for seniors, there are examples of programmes for strengthening the health potential of seniors, which are realised in practice.

Providing conditions and offers for universal undertaking of physical activity at every stage of life is one of the main goals of the government's *Sports Development Programme until 2020* (adopted on 31 August 2015). *Support for actions aiming at the social integration of the elderly through physical activity* is treated as a priority in this document. In response to the occurring changes, a decision was made to strengthen the support for tasks related to dissemination of physical activity and promotion of sport aimed at older people. On this basis a nationwide project, "Physical Activity of the Elderly" (AFOS), was launched<sup>47</sup>. The project is based on organisation of activities activating older people in the form of recreational activities (active recreation based on physical activity) and preventive activities (connected with healthy lifestyle – proper nutrition and social activity, preventing premature and pathological aging). Maintaining efficiency, self-reliance and independence were emphasized as the main objectives of systematic physical activity of the elderly. As far as the promotion is concerned, this programme was aimed at convincing older people to undertake physical activity adequate to their age and current capabilities, and addressed to those 50 years old and older. The support was assigned to wide-range national or transregional ventures implemented in the form of motor activation programmes, prophylaxis campaigns, actions initiating physical activity and activities promoting physical activity in the elderly. Within the AFOS programme in 2015 a number of tasks were realised, which were selected in an open competition. One of them was "Be in the Olympic Shape", in which well-known athletes coach seniors, promoting sport and encouraging them to exercise. Moreover, instructional videos have been produced in which Władysław Kozakiewicz demonstrates how to do exercises tailored to the needs and abilities of seniors.

Another programme within the project – "UTW without borders: Seniors start!" – was realized by the Łukasiewicz Institute Foundation and encompassed a nationwide information and education campaign for seniors – listeners of Universities of the Third Age. In order to convince them to recognize the benefits of systematically

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<sup>46</sup> I. Radziewicz-Winnicki, *Znaczenie idei Active Healthy Ageing dla systemu opieki zdrowotnej*, [in:] *Zdrowe starzenie się: Biała Księga*, ed. B. Samoliński, F. Raciborski, Warszawa 2013, pp. 99.

<sup>47</sup> In 2015 the Ministry of Sport and Tourism allocated 1 million PLN from the state budget for co-financing of the realisation of the AFOS project. One of the basic requirements in the project implementation was the co-financing of the costs of the implementation of tasks from the funds obtained by non-governmental organisations. The applicant for the grant had to demonstrate in the application the share of own resources or funds from other sources at the level of not less than 20% of the total direct costs of the task.

carried out physical activity, 3 issues of a complimentary magazine (about 22 thousand copies of each) were prepared and distributed to approximately 71 thousand listeners of over 400 Universities of the Third Age. A book was also published, containing advice from experts and former athletes on physical activity of older people<sup>48</sup>.

In turn, the Nationwide Programme of Activation of Older People Struggling with Obesity consisted of a series of outdoor recreation meetings in 5 Polish cities. Nordic walking classes were held twice a week for each group under the supervision of qualified trainers who guaranteed their safety. A total of 2000 people (400 in each city) participated in the programme.

The Nationwide “Active Senior” programme focused on improving fitness, coordination, nimbleness and overall efficiency after the age of 55. Throughout the year 2015 the Society for the Propagation of Physical Culture completed the task in 30 centres (for 944 participants). The work of each of them consisted of 3 hours of activity a week – 2 hours in a gym and 1 hour at a swimming pool, as well as additional outdoor activities<sup>49</sup>.

Theoretical and practical activities implemented on the basis of the programmes for seniors have a positive effect on mental health and are an opportunity to meet new people, thus contributing to the maintenance of social ties. A basic component of healthy aging and the abovementioned programmes for strengthening the health potential of seniors is regular physical activity. It is true that there is a natural loss of efficiency with age, however, the point is to make the rate of this decline as slow as possible and to make it start from the highest possible level (which can be achieved through appropriate lifestyle, among others: healthy eating, hygiene maintenance, regular medical examination, health training).

It can be stated that activity, regardless of its character, fulfills many functions, among others: adaptive, integrative, compensatory, educational, recreational and psycho-hygienic one. It is easier for active people to come into social contacts, adapt to new living conditions, become comfortable in a new group more quickly, take steps to compensate for the lack of professional work, and improve their predispositions and skills. They use their free time in a more rational way, which gives sense to their life, raises self-esteem and improves wellbeing, thus creating a new quality of life<sup>50</sup>. There is also a relationship between physical and social activity and the occurrence of symptoms of depression (what is important – gender-conditioned depression)<sup>51</sup>. Older persons who are married, work for charity, have a variety of

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<sup>48</sup> M. Zdziarski, *Seniorze, trzymaj formę! Aktywność fizyczna osób starszych*, Kraków 2015.

<sup>49</sup> *Informacja o sytuacji osób starszych w Polsce za rok 2015*, Warszawa 2016, pp. 145–147.

<sup>50</sup> B. Szatur-Jaworska, P. Błądowski, M. Dzięgielewska, *Podstawy gerontologii społecznej*, Warszawa 2006, p. 161.

<sup>51</sup> In men depression significantly depends on social activity (men fall into depression due to the lack of social activity despite maintained physical activity, while socially inactive women with close relationships with family and friends are more immune to it).

interests, and are in good neighbourly relations, are in a much better frame of mind<sup>52</sup>.

### Conclusions

Advances in medicine, a greater number of educated people and increased public awareness, as well as economic development along with improved living standards have contributed significantly to the prolongation of life of modern societies. This also gives rise to specific challenges for states and societies. In this context it is important with what health potential we are entering into the aging process, i.e. the better physical and mental fitness at an early age, the more likely it is that the aging process will start from a higher level – it pertains to various kinds of efficiency. Physically active people are characterised by a much better psychophysical condition than their non-exercising peers, which is confirmed by scientific research. In order to live longer we have to invest in health cultivating it throughout life, and then there is a good chance that we will be able to enjoy it regardless of age, not having to count on social aid, family support and care in the case of loss of health. Investment in health will be particularly beneficial at the end of life, i.e. in the old age. There are many reasons why so many people are not interested in what is most important to health: lack of awareness of the need for physical activity and knowledge of health, lack of time, lack of responsibility for health or shifting it to others.

Due to the extending time of human life and the increasing number of elderly people, researchers are forced to adopt a new, more holistic approach to the problems of aging and old age. A comprehensive analysis of this process, based on interdisciplinary research in biology, medicine, pedagogy, psychology, sociology and social policy shows that it is possible to keep the organism in a good shape until later years in life. It also makes people realise that although the process of aging is inevitable, the length and condition of human life are determined not only by biological factors, but also by physical activity and mental performance. An active attitude can contribute not only to the prolongation of the individual's life, but also greatly improve its quality. It concerns the appropriate promotion of a healthy lifestyle, animation and adaptation of active leisure activities for seniors. Satisfaction of the need for moving is conducive to both wellbeing and the increase of capacity of the body, moreover it brings the joy of life and refreshment of mind.

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A. Arai, K. Ishida, M. Tomimori, Y. Katsumata, J.S. Grove, H. Tamashiro, *Association between lifestyle activity and depressed mood among home-dwelling older people: A community-based study in Japan*, "Aging & Mental Health" 2007, vol. 11, no. 5, pp. 550–553.

<sup>52</sup> C.M.S. Martina, N.L. Stevens, *Breaking the cycle of loneliness? Psychological effect of a friendship enrichment program for older women*, „Aging & Mental Health” 2006, vol. 10, no5, pp. 467–475.

### Summary:

Older people's physical activity, which has the attributes of health training, improves the degree of efficiency (or at least inhibits the rate of its loss) and general wellbeing, while meeting the condition of social inclusion. However, these are a sphere and, at the same time, tasks connected with it, which increasingly (albeit slowly) penetrate the consciousness of present and future seniors. In the elderly population we can observe more frequent occurrence of cardiovascular diseases, diabetes, obesity and osteoporosis. The occurrence of these illnesses, their severity and complications can be reduced by promoting and practicing physical activity at every age – also among the elderly. Proper physical activity is one of the most effective ways to delay the aging process and to stay healthy. Systematic and moderate physical activity contributes to a better level of efficiency which allows for the better quality of life in the old age, and it is connected with the rational use of leisure time. Changing lifestyle of older people seems difficult due to established habits and numerous health, mental, organisational and economic barriers. Although it is possible, it requires a special approach and a well-thought-out strategy.

### Streszczenie

#### DEFICYTY AKTYWNOŚCI FIZYCZNEJ OSÓB STARSZYCH W POLSCE

Aktywność fizyczna w starszym wieku o znamionach treningu zdrowotnego poprawia stopień sprawności (lub przynajmniej hamuje tempo jej utraty) i ogólną satysfakcję życiową, spełniając zarazem warunek integracji społecznej. Jest to jednak sfera i zarazem związane z nią zadania, które coraz bardziej (aczkolwiek powoli) przebijają się do świadomości, zarówno obecnych, jak i przyszłych seniorów. W populacji osób starszych obserwuje się częstsze występowanie chorób układu krążenia, cukrzycy, otyłości i osteoporozy. Występowanie tych chorób, nasilenie ich objawów oraz powikłania można zmniejszyć poprzez propagowanie i praktykowanie aktywności fizycznej w każdym okresie życia – również wśród ludzi w podeszłym wieku. Odpowiednia aktywność ruchowa jest jednym z najskuteczniejszych sposobów opóźniania procesów starzenia się oraz czynnikiem zachowania zdrowia. Systematyczna i umiarkowana aktywność fizyczna procentuje lepszym stopniem sprawności przekładającym się na jakość życia w starości i wiąże się racjonalnym wykorzystywaniem czasu wolnego. Zmiana stylu życia osób w starszym wieku wydaje się trudna z powodu utrwalonych nawyków i licznych barier w tym zdrowotnych, mentalnych, organizacyjnych i ekonomicznych. Jest ona co prawda możliwa, ale wymaga szczególnego podejścia i przemyślanej strategii.

**Słowa kluczowe:** aktywność fizyczna ludzi starych, zdrowe starzenie się, aktywne starzenie się

**Keywords:** physical activity in the old people, healthy aging, active aging

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