



EUNAAPA

EUROPEAN NETWORK FOR ACTION
ON AGEING AND PHYSICAL ACTIVITY

Learning outcome

After the course the participants should be able to:

- Demonstrate knowledge and understanding in the field of physical activity and sedentary behavior for older adults
- Apply their knowledge and understanding in various occupational contexts.
- Communicate their understanding, skills and activities, with peers and clients, with relevant stakeholders and in public-private partnerships

Curriculum EUNAAPA

Introduction

About EUNAAPA

The European Network for Action on Ageing and Physical Activity (EUNAAPA) is a collaborative network aiming to improve health, wellbeing, participation, and independence of older people throughout Europe by promoting evidence-based physical activity.

For 2014 EUNAAPA has obtained an EU operating grant to undertake dissemination activities including the development of a curriculum. This curriculum will act as a solid recommendation to use in development of different kind of courses for people working in public health, healthcare and NGO organisations on how to stimulate physical activity and reduce sedentary behaviour among older adults. It is also appropriate for students of various health care professions. The curriculum is based on, and includes, the latest evidence on the topic of promoting PA in older persons.

Importance of physical activity in older adults

When people get older their level of functioning slowly decreases. Functions such as muscle strength and speed decrease, eyesight diminishes, and memory deteriorates. In addition to decline of the different systems (motor, cognitive, and sensory system) the integration and collaboration between these systems also decreases.

In spite of the deterioration of systems, studies have shown that exercising and remaining active in daily life improves functioning in older adults, even in those who are considered frail. In addition, sufficient physical activity also decreases the risk of chronic conditions, multimorbidity, dependence in activities of daily living (ADL) and worse health-related quality of life.

Benefits of exercise have been shown in various populations of older adults: healthy and frail, with multimorbidity or specific diseases such as dementia and depression and those who experience major life events such as trauma, surgery and bereavement. In spite of these benefits of exercise, a major part of the older population in Europe does not get a sufficient amount of physical activity. The higher the age, the harder it is to be sufficiently physically active.





Definitions:

Physical activity:

Any bodily movement produced by contraction of skeletal muscles that substantially increases energy expenditure above basal level (Caspersen et al 1998).

Physical exercise:

Exercise is a subset of physical activity that is planned, structured, and repetitive and has as a final or an intermediate objective the improvement or maintenance of physical fitness (Caspersen et al, 1985)

Fitness:

The ability to carry out daily tasks with vigour and alertness, without undue fatigue and with ample energy to enjoy leisure time pursuits and to meet unforeseen emergencies (Clarke, 1971).

Sedentary behaviour:

When activities are executed that are characterized by a low energy expenditure (<1.5 MET) combined with a sitting or standing position (not sleeping) (Sedentary Behaviour Research network, 2012). The activity needs to meet both criteria to refer to sedentary behaviour.

Frailty:

A consensus article defines frailty as "a medical syndrome with multiple causes and contributors that is characterized by diminished strength, endurance, and reduced physiologic function that increases an individual's vulnerability for developing increased dependency and/or death." (Morley et al, 2013)

Well-being:

Integrates mental and physical health (Dunn, 1973). Well-being is associated with self-perceived health, longevity, healthy behaviours, mental and physical illness, social connectedness, productivity, and factors in the physical and social environment (Diener 2004, 2009; Diener et al 2009, Frey & Stutzer 2002; Lyubomirsky et al 2005). (<http://www.cdc.gov/hrqol/wellbeing.htm#two>)



How to use the Curriculum

This curriculum mainly focuses on teaching and promoting exercise interventions and physical activity and can be used for different professionals. The course organisers need to adapt the content and the level depending on the participants pre-knowledge, the context in which participants are active and the possibility to implement the knowledge of the course.

The curriculum can be used as a whole or one can choose to use only parts of it. The length of the course depends upon the level of details, the participants pre-knowledge, how much of the

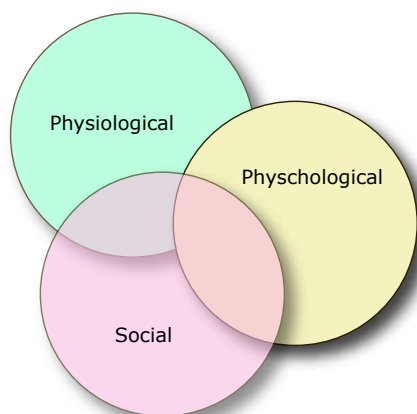


curriculum that is being used and the background of the participants. It can vary from one day up to two weeks. It can also be used in Bachelor or Master Programs at universities. The curriculum is divided in two parts: 1)

Description of the older adult and 2) How can we increase physical activity and reduce sedentary behaviour among this population? We recommend a mix of theoretical and practical sessions during a course.

Target Groups, Users and Participants

The target groups are older adults living in the community or in institutional settings. The users of the curriculum can be different groups such as healthcare professionals, physical activity educators or training instructors who want to organize local or regional courses. The participants of the course can have the same professions or background as the users.



Part 1: The older adult

Age and demography

Life expectancies continue to increase in European countries, reflecting reduced mortality rates at all ages. Not only are more people surviving to old age, but once there, they tend to live longer. These gains in longevity can be attributed to a number of factors such as higher living standards, improved lifestyle and a higher level of education and greater access to high quality health services.

The ageing process

Changes that occur with ageing can be divided into three categories: physical, psychological and social. Changes that happen in one category are likely to influence the other two. Age-related changes are complex; there is a wide variation in the rate of ageing in different people and in different organs in the same person. Genetics, lifestyle, nutrition and medical care will influence the rate of ageing and result in a large heterogeneity amongst the older adult.

Physical changes: The ageing process affects muscle, bones, joints and hormones. Skeletal muscles' cross sectional area decreases with age (sarcopenia), and the activation and aerobic capacity of the muscle cells deteriorate. This results in decreased strength and reduced muscular function. Joint motion becomes more restricted and flexibility decreases with age because of changes in tendons, ligaments and joint surfaces. Loss of bone mass makes older adults more susceptible to fractures. Balance is often reduced due to changes in the central nervous system, slower reflexes, and a decline in the sensory organs such as eyesight and vestibular system. Decreased endurance and lung function will together with the factors mentioned above influence



ADL and mobility. In addition to deterioration of the different systems (motor, cognitive, and sensory system) the integration and collaboration between these systems also decreases.

Psychological changes: Older adults sometimes must deal with major life crises such as retirement, loss of spouse, economic changes, residence relocation, loss of friends and purpose in life, and the reality of mortality. They may also need to cope with the consequences of a chronic disease or a serious physical illness. Some people mourn their freedom due to the loss of independence or the need to take the role as the caregiver for a spouse, sibling or friend. Older adults sometimes process information more slowly and need longer time to learn a new skill. Some experience loss of memory, lower executive function and dementia. Depression is a common problem among older adults, but is not a normal part of aging.

Social changes: The main social problems that can affect older adults are social isolation, change in financial situation, deterioration in housing standard and poor nutritional level. Older adults may also experience increased social isolation with retirement, as family members relocate or as friends move or die. Due to retirement or chronic disease many experience that they take on new social roles. For some it means going from a carer to a dependant and having to accept help from family/friends or the government.

Health challenges

The current WHO definition of health, formulated in 1948, describes health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" This definition was firstly applauded for including psychological and social aspects. It has later been criticized, mainly for using the word "complete" as this would leave most of us unhealthy most of the time, resulting in a medicalization of society. However, older adults are vulnerable to develop medical problems and chronic diseases. The results of such problems can often mimic the changes we see with aging, and it can be difficult to keep the two apart. Chronic illness itself can affect the possibility to maintain independence in activities of daily living, interfere with the sense of control, and cause depression and/or social isolation. Comorbidity from chronic diseases and severity of illness increases the likelihood of adverse drug reactions in the older adults.

Older adults are a very heterogeneous population. Some individuals remain fit and active into their ninth or tenth decades, whilst others show evidence of infirmity during their early sixties in the absence of an acute physical illness. This demonstrate the dissociation between biological and chronological age. Fitness and frailty are opposite ends of a continuum. Frailty is a nonspecific state of vulnerability, which reflects multisystem physiological change. Frailty is considered highly prevalent in old age and is associated with high risk for falls, disability, hospitalization, and mortality.



Physical activity

Technological progress has led to a progressively more sedentary lifestyle to the point that it is now threatening our health. This epidemic of sitting affects all age groups, but older adults are at particular risk. Physical activity and exercise plays an important role in improving and maintaining physiological and psychological function, which helps to retain personal independence and reduces the demand for acute- and chronic-care services. The benefits have been shown in various populations such as healthy older adults, frail older adults, and older adults with multimorbidity or specific diseases such as dementia and depression. Even so, older people are the least physical active of any age group, and their activity level continues to fall throughout the advancing years. Older adults are more likely to display a sedentary behaviour due to illness, fatigue, poor vision, and mobility problems. They may not venture outdoors due to fear of falling or having an accident. Because of their reduced functional status and high incidence of chronic disease, there is no segment of the population that can benefit more from exercise than the older adults. It has also been shown that sedentary time is associated with disability in daily activities independent of physical activity. There is evidence that sitting time has deleterious cardiovascular and metabolic effects independent of level of physical activity. For many older adults, excessive sitting is a serious health hazard that needs to be addressed.

Physical activity in disease prevention

Primary prevention (universal – directed toward the general population):

We know that being physically active can have a preventive effect on many chronic diseases, i.e. cognitive decline and dementia, diabetes, some types of cancer, cardiovascular disease and depression. For example, a physically active person can reduce the risk of dementia by 40% compared to a sedentary individual.

Secondary prevention (selective – directed toward individuals or populations at risk):

Physical exercise can play a role in the prevention of recurrences or exacerbations of diseases that is common amongst the older adults. For example, in people with diabetes, being physically active may reduce the need for medication.

Tertiary prevention (care-oriented – directed toward diseased or dependent individual/population):

In the management of chronic disease, the goals are to prevent further decline and to maximise independence in ADL and quality of life. For example, in people with chronic obstructive pulmonary disease (COPD), physical exercise can reduce dyspnoea, increase exercise tolerance, and reduce the impact on loss of independence in ADL, like climbing stairs or doing household work, and health related quality of life. Exercise may also be appropriate for chronic pain management and in cardiac and stroke rehabilitation.





Part 2: Increasing physical activity in daily life

Inactive adults have the most to gain from physical activity interventions but are more reluctant to change physical activity behaviour. Despite the well-documented evidence supporting the physical, psychological and social benefits of exercise, in a general population, approximately 50% of individuals who start an exercise programme will drop out within the first six months. People who want to make lifestyle changes, or are advised to do so, often encounter internal and/or external barriers. Internal barriers can be feelings of vulnerability, fear of falling, pain, lack of knowledge or being lazy or too busy. External barriers can be lack of support of others, financial situation and accessibility. To lower barriers and increase the chances of adherence it is a good idea to make the activity a natural part of the day, e.g. walking to the shops, use the stairs instead of elevator etc. Part 2 will include the following: 1) Motivation, 2) Assessment/goal setting and 3) Program design.

1. Motivation

Motivation is a critical factor in supporting sustained exercise. Several theories are available on how to motivate adults to become and stay more physically active. Behavioural theories help to describe the determinants (or causes) of physically active behaviour and thereby offer insight in how to change these determinants (and thereby PA) via different techniques. Many theories have been developed all focusing on some part of behaviour, setting, behavioural construct or source (internal/external, conscious/unconscious). Amongst others these include:

- ◆ Social Determination Theory
- ◆ Trans Theoretical Model – Stages of change
- ◆ Health belief Model
- ◆ Achievement Goal Theory
- ◆ ASE (Attitude, Self Efficacy, Social norm) model
- ◆ Theory of Reasoned Action/Planned Behavior
- ◆ Social Cognitive Theory
- ◆ Self Regulation Theory
- ◆ Dual Process Theory
- ◆ Extended Likelihood Model.

Another and more holistic way of looking at how physical activity behaviour is determined is by integrating some of these models into an ecological model (see figure 1; from Bauman et al., 2012). This shows that by addressing only individual determinants possible relevant determinants in other domains might still provide a barrier that prevents behavioural change.



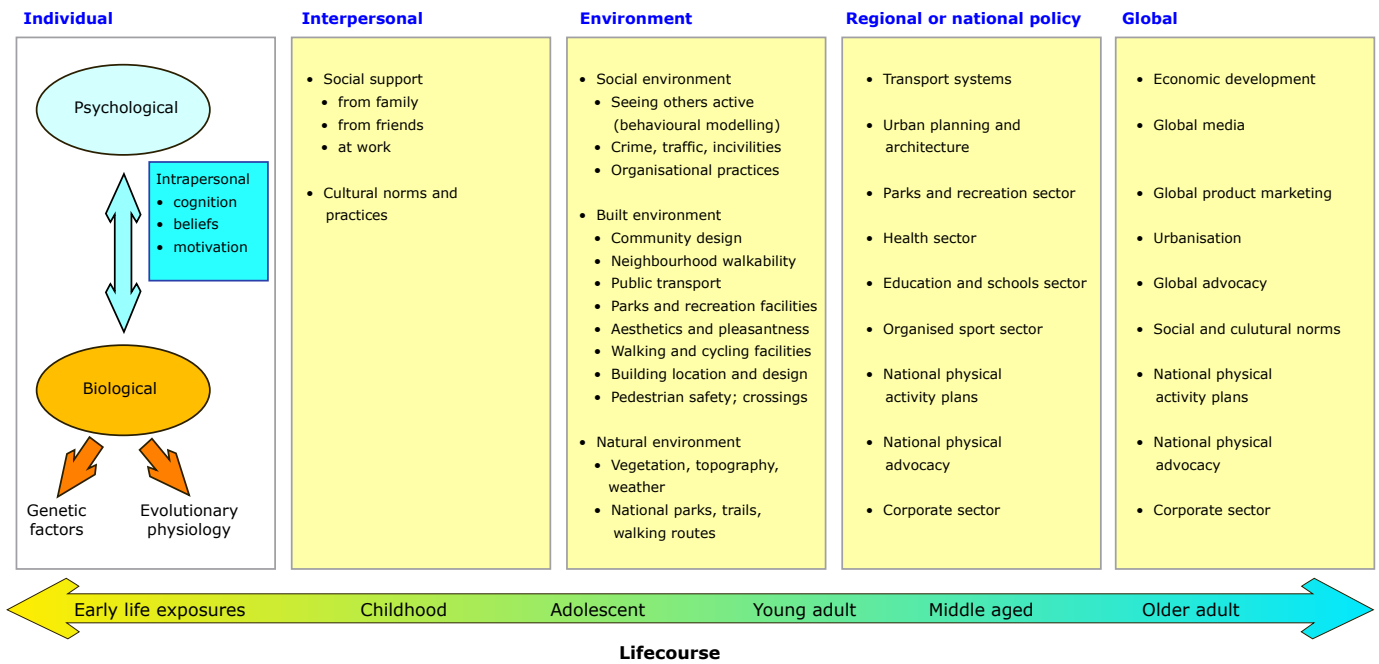


Figure 1: Adapted ecological model of the determinants of physical activity from Bauman et al., 2012.

In the next section some of these determinants and models will be discussed and the paragraph ends with a set of recommendations that can be used in motivating older adults to become physically active.

Determinants

There is a wealth of evidence on determinants of physical activity in adults, some of which also have been found in older adults. In adults in general determinants associated with physical activity include health status, self-efficacy, personal history of PA behaviour in childhood, having an intention to exercise and motivational stage of change (based on Bauman et al., Lancet, 2012). In healthy older adults these include gender, age, chronic conditions, depression, major life events, poor adherence, BMI, self-reported benefits, exercise self-efficacy and baseline physical activity (based on Koeneman et al., 2011). In the oldest old (80+) there aren't motivators or barriers that are unique for this age group but most intrapersonal were also relevant for them with a focus on fear for going or exercising outside, for injury/pain, for falling and for overdoing activity after an illness. The authors of this systematic review (Baert et al., 2011) recommend to pay attention to personal benefits, individual preferences, constraints in the physical environment and social support.

It has been stressed that especially in older age groups interpersonal determinants might play a larger role, compared to younger adults. Next to the already mentioned socially related individual determinants (i.e. living alone, having other conflicting social obligations or roles, family and personal history of PA in childhood) these include the following interpersonal determinants: peer expectations, experiences by others, having an exercise buddy, size and homogeneity of social network and advice from a doctor. Last but not least the following program characteristics have



been mentioned to influence participation and adherence to these programs: adequacy of a (nice) supervisor, same age participants, social advantages of participation and cohesion of the group.

Self-determination theory (SDT)

The SDT has gained increasing popularity for its relevance to understanding behavioural patterns in the physical activity domain. The theory is concerned with the motivation behind the choices that people make without any external influence and interference. SDT focuses on the degree to which an individual's behaviour is self-motivated and self-determined and states that intrinsic motivation is more important than extrinsic motivation. Intrinsic motivation refers to initiating an activity for its own sake because it is interesting and satisfying in itself, as opposed to doing an activity to obtain an external goal (extrinsic motivation). Other extrinsic motivators can be pleasing the instructor/ family or winning a competition.

The level of intrinsic/extrinsic motivation is related to the level of satisfaction of the three human needs: autonomy, relatedness and competence. According to SDT, giving people extrinsic rewards for already intrinsically motivated behaviour can undermine autonomy. As the behaviour becomes increasingly controlled by the external rewards, people begin to feel less in control of their own behaviour and intrinsic motivation is diminished. On the other hand, offering unexpected positive encouragement and feedback on a person's performance on a task can increase intrinsic motivation because such feedback helps people to feel more competent, one of the key needs for personal growth.

Self-efficacy

Choices affecting health are dependent on self-efficacy. Self-efficacy is defined as "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations". Self-efficacy beliefs determine whether health behaviour change will be initiated, how much effort will be expended, and how long it will be sustained when facing obstacles and failures. Four factors that affect self-efficacy have been identified: Experience (sense of achievement), modelling ("if they can do it, I can do it"), social persuasion (encouragement) and physiological factors (perceptions of physiological responses such as aches and pains, or "butterflies in the stomach").

Instructing skills

Physical activity interventions may be taught in two different manners: individually or in groups. One to one instructions demand more resources and will lose the social aspect of exercising. On the other hand, the physical benefit may be greater than in a group setting where it is easier to "hide" behind the other participants. In group sessions the social element is important for older adults and can be a motivator to attend.



When instructing an exercise class or individual session, it is important that the verbal cues are appropriate: distinct and encouraging without being bothersome. It is normal practice to use "say, see, do"-method, which means that the instructor first explains the exercise, then demonstrates how it is done and after that lets the participants execute the exercise themselves. Often it will be necessary to do the movement demonstrations sharp and exaggerated to make it easier for the older adults to mimic. Many participants will find themselves in an all-new, and perhaps somewhat intimidating, setting, so feedback such as praise and reassurance is important. In an individual session, the instructor work closer with the participant, which means that it is easier to give personal feedback and ensure quality of exercise execution. In the group-sessions, the instructor must try to design a program that embraces different fitness-levels amongst the participants. The instructor can also be a peer and might work as a role model to increase motivation even further.

Recommendations

Based on this evidence on determinants and theories the following recommendations can be made which can help to start and maintain older adults to be physically active:

Recommendations

- Take different phases/stages into account: reasons to (not) start (i.e. practical aspects like time, location) differ from those to adhere (i.e. functional ability to follow the program/group) and maintain (i.e. satisfaction with the program such as with the instructor, intensity, experienced progress and feedback);
- Tailor advice and programs to the individual (i.e. physical limitations and preferences);
- Relate contents (i.e. functional exercises in daily context) to goal (i.e. remaining functionally independent);
- Do address behavioral aspects (self efficacy, attitude, social support, coping strategies);
- Address outcome expectations for each individual and provide feedback on perceived success (regular);
- Avoid barriers (especially health related, i.e. pain, fatigue, shortness of breath, depression) by tailoring (group) exercises to the individual;
- Assure good quality (qualified instructors, feedback, variation);
- Motivational interviewing is a method that works on facilitating and engaging intrinsic motivation within the client in order to change behaviour. Motivational interviewing techniques include: asking open-ended questions, using affirmations, forming reflective statements and providing summaries.



Goal setting instruments:

McMaster Toronto Arthritis Questionnaire (MACTAR): Identification of limitations owing to disease, evaluation

Goal Attainment Scaling (GAS): Problem identification, treatment goal setting, evaluation

Canadian Occupational Performance Measure (COPM): Problem identification, evaluation

2. Goal setting and assessment

Goal setting

As stated above, motivation is a critical factor in supporting sustained exercise. When starting an exercise program, it is therefore important to set goals. Realistic goals can be helpful as a motivator, but also in ensuring that the participant is doing the appropriate exercises for what he or she expects and wants from the training. It can also be used as an evaluation of the exercise period. The older adult should formulate the goals and the healthcare professional should guide the older adult in this process by asking, "What would you like to do that you cannot do today?"

Assessments/tests

The assessments/tests are valuable tools both as a base to design the exercise program, but also to assess and set goals. The assessments may also be used as an instrument to find areas that may be important to improve. Different assessments or tests may be appropriate for different participants due to the heterogeneity amongst older adults. Assessments should be carried out before training starts and after every three-six months.

Examples of tests/assessments that may be appropriate:

Bergs balance scale is a clinical test that measures a person's static and dynamic balance abilities. The test takes 15–20 minutes and comprises a set of 14 simple balance related tasks.

MiniBest measures the underlying pathology of balance. The test takes 15-20 minutes to complete and includes 14 items.

Senior fitness test (SFT) measures the underlying physical parameters associated with functional ability, and identifies whether an older adult may be at risk for loss of functional ability. It includes 7 items and normal range scores are available.

Short physical performance battery measures gait speed, chair stand and balance tests. The scores range from 0 (worst performance) to 12 (best performance).

Falls efficacy scale – International (FES-I) measures the level of concern about falling during social and physical activities inside and outside the home whether or not the person actually does the activity. The level of concern is measured on a four point Likert scale (1=not at all concerned to 4=very concerned). The test has 16 items.

Timed up and go is a simple test used to assess a person's mobility. The participant is timed as he/she rises from a chair, stands up, walks 3 meters, turns around, walks back, and sits down.

6 minutes' walk test: The participant is instructed to cover as much ground as possible in 6 minutes on a flat dry surface, preferably in a 30 meters long hallway. The score is the distance walked (meters).



F.I.T.T principle

F = Frequency of training

I = Intensity of training

T = Type of training

**T = Time of training
(duration)**



3. Program design

The aim of an physical activity intervention can be three-folded: 1) to increase or maintain the general level of physical activity, 2) to increase or maintain the level of fitness, 3) to increase or maintain the level of independency in daily living. When designing an exercise program, there are certain training principles that should be considered.

Training principles

Action versus motor approach: The big picture of human movement sciences allows the definition or classification of two complementary, but at the same time rather different extremes of the spectrum of theories. Namely at the one end that of the "Motor" approach (MA) and, at the other end, that of the "Action" approach (AA). The MA forms a more classic bundle of theories and experimental, relatively 'reductionist' methods focusing on all aspects of the substantial body and (separate) body parts/ systems in Human motor sciences focusing primarily on for example the joint movements or a specific muscle group after a fracture incidence. At the same time the AA, that is a more modern bundle of theories and experimental relatively 'holistic' of 'ecologic' methods, focuses on movement as 'intentional' (whole) body-mind behaviour, embedded and related in the real life world for example evaluating a person's spontaneous behaviour in his/her own environment focusing on the relevant needs and practice for the person after a fracture incidence.

Individuality: Exercise should be specific to the individual completing the training. People respond differently to exercise, so in order to maximise the benefits, training programs should be designed to the person's needs and capabilities.

Specificity: The activity or type of exercise that you do strongly influences the outcome/ result. Exercise should be specific to the client's goals, needs and capabilities: If someone wishes to get better at climbing stairs, the exercise should be to climb stairs, if a person would like to be able to rise from a chair independently; rising from a chair is the optimal exercise.

Overload: Exercise must overload the body to invoke positive adaptation. This means it needs to be placed under greater stress than it is accustomed to. This is accomplished by using the F.I.T.T principle.

Progression: For the body to keep adapting to exercise, the stress it is placed under should progressively increase (i.e. the intensity/loads should continually increase). Similar to overload, stress can be gradually increased using the F.I.T.T principle.

Variety: For optimal change to occur and to decrease the risk of an individual getting bored, over trained, injured or reaching a plateau, the training must be varied.



Rest and recovery: Rest and recovery are required to allow the body time to adapt to exercise. It is recommended that adults allow at least 48 hours of rest between strength workouts.

Reversibility: If you don't use it, you lose it. Adaptations that occur through exercise are reversible, so when training is stopped for prolonged periods the adaptations from previous exercise will be lost.

Safety

It is important to take into consideration those older adults who have not been physically active in a while, or who is starting to do new activities might be afraid of falling or having injuries. It is important to make the environment and the exercises as safe as possible. For example, to decrease the risk of falling, the instructor should take precautions and stay close to the participant. The participants need to be assured that the activity is safe so that he or she can concentrate on the exercise performance.

Many older adults will need modified exercises due to chronic or acute disease or multimorbidity. Commonly encountered diagnoses amongst the older adults are cardiovascular diseases, osteoarthritis, osteoporosis, diabetes, and dementia. It is important to always be safe. If the instructor in any way is uncertain or the medical condition of the participant is unresolved, he or she should confer with a general practitioner. In addition, the instructor should make sure that the participants are breathing regularly and steadily. It is important that people with dementia is not excluded merely because of a diagnosis. Many persons with dementia are capable of performing physical training both individually and in groups.

Nutrition

Health, physiological, and functional changes associated with the aging process can influence nutrition needs and nutrient intake. Although health status has multiple contributing factors, nutrition is one of the major determinants of successful aging. Food is not only critical to one's physiological well-being but also contributes to social, cultural, and psychological quality of life. When starting an exercise regime, it is particularly important to eat and drink regularly. Dehydration is a major problem in older adults and advice concerning food and water intake should always be included in physical activity programs for this group.

Exercise program content

For both home- and center-based exercise programs it is important to include all four elements of strength/power, endurance, balance/coordination and flexibility. The exercise program content needs to ensure overload and there are many ways to apply overload when prescribing functional exercises at home and in centres:



Strength training: Increase load using body weight, free weights, plastic bands or weight belts. Intensity recommended for healthy older adults is 8-12 RM, and for persons with chronic disease 10-15 RM. RM means repetitions maximum and 8-12 RM is the amount of load a person can lift 8-12 times.

Balance, gait and coordination training: Adjust amount of support. Static exercises can be progressed into dynamic exercises, make base of support smaller (e.g. feet closer together) or increase speed of movement or turns. Walking on mattresses (soft surface), walk over hurdles, stand still while rotating trunk or head, walk in figures of eight.

Endurance training: Increase duration or speed of exercise, increase number of repetitions (or steps in a staircase) or increase intensity. Where available, it may be appropriate to use treadmills, stationary bikes or rowing machines. To increase load one can increase intensity and/or duration.

Flexibility training: Start with slow and controlled movement through the joint. Increase the amplitude and motion steadily. Participants should be encouraged to strive for full range of motion in all major joints. However, individual joint limitation should be taken into account. Stable position is important with regard to a safe and voluntary movement.

Home-based design

The home-based design can be for people that have problems with coming to a center, for those who prefer to train by themselves or for those who need to exercise in their own environment to reach optimal effects. The activity can be supervised (home-visit related to a rehabilitation process), semi-supervised (the person being assessed and based on that get different exercises that will be followed up), and unsupervised (receive a brochure or given general recommendations such as "walk every day for 30 minutes" or following a web-based program, "e-health"). In the practical session of a course using this curriculum it will be important to point out examples of how to use everyday activities as exercise and physical activity. The exercises can target strength or balance or both. Examples may be:

- ◆ Climbing stairs inside in house or outside
- ◆ Go for walks in the neighbourhood or to local shop with or without load. Maybe parts or the entire trip can be made without walking aid?
- ◆ Rising from low chairs without using the armrest
- ◆ Combining tasks such as rising from a chair, carry a tray to another room or upstairs
- ◆ Operate the dishwasher or washing machine without holding on to something

Center-based design

The center-based program can be organized as individual or group sessions. In the group session, it is important to have in mind that the dose and intensity required can be different for individuals



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Authors:

Elisabeth Rydwick¹,
Nina Waaler²,
Elisabeth Wiken Telenius²,
Carola Döpp³ and Erwin Tak³

On behalf of the Steering
Committee of the European
Network for Action on Aging
and Physical Activity,
www.eunaapa.org

Thanks to:

Design: Jaap van der Plas

Affiliations:

- ¹ Associate professor,
registered physiotherapist,
Karolinska Institutet, Dept of
Neurobiology, Care Sciences
and Society, Division of
physiotherapy.
- ² Dean, Associate professor,
Oslo and Akershus University
College of Applied Sciences,
Oslo, Norway
- ³ the Netherlands Organisation
for Applied Scientific
Research TNO, Dept
Lifestyle.

within a group. Therefore it is important that the group is not too big.

Compared to the home-based design, the center-based program can be more social, and the instructor has better possibilities to work more systematically with increasing load. It is still necessary to design the exercise activities in order to enhance function in everyday life. One way of doing functional exercises is to create tasks that include moving with vertical components (e.g. turns) or horizontal components (stepping up or down), carrying objects, and changing between lying – sitting – standing positions. One can also add a cognitive element by supplementing tasks such as sorting by colour or counting. Time, weight, distance walked and number of repetitions should be documented.

Examples of exercise tasks:

- ◆ Rise from chair, step onto a raised platform (20 cm), pick different objects from shelf. This exercise can be progressed by rising from lower chair (or wearing weighted belt), stepping onto a higher platform, picking several objects.
- ◆ Rise from floor, make two turns and pick up object from floor and put on high shelf. This exercise can be progressed by changing starting position from standing on knees and hands to lying flat on back, sharper turns and heavier objects to pick up.

It is popular to use music in group sessions. Music can be a source of motivation and amusement. However, it is important to consider the age of the participants when the play list is made, as not all seniors are too familiar with, or fond of, today's popular music. If one chooses to play music, make sure that the music is being used for a reason (e.g. for rhythm or diversion) or it could be a disturbance. The exercises/activities chosen for the training session should be as close to actual daily activities as possible. It is often worthwhile to encourage positive group dynamics. Exercises in group sessions can be done in pairs or in smaller groups to stimulate social interaction between participants.



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Introduction

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