

# 38 - 33 Geriatric Psychiatry

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Geriatric Psychiatry For many individuals, the passage from youth to old age is mirrored by a shift from the pursuit of wealth to the maintenance of health. In late adulthood, the aging body increasingly becomes a central concern, replacing the midlife preoccupations with career and relationships. This is so because of normal diminution in function, altered physical appearance, and the increased incidence of physical illness. Despite these occurrences, the body in late adulthood can still be a source of considerable pleasure and can convey a sense of competence, particularly if attention is paid to regular exercise, healthy diet, adequate rest, and preventive maintenance medical care. The normal state in the aged is physical and mental health, not illness and debilitation. The developmental tasks of late adulthood that lead to mental health are listed in Table 33-1. Table 33-1 Developmental Tasks of Late Adulthood Old age, or late adulthood, usually refers to the stage of the life cycle that begins at age 65. Gerontologists—those who study the aging process—divide older adults into two groups: young-old, ages 65 to 74; and old-old, ages 75 and beyond. Some use the term oldest old to refer to those over 85. Older adults can also be described as well-old (persons who are healthy) and sick-old (persons who have an infirmity that interferes with functioning and requires medical or psychiatric attention). The health needs of older adults have grown enormously as the population ages, and geriatric physicians and psychiatrists play major roles in treating this population. DEMOGRAPHICS The number of individuals over age 65 is rapidly expanding. In 1900, for example, 4 percent of the US population was older than 65 years. By 2012 it was 13.7 percent, and by 2050, it is projected to be about 20 percent. That increase far exceeds the general population growth—tenfold compared with just over threefold between 1900 and 2000—and is projected to continue (e.g., 2.5 times vs. just over 1.5 times between 1990 and

150. (Table 33-2). Table 33-2 Aging Population of the United States: 1900–2050 The life expectancy for women at birth is projected to continue to exceed that for men by 7 years until 2050. By 2050, the composition of the US population by age and sex is estimated to differ markedly from that today. Such changes are bound to influence income and marital statistics, the percentage of elderly persons living alone or in longterm care facilities, and other aspects of the social network. A summary of demographic highlights of the aged is given in Table 33-3. Table 33-3 Demographic Highlights of the Aged

The accuracy of these projections, however, depends on the accuracy of other predications such as birth rates, immigration, and emigration—all of which are more

difficult to gauge for the future than the remaining variables, death rates, or life expectancies. Projections concerning life expectancy, for example, can change substantially within a single decade. **BIOLOGY OF AGING** The aging process, or senescence (from the Latin *senescere*, “to grow old”), is characterized by a gradual decline in the functioning of all of the body’s systems—cardiovascular, respiratory, genitourinary, endocrine, and immune, among others. But the belief that old age is invariably associated with profound intellectual and physical infirmity is a myth. Many older persons retain their cognitive abilities and physical capacities to a remarkable degree. An overview of the biological changes that accompany old age is given in Table 33-4. The various decrements listed do not occur in a linear fashion in all systems. Not all organ systems deteriorate at the same rate, nor do they follow a similar pattern of decline for all persons. Each person is genetically endowed with one or more vulnerable systems, or a system may become vulnerable because of environmental stressors or intentional misuse, such as excessive ultraviolet exposure, smoking, or alcohol use. Moreover, not all organ systems deteriorate at the same time. Any one of a number of organ systems begins to deteriorate, and this deterioration then leads to illness or death. Table 33-4 Biological Changes Associated with Aging

Aging generally means the aging of cells. In the most commonly held theory, each cell has a genetically determined life span during which it can replicate itself a limited number of times before it dies. Structural changes occur in cells with age. In the central nervous system, for example, age-related cell changes occur in neurons, which show signs of degeneration. In senility (characterized by severe memory loss and a loss of intellectual functioning), signs of degeneration are much more severe. An example is the neurofibrillary degeneration seen most commonly in dementia of the Alzheimer’s

type. Structural changes and mutations in deoxyribonucleic acid (DNA) and ribonucleic acid (RNA) are also found in aging cells; these have been attributed to genotypic programming, X-rays, chemicals, and food products, among others. Probably no single cause of aging exists, and all areas of the body are affected to some degree. Genetic factors have been implicated in disorders that commonly occur in older persons, such as hypertension, coronary artery disease, arteriosclerosis, and neoplastic disease. Family studies indicate inheritance factors for breast and stomach cancer, colon polyps, and certain mental disorders of old age. Huntington’s disease shows an autosomal dominant mode of inheritance with complete penetrance. The average age of onset is between 35 and 40 years, but cases have occurred as late as 70 years. Longevity Longevity has been studied since the beginning of recorded history and has always been a topic of great interest. The research about longevity reveals that a family history of longevity is the best indicator of a long life; of persons who live past 80, half of their fathers also lived past 80. Nevertheless, many conditions leading to a shortened life can be prevented, ameliorated, or delayed with effective intervention. Heredity is but one factor—one beyond a person’s control. Predictors of longevity that are within a person’s control include regular medical checkups, minimal or no caffeine or alcohol consumption, work gratification, and a perceived sense of the self as being socially useful in an altruistic role, such as spouse, teacher, mentor, parent, or grandparent. Healthy eating and adequate exercise are also associated with health and longevity. Life Expectancy In the United States, the average life expectancy of both sexes has increased in every decade—from 48 years in 1900 to 77.4 years for men and 82.2 years for women in 2013. The projected life expectancy at birth and at age 65 is indicated in Table 33-5. Changes in morbidity and mortality have also occurred. Over the past 30 years, for example, a 60 percent decline has occurred in mortality from cerebrovascular disease

and a 30 percent decline in mortality from coronary artery disease. In contrast, mortality from cancer, which rises steeply with age, has increased, especially cancer of the lung, colon, stomach, skin, and prostate. Table 33-5 Projected Life Expectancy at Birth and Age 65, by Sex: 1990–2050 (in Years)

The oldest old, persons over 85 years of age, is the most rapidly growing segment of the older population. Over the past 25 years, the population of all older persons increased by 100 percent, compared with 45 percent for the entire US population, but the increase for the 85 and older group exceeded 275 percent. It is expected that by 2050, the oldest old will make up about 25 percent of the elderly population and 5 percent of the total population in the United States. Figure 33-1 gives projected percentages for the average annual growth rate of the elderly population to 2050.

FIGURE 33-1 Average annual growth rate of the elderly population. (Data from U.S. Bureau of the Census.) The leading causes of death among older persons are heart disease, cancer, and stroke. Accidents are among the leading causes of death of persons over 65. Most fatal accidents are caused by falls, pedestrian incidents, and burns. Falls are most commonly the result of cardiac arrhythmias and hypotensive episodes. Some gerontologists consider death in very old persons (over 85) to result from an aging syndrome characterized by diminished elastic-mechanical properties of the heart, arteries, lungs, and other organs. Death results from trivial tissue injuries that would not be fatal to a younger person; accordingly, senescence is viewed as the cause of death. Ethnicity and Race The proportion of older persons in the black, Hispanic, and Asian populations is smaller than that in the white population, but it is increasing rapidly. By 2050, 20 percent of older persons will be nonwhite. The proportion of older persons who are Hispanic will increase from 4 percent to approximately 14 percent over the same period. According to the U.S. Census Bureau, Hispanic refers to persons “whose origins are Mexican, Puerto Rican, Cuban, Central or South American, and other Hispanic or Latino, regardless of race” (Fig. 33-2).

FIGURE 33-2 Percent distribution of people 55 years and over by race, Hispanic origin, and age: 2002. (Data from U.S. Bureau of the Census.) Sex Ratios On average, women live longer than men and are more likely than men to live alone. The number of men per 100 women decreases sharply from age 65 to 85 (Fig. 33-3). FIGURE 33-3 Sex ratio of people 55 years and over by age: 2002. (Data from U.S. Bureau of the Census.) Geographic Distribution The most populous states have the largest number of older persons. California has the most (3.3 million), followed by New York, Pennsylvania, Texas, Michigan, Illinois, Florida, and Ohio, each with more than 1 million. States with high proportions of older persons include Pennsylvania, Florida, Nebraska, and North Dakota. The high proportion in Florida is owing to those who move into the state for retirement; in the others, because of young persons moving out. Exercise, Diet, and Health Diet and exercise play a role in preventing or ameliorating chronic diseases of older persons, such as arteriosclerosis and hypertension. Hyperlipidemia, which correlates with coronary artery disease, can be controlled by reducing body weight, decreasing the intake of saturated fat, and limiting the intake of cholesterol. Increasing the daily intake of dietary fiber can also help decrease serum lipoprotein levels. A daily intake of 1

ounce (about 30 mL) of alcohol has been correlated with longevity and elevated high-density lipoproteins (HDL). Studies have also clearly demonstrated that statin drugs that reduce cholesterol have a dramatic effect on reducing cardiovascular disease in persons with diet-resistant or exercise-resistant hyperlipidemia. Low salt intake (less than 3 g a day) is associated with a lowered

risk of hypertension. Hypertensive geriatric patients can often correct their condition by moderate exercise and decreased salt intake without the addition of drugs. A regimen of daily moderate exercise (walking for 30 minutes a day) has been associated with a reduction in cardiovascular disease, decreased incidence of osteoporosis, improved respiratory function, the maintenance of ideal weight, and a general sense of well-being. Exercise has been shown to improve strength and function even among the very old. In many cases, a disease process has been reversed and even cured by diet and exercise, without additional medical or surgical intervention. Table 33-6 lists the biological changes associated with diet and exercise. A comparison with Table 33-2 reveals that almost every biological change associated with aging is positively affected by diet and exercise.

Table 33-6 Positive and Healthy Physiological Effects of Exercise and Nutrition

**STAGE THEORIES OF PERSONALITY DEVELOPMENT** Early personality theorists proposed that development was completed by the end of childhood or adolescence. One of the first development theorists to propose that personality continues to develop and grow over the life span was Erik Erikson. Erikson believed that development proceeded through a series of psychosocial stages, each with its own conflict that is resolved by the individual with greater or lesser success. Erikson termed the crisis of the last epoch of life integrity versus despair and believed that successful resolution of this crisis involved a process of life review and achieving a sense of peace and wisdom through coming to terms with how one's life was lived. For example, Erikson proposed that successful resolution of this crisis would be characterized by a sense of having lived one's life well, whereas a less successful resolution would be characterized by feeling that life was too short, that one did not choose wisely, and bitterness that one will not have a chance to live life over.

Several studies have attempted to validate aspects of Erikson's theory. In one study, a sample of more than 400 men was studied prospectively, and the highest Eriksonian life stage each achieved was rated according to data gathered on the circumstances of his life. For example, if a man had achieved independence from his family of origin and was self-sufficient but was unable to develop an intimate relationship, the highest life stage achieved would be the identity stage, not the intimacy stage. This study found that Eriksonian stages are passed through in sequential order, although often not at the same age for every individual, and that the stages are surprisingly universal in populations that are ethnically and socioeconomically diverse. A longitudinal study of approximately 500 subjects from two age cohorts found that the earlier age cohort scored significantly higher on integrity than the later age cohort, and scores for both age cohorts on integrity had declined significantly by the final time of testing. These data suggest that the conflict of integrity versus despair may have a more favorable outcome in earlier age cohorts than in later ones, raising the possibility that changing societal values have had a negative impact on the struggle for integrity. Another study found that wisdom, a construct related to integrity, bore a stronger relation to life satisfaction in elderly adults than other variables, including finances, health, and living situation. A survey of theories of development in old age is given in Table 33-7.

Table 33-7 Old Age Developmental Theorists

**Personality Over the Life Span: Stability or Change?** Although Erikson and other stage theorists focused on unique developmental tasks and stages central to each phase of life, other theorists focused on defining core personality traits within the individual and determining their course over the life span. For example, do those who are gregarious or extroverted during early childhood and adolescence remain extroverted through midlife and old age? Several well-designed longitudinal

studies that have followed individuals over periods ranging from 10 to 50 years have found strong evidence for stability in five basic personality traits: extroversion, neuroticism, agreeableness, openness to experience, and conscientiousness. Some studies found slight decreases in extroversion and slight increases in agreeableness as individuals move into the oldest-old category, which contrasts with early theories that proposed that personality rigidifies as individuals age. Is the fact that personality appears to have considerable stability over time inconsistent with the basic tenets of stage theories? Perhaps not. It may be that although individuals are consistent over time in their basic personality structure, the themes and conflicts with which they struggle change considerably over the life span, from concerns about developing identity and a stable sense of self, to finding a life partner, to issues related to life review, as hypothesized by the stage theories. In addition, in developing theories about personality change, few studies have examined the impact of significant historical events on personality; thus, the ways in which these events may result in personality change have not been studied systematically.

### PSYCHOSOCIAL ASPECTS OF AGING

**Social Activity** Healthy older persons usually maintain a level of social activity that is only slightly changed from that of earlier years. For many, old age is a period of continued intellectual, emotional, and psychological growth. In some cases, however, physical illness or the death of friends and relatives may preclude continued social interaction. Moreover, as persons experience an increased sense of isolation, they may become vulnerable to depression. Growing evidence indicates that maintaining social activities is valuable for physical and emotional well-being. Contact with younger persons is also important. Old persons can pass on cultural values and provide care services to the younger generation and thereby maintain a sense of usefulness that contributes to self-esteem.

**Ageism** Ageism, a term coined by Robert Butler, refers to discrimination toward old persons and to the negative stereotypes about old age that are held by younger adults. Old persons may themselves resent and fear other old persons and discriminate against them. In Butler's scheme, persons often associate old age with loneliness, poor health, senility, and general weakness or infirmity. The experience of older persons, however, does not consistently support this attitude. For example, although 50 percent of young adults

expect poor health to be a problem for those over 65 years old, 75 percent of persons 65 to 74 years of age describe their health as good. Two thirds of persons 75 and older feel the same way. Health problems, when they do exist, more often involve chronic than acute conditions. More than four of five persons over the age of 65 have at least one chronic condition (Table 33-8).

Age Group	White	Black
65-74	1,000	1,000
75-84	1,000	1,000
85+	1,000	1,000

Good health, however, is not the sole determinant of a good quality of life in old age. Surveys of old persons show that social contacts are at least as highly valued. In fact, the factors affecting good aging appear to be multidimensional. Aging "robustly" means considering aging in terms of productive involvement, affective status, functional status, and cognitive status. These four indicators are only minimally correlated. The most robustly aging individuals report greater social contact, better health and vision, and fewer significant life events in the past 3 years than their less robustly aging counterparts. A linear, age-related decrease occurs in robustness, but it can still be found among the oldest old. George Vaillant followed up a group of Harvard freshmen into old age and found the following about emotional health at age 65: Having been close to brothers and sisters during college correlated with emotional well-being; undergoing early traumatic life experiences, such as the death of a parent or parental divorce, did not correlate with poor adaptation in old age; being depressed at some point between ages 21 and 50 predicted emotional problems at age 65; and possessing the personality traits of pragmatism and dependability as a

young adult was associated with a sense of well-being at age 65. Transference Several forms of transference, some of them unique to adulthood, are present in older adults. First is the well-recognized parental transference, in which the patient reacts to the therapist as a child to a parent. Peer or sibling transference, expressions of experiences from a variety of nonparental relationships, is also common. In this form of transference, the patient looks to the therapist to share experiences with siblings, spouses, friends, and associates. At first, therapists may be surprised by older patients' ability to ignore their age in creating such transferences. In son or daughter transference, quite common in middle-aged individuals and the elderly, the therapist is cast in the role of the patient's child, grandchild, or son-in-law or

daughter-in-law. The themes expressed in this form of transference are multiple and often center on defenses against dependency feelings, activity and dominance versus passivity and submission, and attempts to rework unsatisfying aspects of relationships with children before time runs out. Finally, sexual transferences in older individuals are frequent and intense, and the therapist needs to be able to accept them and manage his or her countertransference responses.

Countertransference Older individuals are dealing with illness and signs of aging, the loss of spouses and friends, and the constant awareness of time limitation and the nearness of death. These are painful issues that are just beginning to come into focus for younger therapists who would prefer not to confront them with great intensity on a daily basis. A second source of countertransference responses centers on the older patient's sexuality. The presence of a vivid fantasy life, masturbation, and intercourse are disconcerting in and of themselves if the therapist has not had much experience in working with individuals who are the same age as their parents and grandparents. Consider the experience presented in the case study of a 31-year-old female therapist who was treating a 62-year-old man. Early in the treatment process, Mr. E's sexual feelings emerged. His well-groomed appearance and adolescent-like nervousness caused the therapist discomfort. Her concern was how to engender respect and develop a therapeutic alliance with a patient who approached each session as a date, particularly because he was old enough to be her grandfather. At first shocked by his open expression of sexual interest in her, with the help of supervision and her own therapy, she was able to recognize that she and the patient had similar conflicts to resolve, despite the 30-year age difference between them. She had hoped that Mr. E would be "all grown up," devoid of issues that she was grappling with also. She came to recognize that failure to help him understand the relation between his past and still vibrant sexuality would do the patient a great disservice and would spring from her a lack of understanding of late-life sexual development and her countertransference reaction to him based on her conflicted attitudes toward the sexuality of her parents and grandparents. (Courtesy of Calvin A. Colarusso, M.D.)

Socioeconomics The economics of old age is of paramount importance to older persons themselves and to society at large. The past 30 years have seen a dramatic decline in the proportion of the US elderly population who are poor, primarily as a result of the availability of Medicare, Social Security, and private pensions. In 1959, 35.2 percent of persons over 65 lived below the poverty line, but by 2012 this figure had declined to 9.1 percent.

Persons over age 65 make up 12 percent of the population, but they include only 9 percent of those living at low socioeconomic levels. Women are more likely than men to be poor. Income sources vary for persons age 65 and older. Despite overall economic gains, many older persons are so preoccupied by money worries that their enjoyment of life is lessened. Obtaining proper medical care may be especially difficult when personal funds are not available or are insufficient. Medicare

(Title 18) provides both hospital and medical insurance for those over age 65. About 150 million medical bills are reimbursed under the Medicare program each year; but only about 40 percent of all medical expenses incurred by older persons are covered under Medicare. The rest is paid by private insurance, state insurance, or personal funds. Some services—such as outpatient psychiatric treatment, skilled nursing care, physical rehabilitation, and preventive physical examinations—are covered minimally or not at all. In addition to Medicare, the Social Security program pays benefits to persons over age 65 (over age 67 in 2027) and pays benefits at reduced rates from age 62 on. To qualify for benefits, a person must have worked long enough to become insured: A worker must have worked for 10 years to be eligible for benefits. Benefits are also paid to widows, widowers, and dependent children if those receiving benefits or contributing to Social Security die (survivor benefits). Social Security is not a pension scheme but a pay-as-you-go income supplement to prevent mass destitution among older persons. Benefits are paid by those currently working to those who are retired. Serious difficulties for Social Security are forecast for the next three decades, when the number of baby boomers reaching old age will greatly exceed the number of younger workers paying into the plan. Retirement For many older persons, retirement is a time for the pursuit of leisure and for freedom from the responsibility of previous working commitments. For others, it is a time of stress, especially when retirement results in economic problems or a loss of self-esteem. Ideally, employment after age 65 should be a matter of choice. With the passage of the Age Discrimination in Employment Act of 1967 and its amendments, forced retirement at age 70 has been virtually eliminated in the private sector, and it is not legal in federal employment. Most of those who retire voluntarily reenter the workforce within 2 years, for a variety of reasons, including negative reactions to being retired, feelings of being unproductive, economic hardship, and loneliness. The amount of time spent in retirement has increased as the life span has nearly doubled since 1900. Currently, the number of years spent in retirement is almost equal to the number of years spent working. Sexual Activity The frequency of orgasm, from coitus or masturbation, decreases with age in men and women. The most important factors in determining the level of sexual activity with age are the health and survival of the spouse, one's own health, and the level of past sexual activity. Although some degree of declining sexual interest and function is inevitable with age, social and cultural factors appear to be more responsible for the sexual

changes observed than for the psychological changes of aging per se. Although satisfying sexual activity is possible for the reasonably healthy elderly, many do not actualize this potential. The widely held notion that the elderly are essentially asexual is often a self-fulfilling prophecy. Long-Term Care Many older persons who are infirm require institutional care. Although only 5 percent are institutionalized in nursing homes at any one time, about 35 percent of older persons require care in a long-term facility at some time during their lives (Fig. 33-4). Older nursing home residents are mainly widowed women, and about 50 percent are over age 85. FIGURE 33-4 People age 65 or older in need of long-term care: 1980–2040. (Reprinted from Manton B, Saldo J. Dynamics of health changes in the oldest old: New perspectives and evidence. *Milbank Q.* 1985;63:12, with permission.) Nursing home care costs are not covered by Medicare; they range from \$20,000 to \$1 million a year. About 20,000 long-term nursing care institutions are available in the United States, this is not enough to meet the need. Those older persons who do not require skilled nursing care can be managed in other types of health-related facilities, such as centers they attend during the daytime hours, but the need for care far exceeds the availability of such centers. Outside institutions, care for older persons is provided by their children (primarily their daughters and

daughters-in-law), their wives, and other women (Fig. 33-5). More than 50 percent of these women caregivers also work in jobs outside the home, and about 40 percent also care for their own children. In general, women end up as caregivers more often than men because of cultural and societal expectations. According to the American Association of Retired Persons, daughters with jobs spend an average of 12 hours a week providing care and currently spend about \$150 a month for travel, telephone calls, special foods, and medication for older persons.

FIGURE 33-5 Caretakers and their relationship to the elderly care recipient. (Data from Select Committee on Aging, U.S. House of Representatives.)

### PSYCHIATRIC PROBLEMS OF OLDER PERSONS

Despite the ubiquity of loss in old age, the prevalence of major depressive disorder and dysthymia is actually less than in younger age groups. Several explanations for this phenomenon have been proposed: rarity of late-onset depression, higher mortality among persons with depression, and a general decrease in disorders caused by emotional upheavals or substance abuse in older persons. Depression in old persons is often accompanied by physical symptoms or cognitive changes that may mimic dementia. The incidence of suicide among older persons is high (40 per 100,000 population) and is highest for older white men. The suicide of older persons is perceived differently by surviving friends and family members on the basis of gender: Men are thought to have been physically ill, and women are thought to have been mentally ill. The relation between good mental and good physical health is clear in older persons. Adverse effects on the course of chronic medical illness are correlated with emotional problems. The following section will discuss the psychiatric problems in older persons.

### PSYCHIATRIC EXAMINATION OF THE OLDER PATIENT

Psychiatric history taking and the mental status examination of older adults follow the same format as for younger adults; however, because of the high prevalence of cognitive disorders in older persons, psychiatrists must determine whether a patient understands the nature and purpose of the examination. When a patient is cognitively impaired, an independent history should be obtained from a family member or caretaker. The patient still should be seen alone—even in cases of clear evidence of impairment—to preserve the privacy of the doctor-patient relationship and to elicit any suicidal thoughts or paranoid ideation, which may not be voiced in the presence of a relative or nurse. When approaching the examination of the older patient, it is important to remember that older adults differ markedly from one another. The approach to examining the older patient must take into account whether the person is a healthy 75-year-old who recently retired from a second career or a frail 96-year-old who just lost the only

surviving relative with the death of the 75-year-old care-giving daughter.

### Psychiatric History

A complete psychiatric history includes preliminary identification (name, age, sex, marital status), chief complaint, history of the present illness, history of previous illnesses, personal history, and family history. A review of medications (including over-the-counter medications) that the patient is currently using or has used in the recent past is also important. Patients older than age 65 often have subjective complaints of minor memory impairments, such as forgetting persons' names and misplacing objects. Minor cognitive problems also can occur because of anxiety in the interview situation. These age-associated memory impairments are of no significance; the term benign senescent forgetfulness has been used to describe them. A patient's childhood and adolescent history can provide information about personality organization and give important clues about coping strategies and defense mechanisms used under stress. A history of learning disability or minimal cerebral dysfunction is significant. The psychiatrist should inquire about friends, sports, hobbies, social activity, and work. The occupational history should include the patient's feelings

about work, relationships with peers, problems with authority, and attitudes toward retirement. The patient also should be questioned about plans for the future. What are the patient's hopes and fears? The family history should include a patient's description of parents' attitudes and adaptation to their old age and, if applicable, information about the causes of their deaths. Alzheimer's disease is transmitted as an autosomal-dominant trait in 10 to 30 percent of the offspring of parents with Alzheimer's disease; depression and alcohol dependence also run in families. The patient's current social situation should be evaluated. Who cares for the patient? Does the patient have children? What are the characteristics of the patient's parent-child relationships? A financial history helps the psychiatrist evaluate the role of economic hardship in the patient's illness and to make realistic treatment recommendations. The marital history includes a description of the spouse and the characteristics of the relationship. If the patient is a widow or a widower, the psychiatrist should explore how grieving was handled. If the loss of the spouse occurred within the past year, the patient is at high risk for an adverse physical or psychological event. The patient's sexual history includes sexual activity, orientation, libido, masturbation, extramarital affairs, and sexual symptoms (e.g., impotence and anorgasmia). Young clinicians may have to overcome their own biases about taking a sexual history: Sexuality is an area of concern for many geriatric patients, who welcome the chance to talk about their sexual feelings and attitudes.

**Mental Status Examination** The mental status examination offers a cross-sectional view of how a patient thinks, feels, and behaves during the examination. With older adults, a psychiatrist may not be able to rely on a single examination to answer all of the diagnostic questions. Repeat mental status examinations may be needed because of fluctuating changes in the patient's family.

**General Description.** A general description of the patient includes appearance, psychomotor activity, attitude toward the examiner, and speech activity. Motor disturbances (e.g., shuffling gait, stooped posture, "pill rolling" movements of the fingers, tremors, and body asymmetry) should be noted. Involuntary movements of the mouth or tongue may be adverse effects of phenothiazine medication. Many depressed patients seem to be slow in speech and movement. A mask-like facies occurs in Parkinson's disease. The patient's speech may be pressured in agitated, manic, and anxious states. Tearfulness and overt crying occur in depressive and cognitive disorders, especially if the patient feels frustrated about being unable to answer one of the examiner's questions. The presence of a hearing aid or another indication that the patient has a hearing problem (e.g., requesting repetition of questions) should be noted. The patient's attitude toward the examiner—cooperative, suspicious, guarded, ingratiating—can give clues about possible transference reactions. Because of transference, older adults can react to younger physicians as if the physicians were parent figures, despite the age difference.

**Functional Assessment.** Patients older than 65 years of age should be evaluated for their capacity to maintain independence and to perform the activities of daily life, which include toileting, preparing meals, dressing, grooming, and eating. The degree of functional competence in their everyday behaviors is an important consideration in formulating a treatment plan for these patients.

**Mood, Feelings, and Affect.** Suicide is a leading cause of death of older persons, and an evaluation of a patient's suicidal ideation is essential. Loneliness is the most common reason cited by older adults who consider suicide. Feelings of loneliness, worthlessness, helplessness, and hopelessness are symptoms of depression, which carries a high risk for suicide. Nearly 75 percent of all suicide victims suffer from depression, alcohol abuse, or both. The examiner should specifically ask the patient about any thoughts of suicide: Does the patient feel life is no longer worth living? Does the patient think he or she would be better off dead or, when dead, would no longer be a burden to others? Such

thoughts—especially when associated with alcohol abuse, living alone, recent death of a spouse, physical illness, and somatic pain—indicate a high suicidal risk. Disturbances in mood states, most notably depression and anxiety, can interfere with memory functioning. An expansive or euphoric mood may indicate a manic episode or may signal a dementing disorder. Frontal lobe dysfunction often produces witzelsucht, which is the tendency to make puns and jokes and then laugh aloud at them. The patient's affect may be flat, blunted, constricted, shallow, or inappropriate, all of which can indicate a depressive disorder, schizophrenia, or brain dysfunction. Such affects are important abnormal findings, although they are not pathognomonic of a specific disorder. Dominant lobe dysfunction causes dysprosody, an inability to express emotional feelings through speech intonation. Perceptual Disturbances. Hallucinations and illusions by older adults can be transitory phenomena resulting from decreased sensory acuity. The examiner should note whether the patient is confused about time or place during the hallucinatory episode; confusion points to an organic condition. It is particularly important to ask the

patient about distorted body perceptions. Because hallucinations can be caused by brain tumors and other focal pathology, a diagnostic workup may be indicated. Brain diseases cause perceptive impairments; agnosia, the inability to recognize and interpret the significance of sensory impressions, is associated with organic brain diseases. The examiner should note the type of agnosia—the denial of illness (anosognosia), the denial of a body part (atopognosia), or the inability to recognize objects (visual agnosia) or faces (prosopagnosia). Language Output. The language output category of the geriatric mental status examination covers the aphasias, which are disorders of language output related to organic lesions of the brain. The best described are nonfluent or Broca's aphasia, fluent or Wernicke's aphasia, and global aphasia, a combination of fluent and nonfluent aphasias. In nonfluent or Broca's aphasia, the patient's understanding remains intact, but the ability to speak is impaired. The patient cannot pronounce "Methodist Episcopalian." Words are generally mispronounced and speech may be telegraphic. A simple test for Wernicke's aphasia is to point to some common objects—such as a pen or a pencil, a doorknob, and a light switch—and ask the patient to name them. The patient also may be unable to demonstrate the use of simple objects, such as a key and a match (ideomotor apraxia). Visuospatial Functioning. Some decline in visuospatial capability is normal with aging. Asking a patient to copy figures or a drawing may be helpful in assessing the function. A neuropsychological assessment should be performed when visuospatial functioning is obviously impaired. Thought. Disturbances in thinking include neologisms, word salad, circumstantiality, tangentiality, loosening of associations, flight of ideas, clang associations, and blocking. The loss of the ability to appreciate nuances of meaning (abstract thinking) may be an early sign of dementia. Thinking is then described as concrete or literal. Thought content should be examined for phobias, obsessions, somatic preoccupations, and compulsions. Ideas about suicide or homicide should be discussed. The examiner should determine whether delusions are present and how such delusions affect the patient's life. Delusions may be present in nursing home patients and may have been a reason for admission. Ideas of reference or of influence should be described. Patients who are hard of hearing can be classified mistakenly as paranoid or suspicious. Sensorium and Cognition. Sensorium concerns the functioning of the special senses; cognition concerns information processing and intellect. The survey of both areas, known as the neuropsychiatric examination, consists of the clinician's assessment and a comprehensive battery of psychological tests. CONSCIOUSNESS. A sensitive indicator of brain dysfunction is an altered state of consciousness in which the patient does not seem to be alert, shows fluctuations in levels

of awareness, or seems to be lethargic. In severe cases, the patient is somnolent or stuporous.

**ORIENTATION.** Impairment in orientation to time, place, and person is associated with cognitive disorders. Cognitive impairment often is observed in mood disorders, anxiety disorders, factitious disorders, conversion disorder, and personality disorders, especially during periods of severe physical or environmental stress. The examiner should test for orientation to place by asking the patient to describe his or her present location. Orientation to person may be approached in two ways: Does the patient know his or her own name, and are nurses and doctors identified as such? Time is tested by asking the patient the date, the year, the month, and the day of the week. The patient also should be asked about the length of time spent in a hospital, during what season of the year, and how the patient knows these facts. Greater significance is given to difficulties concerning person than to difficulties of time and place, and more significance is given to orientation to place than to orientation to time.

**MEMORY.** Memory usually is evaluated in terms of immediate, recent, and remote memory. Immediate retention and recall are tested by giving the patient six digits to repeat forward and backward. The examiner should record the result of the patient's capacity to remember. Persons with unimpaired memory usually can recall six digits forward and five or six digits backward. The clinician should be aware that the ability to do well on digit-span tests is impaired in extremely anxious patients. Remote memory can be tested by asking for the patient's place and date of birth, the patient's mother's name before she was married, and names and birthdays of the patient's children. In cognitive disorders, recent memory deteriorates first. Recent memory assessment can be approached in several ways. Some examiners give the patient the names of three items early in the interview and ask for recall later. Others prefer to tell a brief story and ask the patient to repeat it verbatim. Memory of the recent past also can be tested by asking for the patient's place of residence, including the street number, the method of transportation to the hospital, and some current events. If the patient has a memory deficit, such as amnesia, careful testing should be performed to determine whether it is retrograde amnesia (loss of memory before an event) or anterograde amnesia (loss of memory after the event). Retention and recall also can be tested by having the patient retell a simple story. Patients who confabulate make up new material in retelling the story.

**INTELLECTUAL TASKS, INFORMATION, AND INTELLIGENCE.** Various intellectual tasks can be presented to estimate the patient's fund of general knowledge and intellectual functioning. Counting and calculation can be tested by asking the patient to subtract 7 from 100 and to continue subtracting 7 from the result until the number 2 is reached. The examiner records the responses as a baseline for future testing. The examiner can also ask the patient to count backward from 20 to 1 and can record the time necessary to complete the exercise. The patient's fund of general knowledge is related to intelligence. The patient can be asked to name the president of the United States, to name the three largest cities in the United States, to give the population of the United States, and to give

the distance from New York to Paris. The examiner must take into account the patient's educational level, socioeconomic status, and general life experience in assessing the results of some of these tests.

**READING AND WRITING.** It may be important for the clinician to examine the patient's reading and writing and to determine whether the patient has a specific speech deficit. The examiner may have the patient read a simple story aloud or write a short sentence to test for a reading or writing disorder. Whether the patient is right handed or left handed should be noted.

**JUDGMENT.** Judgment is the capacity to act appropriately in various situations. Does the patient show impaired judgment? What would the patient do on finding a stamped, sealed, addressed envelope in the street? What would the patient do if he or she smelled smoke in a theater? Can the

patient discriminate? What is the difference between a dwarf and a boy? Why are couples required to get a marriage license? Neuropsychological Evaluation A thorough neuropsychological examination includes a comprehensive battery of tests that can be replicated by various examiners and can be repeated over time to assess the course of a specific illness. The most widely used test of current cognitive functioning is the Mini-Mental State Examination (MMSE), which assesses orientation, attention, calculation, immediate and short-term recall, language, and the ability to follow simple commands. The MMSE is used to detect impairments, follow the course of an illness, and monitor the patient's treatment responses. It is not used to make a formal diagnosis. The maximal MMSE score is 30. Age and educational level influence cognitive performance as measured by the MMSE. The assessment of intellectual abilities is performed with the Wechsler Adult Intelligence Scale-Revised (WAIS-R), which gives verbal, performance, and full-scale intelligence quotient (IQ) scores. Some test results, such as those of vocabulary tests, hold up as aging progresses; results of other tests, such as tests of similarities and digit-symbol substitution, do not. The performance part of the WAIS-R is a more sensitive indicator of brain damage than the verbal part. Visuospatial functions are sensitive to the normal aging process. The Bender Gestalt Test is one of a large number of instruments used to test visuospatial functions; another is the Halstead-Reitan Battery, which is the most complex battery of tests covering the entire spectrum of information processing and cognition. Depression, even in the absence of dementia, often impairs psychomotor performance, especially visuospatial functioning and timed motor performance. The Geriatric Depression Scale is a useful screening instrument that excludes somatic complaints from its list of items. The presence of somatic complaints on a rating scale tends to confound the diagnosis of a depressive disorder. Medical History. Elderly patients have more concomitant, chronic, and multiple medical problems and take more medications than younger adults; many of these medications can influence their mental status. The medical history includes all major illnesses, traumata, hospitalizations, and treatment interventions. The psychiatrist

should also be alert to underlying medical illness. Infections, metabolic and electrolyte disturbances, and myocardial infarction and stroke may first be manifested by psychiatric symptoms. Depressed mood, delusions, and hallucinations may precede other symptoms of Parkinson's disease by many months. On the other hand, a psychiatric disorder can also cause such somatic symptoms as weight loss, malnutrition, and inanition of severe depression. Careful review of medications (including over-the-counter medications, laxatives, vitamins, tonics, and lotions) and even substances recently discontinued is extremely important. Drug effects can be long lasting and may induce depression (e.g., antihypertensives), cognitive impairment (e.g., sedatives), delirium (e.g., anticholinergics), and seizures (e.g., neuroleptics). The review of medications must include sufficient detail to identify misuse (overdose, underuse) and relate medication use to special diets. A dietary history is also important; deficiencies and excesses (e.g., protein, vitamins) can influence physiological function and mental status. EARLY DETECTION AND PREVENTION STRATEGIES Many age-related illnesses develop insidiously and gradually progress over the years. The most common cause of late-life cognitive impairment, Alzheimer's disease, is characterized neuropathologically by a gradual accumulation of neuritic plaques and neurofibrillary tangles in the brain. Clinically, a progression of cognitive decline is seen, which begins with mild memory loss and ends with severe cognitive and behavioral deterioration. Because it will likely be easier to prevent neural damage than to repair it once it occurs, investigators are developing strategies for early detection and prevention of age-related illnesses, such as Alzheimer's disease.

Considerable progress has been made in the detection component of this strategy, using brain imaging technologies, such as positron emission tomography (PET) and functional magnetic resonance imaging (fMRI), in combination with genetic risk measures. With these approaches, subtle brain changes can now be detected that progress and can be followed over time. Such surrogate markers allow clinical scientists to track disease progression and to test novel treatments designed to decelerate brain aging. Clinical trials of cholinesterase inhibitor drugs, anticholesterol drugs, anti-inflammatory drugs, and others (e.g., vitamin E) are in progress to determine if such treatments delay the onset of Alzheimer's disease or the progression of brain metabolic or cognitive decline. Novel approaches to measuring the physical evidence of Alzheimer's disease, the plaques and tangles in the cerebral cortex, have been successful in initial studies and will likely facilitate the testing of innovative treatments designed to rid the brain of these pathognomonic lesions. Scientists may not be able to cure Alzheimer's disease in its advanced stages, but they may be able to delay its onset effectively, thus helping patients live longer without the debilitating manifestations of the disease, including cognitive decline. MENTAL DISORDERS OF OLD AGE

The National Institute of Mental Health's Epidemiologic Catchment Area (ECA) program has found that the most common mental disorders of old age are depressive disorders, cognitive disorders, phobias, and alcohol use disorders. Older adults also have a high risk for suicide and drug-induced psychiatric symptoms. Many mental disorders of old age can be prevented, ameliorated, or even reversed. Of special importance are the reversible causes of delirium and dementia; if not diagnosed accurately and treated in a timely fashion, however, these conditions can progress to an irreversible state requiring a patient's institutionalization. Table 33-9 lists the general cognitive domains assessed in a neuropsychological evaluation, with the tests used to measure that skill and a description of the specific behaviors measured by each test. The tests listed in the table constitute a comprehensive test battery generally appropriate for use with a geriatric population. Use of a comprehensive battery is preferable for confident determination of the presence and type of dementia or other cognitive disorder in elderly persons; in some circumstances, however, administering a several-hour battery is not possible. Table 33-9 Cognitive Domains

Several psychosocial risk factors also predispose older persons to mental disorders. These risk factors include loss of social roles, loss of autonomy, the deaths of friends and relatives, declining health, increased isolation, financial constraints, and decreased cognitive functioning. Many drugs can cause psychiatric symptoms in older adults. These symptoms can result from age-related alterations in drug absorption, a prescribed dosage that is too large, not following instructions and taking too large a dose, sensitivity to the medication, and conflicting regimens presented by several physicians. Almost the entire spectrum of mental disorders can be caused by drugs. Dementing Disorders Only arthritis is a more common cause of disability among adults age 65 and older than dementia, a generally progressive and irreversible impairment of the intellect, the

prevalence of which increases with age. About 5 percent of persons in the United States older than age 65 have severe dementia, and 15 percent have mild dementia. Of persons older than age 80, about 20 percent have severe dementia. Known risk factors for dementia are age, family history, and female sex. In contrast to intellectual disability, the intellectual impairment of dementia develops over time—that is, previously achieved mental functions are lost gradually. The characteristic changes of dementia involve cognition, memory, language, and visuospatial functions, but behavioral disturbances are common as well and include agitation, restlessness,

wandering, rage, violence, shouting, social and sexual disinhibition, impulsiveness, sleep disturbances, and delusions. Delusions and hallucinations occur during the course of the dementias in nearly 75 percent of patients. Cognition is impaired by many conditions, including brain injuries, cerebral tumors, acquired immune deficiency syndrome (AIDS), alcohol, medications, infections, chronic pulmonary diseases, and inflammatory diseases. Although dementias associated with advanced age typically are caused by primary degenerative central nervous system (CNS) disease and vascular disease, many factors contribute to cognitive impairment; in older persons, mixed causes of dementia are common. About 10 to 15 percent of all patients who exhibit symptoms of dementia have potentially treatable conditions. The treatable conditions include systemic disorders, such as heart disease, renal disease, and congestive heart failure; endocrine disorders, such as hypothyroidism; vitamin deficiency; medication misuse; and primary mental disorders, most notably depressive disorders. Depending on the site of the cerebral lesion, dementias are classified as cortical and subcortical. A subcortical dementia occurs in Huntington's disease, Parkinson's disease, normal pressure hydrocephalus, vascular dementia, and Wilson's disease. The subcortical dementias are associated with movement disorders, gait apraxia, psychomotor retardation, apathy, and akinetic mutism, which can be confused with catatonia. Table 33-10 lists some potentially reversible conditions that may resemble dementia. The cortical dementias occur in dementias of the Alzheimer's type, Creutzfeldt-Jakob disease (CJD), and Pick's disease, which frequently manifest aphasia, agnosia, and apraxia. In clinical practice, the two types of dementias overlap and, in most cases, an accurate diagnosis can be made only by autopsy. Human prion diseases result from coding mutations in the prion protein gene (PRNP) and may be inherited, acquired, or sporadic. They include familial CJD, Gerstmann-Sträussler-Scheinker syndrome, and fatal familial insomnia. These are inherited as autosomal-dominant mutations. The acquired diseases include kuru and iatrogenic CJD. Kuru was an epidemic prion disease of the Fore people of Papua, New Guinea, caused by cannibalistic funeral rituals, which peaked in incidence in the 1950s. Iatrogenic disease is rare and is caused, for example, by the use of contaminated dura mater and corneal grafts and treatment with human cadaveric pituitary-derived growth hormone and gonadotropin. Sporadic CJD accounts for 85 percent of the human prion diseases and occurs worldwide, with a uniform distribution and an incidence of about 1 in 1 million per annum, with a mean age at onset of 65 years. It is exceedingly rare in individuals under 30 years of age. Table 33-10 Some Potentially Reversible Conditions that May Resemble Dementia

**Depressive Disorders** Depressive symptoms are present in about 15 percent of all older adult community residents and nursing home patients. Age itself is not a risk factor for the development of depression, but being widowed and having a chronic medical illness are associated with vulnerability to depressive disorders. Late-onset depression is characterized by high rates of recurrence. The common signs and symptoms of depressive disorders include reduced energy and concentration, sleep problems (especially early morning awakening and multiple awakenings), decreased appetite, weight loss, and somatic complaints. The presenting symptoms may be different in older depressed patients from those seen in younger adults because of an increased emphasis on somatic complaints in older persons. Older persons are particularly vulnerable to major depressive episodes with melancholic features, characterized by depression, hypochondriasis, low self-esteem, feelings of worthlessness, and self-accusatory trends (especially about sex and sinfulness) with paranoid and suicidal ideation. A geriatric depression scale is given in Table 33-11. Table 33-11 Geriatric Depression Scale (Short Version)

Cognitive impairment in depressed geriatric patients is referred to as the dementia syndrome of depression (pseudodementia), which can be confused easily with true dementia. In true dementia, intellectual performance usually is global, and impairment is consistently poor; in pseudodementia, deficits in attention and concentration are variable. Compared with patients who have true dementia, patients with pseudodementia are less likely to have language impairment and to confabulate; when uncertain, they are more likely to say "I don't know"; and their memory difficulties are more limited to free recall than to recognition on cued recall tests. Pseudodementia occurs in about 15 percent of depressed older patients, and 25 to 50 percent of patients with dementia are depressed.

Schizophrenia usually begins in late adolescence or young adulthood and persists throughout life. Although first episodes diagnosed after age 65 are rare, a late-onset type beginning after age 45 has been described. Women are more likely to have a late onset of schizophrenia than men. Another difference between early-onset and late-onset schizophrenia is the greater prevalence of paranoid schizophrenia in the late-onset type. About 20 percent of persons with schizophrenia show no active symptoms by age 65; 80 percent show varying degrees of impairment. Psychopathology becomes less marked as patients age. The residual type of schizophrenia occurs in about 30 percent of persons with schizophrenia. Its signs and symptoms include emotional blunting, social withdrawal, eccentric behavior, and illogical thinking. Delusions and hallucinations are uncommon. Because most persons with residual schizophrenia cannot care for themselves, long-term hospitalization is required.

Older persons with schizophrenic symptoms respond well to antipsychotic drugs. Medication must be administered judiciously, and lower-than-usual dosages often are effective for older adults.

**Delusional Disorder** The age of onset of delusional disorder usually is between ages 40 and 55, but it can occur at any time during the geriatric period. Delusions can take many forms; the most common are persecutory—patients believe that they are being spied on, followed, poisoned, or harassed in some way. Persons with delusional disorder may become violent toward their supposed persecutors. Some persons lock themselves in their rooms and live reclusive lives. Somatic delusions, in which persons believe they have a fatal illness, also can occur in older persons. In one study of persons older than 65 years of age, pervasive persecutory ideation was present in 4 percent of persons sampled. Among those who are vulnerable, delusional disorder can occur under physical or psychological stress and can be precipitated by the death of a spouse, loss of a job, retirement, social isolation, adverse financial circumstances, debilitating medical illness or surgery, visual impairment, and deafness. Delusions also can accompany other disorders—such as dementia of the Alzheimer's type, alcohol use disorders, schizophrenia, depressive disorders, and bipolar I disorder—which need to be ruled out. Delusional syndromes also can result from prescribed medications or be early signs of a brain tumor. The prognosis is fair to good in most cases; best results are achieved through a combination of psychotherapy and pharmacotherapy. A late-onset delusional disorder called paraphrenia is characterized by persecutory delusions. It develops over several years and is not associated with dementia. Some workers believe that the disorder is a variant of schizophrenia that first becomes manifest after age 60. Patients with a family history of schizophrenia show an increased rate of paraphrenia.

**Anxiety Disorders** Anxiety disorders usually begin in early or middle adulthood, but some appear for the first time after age 60. An initial onset of panic disorder in older persons is rare but can occur. The ECA study determined that the 1-month prevalence of anxiety disorders in persons age 65 and older is 5.5 percent. By far the most common disorders are phobias (4 to 8 percent). The rate for panic disorder is 1 percent. The signs and symptoms of phobia in older adults are less severe than those

that occur in younger persons, but the effects are equally, if not more, debilitating for older patients. Existential theories help explain anxiety when no specifically identifiable stimulus exists for a chronically anxious feeling. Older persons must come to grips with death. The person may deal with the thought of death with a sense of despair and anxiety, rather than with equanimity and Erikson's "sense of integrity." The fragility of the autonomic nervous system in older persons may account for the development of anxiety after a major stressor. Because of concurrent physical disability, older persons

react more severely to PTSD than younger persons. Obsessive-Compulsive Disorders Obsessions and compulsions may appear for the first time in older adults, although older adults with obsessive-compulsive disorder (OCD) usually had demonstrated evidence of the disorder (e.g., being orderly, perfectionistic, punctual, and parsimonious) when they were younger. When symptomatic, patients become excessive in their desire for orderliness, rituals, and sameness. They may become generally inflexible and rigid and have compulsions to check things again and again. OCD (in contrast to obsessive-compulsive personality disorder) is characterized by ego-dystonic rituals and obsessions and may begin late in life. Somatic Symptom Disorders Disorders characterized by physical symptoms resembling medical diseases are relevant to geriatric psychiatry because somatic complaints are common among older adults. More than 80 percent of persons over 65 years of age have at least one chronic disease —usually arthritis or cardiovascular problems. After age 75, 20 percent have diabetes and an average of four diagnosable chronic illnesses that require medical attention. Hypochondriasis is common in persons over 60 years of age, although the peak incidence is in those 40 to 50 years of age. The disorder usually is chronic, and the prognosis guarded. Repeated physical examinations help reassure patients that they do not have a fatal illness, but invasive and high-risk diagnostic procedures should be avoided unless medically indicated. Telling patients that their symptoms are imaginary is counterproductive and usually engenders resentment. Clinicians should acknowledge that the complaint is real, that the pain is really there and perceived as such by the patient, and that a psychological or pharmacological approach to the problem is indicated. Alcohol and Other Substance Use Disorder Older adults with alcohol dependence usually give a history of excessive drinking that began in young or middle adulthood. They usually are medically ill, primarily with liver disease, and are either divorced, widowed, or are men who never married. Many have arrest records and are numbered among the homeless persons. A large number have chronic dementing illness, such as Wernicke's encephalopathy or Korsakoff's syndrome. Of nursing home patients, 20 percent have alcohol dependence. Over all, alcohol and other substance use disorders account for 10 percent of all emotional problems in older persons, and dependence on such substances as hypnotics, anxiolytics, and narcotics is more common in old age than is generally recognized. Substance-seeking behavior characterized by crime, manipulateness, and antisocial behavior is rarer in older than in younger adults. Older patients may abuse anxiolytics to allay chronic anxiety or to ensure sleep. The maintenance of chronically ill cancer

patients with narcotics prescribed by a physician produces dependence, but the need to provide pain relief takes precedence over the possibility of narcotic dependence and is entirely justified. The clinical presentation of older patients with alcohol and other substance use disorders varies and includes confusion, poor personal hygiene, depression, malnutrition, and the effects of exposure and falls. The sudden onset of delirium in older persons hospitalized for medical illness is most often caused by alcohol withdrawal. Alcohol abuse also should be considered in older adults

with chronic gastrointestinal problems. Older persons may misuse over-the-counter substances, including nicotine and caffeine. Over-the-counter analgesics are used by 35 percent of older persons, and 30 percent use laxatives. Unexplained gastrointestinal, psychological, and metabolic problems should alert clinicians to over-the-counter substance abuse. Sleep Disorders Advanced age is the single most important factor associated with the increased prevalence of sleep disorders. Sleep-related phenomena reported more frequently by older than by younger adults are sleeping problems, daytime sleepiness, daytime napping, and the use of hypnotic drugs. Clinically, older persons experience higher rates of breathing-related sleep disorder and medication-induced movement disorders than younger adults. In addition to altered regulatory and physiological systems, the causes of sleep disturbances in older persons include primary sleep disorders, other mental disorders, general medical disorders, and social and environmental factors. Among the primary sleep disorders, dyssomnias are the most frequent, especially primary insomnia, nocturnal myoclonus, restless legs syndrome, and sleep apnea. Of the parasomnias, rapid eye movement (REM) sleep behavior disorder occurs almost exclusively among elderly men. The conditions that commonly interfere with sleep in older adults also include pain, nocturia, dyspnea, and heartburn. The lack of a daily structure and of social or vocational responsibilities contributes to poor sleep. As a result of the decreased length of their daily sleep-wake cycle, older persons without daily routines, especially patients in nursing homes, may experience an advanced sleep phase, in which they go to sleep early and awaken during the night. Even modest amounts of alcohol can interfere with the quality of sleep and can cause sleep fragmentation and early morning awakening. Alcohol can also precipitate or aggravate obstructive sleep apnea. Many older persons use alcohol, hypnotics, and other CNS depressants to help them fall asleep, but data show that these persons experience more early morning awakening than trouble falling asleep. When prescribing sedative-hypnotic drugs for older persons, clinicians must monitor the patients for unwanted cognitive, behavioral, and psychomotor effects, including memory impairment (anterograde amnesia), residual sedation, rebound insomnia, daytime withdrawal, and unsteady gait. Changes in sleep structure among persons over 65 years of age involve both REM sleep and nonrapid eye movement (NREM) sleep. The REM changes include the redistribution of REM sleep throughout the night, more REM episodes, shorter REM episodes, and less total REM sleep. The NREM changes include the decreased amplitude of delta waves, a lower percentage of stages 3 and 4 sleep, and a higher percentage of stages 1 and 2 sleep. In addition, older persons experience increased awakening after sleep onset.

Much of the observed deterioration in the quality of sleep in older persons is caused by the altered timing and consolidation of sleep. For example, with advanced age, persons have a lower amplitude of circadian rhythms, a 12-hour sleep-propensity rhythm, and shorter circadian cycles.

**SUICIDE RISK** Elderly persons have a higher risk for suicide than any other population. The suicide rate for white men over the age of 65 is five times higher than that of the general population. One third of elderly persons report loneliness as the principal reason for considering suicide. Approximately 10 percent of elderly individuals with suicidal ideation report financial problems, poor medical health, or depression as reasons for suicidal thoughts. Suicide victims differ demographically from individuals who attempt suicide. About 60 percent of those who commit suicide are men; 75 percent of those who attempt suicide are women. Suicide victims, as a rule, use guns or hang themselves, whereas 70 percent of suicide attempters take a drug overdose, and 20 percent cut or slash themselves. Psychological autopsy studies suggest that most elderly persons who commit suicide have had a psychiatric disorder, most commonly depression.

Psychiatric disorders of suicide victims, however, often do not receive medical or psychiatric attention. More elderly suicide victims are widowed and fewer are single, separated, or divorced than is true of younger adults. Violent methods of suicide are more common in the elderly, and alcohol use and psychiatric histories appear to be less frequent. The most common precipitants of suicide in older individuals are physical illness and loss, whereas problems with employment, finances, and family relationships are more frequent precipitants in younger adults. Most elderly persons who commit suicide communicate their suicidal thoughts to family or friends before the act of suicide. Older patients with major medical illnesses or a recent loss should be evaluated for depressive symptomatology and suicidal ideation or plans. Thoughts and fantasies about the meaning of suicide and life after death may reveal information that the patient cannot share directly. There should be no reluctance to question patients about suicide, because no evidence indicates that such questions increase the likelihood of suicidal behavior.

**OTHER CONDITIONS OF OLD AGE**

**Vertigo** Feelings of vertigo or dizziness, a common complaint of older adults, cause many older adults to become inactive because they fear falling. The causes of vertigo vary and include anemia, hypotension, cardiac arrhythmia, cerebrovascular disease, basilar artery insufficiency, middle ear disease, acoustic neuroma, benign postural vertigo, and Ménière's disease. Most cases of vertigo have a strong psychological component, and clinicians should ascertain any secondary gain from the symptom. The overuse of anxiolytics can cause dizziness and daytime somnolence. Treatment with meclizine (Antivert), 25 to 100 mg daily, has been successful in many patients with vertigo.

**Syncope**

The sudden loss of consciousness associated with syncope results from a reduction of cerebral blood flow and brain hypoxia. A thorough medical workup is required to rule out the potential causes. Causes of syncope are listed in Table 33-12.

**Table 33-12 Causes of Syncope**

**Hearing Loss** About 30 percent of persons over age 65 have significant hearing loss (presbycusis). After age 75, that figure rises to 50 percent. The causes vary. Clinicians should be sensitive to hearing loss in patients who complain they can hear but cannot understand what is being said or who ask that questions be repeated. Most elderly persons with hearing loss can be treated with hearing aids.

**Elder Abuse** An estimated 10 percent of persons above 65 years of age are abused. Elder abuse is defined by the American Medical

Association as "an act or omission which results in harm or threatened harm to the health or welfare of an elderly person." Mistreatment includes abuse and neglect—physically, psychologically, financially, and materially. Sexual abuse does occur. Acts of omission include withholding food, medicine, clothing, and other necessities. Family conflicts and other problems often underlie elder abuse. The victims tend to be very old and frail. They often live with their assailants, who may be financially dependent on the victims. Both the victim and the perpetrator tend to deny or minimize the presence of abuse. Interventions include providing legal services, housing, and medical, psychiatric, and social services.

**SPOUSAL BEREAVEMENT** Demographic data suggest that 51 percent of women and 14 percent of men over the age of 65 will be widowed at least once. Spousal loss is among the most stressful of all life experiences. As a group, older adults appear to have a more favorable outcome than expected following the death of a spouse. Depressive symptoms peak within the first few months after a death, but decline significantly within a year. A relationship exists between spousal loss and subsequent mortality. Elderly survivors of spouses who committed suicide are especially vulnerable, as are those with psychiatric illness.

**PSYCHOPHARMACOLOGICAL TREATMENT OF GERIATRIC DISORDERS** Certain guidelines

should be followed regarding the use of all drugs in older adults. A pretreatment medical evaluation is essential, including an electrocardiogram (ECG). It is especially useful to have the patient or a family member bring in all currently used medications, because multiple drug use could be contributing to the symptoms. Most psychotropic drugs should be given in equally divided doses three or four times over a 24-hour period. Older patients may not be able to tolerate a sudden rise in drug blood level resulting from one large daily dose. Any changes in blood pressure and pulse rate and other side effects should be watched. For patients with insomnia, however, giving the major portion of an antipsychotic or antidepressant at bedtime takes advantage of its sedating and soporific effects. Liquid preparations are useful for older patients who cannot, or will not, swallow tablets. Clinicians should frequently reassess all patients to determine the need for maintenance medication, changes in dosage, and development of adverse effects. If a patient is taking psychotropic drugs at the time of the evaluation, the clinician should discontinue these medications, if possible, and, after a washout period, reevaluate the patient during a drug-free baseline state. Adults over 65 years of age use the greatest number of medications of any age group; 25 percent of all prescriptions are written for them. Adverse drug reactions caused by medications result in the hospitalization of nearly 250,000 persons in the United States each year. Psychotropic drugs are among the most commonly prescribed, along with cardiovascular and diuretic medications; 40 percent of all hypnotics dispensed in the United States each year are to those older than 75 years of age, and 70 percent of older persons use over-the-counter medications, compared with only 10 percent of young adults. Principles

The major goals of the pharmacological treatment of older persons are to improve the quality of life, maintain persons in the community, and delay or avoid their placement in nursing homes. Individualization of dosage is the basic tenet of geriatric psychopharmacology. Alterations in drug dosages are required because of the physiological changes that occur as persons age. Renal disease is associated with decreased renal clearance of drugs; liver disease results in a decreased ability to metabolize drugs; cardiovascular disease and reduced cardiac output can affect both renal and hepatic drug clearance; and gastrointestinal disease and decreased gastric acid secretion influence drug absorption. As a person ages, the ratio of lean to fat body mass also changes. With normal aging, lean body mass decreases and body fat increases. Changes in the ratio of lean to fat body mass that accompany aging affect the distribution of drugs. Many lipidsoluble psychotropic drugs are distributed more widely in fat than in lean tissue, so a drug's action can be unexpectedly prolonged in older persons. Similarly, changes in endorgan or receptor-site sensitivity must be taken into account. In older persons, the increased risk of orthostatic hypotension from psychotropic drugs is related to reduced functioning of blood pressure-regulating mechanisms. As a general rule, the lowest possible dose should be used to achieve the desired therapeutic response. Clinicians must know the pharmacodynamics, pharmacokinetics, and biotransformation of each drug prescribed and the effects of the interaction of the drug with other drugs that a patient is taking. An adage in geriatric medicine regarding the use of drugs is: Start low, go slow.

**PSYCHOTHERAPY FOR GERIATRIC PATIENTS** The standard psychotherapeutic interventions—such as insight-oriented psychotherapy, supportive psychotherapy, cognitive therapy, group therapy, and family therapy— should be available to geriatric patients. According to Sigmund Freud, persons older than 50 years are not suited for psychoanalysis because their mental processes lack elasticity. In the view of many who followed Freud, however, psychoanalysis is possible after age 50. Advanced age certainly limits plasticity of the personality, but as Otto Fenichel stated, "It does so in varying degrees and at very different ages so that no general rule can be given." Insight-

oriented psychotherapy may help remove a specific symptom, even in older persons. It is of most benefit when patients have possibilities for libidinal and narcissistic gratification, but it is contraindicated if it would bring only the insight that life has been a failure and that the patient has no opportunity to make up for it. Common age-related issues in therapy involve the need to adapt to recurrent and diverse losses (e.g., the deaths of friends and loved ones), the need to assume new roles (e.g., the adjustment to retirement and the disengagement from previously defined roles), and the need to accept mortality. Psychotherapy helps older persons to deal with these issues and the emotional problems surrounding them and to understand their behavior and the effects of their behavior on others. In addition to improving

interpersonal relationships, psychotherapy increases self-esteem and self-confidence, decreases feelings of helplessness and anger, and improves the quality of life. Psychotherapy helps relieve tensions of biological and cultural origins and helps older persons work and play within the limits of their functional status and as determined by their past training, activities, and self-concept in society. In patients with impaired cognition, psychotherapy can produce remarkable gains in both physical and mental symptoms. In one study conducted in an old-age home, 43 percent of the patients receiving psychotherapy showed less urinary incontinence, improved gait, greater mental alertness, improved memory, and better hearing than before psychotherapy. Therapists must be more active, supportive, and flexible in conducting therapy with older than with younger adults, and they must be prepared to act decisively at the first sign of an incapacity that requires the active involvement of another physician, such as an internist, or that requires consulting with, or enlisting the aid of, a family member. Older persons usually seek therapy for a therapist's unqualified and unlimited support, reassurance, and approval. Patients often expect a therapist to be all powerful, all knowing, and able to effect a magical cure. Most patients eventually recognize that the therapist is human and that they are engaged in a collaborative effort. In some cases, however, the therapist may have to assume the idealized role, especially when the patient is unable or unwilling to test reality effectively. With the help of the therapist, the patient deals with problems that had been avoided previously. As the therapist offers direct encouragement, reassurance, and advice, the patient's self-confidence increases as conflicts are resolved.

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