

# ProAge

*Preparation for Active Ageing*

**Active and healthy seniors**

Be Active and Be Happy

## ■ Curriculum

A. L. P. Peca, d.o.o.

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# Content

- 1. Introduction ..... 1
- 2. About The Module Active and Healthy Seniors..... 7
  - 2.1 Older People and Physical Activity..... 7
  - 2.2 Who is it Intended for? ..... 8
  - 2.3 The Structure of the Manual..... 9
- 3. Definitions ..... 10
  - 3.1 Older Person (65+) ..... 10
  - 3.2 Health of the Older People and Active Ageing ..... 11
  - 3.3 Healthy Lifestyle ..... 12
  - 3.4 Physical Activity of the Older People ..... 14
- 4. Healthy Diet of the Older People..... 16
- 5. Social Network of the Older People ..... 21
- 6. Older People Care and Physical Activity ..... 24
- 7. Physical Activity of the Older People..... 27
  - 7.1 Benefits of Movement for the Older People..... 27
  - 7.2 Physical Activity of the Older People in Numbers..... 30
- 8. Nothing is Missed Yet! ..... 33
  - 8.1 How to Get Started? ..... 33
  - 8.2 What is Important to Know when Choosing Physical Activity for the Older People ..... 35
- 9. Overview of the Most Popular Movement Activities for the Older People..... 40
  - 9.1 Aerobic Exercise Activities ..... 40
    - 9.1.1 Walking ..... 41
    - 9.1.2 Squats..... 43
    - 9.1.3 Running ..... 44
    - 9.1.4 Cycling..... 46
    - 9.1.5 Swimming..... 48
    - 9.1.6 Dancing..... 51
    - 9.1.7 Ball Games ..... 53

9.1.8 Landscaping and Gardening .....	54
9.2 Anaerobic Activities .....	55
9.2.1 Strength exercises (for muscle strength and endurance).....	56
9.2.2 Flexibility Exercises .....	59
9.2.3 Balance Exercises .....	62
10. Smart Gadgets for Monitoring Physical Activity .....	68
11. Become a Promoter of Physical Activity for the Older People .....	69
11.1 Why is this an Opportunity?.....	69
11.2 Is this Me? .....	69
11.3 How to Set up Your Own Group? .....	71
11.4 Assisting with Exercise Planning .....	74
12. Practical Examples .....	83
12.1 Using a Smart Bracelet.....	83
12.2 Cycling .....	84
12.3 Hiking.....	84
12.4 Social Games.....	85
12.5 Yoga .....	87
13. References .....	88

# 1. Introduction

## **The demographic turn and the age paradoxon**

The social view on elderly age has significantly changed in Europe and North-America in the second half of the XXth century. The honor and respect, the attitudes of historical periods towards elderly, was replaced by a new social phenomenon appearing in the era of globalized world and welfare societies. In 1970 in a monumental work „The coming of Age” Simone de Beauvoir intentionally broke the „conspiracy of silence” concerning the conditions and position of old people. She pointed out that „For the society old age is something like a shameful secret, it is not the subject of a polite discussion. It is not just the guilt of negligence but direct crime against the elderly. Old people are treated as outcasts of society behind the myth of economic development and abundance.”<sup>1</sup> (Beauvoir 1972:6)

The answers for a basic question, whether the old age is a treasure or burden for societies and families are becoming more complicated in the XXI. century. The respect of the parents (Honor your father and your mother) was already written in the Ten Commandments of the Bible. The Indian culture and Chinese Confucious values, as well as the Islamic traditions also give great respect to the elderly. In the value system of the big religions old people represent an attractive value with their life experience. In the Greek and Roman culture the wisdom of the elderly was also highly appreciated. (Barabás 2013)

In this era, the loneliness, nuclear family, the single parenting, the single way of life, poverty, illnesses and the reverse socialization - when the younger teaches the older for the necessary digital knowledge and orientation, are the signs and symptoms of the changed environment around elderly people.

Well known facts are what the demography reflects: modern societies are getting older and older. The share of people over age 60 has reached 25-34% in some "aging societies". The statistical indicators underpin, that within these societies the share of old people increasing, as well as the average age of people, and most importantly, the increase of those years, in which old people can live in good health. From an economic and social policy point of view these

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<sup>1</sup> It is translated into English from the Hungarian publication so it may differ from the English translation of the French origin.

demographic figures mean a serious headache for decision makers. Who and how they will create the resources for the increasing and longer living elderly generation?

Viewing the elderly age from another perspective, it is not easy for the individual either, to retire after a long active life. The paradox of ageing is best described by Beauvoir: „Each human is subject to death and each of them think about it. Many of them are getting old but almost none of them are willing to face this embarrassing change calmly. Nothing should be wanted more than retirement and yet, nothing is wanted least than the old age.”<sup>2</sup> (Beauvoir 1972: 10)

In the process of aging, the moment of retirement represents a dramatic event, because the former active years from one moment to another, have to be replaced by a different way of life. In this new situation the share of duties and responsibilities are shrinking, the financial position is changing and the former personal contacts are becoming less frequent. This new situation could lead to depression, loneliness and to different mental and physical illnesses. The elderly age by the view of the majority of the societies is still a kind of undervalued stage of life.

Nevertheless, retirement could mean a new opportunity for the given generation. The seniors cannot be regarded as a homogeneous group. By the World Health Organisation's (WHO) grouping, between the age of 60-74, a person is considered to be elderly; between 75-89 years we talk of old age; between 90-99 years the very old age comes; and over 100 years one enters the age of Methuselah. Based on the definition of the WHO, the time of retirement in European societies coincides with the elderly age - as in the states of the continent the completion of labour market activity takes place between 60-67 years of age.

The process of getting old takes place in various ways and 'routes'. Elderly people themselves have different strategies in their new period of life. One is to build a new career. The other possible option is a gradual withdrawal but still remaining active. The third one is giving up, a kind of drifting with life events. The last one is still a frequent pattern, many people cannot find their place in the family and their communities after retirement. (Füzesi et al. 2013).

### **Understanding elderly age**

At the beginning of the 20th century, the way of scientific approach about ageing and older generations has gone through some significant changes. An often cited model was the deficit model – which explained ageing not as a process but as a state of decline, and focused on the loss of abilities and skills of the elderly, both in the field of physical and of mental functions.

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<sup>2</sup> See the previous footnote.

This approach has become considerably marginalised in our day but the stereotypes pertaining to the model may still be encountered in ageing policies and in the communication concerning the elderly.

Another approach which has real significance and influence these days is the activity theory. It claims that after finishing the active period of their lives, elderly people are still in need of finding certain roles in their societies, communities and families. In order to be able to do that and to realise an active ageing they must preserve as many of their previous activities as possible. Activity and social participation are essential elements in the lives of the elderly.

The concept of active ageing gained a new sense in the WHO (World Health Organization) document - titled 'Active Ageing - Policy Framework' - prepared for the United Nation's Madrid World Assembly on Ageing in 2002. The document interprets active ageing as an opportunity for all the members of the retired generation to attain a physical, mental and social well-being, and to participate – according to their needs -, in all areas of social, economic, cultural and community life as well as in the support of their families, their immediate and extended environments. According to the approach of the WHO, the services and care improving the elderly's quality of life and actualising their safety are indispensable in order to attain the goal. (WHO, 2002)

### **The international political discourse on old age**

The increasing number of elderly people, as well as the dilemmas related to ageing have been present in the political discourses of Europe and in the international organisations for more than 30 years.

The universal principles for elderly people (United Nations Principles for Older Persons 1991) lay down the protection of independence during their whole life, the provision of social participation, remaining integrated in society, the provision of care to be able to live in dignity and security and the value of self-fulfillment during their whole life. In the new century the UN has already adopted 5 world reports and several other updated presentations and forecasts on this theme. (World Population Ageing).

The EU declared the year 2012 as the European Year for Active Ageing and Intergenerational Solidarity. Other world organizations like the World Bank or the OECD put into the focus the employment possibilities for older people with the provision of a flexible framework and non-discrimination environment. By the research of the EUROBAROMETER in 2012 one in every

five european adult personally experienced discrimination by age on the labor market. (Eurobarometer 2012).

During the last decades, several professional programs, action plans were born to influence the way of life in older age on local and national and international level. Each of them consider this period of life as valuable, worth to develop both for the individual and the society. Preferred learning forms of the old people like elderly clubs, reading circles, learning circles, summer universiites, folk high schools, camps, workshops, third age univerisites, community planning actions all built on the tradition of humanistic adult education. (Kleisz 2016)

Resarch on the old population covers several fields and themes: dementia and alzheimer, healthy diet, preventing falling down, supporting technologies and robots, loneliness, ageing on the countryside, social involvement of the elderly, poverty, discrimination, adequet elderly friendly living environment etc. In the EU the Horizon 2020 program and its subprogram, Health, Demographic Change and Wellbeing targets the sustainability of healthy way of life and the elderly care system. Research programs get support from the program which develops digital technologies to support the independent way of life of elderly people, permanent monitoringof their health status, the control of their food intake and provide personalized advice and care service for elderly.

### **Briefly about the ProAge „Preparation for Active Ageing” Erasmus+ project**

Our project aimed to formulate a non-formal learning curriculum which present good practices and innovative solutions of conscious preparation for active aging. These practices and activities are increasingly needed in aging societies and are not - or hardly - accessible in formal learning material. The project partners created a complex curriculum, which provides complex knowledge via domestic and international examples. It is suitable for civil organizations, elderly clubsm folk high schools, cultural institutions, libraries, and also for families and individuals to achieve the individual 'routes' to old age. It is important that preparation for active aging should take place consciously, adjusting to the characteristics of different generations and individuals.

Important goal is to avoid lagging behind and keeping pace with progress. The curriculum provides knowledge and experience in four important fields of life. The four modules of the curriculum can be used together as one volume. However, each of the modules can serve different target groups and different interests and can be used separately as well.

The first module is about IT teaching and learning in elderly ageing. There are a lot of courses available for IT. Our module's significant feature is that it pays special attention to the



characteristics of the elderly age group. The content and the teaching methods of the module is adjusted to their special needs and learning pace.

The second module gives examples, best practices and instructions for all age-groups concerning voluntary activities. Participation in the life of the wider communities via volunteer activities also important for elderly people and help to keep social ties with other persons and groups. This knowledge of participation in community life comes from Norway. Community activities, and meeting with different generations is one of the best way to fight against loneliness and desperate depression.

In order to pursue healthy way of life, to be active is very relevant for elderly people. The third module shares knowledge and provides advice on how to maintain or build up new habits for healthy lifestyle, useful leisure activities, nutritional advice and recreation possibilities. Slovenian experience presents physical activity patterns suitable for elderly. Also a healthy diet is an important ingredient of active ageing.

The most threatening and still incurable illness for elderly people is demencia and its special form, the Alzheimer disease. The fourth module on this topic provides a lot of advice for family members how to adjust their life to this illness and how to make the progress of the illness bearable. The fourth module brings up several good practices on active ageing and the cooperation of generations as well as what to do if it turns out that a family member lives with Alzheimer or Dementia.

The authors are convinced that each generation needs to pay attention to the upcoming period of life, not only those who are already in close proximity for retirement age.

### **What are the innovations in in our curriculum?**

We consider that the whole approach, the selection of the themes of the curriculum, the proposed methods in each modules, the simple non-professional language which can be understood by lay people, the structures of the modules, which start from simple or basic issues towards more complicated ones, the community approach to the target groups and and the proposed community based trainings, which enforce local democracy and the involvement of multiple generations are the most important innovative features of the curriculum.

The selected themes cover 4 important aspects of life in old age. Bringing together the IT training, Volunteer activities, treating Demencia and Alzheimer's and Activity can provide a good preparation for active aging for different generations. It is not only the task of the 50+ generation, but should start at an earlier stage of life, at least from the 30+ generation.

Furthermore, the core idea of active aging has to be acquired already in childhood via one's family life.

The preparation for active aging requires a complex knowledge. Family members need to be prepared how to handle threatening illnesses, what social responsibility and voluntarism means at an elderly age, and how to change learning patterns later in life. Therefore the preparation for active aging needs a complex approach through different avenues. This knowledge has to become a basic value for the people involved, for local communities, families and multiple generations.

Kovács Dezső PhD. honorary professor

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- [www.manorquality.eu](http://www.manorquality.eu)

## 2. About The Module Active and Healthy Seniors

*We don't stop playing because we're old, but we get old because we don't play anymore. (Helen Hayes)*



### 2.1 Older People and Physical Activity

Our society is an ageing society. European Union publication *Ageing Europe - Looking at the lives of older people in the EU*<sup>3</sup> states that at the beginning of 2018, 101.1 million people aged 65 or over lived in the EU-28, representing almost a fifth (19.7%) of the total population of the Member States. Over the next three decades, the number of senior citizens in the European Union will reach 149.2 million, representing 28.5% of the total population, and the number of centenarians (people 100 years of age or older) is projected to increase from 106,000 in 2018 to half a million in 2050. Demographic changes are also graphically visible in the age pyramids, which lose their pyramid shape and approach the pillar shape by 2050, with the smallest range in the youngest (birth rate) and the largest in the oldest, i.e. over 85 years old. In light of heading for longer life expectancy, it is also important to think about the quality of life in old age. For experiencing healthy and long old age it is necessary to bring good eating and exercise habits to life and to abandon harmful ones. At all stages of life, we can start with regular exercise that will improve muscle tone, body vitality, metabolism and other physiological variables that influence how long we can be independent of the direct support of others. In addition, by exercising in company, we can also introduce a social dimension which becomes increasingly important over the years due to the passing of peers and colleagues or feeling the lack of reuniting with distant relatives.

Our society is also a society of interesting extremes. On the one hand, there are stereotypical notions (that too many times succumb to fears), e.g. that ageing is associated with mental and physical decline (not true → we can maintain both physical and mental and emotional fitness), that most seniors have similar needs (not true → the older people make the most heterogeneous group as the differences between individuals are only deepening over the years), that creativity and social contribution are the domains of the younger generation (not true → e.g. Michelangelo worked until his death at the age of 89), that the experiences of the older adults are less

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<sup>3</sup> Eurostat Statistical Books (2019): <https://ec.europa.eu/eurostat/documents/3217494/10166544/KS-02-19%E2%80%91EN-N.pdf/c701972f-6b4e-b432-57d2-91898ca94893>.

important nowadays (not true → what about learning etiquette, practical skills, storytelling...), that they only want rest and peace (not true → the desire for peaceful moments is the same in all age groups), that they do not perform well in currently modern jobs (not true → when allowing for adaptation to changing circumstances, older people can contribute with demonstrating more strategic thinking and more logical, holistic and prudent approaches)<sup>4</sup>... The media, social networks, and even examples from the local environment provide us with stories of remarkable older individuals who break down all stereotypes and even taboos. This guide is full of links to videoclips where you can see them in action. If you occasionally browse the covers of today's newspapers, you may read about doctors, political candidates, extreme athletes, scientists, etc. who haven't been hindered by their age of 65+ in the achievement of their set goals.

Our present society needs change, good practices and highlighting everyday heroes (i.e. people who are characterized by solidarity and compassion and who are not afraid to offer intergenerational assistance). In the module we want to present the essential concepts related to the physical activity of the older people in a transparent and non-technical way and briefly outline the situation in our local environment in Slovenia, and in our region. Our country, Slovenia stands out in the European context in terms of population ageing rate,<sup>5</sup> and our Carinthian region is ageing faster than the Slovenian average. Additionally, Carinthia recorded a population decline of 4.6% from 1999 to 2018.<sup>6</sup> We used a desk research method to research the basic literature, and the quantitative method of the questionnaire survey to check the situation in our local environment. By conducting hands-on activities with our sample participants, member of the Javornik School of Health, our beliefs were reaffirmed again and again in the positive effects of various forms of exercise and the added value of socializing and networking involving different generations.

## **2.2 Who is it Intended for?**

The curriculum is intended for anyone who is committed to actively participate in improving the quality of life of older generations in their environment, with an emphasis on promoting the physical activity of older people. In designing this manual, we started from the need to provide new knowledge and know-how especially to those who are involved with the older people on a

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<sup>4</sup> Voljč, B. (2010).

<sup>5</sup> Zupanič, M. (2011): <https://www.delo.si/zgodbe/delo2020/demografski-preobrat-tiha-revolucija-med-nami.html>.

<sup>6</sup> Ranc, T. (2019): <https://www.vecerkoroska.com/koroscev-je-zmeraj-manj-najbolj-kriticno-je-v-meziski-dolini-6682461>.



voluntary rather than professional basis. There are two main target audiences in our mind, first, people engaging with the seniors and promoting a healthy lifestyle, and second, the older people themselves, who show willingness to learn about active ageing and improve their own lifestyle with practical exercises, and consider taking easy-to-follow advice.

The prejudice that ageing is associated with mental and physical decline is deeply rooted. Unfortunately, this attitude is held among the older people themselves, especially the less educated ones, therefore the mission of the promoter of the physical activity of the older people will also be to tackle this misconception. Forming a group of older people who have never been physically active so far can present a specific challenge and a mission.

### 2.3 The Structure of the Manual

The manual explains in a clear way the key concepts related to the topics covered and brings fragments that could benefit the user of the manual. It highlights the important health conditions that the promoter of physical activity needs to pay attention to when working with older people, and lists factual knowledge about retirees, health, ageing, lifestyles, institutions for the older people, etc., which most of us think we know but too often forget about.

Module guide:

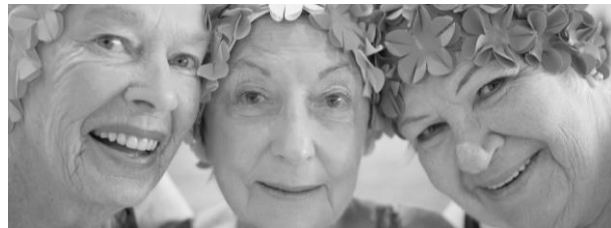
- *Quotes from celebrities* at the beginning of chapters should serve as an opportunity for reflection.
- *In orange balloons*, you will find links to interesting publicly available imagery to serve as your inspiration or idea.
- We give all our support to the suggestions by the  .
- **Red highlights important facts** to consider in your work.
- The  mark the questions for which you need to take some time, and you may want to record the answers.
- Local good practice examples and practical examples that we have implemented within the project are designated *with a golden background*.

With a 77-year-old volunteer we tested the exercises described in the proposals for drawing up individual plans and provided the photos illustrating the movements. Following the experts' recommendations, a version of a monthly plan has been made to help promoters of physical activity of the older people in their practical work with the group. To facilitate visualization and

produce even more ideas, we have also provided links to publicly available videoclips.<sup>7</sup> You will also find a detailed, minute-by-minute example of a workout, suggesting what materials could be needed, and how to guide participants, that can be used as a template for your work. The importance of lifelong learning has been emphasized all the time, that's why the theme of smart gadgets has come up. Many do not favour their use because they are afraid of technological innovations, but they can be a useful and easy-to-use device for monitoring physical activity, health status, individual progress. We also highlight a few points to consider before deciding if you are the right person to advocate and promote older people's physical activity and what aspects are recommended to research in your (local) environment. Don't think too long - everything you need is available, or is within reach. The right state of mind and awareness of society is ripe for promoters of physical activity for the older people!

### 3. Definitions

*To grow old is itself to enter upon a new business; all the circumstances change, and a man must either cease acting altogether, or willingly and consciously take over the new role. (Wolfgang Goethe)*



#### 3.1 Older Person (65+)

**Ageing** is, according to some, a lifelong process that begins at the moment of insemination. Others say ageing begins when the functionality of the body is reduced.<sup>8</sup> It is mostly defined as a natural biological process due to the accumulation of various molecular and cellular damage over time, which can lead to a gradual decline in physical and mental capacity. The

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<sup>7</sup> Respect for cultural and linguistic diversity and the promotion of multilingualism are integral values of the European Union, which is based on the motto 'united in diversity'. Linguistic diversity is a fact of our life, which is why we have - without hesitation - included in the curriculum links to recordings or documents in European languages.

<sup>8</sup> The ageing process is divided in scientific literature into three main phases – primary, secondary and tertiary ageing. It defines primary ageing as the original, painless development in adulthood. It is linked to biological, mental and social change. The symptoms of the first ageing phase include loss of muscle mass and function, loss of bone mineral density, loss of neuromuscular function, impaired balance and mobility. Secondary ageing already involves age-related changes, mostly related to illnesses that (may) occur as a result of an inappropriate lifestyle. Tertiary ageing has also been identified, in which the rapid loss of nearly all abilities in organ and biological systems occurs shortly before death (Birren and Cunningham, 1985).

consequences of all this are reflected in poorer adaptation, greater morbidity and premature death.

From a **chronological** point of view the older people are usually defined as people over 65. However, when we talk about **biological age**, we mean the age of organs and organ systems. Biological age is influenced by genetic factors, eating habits, physical or sporting activity and other environmental influences. Experts point out that biological age is a more realistic indicator of health than chronological age (number of calendar years).

The third age can also be viewed from a **social point of view**. From the early period of this age group, from 66 to 75, one adjusts to retirement life. Usually people are quite healthy during this period and live very actively. In the middle range of the third age, approx. 76-85 years, they already need to adapt and experientially adjust themselves to the decline of their strength and health. They lose their peers suddenly, as most seniors die during this period. Individuals of late period of the third age, after the age 86, are heavily dependent on the help of younger generations, and they themselves perform the last tasks in life.

But, of course, **individuals can be youthful at any age**. The state of thought and mental processes must also be taken into account. Mental changes can occur as a source of various distress, and as a rule they are more difficult to detect than physical ones. Among the most common are various losses and a sense of dependency on the help from others. Many are calmed already with the feeling that they can rely on their children, relatives or friends in the event of serious problems.

**It is very important to realize that age is not a disease.** A fundamental feature of an ageing individual is shown in the slowing down of the various processes that sustain the overall functioning of the human body. Maintaining body structures and functions gradually shifts at the beginning of ageing; regeneration does not catch up with decay, and gradually the slowing down and withering prevail. But ageing in itself does not mean losing health and fitness.

### 3.2 Health of the Older People and Active Ageing



*It's not about how old a person is, it's about how someone is getting old. (Ursula Lehr)*

We define healthy ageing as maintaining health in the physical, social and mental domains. The World Health Organization regards the **health of the older people** as a **state of functional independence** from others. Such older people are more easily involved in society, enjoying the independence and quality of their lives.

The concept of **active ageing** encompasses the notion introduced by the Government of the Republic of Slovenia in the Active Ageing Strategy as an approach to the international response to demographic change. In Slovenia, statistics indicate a decrease in the population of 20-64 years of age and a significant increase in the population aged over 65 years already in the period up to 2030. In order to mitigate the declining ratio between the working population and the economically inactive, i.e. pensioners, reforms of the pension system will be necessary, as well as a new migration policy and the promotion of labor immigration along with the promotion of employment at all stages of life. The Active Ageing Index measures how well older people's capacities are used and to what extent older people (can) function in society in 4 domains: in the areas of Employment, Participation in society, The ability and supportive environment for active ageing, and an Independent, healthy and safe living. According to the Index, Slovenia is below the European average, ranked 23<sup>rd</sup>, mainly due to the variable "employment," where it ranks the last. The concept of active ageing and the guidelines for its implementation are based on four pillars: 1.) Labour market and education (adjustments in the labour market, including education and training, promotion of immigration of foreign workers); 2.) Independent, healthy and safe living for all generations (social protection system, accessibility of health care and long-term care services, health care, reduction of unequal treatment in health care); 3.) Participation in society (intergenerational cooperation, volunteering, use of ICT in communication, prevention of discrimination and violence in society, political engagement); 4. Creating an environment conducive to lifelong activity (adjustments of the economy, living conditions and transport systems through ICT and technological solutions).

### 3.3 Healthy Lifestyle

*I believe in age, dear friend. To work and to grow old, this it is that life expects of us. And then someday to be old and still not by any means to understand everything, no, but to begin, but to love, but to sense, but to link up with what is distant and inexpressible, even into the stars. (Rainer Maria Rilke)*



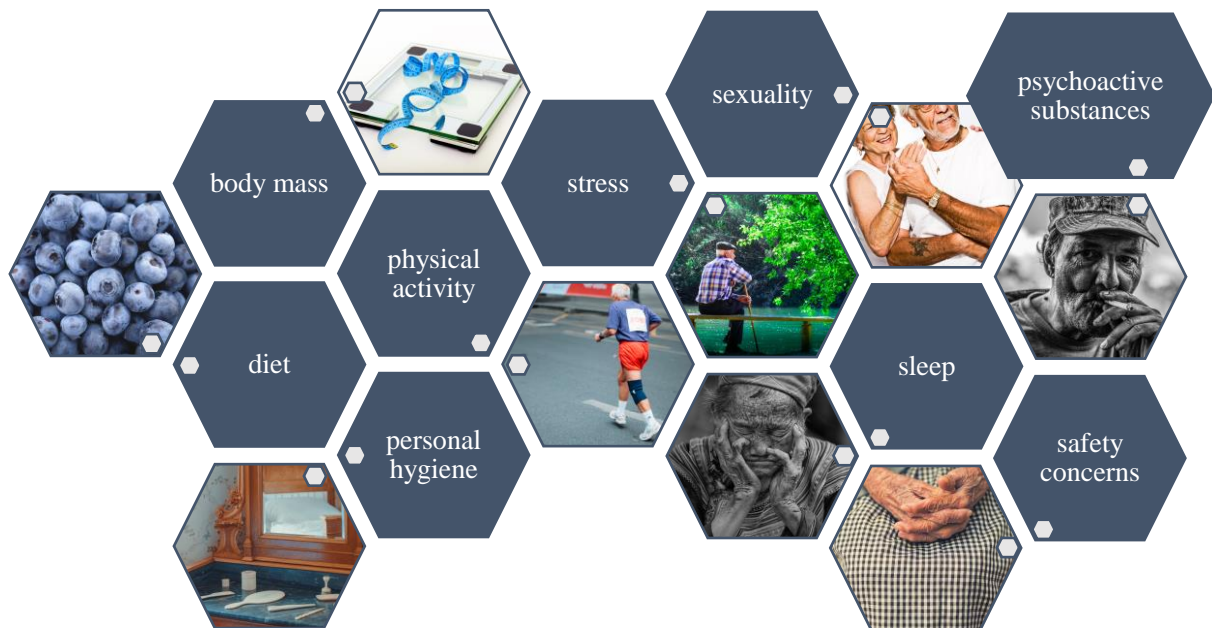


A **lifestyle** is the way of life that is characteristic of an individual and is shaped by a group of behaviours over a period of time. It can be characterized by both harmful and healthy behaviours. It is also formed by the experience and living conditions from an early age, and is significantly influenced by the environment (parents, peers, school), its social, environmental, economic and cultural factors.

Living a **healthy lifestyle** means respecting healthy or beneficial habits such as regular exercise, healthy and balanced diet, safe sunbathing, sufficient level of sleeping, and breaking bad habits such as smoking, drinking alcohol, excessive consuming of food, drug use.

➔ Research results show that healthy lifestyle led by young and middle-aged people maintains mental and physical vitality even in old.

A healthy lifestyle is crucial for health, economic, social, and other indicators, as health is the foundation for human learning, work and civic activity and being efficient.



Picture: Lifestyle factors



- What factors do you consider to be important for a healthy lifestyle?
- What principles of a healthy lifestyle do you already live by?
- What else will you add to your daily routine?

### 3.4 Physical Activity of the Older People



*What counts are not the years of our lives,  
what counts is the life in our years. (Adlai E.  
Stevenson)*

Physical activity is one of the most important and effective factors in inhibiting the ageing process. Health does not really improve with ageing, but with appropriate healthy habits and a suitable lifestyle, the chances of developing a disease can be reduced and slightly delayed. Movement is the natural biological need of every living being.

**Moderate physical activity of the older people** means a level of physical activity that promotes health and is performed frequently enough, i.e. at least 5 days a week. Physical activity in old age is closely linked to the quality of life of an individual. Although no physical activity or exercise can stop the biological process of ageing, findings suggest that regular physical activity reduces the physiological consequences of any sedentary lifestyle, delays the onset of the state of chronic diseases and other age-related conditions (Grizold, 2010).

➔ **Older people should be physically active for at least 150 minutes a week.**

For most inactive individuals, **race walking** is an appropriate form of movement for which the risk of injury is lesser than that of more intense exercise. In addition to walking, other forms of exercise are useful, such as **swimming, cycling, light aerobics, dancing, gardening, intensive housework, walking up and down the stairs**, and other activities that older people can incorporate into their lifestyles.

**Physical activity in old age is part of prevention, treatment and rehabilitation.** It is also very important for those older adults who have been already disabled or functionally impaired due to illness. Improved mobility, maintenance and enhancement of physical strength in unaffected parts of the body due to physical activity allows for more independence. According to the results of research, physically active older people generally live healthier, with better quality and for a longer period of time.

The lifestyle we have led during a more active age will increasingly be manifested over the years. That is why it is important to start active life forms from an early age and make them our

regular nature. Each individual has his/her own personal history and present, with particular limitations, abilities and compensatory potential. This means that there is no guarantee or universal prescription for healthy ageing, there are only general guidelines worth following.

- ➔ One of the general guidelines is that any physical activity is better and more beneficial than inactivity. With the caveat that it should not be exaggerated to the extent that injury will occur.

Speaking about older people, we usually no longer talk about pursuing sports, but of physical activity. The period when an individual is capable of top sporting achievement ends rather quickly in life. This, of course, does not mean that in the third age of life, when we can no longer establish ourselves among the fastest and the best, or we need to completely stop with physical activity.

- ➔ Sports and recreation at an old age is just as important and necessary as at a young age.
- ➔ After the age of forty, it is not about competing with others, but about contributing to a healthy lifestyle with a view to maintaining high levels of mental and physical fitness for as long as possible.
- ➔ The concept of physical activity of the older people includes not only running, walking, swimming, cycling, exercise, ball games, etc., but any physical activity that a person can engage in and is suitable to his or her abilities.

*We talk a lot about breaking stereotypes and pushing boundaries. And extraordinary physical achievements are not impossible even in old age, as the new records at the [Huntsman World Senior Games](#) or at the [National Senior Games \("Senior Olympics"\)](#) prove again and again!*



- Why not be more physically and mentally fit at your age than 20, 30, 40 years earlier?

## 4. Healthy Diet of the Older People



*Learning acquired in youth arrests the evil of old age; and if you understand that old age has wisdom for its food, you will so conduct yourself in youth that your old age will not lack for nourishment. (Leonardo da Vinci)*

Conscious decision for a healthy lifestyle concerns all aspects of human life because it means confronting decisions about diet and exercise, both necessarily affect the daily rhythm.

Nutrition plays an important role in the life of older adults, given the specific changes in that period.

The **physiological facts of ageing** can be summarized such as:

- a marked reduction in energy needs,
- impairment of bodily functions,
- reduction of muscle mass,
- poorer metabolism,
- impaired taste function,
- impaired odor function,
- decreased appetite,
- reduced thirst,
- impaired vision,
- impaired hearing,
- changes in the absorption of nutrients into the body,
- lesser acidity in the stomach,
- reduced efficiency of food use in the body.

➔ In order to be vital and healthy even at a very old age balanced foods in the right quantity and composition should be eaten adapted to the changes of the body at different stages of life.

➔ A judicious diet can provide sufficient amounts of antioxidants that neutralize or hunt down free radicals that are harmful to the body.<sup>9</sup>

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<sup>9</sup> Free radicals are atoms, ions, molecules or complexes that are highly reactive, unstable and therefore harmful to cells as the latter are damaged and the consequences can emerge in the form of various diseases. They are produced in the body constantly, and increased under the influence of various harmful factors: heat, ionizing radiation, polluted air, stress, alcohol, smoking and ageing. Free radicals can be neutralized by the body to maintain cellular balance through enzymatic systems and antioxidants. Important antioxidants: vitamin C, vitamin E, beta-carotene, selenium.

## Recommendations regarding the diet of the older people

In addition to the general dietary recommendations, older adults in particular are subject to the following:

- **consuming a nutritionally rich and energy-balanced quality, varied, mixed diet:**
    - priority should be given to food of plant origin,
    - energy density of food from 1.5 to 2 kcal/ml (if there is no malnutrition),
    - enough fiber (mainly by including fruits and vegetables),
    - protein requirements are increasing and high-quality carbohydrate foods are also important,
  - sufficient fluid intake;
  - consumption of food in several smaller, more frequent daily meals at appropriate intervals;
  - importance of breakfast is the same as for the general population while dinner should be early and light;
  - consumption of foods prepared in a healthy way (preferably stewed, boiled, baked using small quantities of quality vegetable fats), restriction of fried and roasted foods;
  - the individual advice of a physician or other qualified healthcare professional may also be beneficial;
  - consumption of mineral and vitamin supplements primarily according to needs.
- ➔ In order to ensure healthy diet, it is also important for the older people to eat relaxed and find enjoyment in their meals – in peace, sitting down, and in a comfortable company.
- ➔ The same goes for movement – get moving out of joy, do it with pleasure.



## The building blocks of a healthy diet

Important building blocks of nutrition <sup>10</sup>	
<b>Carbohydrates</b>	Sugars are by themselves simple carbohydrates, but on the other hand we have complex carbohydrates, which include starch, cellulose... It is recommended to consume between 50 and 55% of your daily caloric intake in the form of complex carbohydrates, such as starch. This does not affect blood glucose levels in a healthy person. It is advisable to meet a maximum of 10% of your daily energy requirement with sugars (all sugars, including fruit and milk sugar).
<b>Protein</b>	<p>Protein is often the most neglected factor in nutrition, but it is supposed to represent around 20% of your daily energy intake. Since animal proteins are more efficient due to their composition, from 25 to 50% of protein consumed should be of animal origin. Two important groups of foods that are a good source of protein and should not be overlooked are dairy products and legumes.</p> <p>Red meat should be consumed once a week, otherwise white meat, fish and eggs. Blue fish (especially North Sea fish, and fish that are lower in the food chain are recommended, such as anchovies, smaller mackerel and trout, smaller hake, as they have lower heavy metal content than larger fish that feed on them) containing omega-3 unsaturated fatty acids are especially important, as the latter reduce inflammation in the body that often accompanies chronic degenerative diseases.</p>
<b>Fat</b>	Fats are supposed to provide for about 20% of energy needs. They are essential for vitamins, as some of the latter are only absorbed in the presence of fats (A, D, E and K), but they also improve the taste of food and make us satiate faster. Fats are also very important for the older people as a food with a healing impact. We mainly use vegetable oils (e.g. olive, coconut, sunflower oils), but no more than two teaspoons a day. We need to be aware that as we age, the rate of digestion and fat absorption decreases.
<b>Fruits and vegetables</b>	Consume at least 500 g of fruit and vegetables, preferably seasonal, per day. However, we need to realize that only salads cannot enable quality living in old age!

<sup>10</sup> How many calories you need per day depends on your weight, muscle mass and physical activity. Average consumption is estimated to be between 1800 and 2000 kcal for adult women, and 200 to 300 kcal more for men. For those over 65 years of age, the recommended values are: at low levels of physical activity (PAL 1.4 = exclusively sedentary activity with little or no strenuous leisure activity) for men 2100 kcal, for women 1700; at moderate levels of physical activity (PAL 1.6 = sedentary activity, occasionally increased energy consumption for walking and standing activities) for men 2500, for women 1900; at high levels of physical activity (PAL 1.8 = mostly standing work) for men 2800 kcal and 2100 kcal for women.

## What about vitamin and mineral supplements?

The older people who are physically active enough, consume quality and highly nutritious foods, and are free from major health problems, can live without vitamin and mineral supplements. At the same time, the nutritional needs of the older people depend on their existing nutritional and functional status, physical activity and lifestyle in general. Consumption of vitamin and mineral supplements is recommended in case of:

- lack of appetite, taste/smell,
- depression,
- reduced digestive system function,
- poor nutrition (diets, lack of finances, lack of interest in food),
- exclusion of particular food groups,
- increased activity of oxidants from the environment (tobacco, alcohol),
- various health indications.

Some useful facts about vitamins and minerals	
<b>Vitamin A</b>	- More often a problem of over-intake due to uncontrolled consuming; vitamin A deficiency is very rare in Slovenia.
<b>Magnesium</b>	- Intake is usually too low, which can cause problems because it is important for the good functioning of a large number of enzyme systems.
<b>Zink</b>	- An important antioxidant and a component of many enzymes. - Both the intakes which are too low or too high represent a problem; the limit is namely very narrow. - Deficiency manifests itself primarily as impaired immune system function and longer wound healing.
<b>Vitamin D</b>	- It is reasonable to add it because it is less effective in the body of the older people and because the older people are usually less exposed to the sun.
<b>Group B vitamins</b>	- Added because they are important in building nerves, cells of the immune system – pyridoxine (vitamin B6) and cobalamin (vitamin B12) are particularly important.
<b>Iron</b>	- Needs for iron decrease with age, especially in postmenopausal women. - Iron deficiency, despite lower needs, is due to decreased secretion of gastric fluids, chronic haemorrhage due to ulcer disease or other medical conditions, as well as due to iatrogenic conditions resulting from adverse drug reactions.

Here, as with physical activity, the importance of **healthy diet should also be emphasized in the period of growing up**. In the earliest years, the body builds the foundations upon which it will age. The consequences of a poor diet at a young age are paid for in old age. However, a healthy diet (e.g. a modern breakfast with tomato and carrot juice) and morning jogging can hardly reduce the effects of free radicals caused by stress, smoking or other bad habits.

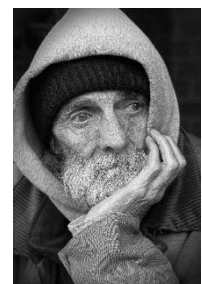


### **Challenges related to the diet of the older people**

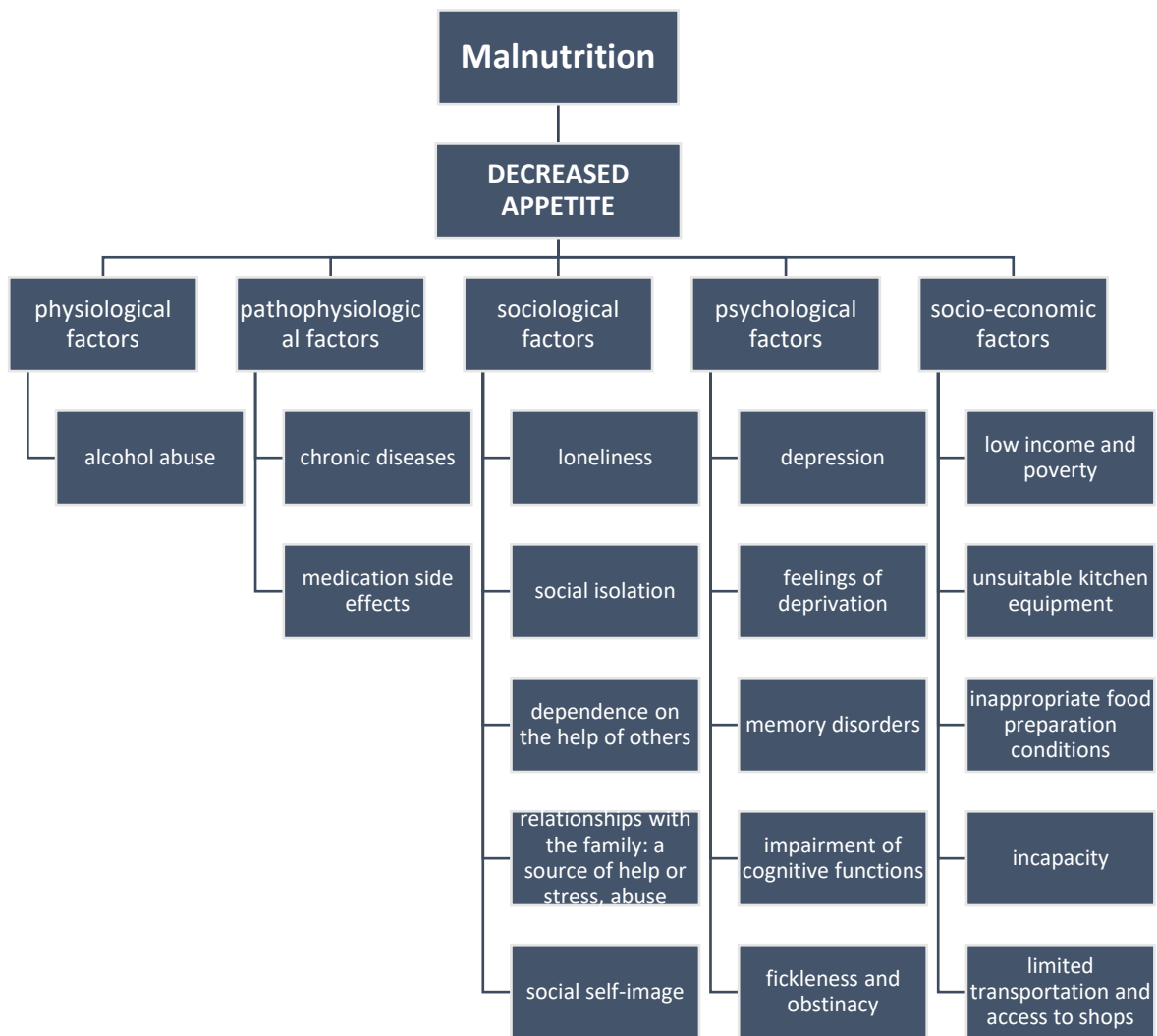
Caution should be exercised when introducing **restrictive diets** as they are a common cause of malnutrition in the older people. Developments in the body on a restrictive diet are easier to understand if we know that the metabolic processes are evolutionarily adapted primarily to the lack of food in the environment. In the case of food shortages, hormonal and enzymatic processes in the body are adjusted to store energy more intensively in (fat) stores after a period of deprivation. Also, a strict restriction diet for the body means a "deficiency period" to which it responds according to the metabolic pattern described. At the same time, frequent improperly managed restriction diets can lead to significant micronutrient deficiencies.

- ➔ **Body mass management can only be successful by regularly consuming energy-appropriate, nutritionally rich food, which goes hand in hand with regular daily physical activity, appropriate to age, ability and limitations, which ensures sufficient energy consumption for weight management.**
- ➔ **If older people are experiencing major problems with body mass (overweight or underweight), professional advice and assistance should be sought.**

It is a shocking fact that in Europe, as many as 30-40% of institutionalized older people are malnourished (Gabrijelčič Blenkuš and Stanojević Jerković, 2010). There are many causes, most often a decreased appetite which is influenced by many factors (see the diagram below).







Picture: Causes of malnutrition due to decreased appetite

## 5. Social Network of the Older People

*The older people are not all the same, they may be even less equal than representatives of any other age group. For they have personal differences that are the fruit of their long lives. One of our current problems is that society refuses to understand this and treats all seniors as one and the same. (Lily Pincus)*

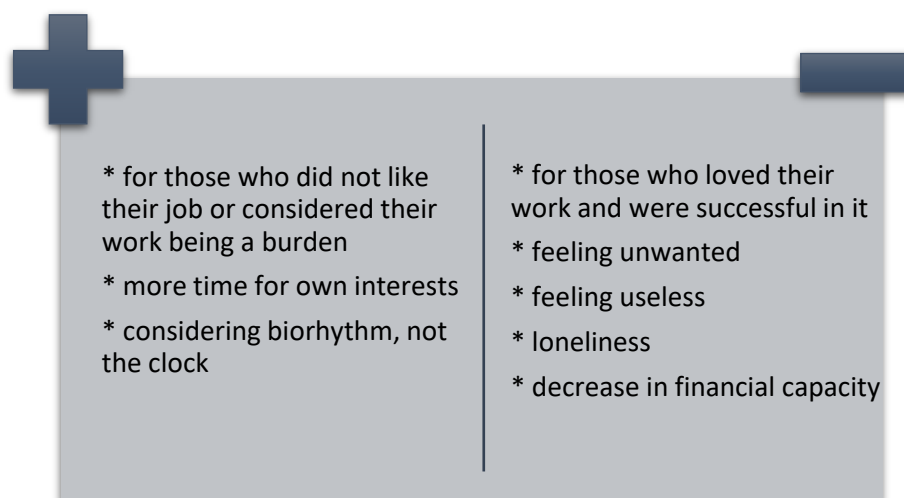


One of the utterly important components for healthy and active ageing are the social aspects, the issues of social inclusion, which are demonstrated through maintaining contacts and social

ties, felt respect for the older people, participation in programs with appropriate activities, acceptance in the system, sociability, experiencing intergenerational solidarity. Slovenia is an ageing society, so the need for lifelong learning and the promotion of social inclusion of older people will become ever greater. A **social network** is an individual's social environment that connects network members (e.g. individuals, groups, organizations, etc.) and provides a source of support. The closest social network is usually made up of a partner, close relatives and good friends, the next level consists (based on emotional closeness) of a circle of friends and other relatives, and the last level includes neighbours, co-workers, superiors, professionals, distant family members (according to Kahn and Antonucci in *Nikoli prestari za učenje*, 2012). The elements that constitute social support are the following: material support (material assistance), information support, emotional support, companionship and problem-solving guidance. Social networks need to be nurtured as they are alive, changing and decreasing over the years. Above all the number of relationships between relatives is decreasing, while the relations with neighbours, friends, acquaintances (ibid) are increasing.

**Retirement** is the "invention" of the modern age which brings a changed lifestyle and different rhythm of the retired person. It has its advantages and disadvantages. Each retiree faces the challenges of a totally changed life situation. The opportunities for active living are very different socially, but some older adult are able to choose to attend the University of the Third Age, as well as various recreational, cultural and social activities, often organized by local pensioners' associations.

### What does retirement bring?



Picture: Advantages and disadvantages of retirement

By engaging in organized sports, recreational and other activities, a **social network is created and expanded**.

- ➔ The more powerful and elaborated the social network of an older person is the better! It has a positive effect on overall health and reduces the chances of psychological illness.
- ➔ Expanding and consolidating the social networks of older people can be made very effective by engaging in (lifelong) learning activities and intergenerational integration programs such as self-help groups, volunteer work, social events and local community gatherings, participation in cultural and sports associations, joining intergenerational camps and organized travels (in Nikoli prestari za učenje, 2012).

One of the most common misconceptions is that older people only socialize with their peers. Thus, they deal with their problems too much, which in turn affects their mental well-being. That is why it is right for them to socialize with younger people and to remain for as long as possible within the family circle. Feeling that they can rely on someone else retains their enthusiasm, vitality, openness, and versatility.

**Loneliness** is one of the problems that the older people often complain to their family doctor about. For the most part, they would prefer more social contact than they have, and complain that younger people do not have time

for them, while their peers are often sick or live not close enough. The situation of the older people also depends on the general **socio-economic situation**, in terms of the financial security of the pension, the given health and social care systems in the country they live in. This affects the **housing situation**, the **spatial availability** and **affordability of services** to meet daily needs. Local communities and the prevalence of institutional support networks contribute greatly to the quality of life of older people.

In recent years, intergenerational assistance and cooperation programs have been introduced into schools and retirement homes to encourage younger and older generations to socialize

*And why shouldn't nursing home residents break the stereotypes regarding old age themselves? Age can also be a time to relive adolescent dreams. [Take](#) a peek at Danica Vogrinec Nursing Home, where the "Grandma, Grandpa and Rock'n'Roll" concert is traditionally being held!*

together. Such approaches have proven to be very successful, as it is possible to detect diminished effects of stressful events in the older people attending such activities.<sup>11</sup>

→ When designing programs to promote healthy lifestyles for older people, their financial capacity needs to be considered.

→ Find out what programs are already available in your community. You will certainly find something for everyone.

## 6. Older People Care and Physical Activity

*Old age is far more than white hair, wrinkles, the feeling that it is too late and the game finished, that the stage belongs to the rising generations. The true evil is not the weakening of the body, but the indifference of the soul.*  
(Andre Maurois)



Slovenian laws regulate various forms of social protection through institutions, other families or other organized forms, which replace, supplement or provide for the function of a home or one's own family. It covers basic care<sup>12</sup> and social care<sup>13</sup> in accordance with regulations in the field of social protection and health care.

The service providers include nursing homes, special social care institutions, care centers, social care training institutions, and alternative forms of living and care. Due to the increasing trends and implementation of programs and policies for the older people to remain independent for as long as possible, **intergenerational centers and day care centers** are also emerging in Slovenia.

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<sup>11</sup> There are two seriously stressful events in old age: moving out of children and the illness and death of a spouse. Parents take the leaving of their youngest child the hardest because their parenting role is thereby finished. Since there are no longer any young persons in the house, the parents feel old, regardless of their chronological age (Kogoj, 2004).

<sup>12</sup> Basic care includes lodging, catering, technical care and transportation.

<sup>13</sup> Social care is a professionally managed activity aimed at providing the contents of social prevention, therapy and guidance to beneficiaries. It involves performing the tasks of protection, special forms of protection, upbringing and preparation for life, and the task of management. Day care means providing assistance in maintaining personal hygiene and performing daily activities (getting up, dressing, moving, walking, communicating, and orienting).

## Nursing homes:

- Form of collective living determined by regulations and norms.
- Nursing homes meet basic living needs: nutrition, washing, ironing, heat, care; they offer sociability and health care.
- It may be a rehabilitation process, a seasonal stay or a way of living (lifelong).
- The purpose of home care is to maximize the needs that an individual can no longer individually provide (chronically disabled people, general physical impairment).
- Maximum spatial connection and at least minimal privacy are enabled.
- An institution satisfies only a part of the human personality; its activity is work oriented.
- The daily rhythm is dictated by three daily meals, with activities in between.
- Occupational therapists.
- The rules of the home are partly laid down by law, partly prescribed by management.
- Satisfaction is mostly related to quality of life.
- Caregivers play an important role, as quality is largely the result of their work, knowledge, attitude.

## Intergenerational and day care centers:

- Diverse daily activities.
- The possibility of new connections and social networks between different generations.
- The possibility of cooperation between government and non-governmental organizations.
- Space for socializing, friendship, learning, work, (self-)help, intergenerational cooperation, counseling, information, fun, relaxation.
- A friendly community for people of all ages.
- The activities are based on the needs, wants and interests of the participants.

*If you have not yet danced into the Intergenerational Center, feel their beat, rhythm and warmth. Click [here](#).*

Here are some **useful links** to start your search for information, where you will also find lists of registered providers in Slovenia on websites of various ministries:

- [nursing homes \(https://www.gov.si teme/domovi-za-starejse/\)](https://www.gov.si teme/domovi-za-starejse/),

- [multi-generational centers](https://www.gov.si teme/vecgeneracijski-centri/) (<https://www.gov.si teme/vecgeneracijski-centri/>),
- [home help](https://www.gov.si teme/pomoc-na-domu/) (<https://www.gov.si teme/pomoc-na-domu/>),
- [volunteering](https://www.gov.si teme/prostovoljstvo/) (<https://www.gov.si teme/prostovoljstvo/>),
- [humanitarian organizations](https://www.gov.si teme/humanitarne-organizacije/) (<https://www.gov.si teme/humanitarne-organizacije/>).

The list of help and self-help organizations is available [here](#); we also add useful links of the Ombudsman with lists of [NGO's](#) and domains of [domestic violence](#), as well as a useful search engine for [volunteering organizations](#).



*Ready to do something for yourself, learn something, expand your social network, and make other people happy? **Visit a nursing home** – you will meet interesting people who are looking forward to new company and are happy to share their life experiences. You may even form an entire group to participate in a physical activity program.*

Nursing homes in Slovenia are mostly **open-type combined homes**. People with serious illnesses live in the **nursing part of the home**, while the residential part is occupied by older people who, due to age-related weakness, the effects of chronic illnesses, family conditions or other reasons, can no longer live at home, although they are independent in performing basic life functions and can move independently.

In the preparation of physical activity programs, particular attention must be paid to the physical and mental capacities of the persons involved in institutional care.<sup>14</sup> For some people, only the most basic forms of physical exercise can be performed which may also be combined with other social activities such as past games, conversations, table games, etc.

**→ If you come to an agreement with the nursing home management to participate and perform physical activities, make sure that the home staff are**

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<sup>14</sup> Institutional housing (nursing homes) offer a form of care for the older people who, according to United Nations criteria, make up for about 5% of the population over 65 years of age. At the end of 2017, there were 20,718 places in Slovenia available in 59 institutions and with 41 contractors. Of these, there were 13,235 places in public nursing homes, 5096 in private nursing homes, and 2387 in special institutions for adults. Citizens of the Republic of Slovenia with permanent residence in the Republic of Slovenia and foreigners with a permanent residence permit are entitled to services in homes. Acceptance, transfer or discharge from a home is in agreement with the occupants or their representatives and homes.

always present at your activities and that you get to know the occupants of the home beforehand.

- ➔ It is important to be aware of their physical limitations. Questionnaires and individual interviews may be helpful as individual restrictions or personal reservations are not always recorded in the medical record.<sup>15</sup>

## 7. Physical Activity of the Older People



*I got old the moment I became afraid of getting old.*

*(John O'Donohue)*

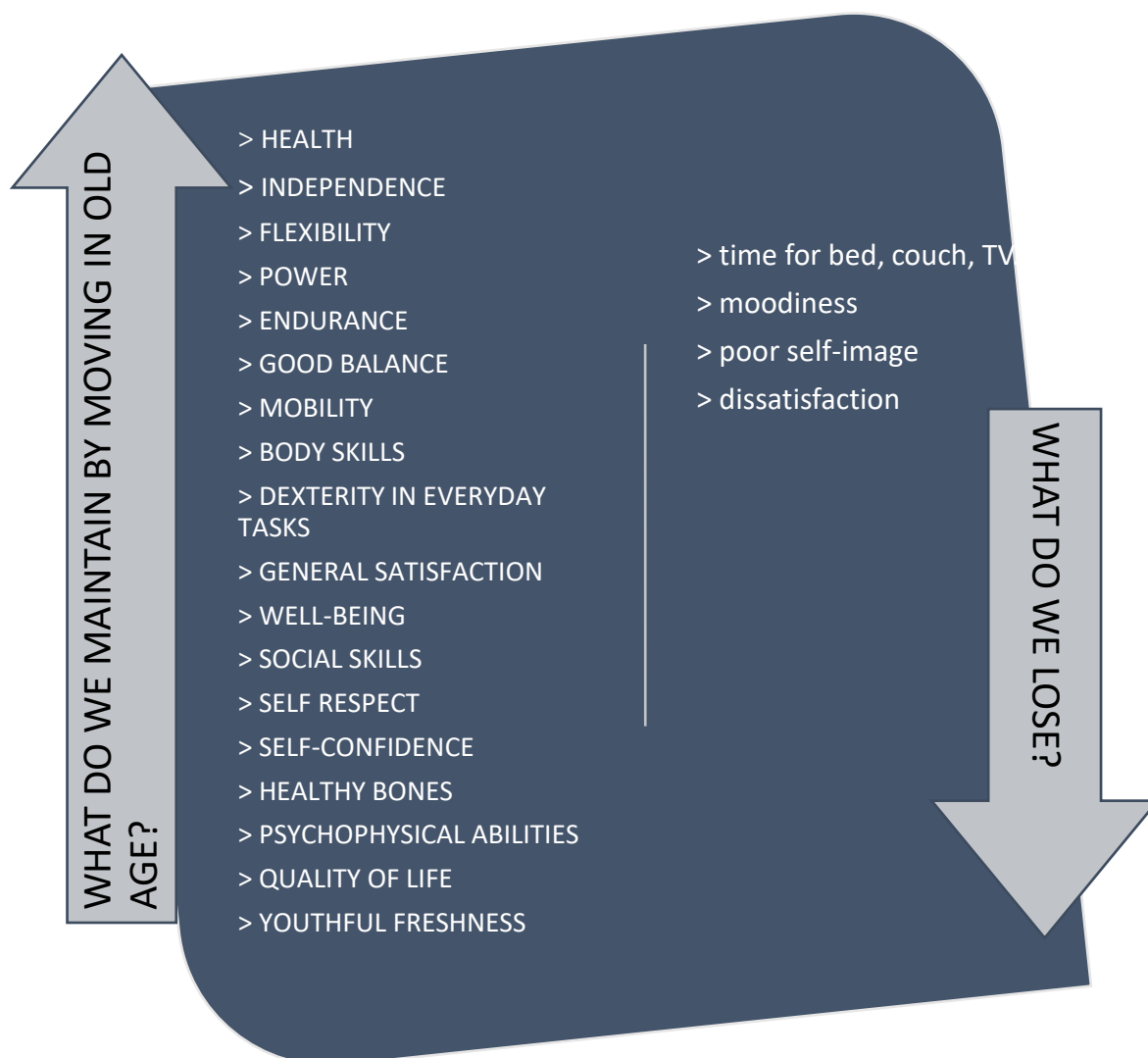
### 7.1 Benefits of Movement for the Older People

**Movement** is a fundamental element of a healthy lifestyle and essential to the health of each individual. As a rule, the younger and middle generations use physical activity to practice the elements of **prevention**, such as the prevention of cardiovascular and respiratory diseases, while the older people choose the elements of **cure**. At a young age, the most important functions of the body are supposed to be developed, that are then maintained at an appropriate level in old age.

Particularly important is regular physical activity which allows the older people to maintain mobility, as the latter is one of the main conditions for maintaining physical and mental functions. In any case, the quality of ageing depends to a large extent on the lifestyle that an individual has lived from an early age. This is not just about maintaining physical health, but also about maintaining psychic functions. (Poredoš, 2004)

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<sup>15</sup> The professional literature highlights the importance of older people's trust in staff and in the provider of sports and recreational activities. Client-centered therapy is an approach to the implementation of occupational therapy that incorporates a philosophy of respect and partnership with people, and which recognizes and respects the autonomy of the individual, the need for client choice when making decisions about occupation needs, the benefits of a client-therapist partnership, and the need to ensure affordable service and adaptation to the context in which we live (Law, 1995).



*Picture: Benefits of physical activity for the older people*

<b>Benefits of physical activity for the older people:</b>	
<b>Physiological benefits</b>	<ul style="list-style-type: none"> <li>• Beneficial effect on blood sugar levels</li> <li>• Better sleep</li> <li>• Improving aerobic capacity</li> <li>• Increase in muscle mass and joint mobility</li> <li>• Maintaining balance</li> <li>• Improving diabetes symptoms in non-insulin dependent patients</li> <li>• Positive effects on blood clotting</li> <li>• Better digestion</li> </ul>

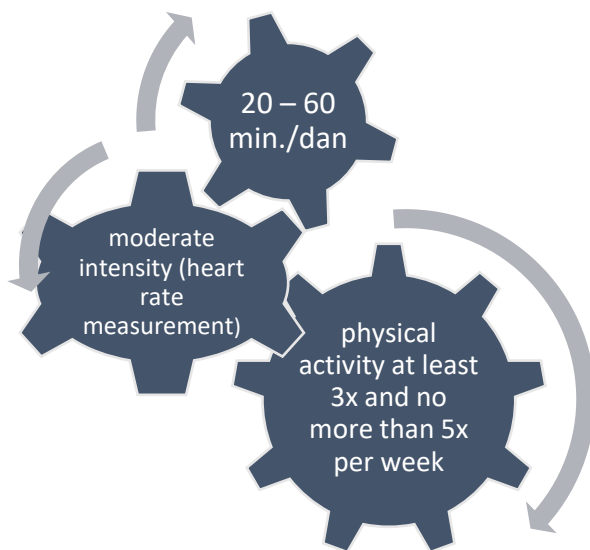


	<ul style="list-style-type: none"> <li>• Easier body mass control</li> <li>• Improved fat metabolism</li> <li>• Reduced cholesterol</li> <li>• Reducing the risk of falls and injuries due to falls</li> <li>• Reducing the risk of developing cardiovascular disease, stroke, high blood pressure, type 2 diabetes, osteoporosis, colon cancer and breast cancer</li> </ul>
<b>Social benefits</b>	<ul style="list-style-type: none"> <li>• Reducing loneliness</li> <li>• A stable role in society</li> <li>• Facilitating the establishment and maintenance of contacts</li> </ul>
<b>Psychological benefits</b>	<ul style="list-style-type: none"> <li>• Better mental state</li> <li>• Increased relaxation</li> <li>• Less stress</li> <li>• Reduced anxiety</li> <li>• Less depression</li> <li>• Better cognitive abilities</li> <li>• Better learning skills</li> </ul>
<b>Personal reasons</b>	<ul style="list-style-type: none"> <li>• Maintaining and improving health</li> <li>• Maintaining a beautiful physique</li> <li>• Experiencing a sense of accomplishment</li> <li>• A way to spend one's free time</li> <li>• Ageing independently: maintaining independence, intimacy and self-respect</li> </ul>

Experts in the fields of medicine and physical activity agree that **balanced and moderate physical activity** is crucial in all age groups.

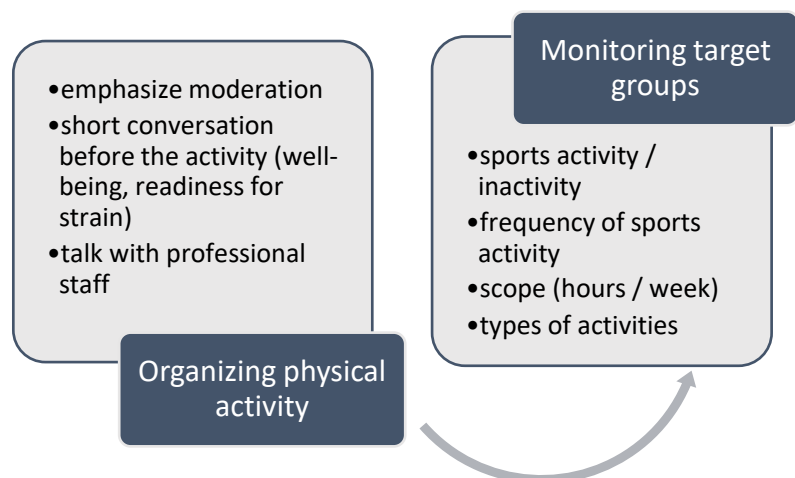
- ➔ Persons over 65 should be especially careful when exercising.
- ➔ For older people over 70, 80 or 90 years of age, the unwritten rule "Try your best, but not too much!" applies. The human body needs work and movement, but it must not exert itself to its maximum capacity.

Excessive exercise and exertion of the body may cause damage to various parts of the body or bodily functions. All age groups can be affected thereby and many times it happens that children, especially when the body is still growing and developing, experience injuries that characterize them for a lifetime, such as being less mobile and consequently abandoning physical activities in the middle phase of life.



Picture: Recommendations regarding the amount of physical activity

➔ Excessive body strain can even lead to a weakening of the immune system, so it is important for every individual to find his/her "safe zone" where there are no extremes.



Picture: Recommendations regarding physical activity

## 7.2 Physical Activity of the Older People in Numbers

Overall, the **physical activity of EU citizens is increasing year by year**. The level of activity is generally low and the differences between countries are substantial. Research in recent years has found that four out of ten Europeans never perform any physical activity in their free time, while pointing out that physical activity in Europe and its Member States **depends on geographical and social stratification**. The least active groups are:

- in South-Eastern Europe,
- women,
- the older people,
- people with lower education,
- people living in rural areas.

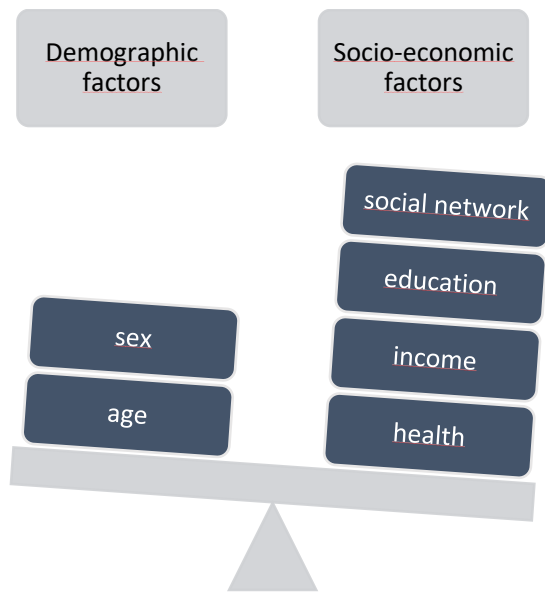
The researchers point out that the results relate to the whole of Europe and not to differences in factors of influence between countries. Indeed, social and cultural differences between countries are very important in the preparation of national programs to promote the physical activity of citizens and in targeting measures for the least active population groups (Van Tuyckom and Scheerder, 2010: 8).

**In Slovenia**, the Faculty of Sport has been monitoring the sports and recreational activities of Slovenes for more than three decades. Two data are of particular interest: 25 years ago, the age threshold at which the number of active people dropped dramatically was 25 years, while today it ranges from 65 to 70 years. The second data shows that the popular sports genres among adults (over 18 years of age) have been the same for more than ten years: walking, swimming, skiing, cycling, hiking.

A survey conducted in the framework of the project in Meža Valley yielded similar results: in the first place walking, with a convincing share (61%) was mentioned; second came gardening or landscaping (42%), followed by cycling (32%), aerobics (31%), dancing, swimming, skiing, and finishing with even more specific forms such as e.g. fishing and tennis.<sup>16</sup>

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<sup>16</sup> The survey, which was designed to analyze the physical activity of the older people, was taken by 70 male and female persons, all over the age of 45. 53 women (76%) and 17 men (24%) participated in the data set. More than half of all participants (40 people) were over 65 years of age. 11 participants belonged to the 45 to 49 year old , 9 to the 60 to 64 year old age group, and 8 to the 55 to 59 year old age group. Only one participant belonged to the 50-54 year olds.



Picture: Factors affecting physical activity

The **findings of the research on the activity and inactivity of individual social groups** are interesting for the formulation of strategies and programs. The conclusions are similar:

- It seems that women are less likely to be inactive pertaining to walking, gardening, and other easier tasks than men, but more likely to be inactive regarding sports and more difficult tasks.
- Interestingly, the likelihood of not engaging in moderate physical activity increases with educational attainment, while no statistically significant influence of education on sport-related inactivity was detected. From this we can conclude that moderate physical activity is replaced with other forms of activity, perhaps social, educational, by more educated older people.
- The same applies to those with regular income who may replace physical activity with other forms of activity. The fact that an individual is employed or retired and lives in rural or urban areas does not have statistically significant effects on not engaging in lighter physical activities or tasks. However, it is more likely that an employee with more demanding work will be physically inactive in terms of sports than a pensioner, and the same goes for an urban resident when compared to a person living in the countryside.
- In general, in recent years, there has been an increase in sports and recreational activities, both in terms of the proportion of the population active in sports and the regularity or frequency of engaging in such activities. The growth was mainly due to various trends from abroad, wherein guided exercise is currently the most popular with the older people.

## 8. Nothing is Missed Yet!

### 8.1 How to Get Started?



*You don't have to look at the stairs.  
Just step on the first one.  
(M. L. King)*

Much has been written about the beneficial effects of physical activity and the importance of exercise. Even with your own eyes, you can already see that those who are physically active are more satisfied. People who have introduced a regular dose of physical activity into their everyday rhythm are generally healthier (simple experiment – keep track of the number of colds over the year of those of your acquaintances that are physically active and those who are not) and prettier (beauty is in the eye of the beholder, but a healthy spirit in a healthy body shines through so strongly that nobody can overlook or deny it).

Many find it difficult to move out of the comfort zone and take the first step, even if they are not well, even if they know that they are missing something, even if they once felt much better after getting rid of the accumulated poisons and stress hormones, much more flexible and strong and full of energy ... We will start tomorrow, next week, after New Year's Eve – all these are old, worn excuses so we can find new excuses again – today I feel bad, I have too many obligations this week, I have to wait for the planets to be in the right constellation ...

Then how do we reach above ourselves and begin an activity that we know will bring us loads of positive effects? They will grow in proportion to our input in the form of time and effort, but even with a small input you will obtain results. We just need to silence and drown out the second thoughts created by our own laziness!

**→ Sometimes you just need to get started. With small steps.**



- Do you have an idea? Write it down.

- Maybe you can make an arrangement with a friend or acquaintance who also wants such changes in his/her daily routine.
- Maybe it's time to expand your social circle, experience new conversations and fresh ideas? In group workouts you can find a kindred soul or even a whole cheerful company that will give you the positive power to overcome all obstacles.
- You can drive to your chosen workout or to the park, to the pool, to the gym. Once you are there, it really doesn't make sense to turn around before you exercise, right?
- Buy new sports equipment that will make you feel great. Walking along the city promenade can be the first step.
- If you love technology toys, you can buy very cheap and smart gadgets to keep track of your physical activity, physical progress, quality of sleep. They offer music accompaniment or just a sense of security, as a mere push of a button triggers a distress alarm. Some apps do just about everything for you, you just need to contribute your body!
- We can choose to look at our excuses, our position in this beloved world in a different light. We can only be grateful for all the good we are given and if we do not take full advantage of it, we are truly foolish.
- Well, have you made the move from the couch to nature yet?



**→ Explore the range of programs in your area.**

First, consider what form of physical activity is attractive to you in the long run (or relying on past experience) and what is available in your area. If you (or one of your loved ones) are adept in the Internet, you will easily find information on which sports clubs, intergenerational centers, nursing homes (many are trying hard for a quality offer, so it makes sense to check what they have to offer to the outside visitors), and non-governmental organizations for the older people operate in your area, municipality, wider surrounding region, and what is within your reach. Can you take a bike or a city bus? Is a taxi within your financial capacity? Many municipalities introduce free transportation for the older people by electric cars, etc.



- The easiest choice is walking since it requires nothing but time.
- But diversity is the spice of life and why not enjoy it with all the flavors at your disposal?

## 8.2 What is Important to Know when Choosing Physical Activity for the Older People



*If we manage not to regard ageing as a decaying body but as a harvesting time of the soul, we will learn that ageing can be a time of great strength, uprightness and self-confidence. (John O'Donohue)*

Before deciding firmly that your heart desire is to jump or ski, dive or climb, think rationally and pragmatically about your physical fitness and health.

➔ **If you have a history of personal injury, a chronic illness or a medical condition (e.g. after surgery) or are taking medication, it is your responsibility to consult your personal physician on the types of physical activity that are appropriate for you, despite the instructions, facts, and opinions you have read in the previous sections of the manual.**

In a group of seniors whom we guide in physical and recreational activities, the **general and personal characteristics** of the target group must be constantly taken into account.

➔ **Older people differ a lot in terms of fitness, just like other age groups.**

It is a fallacy to think that older people are less agile, less flexible and less fit. Choosing the right physical activity is therefore crucial and different for various groups. When prescribing physical activity, we need to consider the **type, frequency, duration and intensity of the activity**. In doing so, we seek to ensure diversity and include day-to-day activities.

It is very important to plan exercise **frequency** carefully because it is necessary to keep balance. It takes **two to three workouts a week** to obtain the best results. Older people who are in better physical condition and do not have symptoms of a disease can also exercise more often a week without negative consequences. The key is that physical and psychological benefits require regular exercise.



*Picture: Factors that influence selection of activity*

The **duration** of most exercise programs for older people is from 45 to 60 minutes. It is advisable to divide this time into 15 to 20 minutes of stretching, 20 to 30 minutes of aerobic activity, and 10 to 15 minutes of cooling down. There are significant discrepancies with regard to duration in the professional literature, but most authors state that the aerobic part should last at least 20 minutes in order to obtain optimal cardiovascular benefit.

There is a popular misconception about **intensity**, namely that high intensity exercises are necessary for physiological benefit. Such misconceptions maintain an inappropriate attitude towards exercise, which causes many seniors to avoid useful and enjoyable physical exertion. In the 1970s and 1980s, there was erroneous belief that only intensive exercise was useful. These were models of physical fitness training.

➔ **Modern recommendations advocate models of combined physical activity based on moderate physical activity. Older people should first be encouraged to engage in physical activity prior to high-intensity activity and to gradually increase their intensity level.**

If we want to encourage older people to engage in active and recreational sports forms of life, we need to **pay close attention to the symptoms of ageing**. Because of the desire or fear of



ageing, individuals may conceal their actual physical and psychological abilities. These are later more exposed to various injuries when performing an activity, which can also result in death.



**Decline** due to lack of movement occurs so slowly that most do not even realize it until it is too late. After a while, people gain weight, the layer of fat becomes thicker and the amount of muscle decreases. Few people realize that in the second half of their lives they should be somewhat lighter and by no means heavier than before. Although

ageing is an inevitable biophysiological process that is defined for each individual in his/her DNA, the declining of physiological (probably also psychological) functions can nevertheless be slowed to a certain extent. Control of this decline may be exercised, and therein sporting and recreational activities play an important restraining and compensatory role.

**The most common symptoms of ageing manifested in the form of a decline in physical capacity include:**

<b>Muscle loss and sarcopenia</b>	<ul style="list-style-type: none"> <li>• <b>Sarcopenia</b> is defined as a simultaneous occurrence of degenerative loss of muscle mass, muscle strength and functional capacity.</li> <li>• Poor eating habits also contribute to poor muscle mass when a person is inactive.</li> <li>• In people suffering from symptoms of muscle mass loss, caution should be exercised as they have poorer muscle strength and severely impaired movement.</li> <li>• Muscle mass increases until the age of 30, and may decline by up to 15% over the next 30 years; after the age of 65, annual muscle loss is supposed to be 3%.</li> <li>• There are risks such as physical impairment, impaired performance of daily activities, falls, bone fractures, various movement disorders, disability.</li> </ul>
<b>Bone mass loss: osteopenia and osteoporosis</b>	<ul style="list-style-type: none"> <li>• <b>Osteopenia</b> is a lower value of bone mineral density (BMD), but still not low enough to be labeled as osteoporosis.</li> <li>• <b>Osteoporosis</b> is a systemic skeletal disease that results in reduced bone mineral density (BMD) and poor bone tissue structure.</li> </ul>

	<ul style="list-style-type: none"> <li>• About 25% of women over 50 have osteoporosis and one in six men after the age of 80.</li> <li>• Osteoporosis leads to bone fragility; often it is called "silent disease" as it occurs or progresses without any symptoms.</li> <li>• Fracture can occur due to minor bumps, falls or normal strain such as bending or lifting; some fractures are long-lasting and prevent the older people from moving completely, but the most dangerous is a hip fracture that can significantly impair the quality of life of the older people → it is estimated that approximately 80% of people cannot yet walk after 6 months of hip fracture rehabilitation because it is a strenuous, demanding and time-consuming process.</li> <li>• <b>Risk factors:</b> female gender, age, bone fractures in the past, genes or heritability.</li> <li>• Failure to maintain balance, muscular weakness, nausea, drowsiness, dizziness and some medicines also represent a risk of fracture – avoidance of physical inactivity, chronic alcohol abuse and smoking are recommended, and proper nutrition is important.</li> <li>• <b>Prevention</b> of osteoporosis should start early in life, in childhood and adolescence → to obtain the right amount of calcium, vitamin D with food, and to build the best mineral bone density (at least before the age of 30) with adequate physical activity.</li> </ul>
<p><b>Impairment of balance in old age</b></p>	<ul style="list-style-type: none"> <li>• <b>Balance</b> is a complex integration of movement and sensory abilities: it is the ability to maintain equilibrium by controlling the center of gravity of the body on a given support surface.</li> <li>• It is divided into <b>static</b> and <b>dynamic equilibrium</b>: static equilibrium is defined as the ability to control the body, with the center of gravity of the body remaining within the support surface (e.g. when standing upright); dynamic equilibrium is the ability to react to changes in body position when center of gravity of the body passes beyond the supporting surface, i.e., the ability of a person to maintain a stable position in various movement tasks or locomotor movements such as walking, walking on stairs, avoiding various obstacles, etc.</li> </ul>

- People who show symptoms of impaired balance should be further protected from falls.
- Around the world, approximately 28-35% of people over 65 experience a fall at least once a year; half of these fall at least once again in the same year.

➔ A person with symptoms of muscle mass loss and symptoms of osteoporosis can be seriously injured in recreational and sports or daily activities.

A person with symptoms of muscle mass loss and symptoms of osteoporosis can be seriously injured in recreational and sports or daily activities.

### **Impaired balance**

Among the risk factors for impaired balance, the World Health Organization ranks age, health and all age-related changes, such as impaired vision and function of the sense of balance, physical ability, musculoskeletal and cardiovascular health, as well as fear of falling again if a person has already experienced it.

➔ It is especially important that a person is not uncontrollably exposed to additional hazards, such as climbing a ladder or standing on an unstable chair.



WHO recommends physical activity and exercise in order to improve, develop or maintain balance and reduce falls, as well as a proper and appropriate diet containing sufficient protein, calcium, vitamins and water, and taking medication, if prescribed. Good balance also requires the use of appropriate footwear, which means avoiding high heels, walking in socks, shoes with a hard sole or slippers, etc. It is also advisable to adjust the space to prevent falls, e.g., the absence of carpets, minor obstacles, or even messy electrical extensions and cables that cross the room.

## 9. Overview of the Most Popular Movement Activities for the Older People

### 9.1 Aerobic Exercise Activities

*We will only harmonize with our body if we truly love and respect it. We cannot communicate well with the enemy. (Dr. Harriet Lerner)*



**Aerobic exercise** is a physical activity and represents the level of effort that we exert over a long, continuous period and during a certain activity without interrupting or significantly reducing the intensity. The energy source for aerobic exercise and effort is consumed while consuming oxygen. In such physical activities, the heart muscle is strengthened, the pulse volume increases, the heart rate at rest and during exertion is reduced, the circulating blood volume is increased, blood flow through the veins and muscles is improved, and the blood pressure level during resting is also reduced.

Through aerobic activity, it is possible to develop and maintain a healthy cardiovascular system and respiratory tract which basically represent the functional abilities of an individual. Aerobic movement activity has a positive effect on the composition of the whole body, as it has been shown to reduce body fat. It has also been shown to have beneficial effects on metabolism as it maintains an adequate blood sugar level. Body fat is primarily used as muscle fuel, and more intense aerobic exercise has a positive effect on bone mineral density.

In order to promote and maintain the health of the older people, it is recommended that:

- ➔ **Aerobic activity with moderate intensity for at least 30 minutes, five days a week, or**
- ➔ **Intense aerobic activity for at least 20 minutes, three days a week.**

Combinations of moderate and intense aerobic activities may also be performed. In doing so, we need to make sure that an individual takes into account his/her fitness, that he/she is active according to his/her abilities. Not everyone is physically fit, so moderate aerobic activity can mean slow walking for one person and race walking or even jogging for others.

### 9.1.1 Walking

The most regular exercise is walking, and in most cases, it is the most popular physical activity among the older people.



Regular, appropriate and safe physical activity in the older people is of the utmost importance, so **at least half an hour of moderately intense physical activity every day** is recommended for those over

the age of 65. Compared to the younger age groups, people over 65 most often engage in physical activity of moderate intensity.

→ **Moderate activity** means that the pulse is slightly increased, we are breathing slightly, but we can still talk normally during the activity.



*One of the most popular forms of walking for the older people is **Nordic walking** which maintains a natural walking pattern by actively using appropriate walking poles. It can be performed for various purposes – as a form of recreation, training, rehabilitation, or therapy. It can be performed year-round and is accessible to most seniors. Almost the entire body is involved in the movement, thus strengthening the heart and blood vessels, respiratory tract and muscles. Nordic walking effectively increases the mobility of all joints and spine, calorie consumption is higher, and it also helps achieve a more upright posture and eliminates pain (neck, shoulders and back), reduces fatigue, stress, as well as improves overall well-being.*

Since walking is the most popular form of physical activity among the older people and is also recommended for other age groups, the following are the most common forms of exercise.

**Stationary stepping** with a relaxed moving of the hands is an exercise that can be done indoors as well. The person carrying out the activity is stepping without moving forward, lifting his/her heels off the ground to the best of his/her ability. In doing so, we need to take care he/she does not strike his/her heels hard on the ground, but rather lay them gently. The arms should be



relaxed, slightly bent in the elbows, and swing rhythmically around the body. The moving of the hands needs to be symmetrical (diagonal arm and leg forward). The exercise can also be performed on a softer padding for greater comfort and reduced risk of injury. Pazimo, da je korakanje z rokami simetrično (diagonalna roka in noga naprej). Za večje udobje in manjšanje možnosti poškodb lahko vajo izvajamo tudi na mehkejši podlagi.



**Walking and simultaneously stretching out arms in different directions.**

The trainee starts moving forward, at the same extending his arms in different directions (arms forward, arms up, arms behind, arms away). Be careful the person doesn't hit his/her heel against the ground too hard while walking. Similar to the previous exercise, the potential problem of asymmetric movement and impaired balance must be taken into account.

**Walking with relaxed arm movement and head turning** is highly recommended for those who suffer from neck and/or shoulder pain. In this exercise, special attention is paid to soft stepping, because turning of your head can lead to loss of balance. When the person feels safe, he/she can start by slowly turning his/her head left and right while walking. After several exercises, we can increase the amount and later also change the intensity (rhythm) of the exercise.



**When walking on the toes with the hands pointing upwards,** the practitioner stands on his/her toes, placing his/her hands upwards while he/she gazes forward. He/she starts moving forward walking on his/her toes. While walking he/she tightens the muscles of the abdominal wall and the buttocks for better balance. For the sake of better visualization, you can instruct the trainee to perform picking apples from the trees. His/her eyes should point forward at all times. The problems with this exercise are often insufficient mobility in the shoulder joint and impaired

balance, so one must watch out for falls.

There are two ways to **walk sideways**. The manuals indicate walking with spurs or cross steps. With the previous, the practitioner starts to walk sideways without crossing his/her legs. With the outside leg, he/she steps sideways and then joins the inside leg and proceeds. In the second exercise, the performer starts to walk sideways so that his legs cross, e.g. once at the front and then at the back.

For the older people who are in better physical condition and who do not exhibit mobility problems, it is recommended to **walk with hands circling back and forth**. While walking, the trainee slowly circulates his/her outstretched arms back and forth in a controlled way. Moving in this exercise can be really difficult for the older people because it leads to a sense of balance loss. The exercise is therefore carried out with vital and uninjured individuals, and the entire process needs to be controlled by a professional or instructor.

### 9.1.2 Squats

Squats are an exercise that is included in part of the professional literature as walking, while other part of the literature describes it as a stand-alone exercise.

- ➔ Squats represent a more intense exercise to be performed by people who do not have physical limitations, especially in the knee.
- ➔ Performing proper squats requires relatively a lot of physical strength, and care must be given to reduced balance.

The trainee squats at a maximum of 90° in the knee and hip. The heels should be in contact with the ground at all times. Then he/she slowly rises back to his/her starting position.

It is advisable for older people to first start squatting with a support. In doing so, we make sure that the knees move in the direction of the feet and that the back is straightened all the time.



It is advisable for seniors to try to do 5 squats, but in no case more than 10.

- ➔ Doing squatting exercises helps with back pain and other chronic pain. Trunk stabilizers play a key role in this process, which are greatly strengthened by performing toning exercises such as squats.

Some studies focusing on older patients with osteoarthritis have also indicated a reduction in knee pain, improved balance and faster walking. The inflammation associated with arthritis also decreased. It is often a misconception that squats damage the knees and spine. Nevertheless, caution is always necessary, and it is advisable to consult with a medical staff.

If squats are done properly, the **flexor muscles** will activate, providing better stability. In deeper squat, the **buttocks** and **back extensor muscles** are activated. This also improves the **stability of the spine**, especially when performing load squats.

**Support** can be provided to the older people by the personnel or by using a chair where the seat is at such a height that the knees are bent at right angles. A lot of people doing squats make a mistake in breathing. When lowering into a squat, you need to inhale, and return (rise) to the starting position when you exhale. Exercise is very useful for the buttocks, hips and thighs, but over time it becomes tedious, so it can be diversified in combinations with a ball, gym strap, a big ball against the wall or with the feet stretched out.

*The unbearable ease of movement is sometimes just the unbearable of movement. Sometimes it is painful to get up because of knee problems. The **Feldenkrais method**, an informed movement, opens many new worlds of ease to many. Click [here](#).*

### 9.1.3 Running

Running strengthens muscles and stamina and burns fat. Basically, running is a **sport that we can practice well into old age**.

Research results show that people achieve the best running results between the ages of 20 and 35. A fairly high level can be maintained until the age 45 or 50. Sometime after the age of 50, the ageing process becomes faster, and after the age of 70 or 75, even faster. On average, the rate of endurance running slows down by about 1% on year.

- ➔ **Muscle strength decreases over the years, flexibility of elastic tissues decreases, and more rest is needed to restore the body.**
- ➔ **It is advisable for an older person who has not practiced running for a long time or has just gotten sick, to check his/her stamina and health beforehand.**

All these phenomena in our body that are happening in parallel with ageing do not represent an actual reason to stop running. On the contrary, by running as well as other everyday movements, we slow down these natural processes, preserve freedom of movement for a long time, and significantly promote health.



- ➔ Older non-runners, who have been walking easily and have not run since they were young, are advised to try running. In doing so, they must, of course, proceed very, very **gradually**.
- ➔ The characteristics of such an exercise should be **lightness, high aerobic capability, improved condition and endurance**.

The **gradual introduction of running techniques** for the older people can also be combined with intermediate walking stages. **Intermingling walking and running** is better for people in their mature years than walking alone, because of the different and, above all, greater strains that we experience when running. These higher stresses, if we can handle them in such a way that they do not lead to overloads that are the cause of injury and exhaustion, enable preservation and to some extent even additional strengthening of the muscles, ligaments, bones and cartilage, maintaining the function of the kidneys, brain, a more vital immune system and easier control of a healthy body mass.

- ➔ **Running affects our health even in very small quantities.** Even if you only run slowly every day for 5 to 10 minutes, or even if you only run 1 to 2 times a week and run up to 10 km in a week, your likelihood of cardiovascular failure leading to death decreases by as much as 29 to 50%.

Research with experimental groups of the older people shows that after a year's introduction to running techniques combined with walking, they can run for 5 and some even up to 10 kilometers. Such a technique necessarily requires **patience** because the implementation period is usually extended throughout the year.

- ➔ Add 10 to 15 seconds of running to every walk, and if all is well, repeat this 5 to 10 times. You should not rush even when individuals are feeling very well. Our goal may be to reach a level of readiness in half a year that you can run for 1 minute and then walk for 1 minute alternatively during a 30 minutes' walk. In doing so, we also look for other positive effects of running – well-being, socializing and being involved in social life.

**Age is not a valid reason not to run.** However, it is true that some seniors do not run because they find it dangerous to run. It could be said that it is more dangerous to give up running for no real reason. In recent years, there have been an increasing number of **social events** that encourage different groups to run (running spouses, running societies, running in threesomes,

etc.) and are also extremely useful for forms of intergenerational socializing and lifelong learning.

Running can also be an appropriate form of physical activity in terms of **cost**. In fact, we can run anywhere and we practically do not need other equipment, except for suitable footwear.

→ It is essential for the older people to check their abilities in the area of **balance, coordination, strength and perception of the activity itself.**

#### 9.1.4 Cycling

Cycling is an attractive way of spending free time and is therefore particularly suited to the exercise activities of the older population. Cycling at 20 km/h is already sufficient movement for the older people. It affects the well-being and improvement of psychophysical fitness.



**Traffic safety** is a major reason why older people do not opt for cycling. If they do not feel capable, we should not force them into the activity, rather try to introduce other exercises that bring less risk of falling or injuring themselves.

Cycling is more difficult to **control**. Each individual driving a bicycle has to maintain balance in addition to monitoring the signs of fatigue and stress, and also paying attention to the other road users. In recent years, the network of cycling trails has been expanding, ensuring safer participation in this activity for the older people.

Cycling has **many positive effects on the body and psychological state** and has a beneficial effect on the prevention and treatment of chronic diseases. Also, research has shown positive effects on mental capacity, as regular cycling improves concentration, thinking, performance, while increasing work productivity and protecting against stress. Psychophysical fitness improves, and regular and properly measured exercise also helps in body mass management. It enables independence even in older years, improves quality of life and extends life expectancy.

→ **Moderately intense exercise** is recommended for beginners and those at risk (i.e., warm up slightly and take a short breath), wherein we are physically active at least 3 to 5 times a week for at least 30 minutes.

Physical activity can also be **divided into several shorter sets daily**, with no individual set shorter than 10 minutes. Experienced and healthy cyclists can also cycle for 45-60 minutes at higher intensity (i.e., breathing deeper and sweating) every day or every other day.

→ However, physical activity is **too intense** if we cannot talk normally and say at least five words in succession while cycling without having to inhale.

For those who want or need to monitor their heart rate more closely (e.g. patients in poor health), we recommend using heart rate monitors while cycling. Beginners who are physically inactive, in poor health, men over 40, and women over 50 are advised to **measure their fitness before starting cycling**.

→ We recommend participating in free walking tests of two kilometers, organized by health centers in many Slovenian towns in the spring and fall as part of a health counseling program. It is a good idea to measure your fitness progress every six months.

Older people who are independent in life are advised to **cycle in the city**. This has many advantages as it can serve as an efficient means of transport when we need to get things done, or we can use it as a **means of transportation** on our way to institutions and homes, as it can save us a lot of time. Thus, we can avoid traffic jams while also doing something for ourselves, and it is usually easier to park a bike than find a parking space for a motor vehicle.

→ By using a bicycle, you **contribute to environmental protection**, reducing carbon footprint and noise in the city.

Older people who do not feel safe in road traffic can try **cycling in nature**. It can be much more relaxing while breathing fresh air. On the other hand, it can also cause quite a few headaches if we have an allergy. Therefore, if we are allergic to pollen or grass,



it is reasonable to avoid allergens in nature or to prevent them with preventive medicines. Also, extra caution is required when cycling in the countryside so that the trip does not end due to a fall and possible injuries.

The older people can, of course, also enjoy **cycling on a gym bicycle** which is an ideal substitute when the weather (cold, rain, snow, heat) prevents us from outdoor cycling. It is an appropriate and safer way of cycling, especially for those with poor coordination and balance skills, for

inexperienced cyclists, and for patients and injured persons, for whom indoor cycling can be a form of rehabilitation.

- Replacing fluids is very important when cycling.
- When we feel thirsty, dehydration is already present, so it is extremely important to replace the fluid regularly.

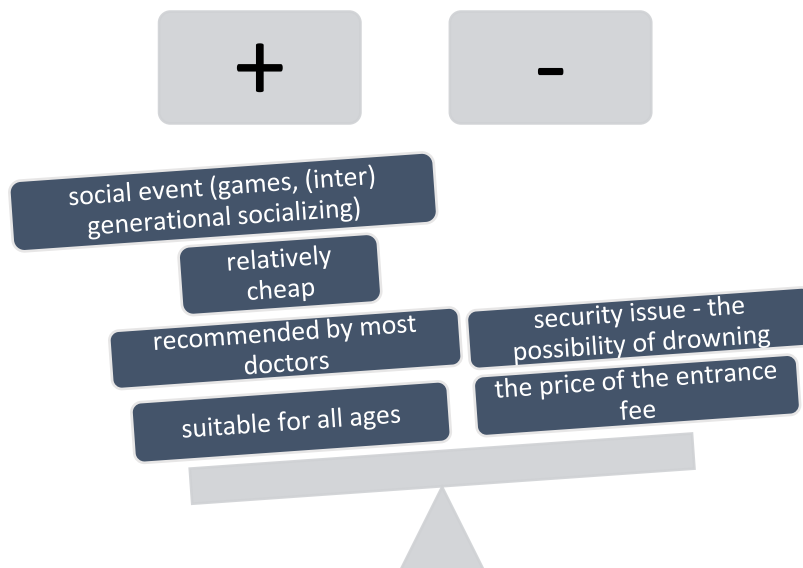


Before you start cycling, you need to drink enough, and fluids should be replaced during and after the activity.

If we do not sweat while cycling, it is sufficient to replace the lost fluid with water, but if the activity is more intense and/or longer, then the lost **electrolytes** should be replaced in addition to water. It is very important that beverages contain no caffeine, alcohol and are non-carbonated.

### 9.1.5 Swimming

Swimming is a holistic sport that develops and shapes the body and can always be upgraded to a social gathering or varied with games (water volleyball, water basketball, water polo, etc.).



Picture: Advantages and disadvantages of swimming

Movement in water is actually a **type of massage** and is recommended not only for a healthy organism, but also as a successful treatment for various injuries.

- Due to the horizontal position of the body and the feeling of reduced weight, the entire skeleton in the water is relieved.

This is why swimming is recommended for the older people, overweight, paraplegic, or people with congenital hip defects.

→ Swimming is effective in preventing and treating negative effects on the spine due to lack of physical activity.

It is also useful for correcting irregular posture that often results from working in a seated position. With proper loading, swimming is also useful as a means of faster rehabilitation after injuries and illnesses.

Swimming is recommended for those who want to strengthen or maintain a healthy heart, lungs, joints and muscles. **Swimming and diving** can increase the capacity of the lungs, which therefore absorb more oxygen.

The activity is also suitable for certain asthmatics, as the humid air in an indoor pool can alleviate problems of asthmatics in sports and exercise. Older people can learn by swimming how soothing it is to **float** on the water when it does not require much effort. Water acts as a cushion that relieves the joints while they are horizontal. This is why swimming is also recommended for people with arthritis and anyone with joint problems. Swimming is also suitable for the older people who can experience more serious consequences than a healthy young man if they fall. Because they are unlikely to lose their balance there and hit a hard surface, they go light-heartedly into a pool, river or sea. However, the presence of a professional water rescuer is highly recommended.



→ In the target group of the older people, it is essential to first check which group of swimmers they belong to. The experts classify them as: beginner and non-swimmer group, moderate swimmer group and better swimmer group.

→ Swimming is a great form of recreation, but not in every case: the so-called breaststroke position where the head is always out of the water can cause pain in the neck and thoracic vertebrae after only 10 minutes. The reason for the pain is the unnatural position of the head. With proper forms of **breaststroke**, such as breaststroke with exhalation into water, **crawl** and **backstroke**, this kind of pain does not occur.

Different types of **water games** are closer to the groups of the older people because they are always in the lower water where they can still stand. Fear, therefore, is reduced and cooperation improved.

Water activities can be carried out **throughout the year**. Care should be taken not to expose the elderly participants to excessive differences in temperature within and outside the swimming pool complex. A swim event can represent fun and dynamic **water gymnastics**. In recent years, it has been practiced in almost all swimming pool complexes, designed and run by coaches and instructors, and participants have enjoyed moving in the water.

These activities include **water aerobics**, **water basketball**, various **forms of water fitness**, **water polo** and any movement that overcomes the resistance of the water. This is a relatively new way of group exercise that has very beneficial effects on the body.



It does not require any prior knowledge of swimming or fitness. On the contrary, due to the buoyant force that takes away some of the body mass, water exercise is especially appropriate and recommended for anyone who has problems with movement due to being overweight. It usually takes place with stimulating music and shallow water reaching chest level. Exercise is occasionally intensified by the use of aids such as water worms, floats, balls, water weights, and even water fitness equipment such as, e.g., exercise bike.

**Water gymnastics** is also part of the rehabilitation process. Water pressure speeds up blood circulation, reduces swelling and water retention in the body, while also reducing heart rate at rest and enabling deeper breathing, whereby we also strengthen our respiratory muscles during exercise. Water thus has an overall effect on the cardiovascular system, and through water exercise improves endurance and flexibility, coordination and balance (and of course, shapes the body holistically). The temperature difference is supposed to promote metabolism, and water is very effective in eliminating cellulite.

In addition to its beneficial effects on the body, water exercise eliminates stress, and movement fills us with new energy while maintaining physical and spiritual vitality.

*Have you already experienced the extraordinary soothing power of water sounds? Rain, brook, ocean - the sounds of water can be the most gentle lullaby or help you meditate.*

[Listen.](#)

### 9.1.6 Dancing

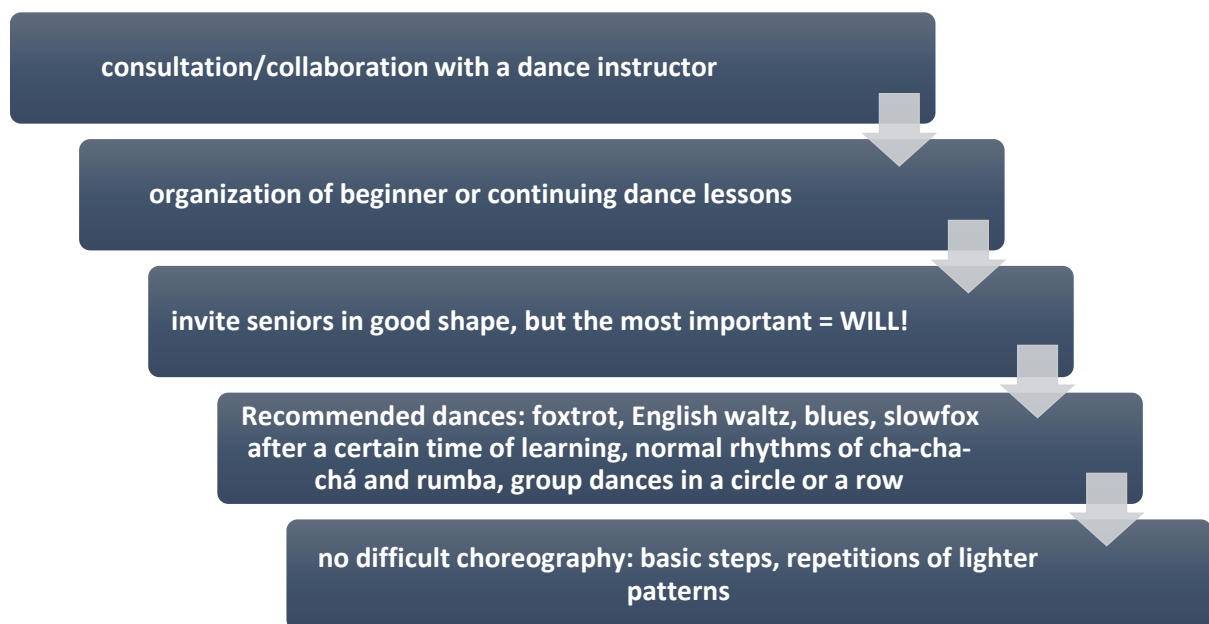
Dancing is one of the most popular activities among the older people:



- facilitates **socializing**, meeting new friends and lifelong learning;
- an interesting **way to relax** and manage stress;
- **intergenerational events** can be organized and may be attended by several generations of the same family;
- has a positive effect on the cardiovascular system, strengthens the **immune system**, eliminates harmful substances from the body, which detoxifies the body and helps to burn fat;
- due to the variety of movements, the **muscles** become stronger and more flexible, which has a positive effect on the appearance – in addition to muscle mass, self-confidence and self-reliance increase.

➔ When dancing, it is important that the types of dance are selected according to the target group and that the movements are performed under the supervision of an expert.

➔ The biggest danger in dancing for the older people is loss of balance which can lead to a fall with injury.



Picture: How to get started working with a dance group

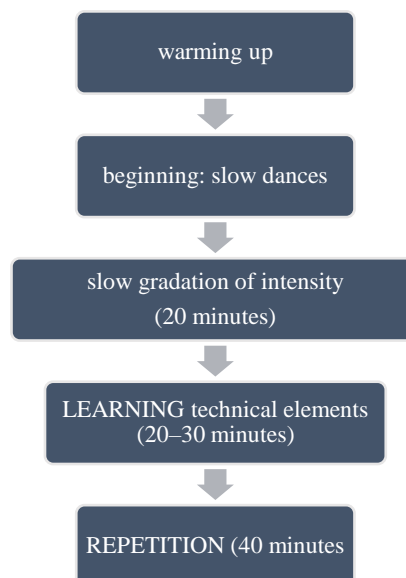
In recent years, dances where sociality is at the forefront - e.g., **group dances** or **dances in rows**, are very popular. With such methods, the older people can awaken memories of their youth, make new friendships, and be empowered volunteers. Also people in their eighties can dance, and some couples are still very active and physically fit, despite being in their late seventies or eighties.



The **Country, Folk & Blues Festival** took place in Carinthia in 2018 and 2019, presenting the contents of American country, folk and blues culture to the general public. In 2019, lectures, cowboy dance workshops and public dances were held at Carinthian intergenerational centers in the middle of the city center of Ravne na Koroškem. All generations, from the youngest to the oldest, danced, and the whole musical and culinary event drew a lot of curious and enthusiastic spectators. More about the festival, the organizers and their events can be found [here](#).

➔ It is necessary to warm up properly before the dance exercise.

*Picture: An example of performing a dance exercise*





### 9.1.7 Ball Games



For the youngest and middle-age generations, ball games, especially football and basketball, are among the most popular forms of recreation. In addition to physical training, they bring the benefits of teamwork, socializing and fun, and as a rule they are played outdoors, where the participants can get some fresh air and sunlight.

→ In ball games, seniors try to maintain uniformity of movement, balance, accuracy, passing, catching and touching, and speed of response.

In these activities, the older people must be in good physical condition, because in almost all ball games, physical contacts also occur. In addition to endurance, the older people must also exhibit movement-motor skills, keep balance and have sensory abilities. Situational ball movement, however, influences the development of attention and situational thinking and encourages collaboration.



*Ball activities for the older people can be organized as a social event for them to hang out with friends or younger people.*

*We should adapt the disciplines to the older population.*

*Instead of the classic volleyball, we can use the so-called **sitting volleyball**.*

***Passing the ball** can also represent a game.*

*Rather than playing basketball or football, competition in scoring baskets or goals can be organized.*

- Begin with 10 to 15 minutes of **warm-up** before each activity.
- The activity with a ball should be limited to 30 minutes, followed by a cooling-off phase of up to 15 minutes.

### 9.1.8 Landscaping and Gardening



This activity is not considered by professional literature to be a sport or a recreational activity however it has been gaining momentum over the past decades as its extremely positive effects on human health have been confirmed.

Research shows that **landscaping or gardening** is also very beneficial for the youngest and middle-aged. Most of this research has been conducted in Japan and South Korea, where the impact of landscaping has begun to be studied scientifically

highlighting the beneficial effects on one's physical and mental health in the early 21<sup>st</sup> century.

In Japan, gardening is a centuries-old tradition that encourages the individual to take on easier tasks and body-strengthening movements. In South Korea, a lot of attention has been given to this domain when it was noticed that people who live in the city and exercise regularly are no more relaxed than those who do not. However, it has been demonstrated that those who have walking paths in nature in the immediate vicinity of their dwellings had substantially lower levels of stress. The stress levels of test subjects living in cities only began to decline when plants or gardens began to be planted in workplaces or in the immediate vicinity.



Working in the countryside, mowing grass, landscaping, gardening represents **free time well spent** for anyone, but especially for the older people who either live in their home environment or live in nursing homes. Like any other exercise, this has a positive effect on maintaining and improving joint mobility and muscle strength.

Such activities are also capable of bringing options for **socializing lifelong learning** and enhanced **intergenerational cooperation**.

Those individuals who own a garden attached to their house have to perform the required daily tasks in addition to the helpful physical movements, all these mean that such a person can enjoy fresh air and sunlight. If the older people are physically fit, they can also arrange an **apiary** and/or an **herb garden** in their immediate vicinity. In particular, herb gardens have been very popular in recent years. In terms of content, we can provide education and training for all generations at the gardens. Participants thus learn about the importance of biodiversity in

relation to personal health. Workshops can teach you how to use herbs in cooking teas or making other products.



At Fara in Prevalje, a flower-herb garden was set up as part of the Beekeeping and Fruit Farming Training Center, where more than 50 species of flowers, herbs and fragrances are planted on 22 beds. The Learning Center, because of its close proximity to the Fara Nursing Home and the Franjo Golob Elementary School, offers an ideal opportunity to combine usefulness, skills and generations. It is intended for sightseeing by children and adults, but it is also an opportunity for learning, intergenerational socializing and physical activity in nature.



- What are the opportunities to transfer and upgrade this practice in your area?

## 9.2 Anaerobic Activities

*You never get a desire without the power to make it happen. But you still have to do something about it.*

*(R. Bach)*

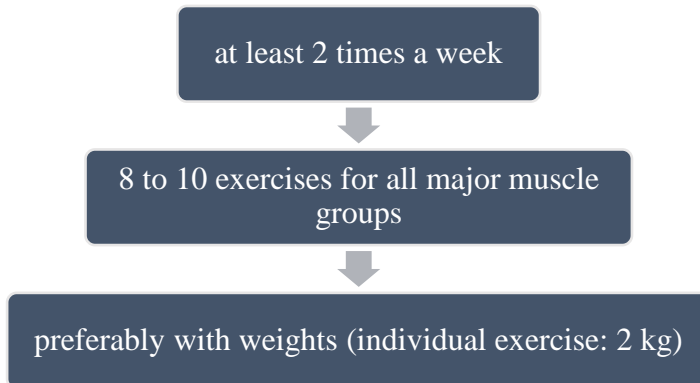


The most common anaerobic sports exercises include **strength exercises** (muscle building and endurance exercises), **mobility exercises** and **balance exercises**. As you age, your body begins to lose muscle mass. This slows down metabolism, the body loses power and daily life is consequently more difficult. If we do not have enough muscle mass, simple tasks such as lifting weights or loads, walking the stairs, etc., become more difficult and, for some, even impossible. Therefore, in addition to aerobic activities, it is very important to introduce anaerobic activities into our lives. These take care of muscle strength and bone strength, speeding up metabolism and reducing body fat.

➔ It is recommended that anaerobic activities be performed **twice a week**. This reduces the likelihood of cardiovascular disease, and prevents obesity, arthritis, lower back pain and type 2 diabetes.

➔ In carrying out the exercises one can utilize his/her body weight.

### 9.2.1 Strength exercises (for muscle strength and endurance)



Picture: How to perform strength exercises

We can use as a **weight** a small bag of dried beans or a bottle of water or a plastic bottle in which we poured some sand or flour.

For **muscle toning**, the following exercises can be considered:

- lifting or carrying loads,
- weight training or fitness exercises,
- gardening.



Among the most common strength exercises for the older people is the **ankle strength exercise**:

- The person practicing stands upright, legs spread at the hips, arms relaxed at the body and looking straight ahead;
- Then he/she begins to lift on his/her toes as high as possible;
- When he/she reaches the highest point, he/she slowly descends towards the ground, to his/her initial position;
- Repeat the exercise 10 to 12 times;
- After a few exercises, the training can be made more difficult by standing on elastic rope and gripping the two ends of the elastic with the hands or with weights in the hands.



**Wall push-ups** are popular for their relatively safe and simple execution:

- The trainee stands facing the wall, a step or two from the wall, the feet slightly wider than the width of the hips;
- He/she is leaning against the wall with his/her palms placed so that his/her position is diagonal;
- Hands are outstretched, gaze is directed to the wall, feet are on the floor;
- He/she slowly and carefully bends his/her arms until a rectangular position in the elbows is reached;
- Then he/she goes back to the starting position and repeats the exercise 10 to 12 times.



After a certain number of exercises, the senior person can perform the exercise by standing slightly away from the wall. If he/she feels strong enough, he/she can also do push-ups on the floor.

➔ Take care of suitable footwear and flooring that should not be slippery so as to prevent a fall.

Those who are unable to complete the entire squat can practice the **half squat**:

- Half squat is achieved by lowering the hips against the ground with a straight back;
- The lowest point of a half squat may be when the thighs are parallel to the ground;
- A single half squat should last 1-2 seconds downwards and equally upwards to the starting position;
- After a few exercises, the practitioner can hold elastic or balls of a certain weight in his/her hands;
- Repeat the exercise 8 to 12 times.



➔ Pay special attention to your knees.

With most exercises, the knee will move inward or outward. Keep your knee straight in the direction of your feet, with your back straight. Also, the shoulder joint of most seniors will not be flexible enough to upgrade the exercise with weights or elastic.



### Passing the ball between your legs:



- The person doing the exercise lifts his/her knees alternately towards the ceiling while passing the ball between his/her legs or under his/her thigh from one hand to the other;
- The trainer must be careful and protect the active senior from falling;
- After a few exercises, the workout can be made more difficult if the hard surface is replaced by a foam balance pad or if the ball weight is changed and the exercise is repeated 10 to 12 times.

For those who have problems standing up, it is advisable to **exercise in a seated position**, whereby the palms of the hands have to be raised against the shoulder (elbow flexion). Keep your elbow close to your body at all times. When the movement is complete, the hand slowly returns to its starting position, whereupon the same movement is performed with the other hand. After a few exercises, the workout can be made more difficult by introducing heavier weights, or an elastic band can be used instead of weights. Repeat the exercise 10 to 12 times and make sure that it is performed only with the hands and not with the whole body.

In the next sitting exercise, the senior trainee lifts an arm diagonally upwards from the starting position and then slowly lowers it back to the starting position. It is especially important that the hips and shoulders are in the same horizontal position. After a few exercises, the workout can be made more difficult with heavier weights, but the exercise can also be performed with an elastic band instead of weights. Repeat the exercise 10 to 12 times for each arm and make sure, like in the previous exercise, that it is performed only with the hands and not with the whole body.



### Exercising knee flexors standing up:

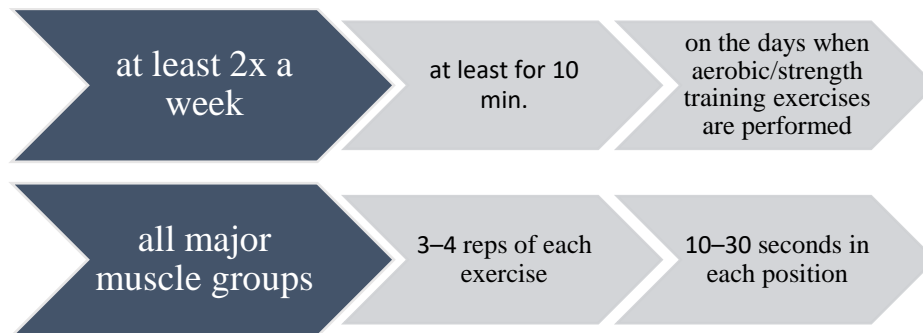
- The performer is standing upright against a batten or chair, with his/her hands resting on the latter and his/her eyes pointing straight ahead;
- Attach a weight or an elastic band around his/her ankle, which is clamped to a batten or chair;
- The knee is bent with the heel upwards towards the buttocks;



- When the end position is reached, he/she stops and slowly lowers the ankle to the starting position.

The exercise is repeated 8- to 10 times for each leg. Make sure that the elastic band does not move the chair.

### 9.2.2 Flexibility Exercises



Picture: How to perform flexibility exercises

To maintain mobility, the following exercises are recommended, among other: lifting your arms above your head, half squats or squatting against a support, yoga elements and certain gymnastics exercises.

➔ The choice of exercises should be adapted to the individual's abilities and possible physical conditions or pathologies (frequent muscle spasms, disc herniation, cartilage wear in the joints, general muscle contraction...).

➔ It is important that stretching exercises should be performed correctly. In order to increase the mobility of a particular muscle you need to hold a particular position in a relaxed way, while at the same time directing attention to the muscle that you are stretching. We always stretch to the “pain threshold”.<sup>17</sup>



- Initially, you need to hold a specific position for 10-15 seconds.
- Lower to the point where there is a slight tension and hold it.

<sup>17</sup> The threshold of pain is the boundary between feeling comfortable and experiencing pain in a muscle while stretching it.

- Muscle stretching should be felt, however it should not be painful but pleasant.

After an easy stretching, the exercise is repeated once more, this time a few inches longer, and also holding for 10-15 seconds. This is called the **developmental stretching**. The tension in the muscle gradually subsides. If the tension during the stretching increases or pain arises, the stretching is incorrect and you either need to change position or stretch less.



- ➔ Stretch properly. Damage occurs if the exercises are performed too quickly or the muscles are stretched too fast and too much.
- ➔ During stretching breath slowly, rhythmically and in a controlled manner; do not hold your breath, but you can deepen it.

If stretching exercises are performed as a stand-alone exercise unit, you should first warm up quickly, in the form of a few minutes of general warm-up, in order to accelerate the blood flow slightly. In any case, the stretching exercises need to be adapted to the older people and their physical limitations should be taken into account.

One of the most popular stretching exercises in this age group is the **seated butterfly**.

- Sit straight, approach your feet toward the body and push your knees as far as possible toward the floor.
- Keep the spine as straight as possible.
- Hold the position so that your knees are as close to the ground as possible.
- You can also place your spine against the wall (for a better sense of a straight spine).
- Exercise can be performed statically (for the development of mobility) or dynamically (for warming up, especially the hip joint).



A very simple exercise that everyone can do is the **outstretch**. The exercise is reminiscent of the morning stretching that the body needs. You can also carry it out purposefully several times during the day.

- Stand with your feet firmly on the floor and join your arms over your head.





- Lift them high towards the ceiling or sky and feel the stretching in the shoulders and upper back.

With **forward bend**, you need to pay particular attention to balance. Perform the exercise as far as your mobility allows.



- Start with slightly bent knees and slowly lower yourself toward the ground. You don't have to touch them, just reach as deep as you can.
- If you are flexible enough, you can straighten your knees and try to make

the forward bend that way.

**Ankle stretching** is performed with the help of stairs or a lower bench. In the latter case, stability is ensured.

- The trainee starts pushing his/her heel placed at the edge of the stairs toward the floor with the knee extended.
- When he/she feels increased muscle tension, he/she stops and waits for the tension to wither away.
- The exercise is then performed with the other leg.
- During the exercise, be careful not to slip from the stairs or bench.



When **stretching the lateral torso flexors**, stand upright side by side with a batten (or similar stable support), with legs spread in the width of the hips, arms are outstretched, eyes pointing ahead.

- The first move is slowly beginning to lean to the side of the batten.
- Then he/she tries to touch the batten with both hands and gradually move the hands down the batten.
- When someone feels tension in the muscles, then immediate stop is advised and holding the position.
- After returning to the starting position the same exercise may start on the other side of the torso.



Some of the more challenging stretching exercises include **stretching the knee flexors and hip extensors**.

- In a sitting position, place both hands on one foot and try to lean forward with the back as straight as possible, against the tips of the toes.
- When increased muscle tension is felt, stop and wait for the tension to subside.
- Then the movement can be increased or repeated again.
- Stretching is subsequently performed against the other leg.



One of the most challenging stretching exercises is **anterior pelvic tilt**.

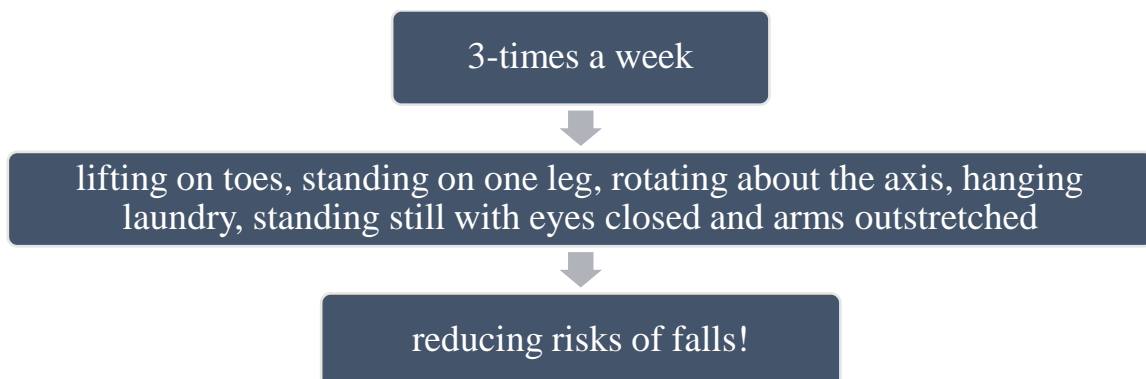
- In the kneeling position, one leg goes forward, so that the angle in the knee of the front leg is greater than 90 degrees, while the knee of the rear leg rests on the floor.
- From this position, we push our hips as far forward as possible, but the knee of the front foot must remain at least above the ankle.
- The second part of the exercise is performed by holding the foot of the rear leg by the hand and pulling it against the buttocks.



The exercise is repeated as instructed on both feet. For the performance of the exercise, it is good to be stable, so you need to touch the floor or the wall with your other hand. If you do not do this, your body is more concerned with keeping the position in a stable position than with stretching or mobility, so touching the floor or wall is

necessary.

### 9.2.3 Balance Exercises



*Picture: How to perform balance exercises*

An impaired balance factor is a leading risk factor for **falls**, and because falls are relatively common in the older people's lives, balance exercises can be key to improving quality of life. Even the older people in good physical condition often fall. Most falls lead to injuries, which in turn result in decreased mobility, loss of independence and increased risk of premature death. Researching older people has found that women fall more often than men, and the risk of falling is increasing with both sexes as they are ageing.

- ➔ Falls may be due to age-related changes (impaired vision, balance, movement, musculoskeletal and cardiovascular systems) and diseases in old age (acute and chronic diseases).
- ➔ Keep in mind that the older people often have a reduced ability for balancing due to their medication.
- ➔ The exercise<sup>18</sup> can be **guided** or the older people can choose to do it **at home**.

Guided exercise is usually done in groups, and individually at the request of the senior trainee. Usually older people come to the gym or to a training room where they perform certain exercises under the guidance of the trainer. This type of exercise



is more appropriate for those older people who are under constant surveillance and thus the risk of injury can be mitigated. If we are a little resourceful, each of the exercises can be adapted for outdoor use.

Older people can also exercise at home, but there is a greater risk of losing control of the movement and consequently falling. Sometimes a trainee can overestimate his/her abilities, make a mistake, fall and be injured. Therefore, it is more advisable to practice in smaller groups, where the trainees receive constant supervision.

- ➔ At any age, physical activity carries a certain risk. Exercise restraints should be kept in mind, as older people have a fear of falling. If they feel safe, they

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<sup>18</sup> It is recommended that participants perform tests before performing balance exercises, with the so-called functional fitness test (Rikli and Jones, 2001) assessing the strengths and weaknesses of each individual, with clinical tests to assess sitting, and with scales to assess balance when standing (Moharič, 2009). All tests are described in considerable detail in the professional literature, nevertheless, medical or other professional staff should be consulted before performing them.

are more confident, perform their assigned tasks more easily, and willing to take exercise more regularly.<sup>19</sup>

The instructor should watch each participant closely, monitor his/her breathing, his/her movements, and be alert if something unusual happens. It is a good idea that before exercising, each participant explains his/her health limitations. If pain occurs at any time, the exercise should be stopped immediately.

→ Space and equipment are also important for safety: the room should be well lit and airy, the floor should not be slippery, and the equipment should not be hazardous to participants.

It is advisable to **include balance exercises in your daily activities.**



- In which daily activities can we include balance exercises?
- Have you tried washing dishes with one foot in the air or washing your teeth by catching balance at the tips of your toes?

- Beginners who have an impaired balance can exercise twice a week, with five exercises per training unit; one exercise should last for 10 to 15 seconds.
- If they have a very weak balance, they should not perform the exercises on their own, as there is a high risk of falls.
- Over time, as seniors adjust to the workout, they may begin increasing their workload by extending the workout time with 30 seconds and increasing the number of sets (reps) to 2 or 3.

→ The **principle of gradualism** must be followed more consistently in the training of older persons.

→ Training **intensity** can be increased by:

- extending the load duration,
- increasing the number of repetitions,
- shortening the duration of breaks.

→ Training **difficulty level** can be increased by:

- changing the quality of the support,

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<sup>19</sup> Best-Martini and Botenhagen-DiGenova, 2003.

- resizing the support surface,
- moving the center of gravity of the body,
- exclusion of eyesight, and
- by changing the position of the head (Rogers).

Balance exercises can be done **standing up, with partial support, sitting or lying down**. It should include changing sensory information, altering the supporting surface, shifting the center of gravity in different directions, disturbance of balance by external resistance, and the need for additional attention, and it is also desirable to perform **strength exercises** in addition to balance training. By performing the exercises with the eyes closed, by moving the head or by an unstable base, the difficulty of performing the exercises is affected. Exercise can also be made more difficult by turning off the visual system (closing the eyes), thus disrupting the balance system, so that we have to rely more on the somatosensory system.<sup>20</sup>

After initial warm-up, the **most common exercises for balance** are ‘stepping forward with rotation,’ ‘touching rings,’ ‘standing up from a chair,’ ‘moving with a partner,’ ‘stepping over an object,’ ‘bending your knees,’ ‘moving your leg away,’ ‘performing a roll with your eyes closed,’ and ‘throwing a ball against the wall.’



**Stepping forward with rotation:** The senior trainee steps forward on the foam pad, with one foot on the pad and the other on the floor. He/she has his arms outstretched forward. He/she then first rotates the torso to one side and then to the other. Then he/she returns to the starting position. He/she replaces the standing leg after each movement. In doing so, make sure that the pad is lying firmly on the floor.

**Exercise with rings:** Use plastic rings or cut them out of colored paper. Make sure the rings are firmly on the floor and do not slide. The person stands on colored rings, with both feet on the same ring. He/she then steps on any free ring. He/she chooses his/her own direction of movement. He/she must hold his/her position for 2 seconds on each ring



<sup>20</sup> The somatosensory system allows the detection of stimuli of four modalities: type (touch, pressure), proprioception (sensory perception of one's own body), temperature, and pain. These allow us to explore our immediate surroundings, as well as provide us with important information about what is happening in our body.

before stepping on a new ring. He/she steps on it with both legs at the same time, and then with one leg on the next ring. If the performer has good balance, he/she can step on the rings with one leg.



**Standing up from a chair** is a workout that starts in a sitting position with your feet positioned on a foam pad at the width of your shoulders. Rest your hands on your thighs. You should sit in a chair with a backrest and a support so you can rest. If the chair does not have a support, you could fall quickly. The chair should

lean against the wall and the foam pad should be firmly placed on the floor. When you stand up from the chair, hold your position for 2 seconds and then return to the seated position.

When **moving with a partner**, the senior trainee is standing on a foam pad with his/her feet shoulder-width apart, his/her knees slightly bent. He/she holds hands with a partner or instructor, with a strong grip. The partners push and pull each other in different directions, and the latter must assume the original position. The partner may also exhibit specific movements that the other senior imitates. Particular attention should be paid to keeping the pad firmly on the ground.



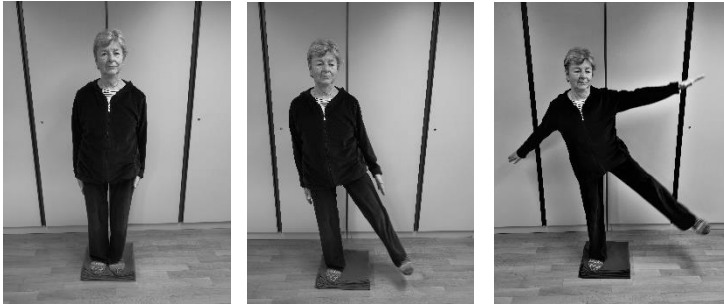
**Stepping over an object** requires a foam pad or a low bench. The person stands on a foam pad with one foot, with the other touching the ground in front. He/she then steps with his/her rear foot over the pad, holds the position for 2 seconds, and steps over the pad back to the starting position. Halfway

through the exercise, he/she replaces the standing leg.

**Bending the knee** is performed by a wall which provides support. The person is standing against the wall, if necessary, he/she can touch the wall. One leg is lifted forward, the angle between the hip and the knee



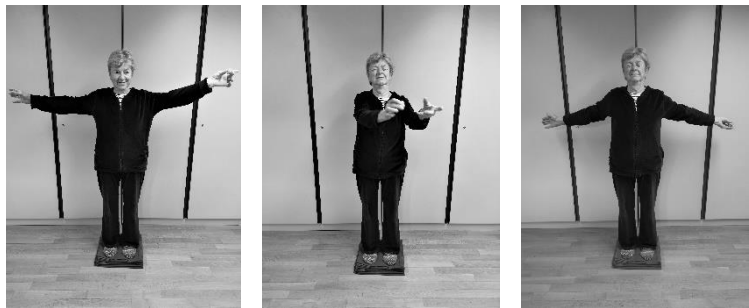
is 90 degrees. He/she then lowers his/her foot to a near complete stand but does not put his/her foot on the floor but rather bends it backwards. He/she returns to the starting position with the same motion. Halfway through the exercise, he/she replaces the standing leg. The senior trainee should not hold on to the wall at all times if possible.



**Moving your leg away** falls among the simpler balance exercises. The starting position is the upright stand. A foam pad is recommended, which in turn may reduce the balance of some, so it should be

used according to the capacity of the individual. The performer moves the leg aside and then back to the starting position. In doing so, he/she can help him-/herself with his/her hands outstretched. When he/she returns to the starting position, he/she replaces the standing leg.

In **closed-eyes exercises**, we need to watch over the senior trainees at all times because the balance is significantly reduced. We use lighter objects that also fit well into the fist. The old person stands on a foam pad, with his/her arms outstretched to the sides, and holds a smaller object in his/her hand. With his/her eyes closed, he/she passes the object from one hand to the other. The arms are outstretched all the time.



The **throwing of a ball against the wall** is performed from a starting position that is 0.5-1 meters from the wall. A ball is held in the senior's hand, with the front of his/her body facing the wall. He/she then throws the ball into the wall and tries to catch it every time. He/she should throw the ball at different points on the wall.

## 10. Smart Gadgets for Monitoring Physical Activity



*If you do not progress, you will decline. (Latin proverb)*

Today, it is impossible for an individual to keep track of all the progress and technological change, even if one keeps trying. Here, however, we would like to highlight useful solutions for monitoring your movement activity offered by smartphones, smartwatches and smart bracelets. Have you tried them before? If you already know how to use them, then you know that smart gadgets are just smart enough for the average wit.

You can choose smart gadgets based on price, quality, design, or other features. Then, you can download apps to your smartphone that will track your basic or additionally selected activities, like counting steps and measuring calories burned. A practical and easy choice is a smart bracelet that is capable of measuring your heart rate, offering Bluetooth connectivity, counting steps, measuring distance and calories burned, monitoring sleep and calculating the daily objectives regarding the number of steps. The more advanced ones are water and dust resistant and equipped with an accelerometer, gyroscope, barometer and heart rate monitor. It is possible to connect the smartphone to smartwatches which usually have many programs loaded that make it much easier to use many of the features of the phone. You can wear a smartwatch on your hand at all times to accurately record your fitness and monitor your progress as it measures the number of steps, distances made, the number of calories burned, heart rate, time and quality of sleep, body temperature, acceleration and cardiovascular effort. It also allows the user to listen to music, make contactless payments, and use reliable map orientation when going to hills or to mountains.

For a little more money, you can also invest in **smart shoes** that have motion sensors that monitor and send motion data to your smartphone, or even heating that you activate through an app on your smartphone, as well as motion tracking, wireless charging, and damping measurements. It connects to the smartphone and the app can manage temperature, check the number of steps (certainly much more accurately than smart watches and bracelets) and burnt calories.



## 11. Become a Promoter of Physical Activity for the Older People



*We all age. Some by getting older, others by being old.*

*(John O'Donohue)*

### 11.1 Why is this an Opportunity?

Most people search for something all their lives. They are looking for themselves, for happiness, challenges, new opportunities to prove themselves, to succeed, to grow personally... Dealing with the promotion of physical activity for the older people can be all that and more. It can mean an opportunity for

- filling useless, empty hours of the day;
- voluntary activity as a contribution to the well-being of society, your community;
- expanding your social network;
- building on existing knowledge of physical activity, health, psychology;
- descent into completely new waters of interest, new education and knowledge;
- self-discovery: of your physical condition, leadership skills and other personality traits;
- cultivating your own healthy mind and body and educating others according to these principles; and
- your new career...

### 11.2 Is this Me?



*All progress takes place outside the comfort zone. (Michael John Bobak)*

If you are considering becoming a physical activity promoter for older people, the first step is to make a decision. If you are already engaging with older people in your job, within a field of interest or volunteer activities, this may be a natural extension of your career.

You may have accidentally stumbled upon this manual and realized that it was intended for you, since it crossed your path at exactly the right time. Maybe someone suggested you would be an ideal person for such an activity, or maybe your browser (who knows you really well) directed you here. We invite you to answer the questions below to help you make your decision.

The activity of a physical activity promoter can in some respects be equated with the work of a personal trainer, since it is about encouraging people to move and steer them towards physical activity.

At the Faculty of Sport, a diploma thesis (Korošec, 2019) was elaborated on the topic of knowledge, skills and attributes of a modern personal trainer for an ethical, effective and professional work in the labour market. The knowledge you need touches on the fields of **biology, kinesiology, psychology, and**



**sociology**. A personal trainer, as well as a promoter of physical activity, is not only limited to the planning and implementation of the exercise process, but should also motivate, inform and guide others. Special knowledge of working with the older people, general knowledge on sports, and communication and organizational skills are extremely useful. Knowledge about healthy nutrition will also come in handy, and you will certainly be upgrading your skills in many areas over time.



### Answer the following questions honestly:

- What is your experience with working with the older people? What do you already know about this? What forms of recreation are close to you and you master well? What knowledge and skills would you need to upgrade?
- Do you have a (refreshed) first aid course? Where can you do this?
- How resourceful are you in contingencies? How would you react in case of group conflicts, of injury?
- Are you ready to further your education and collaborate with experts in various fields?
- Do you know anyone who is already good at this and could become your mentor?
- Do you like working with people? What do you like about it? Are you a communicative person?
- How good a motivator are you? Have you ever succeeded in impressing people with an idea? What are your key attributes that can help you?
- Can you listen to people without interruption and maintain eye contact?
- Do you know how to contact and ask a question so that a person answers you honestly and gives you key information?
- How honest are you with yourself and others?
- Are you worthy of trust? Do you know how to be discreet?

You may perhaps also get to know more about your personality by taking a personality test, e.g. [16 personalities](#).

→ When working with people, it is useful to have a mature understanding that the more you know yourself, the more you will be able to use your advantages and eliminate your weaknesses.

### 11.3 How to Set up Your Own Group?



*The only thing we can get high on is life. It is a mild intoxicant but with long lasting effects. (Anthony de Mello)*

If you were challenged to form a senior group that would regularly and happily participate in activities organized or led by you, who would be motivated to work with you with suggestions and bring in new members – how would you go about it?

→ The challenge can be addressed in the same way as writing a business plan, because its essence is planning carefully the steps from **an idea to its realization**.

- a) **Analysis of the environment:** Explore the environment in which you live. What is the size of your target age group, what are the results of opinion polls on the popularity of the physical activity offer available, and what do people (in your opinion or based on the questionnaires you distribute) miss? You can contact relevant community actors, municipalities, statistical office, etc. for information.
- b) **Supply analysis:** What is already happening in this area, what groupings and institutions are operating and what are they offering, are people already connecting in existing groups (e.g. groups such as the School of Health)?
- c) **Analysis of trainees:** Who is your "ideal" trainee, what are his/her habits and patterns in your environment and what are their concrete needs and motivations?

→ The essence of any success in working with people is to know the target groups in detail.

Have you ever heard of **Empathy Map**? We will take it from the business world. The model emphasizes that in addition to demographic traits, also important are the so-called soft elements that will affect whether a person is willing to buy our product/service. With the precise answers

to the questions below, we will be closer to a successful solution – an organized physical activity program.

1. How does a person think and feel (values, interests, motives, concerns, obstacles)?
2. What does he/she say and do (behavior, image, attitude towards others, i.e. how he/she expresses him-/herself)?
3. What does he/she hear (what does he/she talk about with friends, co-workers, family, what does he/she hear from them, and who affects him/her)?
4. What does he/she see (who are his/her friends; what kind of environment does he/she live in; what kind of problems does he/she have; what products/offers interest him/her)?
5. Pain (fears, risks and obstacles to achieving goals or fulfilling desires)?
6. Achievements (what does he/she want to achieve, how and how does he/she measure his/her success)?

- d) **Marketing plan:** Depending on your analysis, come up with an attractive offer of interest to your target audience. Decide whether it is a paid or voluntary activity and define exactly what will be paid and what is free. Define your idea – what would be the added value/benefit of your offer, what would you do better/differently than others already engaged in similar services.
- e) **Marketing:** Through which media, how often, and how to spread the voice about your offer. Social networks, newspaper or radio ads, leaflets, or word of mouth advertising?



**Let's be honest.**

- Does the idea of starting a new group, new offer in your environment makes sense? Would it be better to join any existing ones and develop your ideas there?
- Consider the points above and write a list of PROS and CONS.

**Here are some practical tips on how to form your first group:**

- Find out among your close relatives, acquaintances, neighbours, whether they would like to get involved or if they know anyone who would be interested. Sometimes we don't know what we need, but when we hear it, we know! Don't mince words and spread the news on your **social network** without shame.
- Take advantage of **social media networks** like Facebook, Instagram, Snapchat, YouTube, Twitter, etc. If you are not present on the social media or skilled in their use, contact your children, grandchildren, acquaintances of different generations who use

different applications – they will definitely be happy to help you design posts or advertisements or stories.

- Even if it is a free, passion-based activity, you can spend a few euros on printing **leaflets** to be distributed to public institutions (ask for permission first!).
- Visit the **nursing homes and intergenerational centers** and explain to them your wishes, ideas and goals. Connect with experts working there who can spread the news about your offer during their rounds or may perhaps actively engage with expert opinion on your exercises and point out potential obstacles (bureaucratic, medical, financial, infrastructural...).
- The best **advertisement** is **word of mouth**, i.e. the one spread by users/clients/customers who have tried the service/product/offer... No big deal if you start with a small number, because satisfied trainees will quickly make sure there will be more than enough of them.



- How big a group do you want?
- With how large a group will you get optimal results?



*Do you want to know why orange has revitalized Slovenian parks, greenery and forest clearings? Truth be told - live it is indescribably better, but even a brief virtual introduction to Nikolay Grishin's 1000-gesture method is [exciting](#).*

An excellent example of good practice that is spreading like an unstoppable fire in the manner described in the last indent is the **School of Health Society**. It has been operating since February 2006 and has set up branches all over Slovenia, expanding mainly on the basis of acquaintances. Individuals of their own interest attend classes with groups that already master the **1000 movements method**, and then transfer it into their environment, into their community, or invite more experienced members to visit and teach them at a chosen new location. The method is about 51 exercises that stretch all the

joints and muscles and have been described in his comprehensive **School of Health Program** by its founder, Nikolay Grishin. Exercise improves blood circulation, improves muscle strength, balance and flexibility, i.e. physical fitness and, consequently, well-being and performance, which ensures longer independence. **From Monday to Friday, half an hour of outdoor exercise is done regularly, with no excuses, regardless of the weather.** The exercises are performed in a carefully selected sequence, as a rule, gradually and by learning to breathe properly. Together with the members of the Carinthian group **Javornik School of Health**, we carried out the activities described in the following chapters in Ravne, Carinthia as part of the project, and monitored them from the very beginning (March 2019). At Javornik, six friends who started their regular half-hour morning movement have grown into a group of more than twenty members within a few months. They met with the members of the Slovenj Gradec and Mežica groups, and for a week the latter became their mentors and taught them the basics of the **1000 movements method**. They encourage each other during exercise and otherwise. They attend education programs, meet with other groups and boldly upgrade their work. In the first months of operation, they also showed their adherence to the idea by purchasing orange t-shirts with the society's logo, as well as lighter summer and warmer autumn jackets. An attractive colour, an engaged group leader, a sovereign instructor – everything is going so well that the group is constantly growing and now has 25 members.

If you do not already have a Health School group in your area, and if you want to seriously promote physical activity for the older people, it is wise to consider the possibility of transferring this practice into your environment, as it has proven to be good in Slovenia. The reasons given for the success of the society by President Zdenka Katkič are the following:

- there is a need for outdoor exercise in the immediate vicinity of the home;
- no special equipment or transport required;
- there is no competition or feelings of shame about possible wrong steps during exercise;
- the trainer explains and shows the exercise and everyone does his/her best; and
- continuous training of trainers.

## 11.4 Assisting with Exercise Planning

Taking into account the recommendations we have outlined in all the chapters and the exercises we have considered we have also prepared a monthly physical activity plan intended for the promoters of older people's physical activity in practical work with groups. It can serve as an idea template for planning your own hours.

- ➔ For older people over 65, 150 minutes of moderate exercise per week is recommended, which could be achieved with 30 minutes of exercise each weekday, but since the group is likely to be more diverse, it seems reasonable to plan 45-minute workouts that are shortened if necessary, whereby each participates to the best of their ability (with short breaks if necessary).

In planning, we assumed that you would initially perform these activities voluntarily, at least initially without the payment and assistance of sponsors, and proceeded from the point of view of the least possible financial burden. Our proposal thus consists of exercises that can be performed in nature, and which (for the most part) do not require special aids and equipment. We also advocate the positive effects of moving in the fresh air (today's people spend too much time indoors) and the School of Health has convinced us that this is feasible in any weather. The suggestions are accompanied by links to clips where you can see them in practice and then adapt them to the needs and abilities of your group. You can connect with volunteers from different health societies and communities, fitness centers or providers of various sports services to conduct specific exercises, sometimes in the context of promotional activities, to support your efforts, or just for the sake of their good will.



*An expertly prepared one-week physical activity plan can be found in the [NIJZ publication](#).*

The plan is based on **guidelines for promoting and preserving the health of the older people** which recommend:

- ➔ At least 30 minutes of moderately intense aerobic activity five days a week or at least 20 minutes of intense aerobic activity 3 days a week;
- ➔ Exercise at least twice a week for muscle strength and endurance exercises, from 8 to 10 exercises for all major muscle groups;
- ➔ Exercise at least twice a week for mobility exercises, with a duration of 10 to 30 seconds in each position, with 3 to 4 repetitions;
- ➔ Exercise three times a week to maintain balance.

The table shows only different examples, examples for different abilities, physical conditions, age... The trainee/promoter should prepare his/her own plan according to the group, possibly after finished physical fitness test for the trainees/participants and add individual adjustments for every individual. Many of the recordings are in English, some are in Slovene, but by entering keywords in the search engine you will easily find the recordings in your own language. Warning: Sometimes a clip is removed or deleted; we recommend that you enter your keywords into the search engine and choose from the results that are offered.

*Life is nicer when spiced up with humor. You never know when the opportunity for an unexpected dose of laughter will come. Why not make a fun point in the group - for plenty of laughs while [learning choreography](#), as in the video.*



	AEROBIC EXERCISES	STRENGTH EXERCISES	MOBILITY EXERCISES	BALANCE EXERCISES
MON	Moderate 30 min.: Nordic walking  <a href="https://www.youtube.com/watch?v=9nOud-C9Hrs">https://www.youtube.com/watch?v=9nOud-C9Hrs</a>		15 min.: Squats, arms lifting, yoga elements  <a href="https://www.youtube.com/watch?v=v8eW75zNBYA">https://www.youtube.com/watch?v=v8eW75zNBYA</a>	
TUE	Intense 20 min.: Make a list of tunes and dance: guided, solo, in pairs (Bluetooth speaker lets you do it anywhere)  <a href="https://www.youtube.com/watch?v=hMvAJ9cG0zU">https://www.youtube.com/watch?v=hMvAJ9cG0zU</a>	15 min.: Sitting exercises to strengthen the torso, spine; preferably trainees hold one plastic bottle in each hand  <a href="https://www.youtube.com/watch?v=6Ts-deSDnRM">https://www.youtube.com/watch?v=6Ts-deSDnRM</a>		10 min.: Basic asana tadasana (tree, palm tree), i.e. yoga positions  <a href="https://www.youtube.com/watch?v=v49WzOti7kY">https://www.youtube.com/watch?v=v49WzOti7kY</a>
WED	Moderate 30 min.: Race walking, every eight minutes you interrupt it with running - a few meters or up to 2 minutes		10 min.: Exercises to be done anywhere, also at home  <a href="https://www.youtube.com/watch?v=TWtaSxV_2IQ">https://www.youtube.com/watch?v=TWtaSxV_2IQ</a>	5 min.: Exercises against a chair  <a href="https://www.youtube.com/watch?v=BNC4bi3Ucac">https://www.youtube.com/watch?v=BNC4bi3Ucac</a>
THU	Intense 20 min.: Beginner aerobics (speaker, Bluetooth and fun anywhere!)  <a href="https://www.youtube.com/watch?v=iC_UG8yVGOw">https://www.youtube.com/watch?v=iC_UG8yVGOw</a>	15 min.: Strength exercises for the entire body by using own weight (and weights/bottles)  <a href="https://www.youtube.com/watch?v=JejTelL05Qw">https://www.youtube.com/watch?v=JejTelL05Qw</a>		10 min.: 7 simple balance exercises (e.g. lifting leg forward, sideways; standing on one leg; walking in a (straight) line; stepping on a footstool)  <a href="https://www.youtube.com/watch?v=BNC4bi3Ucac&amp;t=108s">https://www.youtube.com/watch?v=BNC4bi3Ucac&amp;t=108s</a>
FRI	Moderate 30 min.: Step aerobics (you need a step, footstool ...)  <a href="https://www.youtube.com/watch?v=681IGH5PtWY">https://www.youtube.com/watch?v=681IGH5PtWY</a>		15 min.: Tibetan exercises  <a href="https://www.youtube.com/watch?v=gY1rwsWllrs">https://www.youtube.com/watch?v=gY1rwsWllrs</a>	
MON	Intense 20 min.: Rhythmic exercise for the older people  <a href="https://www.youtube.com/watch?v=7aHK2sgjBCM">https://www.youtube.com/watch?v=7aHK2sgjBCM</a>		20 min.: Simple Tai Chi exercises  <a href="https://www.youtube.com/watch?v=tLct1v6Qdok">https://www.youtube.com/watch?v=tLct1v6Qdok</a>	5 min.: Balance tips according to the Feldenkrais method  <a href="https://www.youtube.com/watch?v=vGa5C1Qs8jA">https://www.youtube.com/watch?v=vGa5C1Qs8jA</a>

TUE	Moderate 30 min.: Race walking on the spot (adapt the tempo!)	15 min.: Exercises with a band or a towel, also sitting down		
	<a href="https://www.youtube.com/watch?v=enYITYwvPAQ">https://www.youtube.com/watch?v=enYITYwvPAQ</a>	<a href="https://www.youtube.com/watch?v=iRWHO6ywwunA">https://www.youtube.com/watch?v=iRWHO6ywwunA</a>		
WED	Intense 20 min.: Jumping over a jump rope, interrupted by stepping in place	15 min.: Exercises for strengthening the legs, knees with elements of yoga		10 min.: Exercises in and around a chair
		<a href="https://www.youtube.com/watch?v=QuEaZrGGnC4">https://www.youtube.com/watch?v=QuEaZrGGnC4</a>		<a href="https://www.youtube.com/watch?v=z-tUHUNPStw">https://www.youtube.com/watch?v=z-tUHUNPStw</a>
THU	Moderate 30 min.: Cardio workout with music (speaker, Bluetooth and fun anywhere)		15 min.: Stretching exercises on a chair	
	<a href="https://www.youtube.com/watch?v=xZ2V84FfWaw">https://www.youtube.com/watch?v=xZ2V84FfWaw</a>		<a href="https://www.youtube.com/watch?v=YGRje8p5gbc">https://www.youtube.com/watch?v=YGRje8p5gbc</a>	
FRI	Moderate 30 min.: Cycling (a trip with public bicycles?)		15 min.: Greeting the Sun	
		<a href="https://www.youtube.com/watch?v=Go1IHeffxVE">https://www.youtube.com/watch?v=Go1IHeffxVE</a>		
MON	Moderate 30 min.: Football	10 min.: Exercises with body weight against a chair		5 min.: Exercises on one leg
		<a href="https://www.youtube.com/watch?v=Qn0QFTVow3c">https://www.youtube.com/watch?v=Qn0QFTVow3c</a>		<a href="https://www.youtube.com/watch?v=PKYrQFWieQE">https://www.youtube.com/watch?v=PKYrQFWieQE</a>
TUE	Intense 20 min.: Slow run (when too demanding – walking)		25 min.: Stretching exercises against a chair with Pilates elements	
			<a href="https://www.youtube.com/watch?v=u-R8O4ap1LY">https://www.youtube.com/watch?v=u-R8O4ap1LY</a>	
WED	Moderate 30 min.: Race walking to the nearby hill and back	10 min.: Exercises for strength and cardio with against or in a chair, with plastic bottle, weight or without		5 min.: Yoga balance exercises
		<a href="https://www.youtube.com/watch?v=PDe3vWszmUA">https://www.youtube.com/watch?v=PDe3vWszmUA</a>		<a href="https://www.youtube.com/watch?v=hya4-oEqmA">https://www.youtube.com/watch?v=hya4-oEqmA</a>

THU	Intense 20 min.: Basketball		15 min.: dynamic stretching - from shoulders, elbows, wrists, neck, through torso, to legs and ankles	10 min.: Leg exercises and balance exercises in a chair (leg lift, squats)
	<a href="https://www.youtube.com/watch?v=8hS2MwlpZek">https://www.youtube.com/watch?v=8hS2MwlpZek</a>		<a href="https://www.youtube.com/watch?v=FemRIabAUKw">https://www.youtube.com/watch?v=FemRIabAUKw</a>	<a href="https://www.youtube.com/watch?v=k-NBhc2EgX0">https://www.youtube.com/watch?v=k-NBhc2EgX0</a>
FRI	Moderate 30 min.: Race walking in the park	20 min.: Guided exercise that covers exercises for strength, endurance, balance, mobility		
	<a href="https://www.youtube.com/watch?v=q3JYT_jKs7Y">https://www.youtube.com/watch?v=q3JYT_jKs7Y</a>	<a href="https://www.youtube.com/watch?v=8E8iCYG16ho">https://www.youtube.com/watch?v=8E8iCYG16ho</a>		
MON	Intense 20 min.: Zumba for seniors	10 min.: Exercises for upper body strength performed in a chair; you can use plastic bottles instead of weights	10 min.: Exercises for the mobility of the whole body, stretching in and against a chair	5 min.: Exercises on one leg
	<a href="https://www.youtube.com/watch?v=vpyYej_S_wE">https://www.youtube.com/watch?v=vpyYej_S_wE</a>	<a href="https://www.youtube.com/watch?v=PBMi4Gr_9Is">https://www.youtube.com/watch?v=PBMi4Gr_9Is</a>	<a href="https://www.youtube.com/watch?v=JFi-kOuZns">https://www.youtube.com/watch?v=JFi-kOuZns</a>	<a href="https://www.youtube.com/watch?v=t5Mnjb3tvEc">https://www.youtube.com/watch?v=t5Mnjb3tvEc</a>
TUE	Moderate 30 min.: Volleyball	15 min.: Exercise with weights in a chair		
		<a href="https://www.youtube.com/watch?v=Wa8Fk8TaXPk">https://www.youtube.com/watch?v=Wa8Fk8TaXPk</a>		
WED	Intense 15 min.: Dancing in rows	30 min.: Yoga in a chair		
	<a href="https://www.youtube.com/watch?v=LUVX54tBZNg">https://www.youtube.com/watch?v=LUVX54tBZNg</a>	<a href="https://www.youtube.com/watch?v=k4ST1j9PfrA">https://www.youtube.com/watch?v=k4ST1j9PfrA</a>		
THU	Moderate 30 min.: Running		15 min.: 6 exercises on a chair, pad, with a towel	
			<a href="https://www.youtube.com/watch?v=KcdkySvCRCC">https://www.youtube.com/watch?v=KcdkySvCRCC</a>	
FRI	Moderate 30 min.: Sprint 10 m, walking 2 min., slow run 1 min. (repeat)	15 min.: Exercise sitting down or standing up for the whole body		
		<a href="https://www.youtube.com/watch?v=8CE4ijWlQ18">https://www.youtube.com/watch?v=8CE4ijWlQ18</a>		

The following table gives a specific example of how to schedule a physical activity lesson with your group, what you need to pay attention to, and what you need to alert participants to.

TIME	SUBJECT	PROMOTER	PARTICIPANTS	MATERIAL...
00:00–05:00  5 min	<b>INTRODUCTORY GREETING</b> - greeting - goals or objectives of the exercise course - questions/comments from participants	- include a joke, anecdote, challenge to break the ice when starting - be relaxed and smiling, make eye contact with participants and share your positive energy - observe the participants	- they line up or make a circle - respond to the promoter's greeting	- the promoter and participants are dressed in comfortable clothing and sports shoes
05:00–15:00  10 min	<b>WARMING UP</b> - head rotation and tilting left, right, forward, backward - circling with the hands forward, then back; large circles, and then smaller circles - circling with the hips - body leaning and deflection - lifting on toes - lunges (left, right foot) - jumping in place	- start with a gradual warm-up and observe the responses of the participants - raise awareness of breathing - remind everyone to do their best and at their own pace, nothing should cause pain - observe the participants, encourage them	- they listen to the instructions and do the workout	
15:00–25:00  8–10 min	<b>AEROBIC EXERCISES</b> - skipping rope - slow running or brisk walking on a particular route - combination of exercises	- when everyone is warm enough, you begin the aerobic workout - remind everyone that the next minutes are not a competition, but that everyone should exercise in such a way that they will have slightly accelerated heart rate, and can still talk and feel safe - observe the participants, take a short break in between if necessary	- they listen to the instructions and do the workout - brief rests if necessary	- skipping rope or other accessories

<p><b>25:00–30:00</b></p> <p><b>5 min</b></p>	<p><b>STRENGTH EXERCISES</b></p> <ul style="list-style-type: none"> <li>- raising hands and stepping back and forth simultaneously: from the bottom up; side by side; with outstretched arm, then with bended; slow descent from different positions</li> <li>- change sides</li> </ul>	<ul style="list-style-type: none"> <li>- exercises can be done sitting or standing by a chair, but not necessarily</li> <li>- with one hand they hold a chair, in the other hand they have a weight</li> </ul>	<ul style="list-style-type: none"> <li>- they listen to the instructions and exercise</li> </ul>	<ul style="list-style-type: none"> <li>- weights (or arrange for each to bring two filled bottles, etc.)</li> <li>- chair</li> </ul>
<p><b>30:00–35:00</b></p> <p><b>5 min</b></p>	<p><b>EXERCISES FOR MOBILITY and STRECHING</b></p> <ul style="list-style-type: none"> <li>- whole body streches</li> <li>- forward bends</li> <li>- lateral bends</li> <li>- (half)squats</li> </ul>	<ul style="list-style-type: none"> <li>- they should always try to make progress, but emphasize that they should stop before the pain limit</li> </ul>	<ul style="list-style-type: none"> <li>- they listen to the instructions and exercise</li> </ul>	
<p><b>35:00–45:00</b></p> <p><b>10 min</b></p>	<p><b>RELAXATION and CONCLUSION</b></p>	<ul style="list-style-type: none"> <li>- be sure to ask what the physical well-being of the individuals is, what they liked and what they could improve upon further training</li> <li>- whatever style of teaching/exercise you choose, you can conclude with a song, bow, socializing, joke... so you part with goodwill</li> </ul>	<ul style="list-style-type: none"> <li>- participants lie down on mats and rest, breathing deeply</li> <li>- they listen to the instructions and exercise</li> <li>- participate in the closing conversation</li> </ul>	<ul style="list-style-type: none"> <li>- possibly mats, otherwise standing relaxation</li> </ul>

The unexpected should also be expected in life. It may very well be the case that your group may attract a person who wants something more adrenaline than everyday bread and water! And because this person is very charismatic and persuasive, suddenly half the participants want to experience an extreme sports experience! How to approach this challenge?

*A free-spirited shattering of the stereotypes by the older people who were not told that at a certain age certain things are no longer possible. Inspiring [extreme seniors!](#)*



**Adrenaline** is a state of heightened excitement, a psychophysical activity that can basically be achieved with any sport activity. In some activities, however, the likelihood of an individual being overwhelmed by an "adrenaline bomb" is much higher. These are the so-called extreme sports (again – for some people the activity can

be very extreme, for others the same activity is just a bit special, while the third consider it to be nothing special and yawn when walking in the highlands), also called "risky sports", which include different elements of high speed, danger, height, acrobatics. Due to extreme effort there is a high risk of injury, and the question arises as to whether there is a spirit of sport in this extreme action or if it is mostly about addiction.

In Slovenia, **adrenaline sports** are popular because of the success of Slovene athletes on a global scale, e.g. alpinism (Tomaž Humar, after climbing the Dhaulagiri (8167 m), was proclaimed the best alpinist in the world), paragliding (multiple world champion Irena Avbelj), rafting (Bobri, five-times world champions), climbing (currently six times world champion Janja Garnbret), as well as due to the natural features of Slovenia, with its diversity (mountains, rivers, lakes, seas, forests, valleys, gorges, canyons...). They provide possibilities for additional tourist offer (e.g. numerous adrenaline and adventure parks mentioned in this [list](#)).

Predlogov potencialnih aktivnosti, ki jim lahko rečemo ekstremni športi, je ogromno. Za There are many potential activities that can be called extreme sports. For older people who want a strong adrenaline rush, physical fitness, medical opinion and mental health should be taken into account more than usual in sports. And if everything is checked and secure, if there is desire to propel blood through the veins with something "extreme", and different, there will definitely be something on this [list](#) that will be appropriate for the



age, abilities and expectations of the candidate. Honest communication is important so that no problematic medical conditions or fears should be hidden. (Fight the phobias with a specialist.) Therefore, we recommend that you only go out on such trips when you know and trust the group very well. Then proceed with team building with a zipline excursion?

## 12. Practical Examples



*Getting old is more of a task than a condition. If resolved, age can be as beautiful as youth, and death is not the end, but the fruit. (Eugen Diederichs)*

### 12.1 Using a Smart Bracelet

Members of the Javornik School of Health, who have been with us for months, have been equipped with smart bracelets to monitor their physical activity for ease of use and multifunctionality. Smart bracelets are synchronized with the phone on which the application is downloaded. They provide the following features:

- showing time;
- counting steps;
- overview of the distance traveled;
- estimate of the calories consumed;
- display of heart rate, blood pressure and oxygen in the blood;
- monitoring sleep (deep sleep, shallow sleep, waking) and evaluating its quality;
- display of the last three messages;
- vibrating in case of inbound calls;
- vibrating if someone sends an SMS;
- vibrating also for alerts of other applications and displaying them;
- enabled setting of the alarm (8 alarms);
- if paired with your phone, you can hit "Search Bracelet" and it vibrates;
- enabled taking of photos,



- setting the reminder to move;
- raising your hand illuminates the screen,
- do not disturb mode,
- deleting all data.

## 12.2 Cycling

During European Mobility Week, we organized **Bike Day 2019** to promote cycling as an alternative form of mobility. In the municipalities of Prevalje and Ravne na Koroškem, with the resources of European cohesion policy, a bike rental system was funded among other, as well as the building of a bike station, and regular and/or electric bicycles. We were joined by 25 cyclists of all ages, from high school students to seniors. We have warned that cycling is not appropriate for those with vision, hearing or balance problems who experience sudden nausea, pain or dizziness, as well as for people with certain illnesses. We emphasized that cycling is good for those who have knee problems, as with this moderate activity we exercise the body, with the movement in nature we consume fresh air, with the intergenerational socializing we exchange different views on open topics and make new contacts, which all contribute to good feeling and reducing (any) stress in life. And we are also reducing our carbon footprint in the process. Our symbolic cycling tour with accompanying activities has helped with all of this, so we strongly recommend this activity as a regular activity or a form of transportation instead of a car.



## 12.3 Hiking

With over 10,000 kilometers of hiking trails, Slovenia is a wonderful destination for hikers of all ages and all fitness levels. Excursions to the nearby hills or mountains are an ideal opportunity of socializing for different generations, where we do something good for both our body and soul. Adrenaline enthusiasts, thus also the older people who maintain excellent fitness,



will find enough mountain peaks throughout Slovenia to invigorate them – not only the highest mountain Triglav which, despite its 2864 m, is not the most demanding (They say mountain Mrzla gora (Cold mountain) gives a person the chills or the thrills!).

*Are you a tourist or looking for ideas for a hiking trip for your groups? [Explore!](#)*



Together with the members of the Javornik School of Health, we organized a hike from Ravne na Koroškem to the nearby lake in Brdinje. For many, it would be a short 15-minute walk, however due to various medical conditions and difficulty walking, the whole group gathered at the finish line (halfway) after more than half an hour. The half-hour alphabet of health followed, i.e.

exercise according to the 1000 movements method, then we took a short break and returned to the starting point.

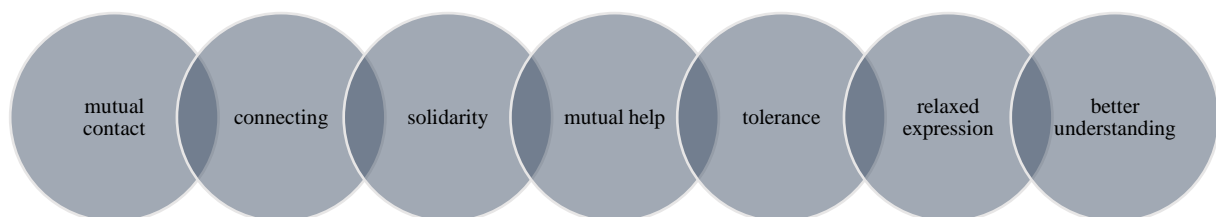
## 12.4 Social Games

Social games include two important aspects, **playing**, which consists of curiosity, joy, discovering something new, and **communication**.



They are important in identity formation and in improving communication skills. They achieve their purpose if participants discuss the game after

it is finished – how they experienced it, how they received the other members, how they felt about it (Virk-Rode, Belak-Ožbolt). Social games are usually conducted in schools and kindergartens within the class, but they can be a means of connecting children and the older people or deepening the existing relationship between grandparents and grandchildren. The benefits of social games for participants of different age groups are the following:



*Picture: Benefits of social games*

Schools and kindergartens, and also intergenerational centers, nursing homes, different societies – everyone recognizes that mixing generations in a joyful atmosphere of play and conversation is not mathematics, where  $1 + 1 = 2$ , as we get an intangible added value that can only grow from positive and creative interpersonal contacts.



The **Mislinja Elementary School** has been organizing daily gatherings of pupils and their grandparents every day for a week as part of the Symbiosis Movement intergenerational project. Every day, they spend one hour in physical education together in movement and socializing. This year, we joined them in gym activities that included ball games (throwing a basket, dribbling the

ball on the bench), running between hurdles, games with hoops, throwing, hockey ... and the Tom and Jerry social game where Tom is the bigger ball and Jerry the smaller one. Participants are placed in a circle and quickly pass both balls around – supported by cheerleading and encouraging cheers. If a participant loses the ball or if it slips out of his/her hands so that the game cannot be resumed immediately, it starts again. It ends with a conversation about how satisfied everyone is, how the game went, as it is always accompanied by laughter or emotional reactions.



We organized a joint event with the group of **Javornik Health School** participating in our project and the Ravne na Koroškem kindergarten, the Ajda unit, which connected three generations: the youngest, the kindergarten, the middle, i.e. educators who actively participated in the morning



exercise, and the older people, i.e. our participants, mostly retirees. They performed exercises for agility and strength, ending with a song as is usual for the School of Health. The children surprised us with their own self-initiative response - they started singing also, and since all participants were enthusiastic, even with the intergenerational socialization that followed at the

kindergarten breakfast, we said goodbye by agreeing to introduce such joint exercises regularly once a month.

## 12.5 Yoga

Yoga is an ancient discipline that originates from the Indian Hindu culture and the essence of which is to treat man holistically, i.e., to connect body, mind and spirit. An essential part thereof is meditation which teaches you to focus on the present moment and the use of relaxing breathing techniques. Yoga can be understood as a way of life or as a form of exercise that connects the body, breathing and mind into a whole and improves self-awareness of one's body. When exercising (performing “asanas”, i.e. holding certain postures, by standing, sitting or lying down slowly, and with full awareness of movement and breathing), muscle contractions, exercises for flexibility and mobility, and relaxation and breathing techniques are combined. Numerous studies have shown that yoga training can improve strength, endurance, flexibility, mobility and have beneficial effects on blood pressure, breathing, heart rate, and metabolic rate. (Kumprej, 2019)



We invited **Tamara Miler**, a certified yoga teacher, who took over the **Javornik School of Health** in the morning exercise, for a hands-on display. Despite all the limitations, such as that the training was conducted in nature, that the participants were 65-80 years old and that all participants were not interviewed about the health specificities before the exercise, an interesting workshop of standing asanas and face yoga method was successfully conducted. Asanas were performed by emphasizing breath and exhalation and by explicitly focusing attention on specific muscles that need to contract in a particular position. At the same time, participants learned the importance of activating the facial muscles, as there are as many as 57 of them and are too often neglected. Face yoga, which is not as easy as it sounds, improves blood circulation throughout the skull, leading to positive effects throughout the body.

*You can read more about Tamara's experience and her interesting life on [her website](#), where her e-book [Yoga at Work](#) is also available.*

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More guidance [for a quality life in old age] is also provided in the Active and Healthy Seniors modul, which provides many guidances for a healthy lifestyle, how and how much older people should be physically active, while also emphasizing the importance of a balanced diet. The behavioral habits of the older people are already shaped, and by socializing or joining an organized group, positive habits can be strengthened or become part of everyday life. The modul also includes guidelines for guided exercise, whether in the home community, through a society, or if desired to socialize in a smaller group. The modul is useful for both the individuals and the groups.

The older people should be allowed to be active in the local environment. With the help of a network of local stakeholders, citizens can connect more widely, including intergenerationally. All stakeholders in the local community can contribute to empowering individuals and making it easier for them to have regular physical activity and a balanced diet. All activities included in the guide coincide with the 2015-2025 Resolution on the National Programme on Nutrition and Physical Activity for Health.

Local environments are increasingly striving to regulate a greater number of quality recreational areas for all target populations, for different age groups, which can be achieved through various projects. An active, balanced and quality life for older people is our (shared) vision. (excerpt from an opinion on the modul)

***Dr. Neda Hudopisk**, Doctor of Medicine, Public Health Specialist, Manager of the NIJZ OE Ravne na Koroškem*

Your decision to take the ProAge project on the path to getting to know the age in a way that helps the seniors is the right path. The path by which we invest hope in changing attitudes towards old age.

ProAge is a contribution to building a different attitude towards old age, which gives hope that in the future the attitude towards the older people will turn in a positive direction, just as the attitude towards children has been positively revalued in the last century. (excerpt from an opinion on the modul)

***Mag. Marjana Kamnik**, Manager of the Koroški dom starostnikov, PE Slovenj Gradec, Expert Manager of the Koroški medgeneracijski center*

