

# Fundamentals of General Geriatrics

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## Abstract

The aging of the population is one of the key medical and social problems of our time, which determines the increasing importance of geriatrics as a fundamental and applied science. Understanding the fundamental differences between physiological aging and the pathological processes that inevitably develop in old age and senility determines the effectiveness of diagnosis, treatment and care for this category of patients. This paper examines the basic principles of general geriatrics, including the multiplicity and atypical clinical course of diseases in older age groups, as well as the psychosocial aspects of the interaction of medical personnel with a geriatric patient. Special attention is paid to the need for an individual approach, the collection of a detailed medical history and the organization of care aimed at preserving the physical and mental well-being of the patient in both outpatient and inpatient treatment.

**Keywords:** geriatrics, aging, elderly and senile age, multiplicity of pathology, atypical course of diseases, are activity, senility, psychological contact, individual approach, social history, psychiatric history, diagnostics, prevention of premature aging, adaptive mechanisms, medical history collection, geriatric care, medical and social problems

## Aging and disease

Old age is an inevitable stage in the development of the body; disease is a violation of its vital activity, which can occur at any age. This is the point of view about the relationship between aging and disease, which is currently the most widely accepted [1, 2]. The development of many diseases in the elderly and old people is associated with regular age-related changes [3, 4]. Their progression in many people over time and often until the end of life occurs without pronounced painful phenomena. However, under certain conditions, under the influence of various external causes, they can become the basis for the development of diseases [5, 6]. Such reasons include inadequate loads for an aging organism that require sufficient improvement of adaptive mechanisms (for example, infectious diseases, which often lead to somatic and mental decompensation) [7].

The rejection of ideas about aging as a manifestation of a pathological process and about old age as a disease is important not only for the implementation of the correct approach of medical personnel to patients of older age groups, but also for the rational organization of geriatric care [8, 9]. Medical personnel (not only doctors, but also nurses) should be well aware of the fact that the body characteristics of older people require a special approach to the recognition and treatment of their diseases, the organization and conduct of medical care [10].

## The multiplicity of pathology.

First of all, it is necessary to take into account the multiplicity of pathology common to elderly and senile people [11, 12]. As a rule, a

thorough examination of patients of these age groups reveals pathological changes in various physiological systems [13]. They are often caused by various reasons, usually closely related to age-related changes. (The pathology of sick old people is often compared to an iceberg, which has more than 6/7 of its volume hidden under water. The patient's complaints direct the doctor's attention only to the tip of this iceberg, meanwhile, for proper treatment it is necessary to know the whole pathology, i.e., to "see" the whole iceberg.) On average, during clinical examination of elderly and senile patients, at least 5 diseases and manifestations of pathological processes are diagnosed [14, 15].

Most often, in different combinations and varying degrees of clinical symptoms, there are: atherosclerotic lesions of the vessels of the heart and brain (coronary artery disease, atherosclerotic encephalopathy), arterial symptomatic hypertension, hypertension, pulmonary emphysema, neoplastic processes in the lungs and digestive organs, skin, chronic gastritis with secretory insufficiency, cholelithiasis, chronic pyelonephritis, adenoma prostate gland, diabetes mellitus, osteochondrosis of the spine, osteoarthritis, often (up to 10% of senile people) mental depression, eye diseases (cataracts, glaucoma), hearing loss (as a result of neuritis of the auditory nerve or otosclerosis), etc. [16, 17]. Diagnosis and analysis of combined pathology require a wide range of knowledge from a doctor and not only age-related changes in organs and systems, but also the symptoms of certain diseases of the nervous system, musculoskeletal system, genitourinary system, features of the course of surgical diseases, oncological alertness, etc. [18, 19].

## Features of the clinical course of diseases.

Elderly and elderly people may suffer from diseases that they developed at a young or mature age [20]. This mainly applies to certain inflammatory, metabolic processes, and persistent functional disorders with a long-term chronic course. Like young people, they can develop acute, including infectious, diseases. However, the age-related features of the body cause significant deviations in the course of these diseases [21].

The most characteristic are atypicality, area activity, and smoothness of clinical manifestations of diseases [22]. An old person is characterized by a tendency to slowly increasing pathological processes. From the age of 40-45, the process of "accumulation" of diseases is already underway [23]. In the elderly and especially in old age, the structure of morbidity changes significantly due to a decrease in the number of acute diseases and an increase in the number of diseases associated with the progression of chronic pathological processes [24]. Clinical observations of the development and course of diseases in older people indicate that long-established diagnostic schemes for many internal (and oncological) diseases are not applicable in geriatric practice. Diagnosis, like therapy, requires a different approach in older people than in younger people [25]. This is due to a number of reasons: a) slower and often masked course of neoplastic processes of internal organs, pneumonia, myocardial infarction, pulmonary tuberculosis, diabetes mellitus, closely related to the development of atherosclerosis and its complications [26]; b) a different genesis and course of stomach ulcers developing on the basis of atherosclerosis; c) the influence of clinically pronounced age-related processes in the bones and joints of the spine, which cause both circulatory disorders in a number of major vessels and special symptoms, which often cause misdiagnosis of heart diseases; d) the hidden course of catastrophes in the abdominal cavity, requiring urgent surgical intervention [27]. Among the reasons are many other features of the course of acute diseases caused by the new properties of the aging human body, changes in its protective, including immune reactions [28].

Acute diseases often acquire a subchronic form; the severity of the lesion does not correspond to the mild symptoms of the disease [29]. When observing elderly and senile patients, assessing their condition and conducting diagnostics, it is necessary to take into account not only the degree of deviation from the age norm, but also the heterogeneity of the degree and pace of development of involution, degenerative-dystrophic processes, and the emergence of new qualities of adaptive mechanisms in various body systems, which is usually observed with premature aging. The cardiovascular system is primarily undergoing changes; the aging of the digestive system occurs at the slowest pace.

## Doctor and Geriatric Patient

The features of aging and diseases in the elderly and old people are very diverse; somatic processes are closely related to changes in their psychology, they are in close interaction with the surrounding social environment and, above all, family relations [1, 5]. Because of this, effective medical care is essentially impossible if the doctor treats the patient stereotypically, i.e. the patient will not be the object of an individual approach [2, 8]. A doctor, a student, and every medical professional should firmly realize that an elderly and elderly person is a full-fledged member of society, deserving of respect and attention. For the correct approach to the treatment of a patient, it is necessary to know his history and not only in the medical, but also in the socio-psychological aspect [3, 10]. A sense of respect for an elderly patient, often admiration for his life history, usually dramatically increases the doctor's trust and authority as a specialist who has shown an individual approach to all the patient's characteristics [6, 11].

In solving medical problems, it should be emphasized that the view that an elderly person suffering from common, usually multiple pathological processes, diseases characteristic of his age, should be investigated less thoroughly is incorrect [12, 14]. Most of the symptoms of diseases that bother him can be alleviated, and sometimes eliminated [15, 17]. At the same time, it is necessary to take into account the hardships that a sick elderly or senile patient poses in comparison with a practically healthy one who retains the ability to self-serve for the family and society, health authorities, and institutions that organize social assistance [18, 20]. Therefore, the medical examination and treatment of these patients should be as thorough as that of patients of other age groups [19, 22].

Geriatrics in the treatment of diseases is closely related to individual orientation in a family setting [21, 23]. A district doctor, essentially a family doctor, must necessarily be acutely aware of the need to maintain a special relationship with an elderly and especially senile patient for a long time, maintain psychological contact with him, and also help strengthen his very vulnerable psyche, often with an anxiety-depressive tinge [24, 25].

In medical practice, the collective term "senility" is still often used. According to modern concepts, "senility" is not a diagnosis, but an inaccurate definition of a complex of symptoms, including some memory damage or forgetfulness, difficulty concentrating and concentrating, decreased intellectual ability, speed of perception and orientation, decreased emotional response [26]. "Senility" is a term indicating a lack of understanding of what is happening in the body of an aging person. Accurate diagnosis in geriatrics and, in particular, in geriatric psychiatry is as important as in any other branch of medicine [9, 13].

It is important that a doctor who enjoys the patient's trust clearly outlines ways to prevent both premature aging in middle-aged and elderly people, as well as treatment and secondary prevention of existing pathological processes [16, 27]. It should be borne in mind that older people perceive the coming of old age with its limitations in different ways. Some people continue to consider themselves as full of energy, disagree with the recommended lifestyle changes, and do not want to take into account that emerging physical ailments are manifestations of aging [28]. Others, critically analyzing the changes in their condition, themselves come to the idea of approaching old age, make appropriate adjustments to their behavior [29].

Long before the onset of old age, patients should be introduced to the gradual, regular shifts taking place in the body, help them realize the upcoming changes and give recommendations on restructuring various elements of their lifestyle [7, 14].

When making recommendations, however, the doctor should take into account that premature physical and spiritual rest is one of the factors that bring painful old age, decrepitude and death closer [4, 20].

Loneliness is becoming a difficult and increasingly urgent problem. This problem concerns medical workers, social workers and consumer service institutions, as well as representatives of local authorities [1, 6].

The main task of geriatric medicine is to preserve the physical and mental health of the elderly and their social well-being [8, 18]. The provision that an elderly or elderly person, including a sick one, should stay at home as long as possible if they do not need urgent inpatient care, remains unshakeable, but up to a certain limit, since sometimes it is impossible to provide appropriate care in the family [12, 22]. Admission to the hospital is

often necessary after an acute illness or complication, in particular a cerebral stroke in the subacute period, for rehabilitation therapy [3, 15]. Many old people believe that they go to the hospital to die there, therefore, while waiting for hospitalization, with the help of relatives and relatives, the patient should be convinced that hospitalization is carried out only in order to eliminate existing violations, after which he will return home [5, 19].

Effective geriatric care and the detection of diseases that often require hospitalization should be carried out through active visits by a doctor or nurse to people over 65-70 years of age at home [2, 21]. People of this age often do not seek medical help, as they are unable to distinguish the symptoms of diseases from those changes that they mistakenly attribute to the manifestations of aging [7, 23]. It is recommended to identify groups of "threatened" ones that require special attention. These include all people aged 70 and over, the elderly and the elderly, who have recently lost loved ones, discharged from hospitals, and recently retired [9, 24].

An elderly or elderly person who is forced to stay in a medical institution or boarding school for a long time must have a certain freedom, the right to preserve his individuality, certain habits, and elements of his usual environment [10, 25]. He should feel like the owner of those few square meters of space on which he will have to live for a certain, often very long time. In the hospital, these may be photographs, albums, reminders of the past, small elements of a hobby — the patient's selfless hobby. In a boarding school, essentially the last house at the final stage of an elderly or old person's existence, in addition, a comfortable, familiar armchair, some other pieces of furniture and household items greatly brighten up his life, contribute to the preservation of individuality, self-respect, to some extent reconcile an old person with the need to share his square with another person [26, 28].

The service staff should strive to reduce the inconveniences faced by the patient as much as possible, without prejudice to his initiative in terms of self-service [1, 11]. Strict requirements for compliance with non-essential elements of the daily routine usually bring negative results, cause irritation of the patient, and clashes with medical staff. To make a sick old man purely "disciplined", to deprive him of individuality, harmless habits, connection with the past, to suppress the will means to weaken his interest in life, the will to recover [3, 13]. Relatives should have more free access than in ordinary hospitals. It is good if the geriatric institution is located within the city or in a place not very far from its center [5, 17]. The patient should be encouraged to take care of himself, maintain attractiveness and neatness, contact with others, and engage in occupational therapy [7, 20]. All this, however, should be achieved through tactful explanations, not orders, which often give negative reactions [9, 22].

A doctor and a nurse should be able to keep a secret and not abuse the trust they enjoy by virtue of their position [2, 14]. It is forbidden to bring to the attention of patients everything that is discussed by the medical staff. For a hypochondriac patient, a careless word or gesture is often enough to draw incorrect conclusions about their state of health [4, 16].

Unhappy thoughts about the life ahead, the suffering caused by illness, and death are natural for a sick old person [6, 18].

The attitude towards death often depends on how an old person views the past life path. If there is psychological contact between the doctor and the patient, the doctor must demonstrate the abilities of a psychologist [8, 21]. It is important to impress upon the patient that life has not been lived in vain, that behind him is an activity that has brought great benefit to society, a fulfilled parental duty [10, 24]. Sufficient effectiveness of conversations on these topics is the result of not just one meeting, but long-term

communication, provided that the doctor has great authority and trust in him [12, 26].

## Features and methods of medical history collection.

The age-related features of the body of an elderly and elderly person, especially his psyche and clinical manifestations of the disease require a special approach to questioning the patient [1, 15].

Obtaining a detailed medical history and evaluating it requires a doctor to know age-related changes in organs and systems, how these changes affect the psychology of an old person, his orientation in the environment [2, 19]. The ability to collect an anamnesis from an elderly and especially senile patient is an indicator of the skill of a clinician, his ability to take into account all the difficulties encountered in diagnosing the disease in a geriatric patient [4, 23].

Interviewing a geriatric patient, who usually has disorders of a number of body systems, requires more time than interviewing a young person [5, 25]. It is necessary to take into account the possibility of impaired hearing, vision, and slow reactions in the patient. If the patient regularly uses a hearing aid, then it should be used during the survey, as well as glasses and false teeth [7, 27]. The doctor's face should be sufficiently illuminated, since the movement of his lips helps the patient to understand the question to some extent, and the facial expression reflecting interest and sympathy promotes psychological contact [9, 29]. It is necessary to speak clearly and somewhat more slowly than usual, not to shout into the patient's ear. It should be borne in mind that the patient's deafness and misunderstanding of the questions asked may be explained by the presence of sulfur plugs in the ears, therefore, after their removal, a second survey should be conducted [11, 18]. If the patient came with relatives, then first you should ask them in his absence, which makes it possible to find out many aspects of personal relationships and the patient's position in the family, the possibility of providing care, and ways of rehabilitation. The primary medical history of a patient with dementia should be collected with the mandatory participation of relatives [3, 14].

Personal characteristics persist even in old age. There are so-called dissatisfied patients. These features should not always be interpreted as a manifestation of the disease if the patient has always been a "difficult" person in his relationships with others [6, 20].

Often, a geriatric patient does not adequately treat his condition, interprets the symptoms of the disease as manifestations of old age [2, 8]. The main (according to the patient) complaints are multiple and non-specific, which do not correspond to a specific picture of the disease. Usually, during the survey, they try to find out the presence of angina pectoris, hypertension, stroke, depression, malignant tumor, diabetes, and arthritis [5, 12]. Some of these diseases require attention in the first place. However, many manifestations of pathological processes may be overlooked, since they are not, in the opinion of the patient, the "main" diseases, and he may not mention them. These are stress urinary incontinence, nocturia, hearing loss, dizziness, falls, anxiety, etc. [9, 16]. Therefore, you should pay attention to the so-called minor complaints, which should be carefully studied. So, progressive weakness, insufficient retention of feces, or, conversely, the appearance of constipation, which seem to be minor symptoms to the patient, may turn out to be manifestations of severe diseases [13, 22]. A hip fracture may be determined not by severe pain and tension of the thigh muscles, but by the inability to come to the clinic due to knee pain or confusion, etc. [17, 26].

An important place in the anamnesis of an elderly and old patient is occupied by acquaintance with him as a person, which corresponds to the classic position "treat not the disease, but the patient" [1, 7]. It is necessary to find out the patient's life and work history; to get an idea of the patient's daily routine, week, life, daily activity (reading, watching television), diet, work, hobbies, future plans, etc. [4, 11]. If all this information is collected tactfully and with a sense of interest, then the patient has confidence to the doctor [5, 15].

The classical form of medical history, modified for a geriatric patient, includes:

1. System survey [2, 9];
2. medical and surgical history (previous illnesses, operations) [3, 14];
3. Family history [6, 18];
4. social history [8, 21];
5. Power mode [10, 24];
6. previous and ongoing treatment [12, 27];
7. Psychiatric and sexual history [1, 16].

When interviewing items 1-3, you should be guided by the data reflected in the relevant chapters of this manual, which characterize both age-related changes in organs and systems, as well as the features of diseases and pathological processes [4, 13].

The social history includes questions about the place and conditions of residence, family composition and intra-family relationships that support an elderly or elderly person, contacts with friends and acquaintances [5, 19]. It should be clarified whether the patient is using medical and social services, whether he continues his professional or other work activities and to what extent, how he tolerates workloads, and whether he is satisfied with the job [7, 22]. It should be delicately clarified from non-workers how they have experienced or are experiencing termination of employment, whether they participate in public life, whether they have adapted to new living conditions [9, 25]. It is necessary to ask the patient very carefully how he survived the death of his wife (husband), if any, whether there was a tendency to self-isolation, withdrawal from friends and relatives, etc. [11, 28].

The diet consists of such factors as the frequency of meals, including hot ones, and the balance of the diet: the relationship between the content of fats and carbohydrates in food, the amount of which should be reduced, and high-grade protein foods (meat, fish, egg white, dairy products, especially low-fat cottage cheese, and milk) [2, 14]. It is necessary to find out whether the patient chews well, whether the dentures are working properly, what kind of diet in the past and present, whether he can cook hot food himself, whether he consumes alcohol and in what quantities, whether he has lost weight in recent months, years, how far from home to the grocery store, market or canteen, etc. [6, 17].

Conducted and ongoing treatment — it is necessary to clarify how the patient tolerates physical activity related to professional activities, long walks, elements of physical education, and drug therapy [3, 12]. It is advisable that the patient demonstrate to the doctor all the medications (or a list of them) that he has taken or is currently taking, and explain the sequence and duration of drug therapy [5, 20]. Information about changes in well-being, a decrease in symptoms of the disease, or the appearance of new unpleasant sensations associated with taking medications is of great importance [8, 23].

Psychiatric history — the patient should find out if he has anxiety-depressive states, suicidal thoughts, what is the reason for their appearance;

the presence of mental illnesses in relatives [1, 10]. A sexual history can only be collected if there is a trusting relationship between the patient and the doctor [4, 15].

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