

Golden Age Platform

Inclusion of Senior Citizens to Virtualised Environments with Lifelong Learning Facilities

GAP-IOS HEALTH LITERACY MODULE Shorted version

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1.1. Healthy Diet

- “Nutrition” in human life is not just the consumption of food.
- Nutrition also includes taking pleasure while eating, socializing, and practices made according to traditions and customs.
- Nutrition is one important factor that has beneficial or negative effects on the rate of the ageing process.
- Ensuring adequate and balanced nutrition in old age; protection, improvement and development of health is important in increasing life expectancy and quality.

Food groups Healthy Food Plate: By food groups healthy food plate

Bread and cereals

Milk and milk products

Meat and its products, eggs and legumes and nuts/seeds

Vegetables

Fruits

Eat Healthy, Act for Health



Table 1. The four food groups: advice on servings and nutrients for healthy older people

Food group	Advice	Serving size examples	Nutrients provided
Milk and milk products (includes milk, yoghurt, cheese, kefir and ice-cream) and alternatives	Eat 3 servings per day (choose low- or reduced-fat options)	1 large glass milk (240 mL) 1 large glass or 1 small bowl yoghurt (200 mL) 1 large glass kefir (240 mL) 3 slices White cheese (60 g) 2 slices cheddar cheese (40 g)	Protein Fats: higher proportion of saturated than poly or mono-unsaturated fats, especially in full fat products Vitamins: riboflavin, B ₆ , B ₁₂ , niacin, A, D, E and K Minerals: especially calcium, phosphorus, zinc
Meat and its products, eggs and legumes and nuts/seeds	Meat, chicken, fish, eggs: eat 1 ^{1/2} servings per day Legumes: Eat 2-3 servings per week nuts/seeds: Eat 1 ^{1/2} servings per day	3-4 grilled meatballs or 1 handful of meat (80 g) 2 small size egg (100 g), 1 medium drumstick or 1 palm-sized cooked chicken meat (80 g), 1 hand-sized thin slice or 1 palmsized thick slice cooked fish (150g), anchovy etc. small fish cooked 12-13 pieces (150 g), ¾ cup or 2 small ladles or 8-10 tablespoons cooked legumes (130 g), handful nuts or seeds (30 g)	Protein Fats: both visible and marbled in meat (mostly saturated fat, cholesterol); mostly unsaturated fats in seafood, nuts and seeds Vitamins: red meat and poultry, fish, eggs, nuts/seeds, legumes are good sources of vitamin B ₁ , B ₆ , B ₁₂ and A. Vitamin B ₁₂ is only found in foods of animal origin. Minerals: iron, zinc, phosphorus, magnesium, copper, potassium and selenium Iodine: particularly in seafood and eggs Legumes are also a good source of fiber.

Table 1. The four food groups: advice on servings and nutrients for healthy older people

Food group	Advice	Serving size examples	Nutrients provided
Vegetables and fruit (includes fresh, frozen, canned and dried)	Eat at least 5 servings per day (at least 400 g/day): at least 2.5-3 servings of vegetables and at least 2-3 servings of fruit.	1 cup or 1 punch or 5-6 tablespoons or 2 medium scoops dark leafy greens (spinach, chard, purslane, kale etc) and other vegetables (broccoli, okra, green beans, fresh peas, green zucchini, artichokes, asparagus, brussels sprouts), 1 medium size tomatoes and carrot, 1/2 medium size potato, 1 fist-sized apple, orange, peach, nectarine, 1 small pear or quince, 2 medium tangerines or kiwi, 4 large or 7-8 small apricots, 3-4 dried apricots, plums, figs	Carbohydrates Dietary fibre Vitamins: especially folate, vitamin A (yellow and green vegetables) and vitamin C (dark-green vegetables and most fruit, potatoes), Minerals: magnesium, potassium, calcium, iron
Bread and cereals (includes breakfast cereals, breads, grains, rice and pasta), preferably wholegrain	Eat 3-3 ^{1/2} servings per day (for female), 4-4 ^{1/2} servings per day (for male) (choose wholegrain breads and cereals)	50 g (2 thin slices of bread), 75 g cooked (4-5 tablespoons or 1/2 cup) pasta, 90 g cooked (4-5 tablespoons or 1/2 cup) bulgur or rice, about 30 g or 1 cup of breakfast cereal	Carbohydrates Dietary fibre Protein Vitamins: all B group (except B ₁₂), E (rich in wheatgerm) Minerals (particularly in wholegrain breads and cereals): magnesium, calcium, iron, zinc and selenium

1.2. Daily exercises

- Basic home exercises:

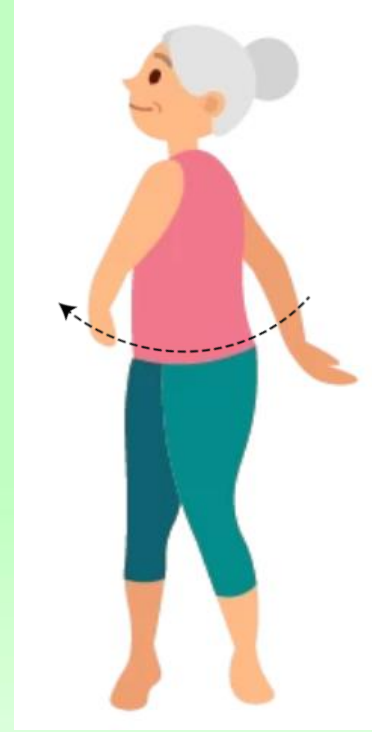


Warm-up exercises (10 repetitions):



Stationary march:

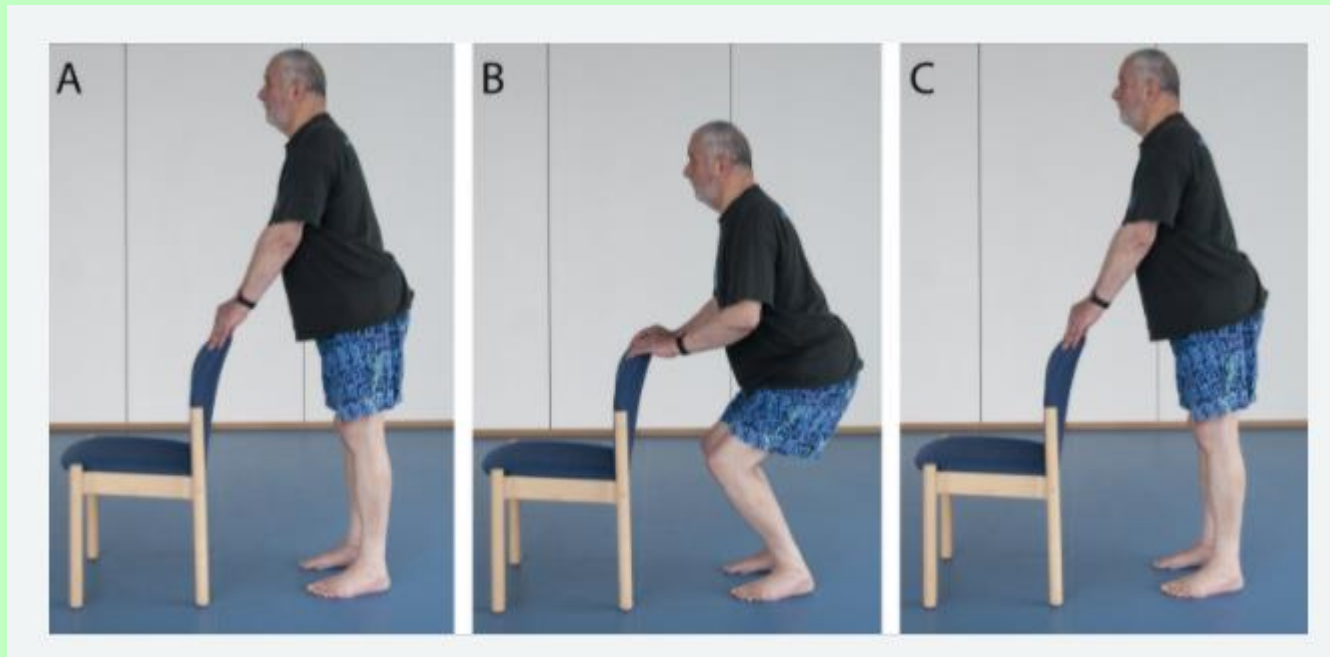
1. Stand with arms at sides, feet shoulder width apart.
2. Raise one knee up as high as comfortable. Lower this knee, then raise the other knee.



Waist loosening:

1. Stand up straight with your feet slightly wider than hip width.
2. Let your arms hang by your sides.
3. Rotate your hips to the left then back to the right. Your relaxed arms will flap against your body.

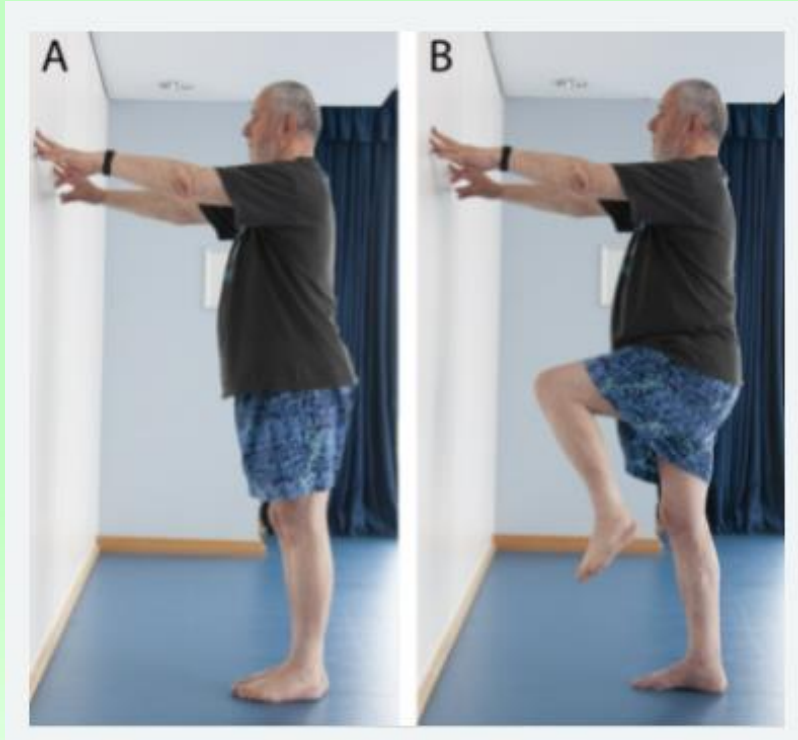
Strength exercises (5 repetitions):



Mini Squats

1. Rest your hands on the back of the chair for stability and stand with your feet hip-width apart.
2. Slowly bend your knees as far as is comfortable, keeping them facing forwards. Aim to get them over your big toe. Keep your back straight at all times.
3. Gently come up to standing, squeezing (clenching) your buttocks as you do so.

Balance exercises (3 repetitions per leg):



One-leg stand

1. Stand facing the wall, with your arms outstretched and your fingertips touching the wall.
2. Lift your left leg, keep your hips level and keep a slight bend in the opposite leg for 5 to 10 seconds. Gently place your foot back on the floor.
3. Repeat with the other leg lifted.

1.3. Stress management

• Causes of Stress for Elderly People

• Micro level

- Worsening of physical health
- Be ill
- Decreased mental capacity
- Increasing of care needs
- Wife's/Husband's death
- Loneliness
- Low income
- Gender
- Loss of roles
- Be pessimistic
- Adapting to aging

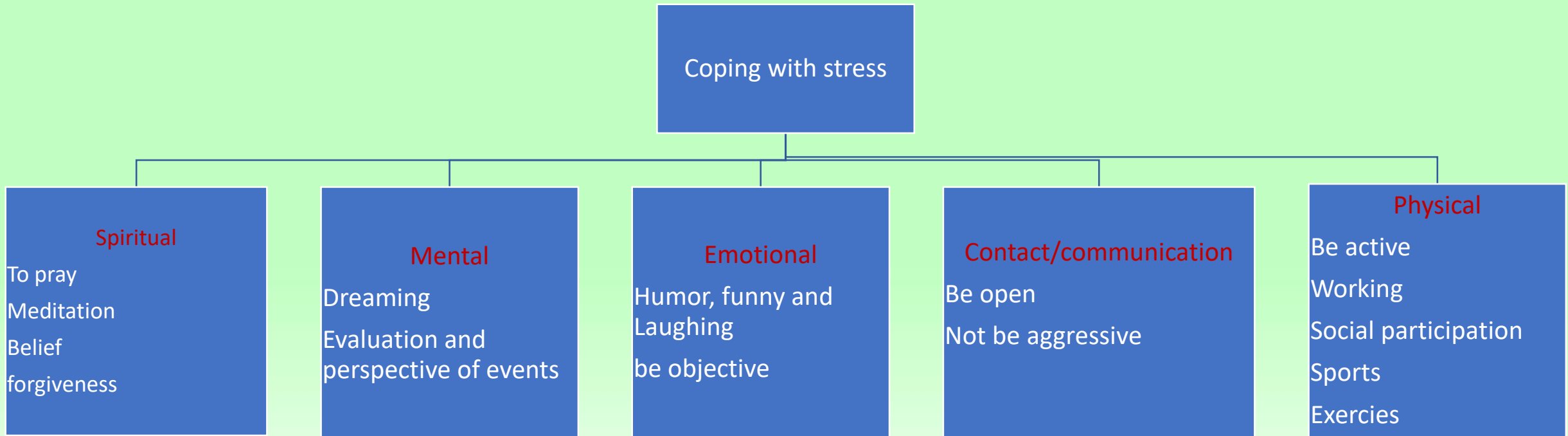
Mezzo level

Lack of social services for the elderly
Lack of health services for the elderly
Lack of life- long learning opportunities
Lack of social support
Lack of care services

• **Macro level**

- Exposure to age discrimination
- Attitudes to elderly people
- Accessibility to services
- Accessibility in urban area
- Lack of age friendly cities application
- Air pollution
- Crowded
- Lack of green area

Coping With Stress in the Elderly



Coping With Stress in the Elderly

- **Individual strategies for coping with stress**
- Take control of your life
- Include more humor and jokes in your life
- Compare yourself to others
- Take advantage of stress
- Learn to live with the stress you can't avoid
- Do sports and exercise regularly
- Have an adequate and balanced diet

1.4. Cardiovascular health in old age

• Cardiovascular risk factors

- Gender
- Age
- Cigarette smoking
- High blood pressure
- Diabetes
- Obesity
- Lack of physical activity
- Abnormal blood cholesterol
- Homocysteine levels

The more risk factors a person has, the greater the likelihood of developing heart disease. Heredity, gender, and age cannot be modified, but the others can be influenced by the individual's behavior

Hypertension (HT)

Hypertension (HT) is called when the systolic blood pressure is greater than 140 mmHg and the diastolic blood pressure is greater than 90 mmHg

Classification	Kategori	SBP		DBP
	Normal	< 120 mmHg	and	
	Prehypertensives	120-139 mmHg	or	
	Stage 1 HT	140-159 mmHg	or	
	Stage 2 HT	> 160 mmHg	or	

Results of HT

- MI (Heart attack)
- Thickening of the heart muscle
- Kidney failure
- Stroke
- Heart failure
- Aneurysm(Large vessel dilatation)
- Eye damage
- Death due to cardiovascular diseases

Blood Pressure

Goal in people 60 (If there is no diabetes or chronic kidney disease

150/90 mmHg

Target with diabetes or chronic kidney disease:

140/90 mmHg

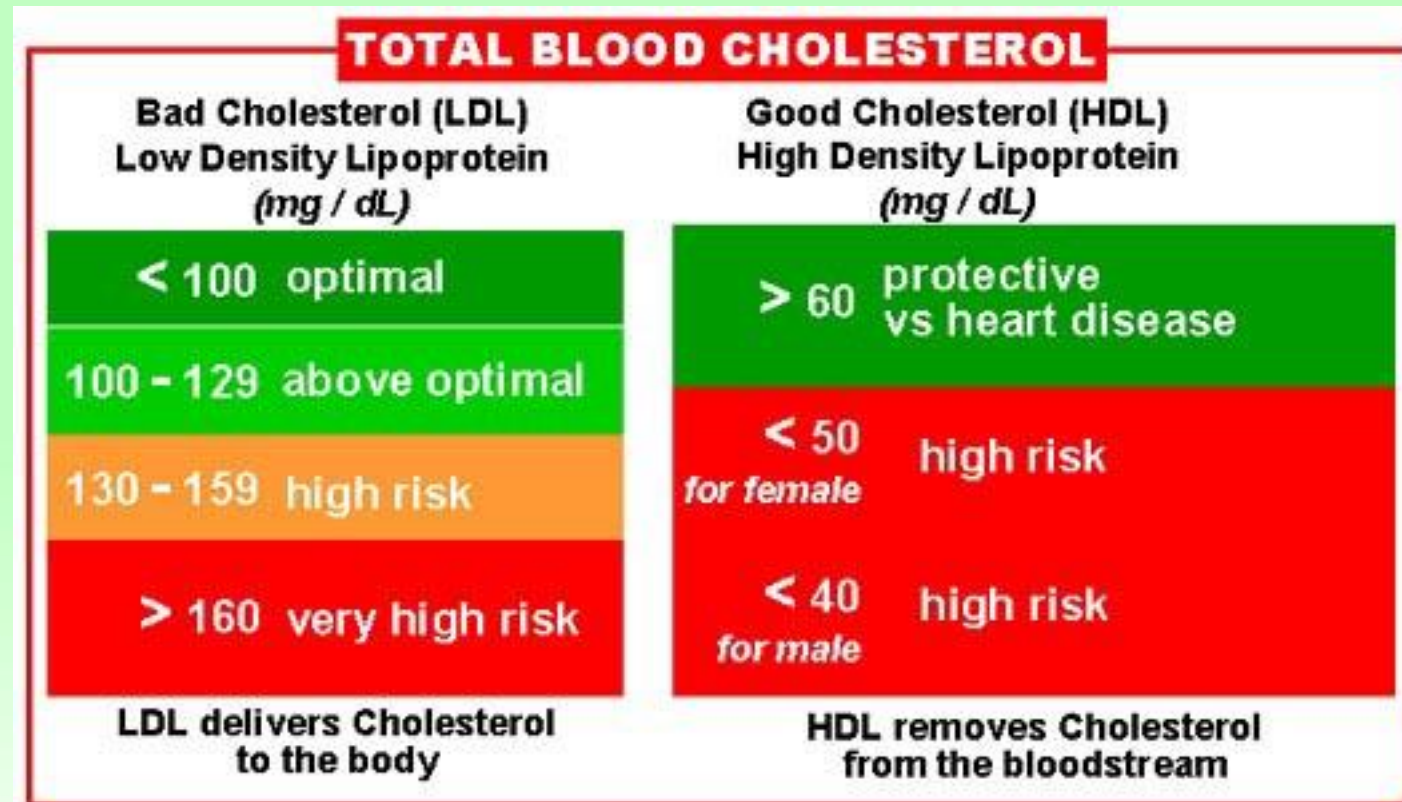
Salt restriction is important in elderly

- The effect salt on blood pressure increases with aging
- Aging changes in taste cause more salt consumption
- The blood pressure reduction effect of salt restriction increases with aging
- Salt should be consumed at 100-120 meq/day(2.3-2.8 gr)
- 1 wiping sweet spoon salt: 4 gr

• Cholesterol

Cardiovascular diseases are common in older women and men

Cholesterol is a risk factor for cardiovascular diseases



Diabetes Mellitus

Tests for diabetes

Doctors use several blood tests to help diagnose diabetes:

- Random plasma glucose test — given at any time during the day
- A1C test — given at any time during the day; shows your average glucose level for the past three months
- Fasting plasma glucose test — taken after you have gone without food for at least eight hours
- Oral glucose tolerance test — taken after fasting overnight and then again two hours after having a sugary drink (This is not regularly given for type 2 diabetes).

1.5. Musculoskeletal system in old age

Musculoskeletal disorders

- Musculoskeletal disorders are common problems affecting the elderly
- With age, musculoskeletal tissues show increased bone fragility, loss of cartilage resilience, reduced ligament elasticity, loss of muscular strength, and fat redistribution decreasing the ability of the tissues to carry out their normal functions.
- The loss of mobility and physical independence resulting from arthropathies and fractures can be particularly devastating in this population, not just physically and psychologically, but also in terms of increased mortality rates.

Osteoporosis

- **Unchangeable risks: Gender, Age, Race, Family history, Body frame size.**
- **Hormone levels: Sex hormones, Thyroid problems, Other glands** (overactive parathyroid and adrenal glands)
- **Dietary factors: Low calcium intake, Eating disorder, Gastrointestinal surgery.**
- **Steroids and other medications**
- **Medical conditions:** Celiac disease, Inflammatory bowel disease, Kidney or liver disease, Cancer, Multiple myeloma, Rheumatoid arthritis
- **Lifestyle choices: Sedentary lifestyle, Excessive alcohol consumption, Tobacco use**

Treatment and supplementation

- There is a wider variety of osteoporosis treatment options than ever before.
- The type of treatment you are prescribed will depend on your individual risk profile.
- This includes the risk for a specific type of fracture (spine versus hip), other medical conditions, or medications you may take.
- Treatments have been shown to reduce the risk of hip fracture by up to 40%, vertebral fractures by 30-70% and, with some medications, reduce the risk for non-vertebral fractures by 15-20%.
- In addition to drug therapy, calcium and vitamin D supplements can be prescribed to ensure maximum effectiveness of your medication.
- Strengthening exercise

Osteoarthritis

- Frequency increases with age
- Develops with abnormal loading, repair can not afford destruction
- Slow progress
- Causes pain and stiffness
- Social and economic burden is high (9.6% for men over 60, 18% for women)
- **Sarcopenia**
 - Primary or age-related sarcopenia and secondary sarcopenia. Primary sarcopenia is diagnosed when no other specific cause is evident.
 - Secondary sarcopenia is considered when factors other than aging are evident, especially systemic diseases such as malignancy or organ failure.
 - Many factors have been identified to contribute to sarcopenia: Age, sex, physical inactivity, other comorbidities, malnutrition, drugs

1.6. Preventive medicine practices in old age (vaccination, etc.)

- Screening for health problems that are not yet causing symptoms noticeable to the patient.
- Checking for common problems that do cause symptoms but are easily overlooked in routine clinical care.
- Administration of vaccines or medications to reduce the risk of a future illness.

Cancer Screening

- Screening for colorectal cancer
- Screening for breast cancer
- Screening for cervical cancer
- Screening for lung cancer
- Screening for prostate cancer

Physical Health

- Screening for high blood pressure
- Screening for high cholesterol
- Screening for obesity
- Screening for abnormal blood glucose and type 2 diabetes
- Screening for abdominal aortic aneurysm
- Screening for osteoporosis
- Screening for hepatitis C
- Screening for HIV
- Screening for other sexually transmitted infections
- Screening for malnutrition
- Exercise

Mental Health, Cognitive Health, Substance Use

- Checking for tobacco use
- Checking for alcohol misuse
- Checking for depression
- Checking for signs of cognitive impairment

Safety and Functional Ability

- Asking about falls
- Checking for signs of functional impairment and assessing home safety
- Checking for signs of elder mistreatment

1.7.Awareness of Demans-Alzheimer

- **Although dementia mainly affects older people, it is not a normal part of ageing.**
- **Worldwide, around 50 million people have dementia, and there are nearly 10 million new cases every year.**
- **Alzheimer's disease is the most common form of dementia and may contribute to 60–70% of cases.**
- **Dementia is one of the major causes of disability and dependency among older people worldwide.**
- **Dementia has a physical, psychological, social, and economic impact, not only on people with dementia, but also on their carers, families and society at large.**

Cognitive Changes

- **Memory loss, which is usually noticed by someone else**
- **Difficulty communicating or finding words**
- **Difficulty with visual and spatial abilities, such as getting lost while driving**
- **Difficulty reasoning or problem-solving**
- **Difficulty handling complex tasks**
- **Difficulty with planning and organizing**
- **Difficulty with coordination and motor functions**
- **Confusion and disorientation**

Psychological changes

- **Personality changes**
- **Depression**
- **Anxiety**
- **Inappropriate behavior**
- **Paranoia**
- **Agitation**
- **Hallucinations**

Therapies

Several dementia symptoms and behavior problems might be treated initially using nondrug approaches, such as:

Occupational therapy, Modifying the environment, Simplifying tasks.

Other therapies

- Music therapy, which involves listening to soothing music
- Light exercise
- Watching videos of family members
- Pet therapy, which involves use of animals, such as visits from dogs, to promote improved moods and behaviors in people with dementia
- Aromatherapy, which uses fragrant plant oils
- Massage therapy
- Art therapy, which involves creating art, focusing on the process rather than the outcome

Prevention

- **Keep your mind active.**
- **Be physically and socially active.**
- **Quit smoking.**
- **Get enough vitamins.**
- **Manage cardiovascular risk factors.**
- **Treat health conditions.**
- **Maintain a healthy diet.**
- **Get good-quality sleep.**
- **Treat hearing problems.**

Care and support for the person with the disease

- Learn about memory loss, dementia and Alzheimer's disease.
- Write about your feelings in a journal.
- Join a local support group.
- Get individual or family counseling.
- Talk to a member of your spiritual community or another person who can help you with your spiritual needs.
- Stay active and involved, volunteer, exercise, and participate in activities for people with memory loss.
- Spend time with friends and family.
- Participate in an online community of people who are having similar experiences.
- Find new ways to express yourself, such as through painting, singing or writing.
- Delegate help with decision-making to someone you trust.

1.8. Polifarmasi

- **Do you need medications?**

- Elderly people do not need to take medication for every medical problem
- If possible, do not take medication
- Drugs that affect quality of life should be considered
- Certain and accurate diagnosis should be made before treatment

- **Rational drug use**

According to the clinical findings and individual characteristics of the subjects

- Appropriate drug,
- At the appropriate time and dose,
- Most cost effective,
- Easy to provide.

Drug doses

- Drugs should be started at low doses in elderly
- The dose should be increased by long intervals and small amounts
- Pay attention to drugs with kidney excretion
- Drugs that have little effect on brain function should be preferred
- Individual treatment should be used

Elderly and drug side effect

- Drug side effects in elderly patients are 2-3 times more common in younger patients
- Among the reasons for the elderly to visit the hospital, 28% constitute drug related problems
- 70% of these drug-related applications are due to drug side effects.

Effects of polypharmacy

Drug reactions in the elderly often produce effects that simulate the conventional image of growing old

- Depression
- Nervousness
- Incontinence
- Fatigue, malaise
- Insomnia
- Unsteadiness
- Drowsiness
- Dizziness
- Falls
- Confusion

For proper drug use

- **WRONG: 'Each medical problem must be solved with medication'**
- **No drugs other than doctor's advice should be taken.**
- **When the doctor tells the drugs, he should be asked when it is not understood, the doctor should be asked for drugs use scheme.**
- **Which drug is being used for which illness? What is the side effect of the drug? When to visit to a doctor ? It should be known**
- **Herbal drug may be harmful, may interact with the other routine medication. ATTENTION !!!**
- **The drug that is good for your neighbors can take you to the hospital !!!**
- **If the drug is a side effect, it is better to go to the doctor who started**
- **Take all of your medications with you on your way to the doctor**