The Process of Aging

Old age is like a rock on which many found and some find shelter. —Anonymous

Health condition is one aspect of the quality of life. It is not merely existence which is important, but the person’s functional capacity to perform as a human being. While recognition that aging is accompanied by an increasing, though varied decline, in health status, any measurement of health levels is complicated because of the need to consider the individual’s physical condition, functional ability on several levels, and future condition based on a number of intersecting influences.

Even if people remain healthy until an older age, they will continue to be affected by most of the same health problems as old people do now. Depending on a gamut of genetic and environmental variables which significantly influence health status, the predictability of continued good health into old age is questionable. For most people, the latter part of life is impinged upon by intermittent periods of dependence due to disability. A critical issue concerning quality of life is not how long, but how well one lives.

The initial period of life, from conception to the age of 30 years, is one of growth, differentiation, and development. The organism is learning to adjust and adapt to its environment, even physical or social. After the age of 30 years, the deterioration process begins and reserve capacity established in youth begins to diminish. Still, for the remainder of the individual’s life, adaptation continues because compensatory physiological effects take into account the reduced reserve. This decrease in reserve capacity is really a reflection of the diminution in actual cell numbers, a feature of the aging process. Although they can maintain a physiological balance, which weakens under stress or disease, older adults cannot function as well physiologically as younger ones. Changes due to age, such as loss of skin elasticity, visual, and auditory acuity, are common.

Biological Factors in Aging

Eventually, everybody faces the prospect of progressive loss of energy and ability to resist disease. No matter what measures are taken, this loss continues and becomes so excessive that death is a particularly disturbing to learn that decline is an adventitious incident of timeliness, rather than everyone. Most people live in ways they though they were immortal. They chose not death for themselves. Until they are brought an unpleasant fact of decline, they tend to grieve, not aging, explain the process of increased vulnerability. Senescence shows itself in an increasing probability of disease with the study of aging is the examination of a group of organisms, which lead to an increasing intolerance of stress and age. Without stress, many life functions as well as younger people although this is a given to lengthen with age. However, does not perform well and displays insecurity even there is an appreciable diminution of acuteness of reduced muscle mass due to loss of hair. The typically craggy feature—eyes, head, and eyes—bespeak age.

Skin texture is not the only striking change; joints become less mobile, hips and knees the lower back. The continual pounding of time of walking causes compression of the skin’s individual’s posture. A noticeably bent over younger person is almost always due to congenital posture or rheumatoid arthritis.

Organ Deficiency. Decreased cardiac efficiency has led a sedentary life, is associated with a slower rate, not as a result of efficiency as to exercise, but because of decreased function. Can perceptibly. Fortunately, even though hearti
and becomes so expansive that death is the outcome. For most people it is particularly dismaying to learn that decline is inevitable, that despite escape from adventitious incident, catastrophes, and illnesses, death from old-age awaits everyone. Most people live in ways that preclude death (i.e., they live as though they were immortal). They do not acknowledge the possibility of death for themselves. Until they are brought up short and confronted by the unpleasant fact of decline, they tend to ignore what is to be. Biologists, describing aging, explain the process as a decrease in viability and an increase in vulnerability. Senescence shows itself in terms of mounting cellular death and an increasing probability of demise with advancing chronological age. The study of aging is the examination of a group of processes, varied in different organisms, which lead to an increasing vulnerability.

Sites and Age. Without stress, many older people can perform various functions as well as younger people; although the time required for carrying out tasks tends to lengthen with age. However, under stress the elderly person does not perform well and displays inability to complete assignments. With age there is an appreciable diminution of actual muscle strength. This is a consequence of reduced muscle mass due to loss of individual muscle cells.

Appearance. The aging process produces a characteristic appearance that cannot be denied, although it can be disguised by artificial means. The skin becomes increasingly lined, as the membrane loses its padding of fat and the skin becomes less elastic, thinner, and more fragile. Wrinkling and roughness of the skin occurs as the person becomes older. Pigmentation spots frequently appear, and the surface of the skin is more easily bruised. The skin loses its resiliency and is subjected to a drying process, which also accounts, in part, for loss of hair. The typically craggy features — etched lines about the mouth, forehead, and eyes — bespeak age.

Skin texture is not the only striking characteristic. With age the individual's joints become less mobile. Hips and knees are often subject to stiffness, as is the lower back. The continual pounding of the spinal column during a lifetime of walking causes compression of the spinal disks, which influences the individual's posture. A noticeably bent-over or shorter appearance in an elderly person is almost always due to compression of the spinal disks, osteoporosis, or rheumatoid arthritis.

Organ Deficiency. Decreased cardiac effectiveness, particularly if the individual has led a sedentary life, is associated with aging. At rest the older heart has a slower rate, not as a result of efficiency, as is the case in young people who exercise, but because of decreased function. Cardiac output per minute lessens perceptibly. Fortunately, even though heart function decreases, an adequate
blood supply to vital organs is maintained. Under stress the aged heart is even less effective, less efficient, and less resilient.

The aging heart is also subject to increased irregularities in rhythm, which cause inferior oxygenation of the heart itself due to distortions in the pumping and filling action. In emergency situations these irregularities occur more often. Thus, when the heart really needs more oxygen, it cannot receive it. If such arrhythmia is critical, it can lead to death of the person. Cardiac hypertrophy, common among those of advanced age, can result in death. In an individual whose heart is required to work constantly at a higher level, as in high blood pressure, the heart will pathologically increase in size (hypertrophy). This increase in size is not due to strengthening of the muscle, as occurs in an appropriate exercise program, but to a stretching type of action that actually causes the heart muscle to weaken.

Failure of the circulatory system is the most common cause of death for people over 40 years of age. Congestive heart failure, general deterioration of blood vessels, plaque formations within arterial walls, embolisms, aneurysms, thromboses, and increasing inelasticity of the larger arteries can result in reduced or interrupted flow of blood to the brain or heart. When such incidents occur a cerebral vascular accident or myocardial infarction ensues.

The kidneys show the greatest degree of deterioration in the aging person. Renal function is reduced by more than half with age, and kidneys are therefore less able to remove waste products from the blood because the number of cells to carry out the process is also reduced. With decreased cardiac output there is further inability of the kidneys to function effectively. While kidney cells are decreasing the total number of cells in the rest of the body and the waste products thereby produced are also decreased. It is probable, therefore, that kidney failure is not due directly to the attrition of cells that accompanies aging but rather stems from some disease or environmental factor that either creates an excessive load upon the kidneys or destroys a crucial number of remaining kidney cells.

System Deterioration. Function of the pulmonary system also decreases with age. The lungs lose their elasticity as does the chest wall as a consequence of collagen (proteins in connective tissue) build-up. Whenever the individual is placed in stressful circumstances, pulmonary output is reduced by more than 50 percent. Oxygen diffusion across the lungs is decreased because of collagen increments and diminished blood flow to the lungs. Despite reduced pulmonary function, the amount of oxygen is adequate to maintain survival. Blood flow in the elderly tends to slow, and more time is available for each cell to extract the required oxygen from the blood. Thus, there is a significant decrease in the oxygen content of venous blood returning to the heart.

The digestive system also is influenced by age. Metabolic processes display a marked decrease in coordination in the effective interaction of hormones.
Strain aggravates the condition. Since fewer cells are available for glucose utilization (even though production of insulin remains unimpaired) there is no increase in fasting blood sugar levels, and blood sugar levels are raised only after ingestion of large amounts of glucose.

Adrenal capability diminishes, hindering adaptation to stressful situations. This is most likely due to a decrease in ACTH (adrenocortical tropic hormone), secreted from the pituitary gland, or to inability of the adrenals to respond to ACTH.

Age affects the reproductive system. Menopause is always accompanied by a significant decrease in female hormones and by pituitary hormone imbalance. Physical symptoms accompanying menopause may be responsive to estrogen (female hormone) therapy. Most women indicate that they feel much better after the menopause than they did previously. Production of spermatozoa shows signs of exhaustion at a much later age than cessation of menstruation, and discontinue of sperm production is not coexistent with a decrease in male hormones. However, there is typically a decrease in testosterone that conduces to loss of sexual drive and may produce penile dysfunction.

The nervous system becomes increasingly exposed to the impacts of aging. Although other organs are still developing and producing new cells, death of brain cells begins early in life, and previously it was thought that they are not replicated. However, recently conducted research finds that brain cells are continuously replaced.

Circulatory problems, such as arteriosclerosis, may prevent needed blood from reaching the brain or cause related problems. The speed of impulses traveling through nerve tissue is considerably reduced, and therefore a particular response to stimulation is slower. In addition, the coordinating function of the nervous system is frustrated as other organs or systems begin to deteriorate, further reducing input to the central nervous system. Breakdown of each peripheral organ contributes to any existing inability to function properly.

The major impairment is to the central nervous system rather than to the peripheral nervous system. It is manifested by traumatic incidents. The area of recent memory is usually most seriously affected and is closely associated with a decrement in electrical activity of the brain. In some instances, Alzheimer's disease is observed in older persons. Approximately seven percent of those over 65 are afflicted by this disease in the United States. The substance (beta amyloid) is a key constituent of the plaques that invade the brain. It is thought that these plaques and fibrils of tangles contribute to the destruction of the mind, but a definitive discovery of the actual process seems to have been made in the laboratory.

Older persons have more trouble in making decisions and reacting to various inputs. Slowing of nerve impulses exists at relatively youthful ages, however, by the time the individual reaches the late 40s there is notable slowing of reaction time and reflex action.
Homeostasis. The homeostatic mechanism or the ability to maintain equilibrium also worsens with age. After some disruption more time is required for the body to restore itself to its normal state. This decreasing functional capacity is exaggerated by other organic deteriorations. For example, maintenance of body temperature becomes susceptible to variations of climate, because subcutaneous fat deposits tend to disappear with age. This may be one of the reasons some older adults feel chilly even when the weather is warm. Another example is the inability of the body to maintain its acid-base balance. This occurs when the blood cannot rid itself of excess acidity produced under stress (often stemming from pulmonary deficiency), which affects exhalation of carbon dioxide, and kidney deficiency, which hinders extraction of hydrogen ions from the blood. Homeostasis is upset when the integrative systems are unable to function properly. As organs and systems age, their effectiveness is disturbed. Such disturbances are not isolated; rather they are synergistic (work together). In aged persons, as organs lose their ability to function properly, greater demands are placed on other organs. The functioning organs are unable to keep up with the load thereby imposed, and they in turn lose some restorative ability. Sometimes great environmental pressures so completely overload systems that homeostasis becomes unachievable and death occurs. Although the internal control system does decline with age, it is rare for the homeostatic mechanism to deteriorate to the point at which the organism cannot compensate or disability is produced.

Nutrition. Nourishment or the lack of it has an extreme effect on the biology of aging. Good nutrition at any age requires an adequate supply of necessary proteins, vitamins, minerals, and other tissue-building substances, but for elderly persons, whose habits tend to be sedentary, there is also the hazard of obesity unless they are careful concerning caloric intake. Proper nutrition assumes that there will be a higher proportion of proteins in the diet despite the fact that there is a need to reduce overall intake. Because protein is expensive, some older adults who live in straightened circumstances are at a disadvantage. They simply cannot afford the daily minimum requirement of an adequate nutritional diet that their age dictates. In too many instances, therefore, malnutrition is their lot. The significance of proper nutrition to maintenance of the human organism cannot be emphasized too strongly.

If any generalization can be made about the aging process, it is the increasing vulnerability of the organism to environmental stress, disease, and continuing loss of functional ability of organs and systems. Advanced old age infringes upon the individual's capacity to resist the strains to which the various organic systems are exposed. As the body becomes less efficient (as a result of the destruction of cells that make up the diverse internal structures of the body), each organ deteriorates at its own rate, and the integrating mechanism of the homeostatic process is unable to compensate or restore the balance that has been of stress, the organism may not be the individual even more defense other environmental trauma.

These biological facts of aging show less impairment or vulnerability as the member is to treat each person as how well each individual can put to the impact of environmental factors of individuality. Although it is important for such incisions be avoided, it must be reminded that rates in different adults. Chronological unimpairment capacity and potential that is necessary.

Sensory and Pain

There seems to be undisputed evidence that these processes tend to weaken with age. Individuals reach 60 years of age, and which the brain gains its compre which humans perceive internal it adapt to their environment, proper senses. Sensory organs receive stimuli from the external environment and transmit such receptor information to cells to which individuals say, hear, touch, taste, and smell, as a sense. As people age, the ability of the organ to operate or externally changes, the degree of complete failure in another.

Sight. The organs of vision and environment, to record with clarity and intensity, and to perceive depictions of things in this intricate manner by the brain. Obviously, it is the eye processes, comprehending the world. The eye itself is composed of vessels, and the all-important optical movements, sensitivity to light, and the that enters through the retina and
restore the balance that has been lost. Under extreme or prolonged conditions of stress, the organism may not be able to adjust itself appropriately; this leaves the individual even more defenseless and open to the onslaught of disease or other environmental trauma.

These biological facts of aging cannot be denied. However, some individuals show less impairment or vulnerability as they age. The cardinal rule to remember is to treat each person as an individual. The single criterion must be how well each individual can perform. Personal capacity, apparent resistance to the impact of environmental stress, outlook, and interest are all indicative of individuality. Although it is important that extreme environmental conditions be avoided, it must be reiterated that biological aging occurs at different rates in different adults. Chronology is less important than is the fact of personal unimpaired capacity and power.

**SENSORY AND PSYCHOMOTOR FUNCTIONS**

There seems to be undisputed evidence suggesting that many of the sensory processes tend to weaken with age, with the decrement more rapid as individuals reach 60 years of age and older. The senses are the means through which the brain gains its comprehension of the world and the faculties by which humans perceive internal stimuli as well. In order to interact with and adapt to their environment, people require the information provided by the senses. Sensory organs receive information about changes in the internal or external environment and transmit it to the brain via neural pathways. All such receptor information is collected and organized by the brain; whatever individuals say, hear, touch, taste, or smell is interpreted by the central nervous system. As people age, the ability to distinguish stimuli either internally or externally changes, the degree varying from almost none in one person to complete failure in another.

**Sight**. The organs of vision are designed to adapt to a constantly changing environment, to record with clarity and accuracy an extensive range of color and intensity, and to perceive depth and a broad visual field. The eyes can perform in this intricate manner because the optic nerve interacts directly with the brain. Obviously, it is the brain itself that produces the perceptual processes, comprehending the world and classifying all of the perceived images. The eyes are able to see both near and far a single color and multi-colors, in almost total darkness and in bright light.

The eye itself is composed of various muscles, specialized organs, blood vessels, and the all-important optic nerve. It is, thus, capable of large and small movements, sensitivity to light, and the ability to control the amount of light that enters through the retina and stimulates the optic nerve. The lens bends
(refracts) light entering the pupil so that the light pattern focuses on the retina. The lens is capable of modifying its shape, so that it can focus on near or distant objects.

The single most obvious change in the aging eye is a lessened ability for the lens to change shape as it attempts to focus on objects that are close at hand. Because of this loss of elasticity many older people must use glasses or contact lenses for reading. Older people tend to become far-sighted, although some individuals become myopic, perhaps at a young age, and continue the pattern into later life. Thus, they can see to read, but lose the ability to see anything at a distance, except at vague blurs. Typically, glasses are utilized to correct this deficiency.

The size of the pupil is also affected by age. Since the pupil controls the amount of light entering the eye, its size should change with a change in light intensity. With aging the ability of the eye to adjust to changing light conditions diminishes. The size of the pupil does not change in response to light intensity or to changes in the shape of the lens. These factors are significant because proper focusing of an image on the retina necessitates appropriate light patterns (regulated by the lens), and the amount of light stimulates the optic nerve through the retina (regulated by the iris). When the function of these organs begins to deteriorate, as is usual with advanced age, vision becomes problematic.

The ability of the eye to adjust to rapidly changing light conditions diminishes with age. Since there are no artificial means for correcting the disability to adapt to light and darkness, difficulties arise, one of the most important of which involves night driving. Weakened ability to make rapid adjustments to light conditions at night makes driving hazardous for older adults. Adaptation to dazzling light becomes more difficult as people reach 40 years of age; peripheral vision starts to diminish significantly in the fifties and sixties. The ability to distinguish colors also changes as individuals age. The lens slowly becomes jaundiced and screens out the violet, blue, and green colors at the lower end of the spectrum. This means that color codes for dials, switches, or other equipment should be confined to the longer wave lengths, reds and yellows, if older adults are going to utilize them.

Vision plays an important role in maintaining balance. Sight helps to establish the relationship of the body to the external environment so that adjustments of body parts can be made to keep the body in balance. How various degrees of vision loss effect balance is not clearly established; however, it is known that total or nearly total blindness causes severe balance problems.

Visual decrements related to aging can be anxiety provoking. However, loss of visual acuity is neither total nor inevitable. There are substantial individual differences in the ability to see. Many decreases in visual acuity can be corrected, some can be compensated for, but some decrements have only negligible effect. Only a small percentage of older people are blind—less than three percent of those from 65 and 74y aged 75 or over. There is, however...

The design of residences, use of lenses, can help to compensate for difficulties can be offset by physical compensation for loss of peripheral vision from a visually stimulating environment of techniques that can assist them aging and make life more satisfying.

Hearing. Hearing is the second modality in which there is little loss of hearing during the lifespan. Hearing loss is significant for tones in the high frequencies, for some, at later ages. As actions, but fundamental is the delay period of occurrence. As individual change. However, there does not appear to be a significant change in high-tone hearing. Also important is the ability to focus attention on a given sound and then attend to the sound.

One apparent outcome of hearing impairment is that people grow old and may not hear pitched sounds and sounds of lower frequency. There are compensatory factors, such as the ability to communicate easily, through personal relations and interactions with others. How can prove disadvantageous to the individuality problem, and the person will be more aware of social life.

Impaired hearing tends to hinder normal activities associated with social interactions, and can be isolated from peers and occur in personal communication.

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percent of those from 65 and 74 years, but more than eight percent of those aged 75 or over. There is, however, a definite age-related factor.

The design of residences, use of colors, utilization of eyeglasses or contact lenses, can help to compensate for inadequate visual acuity in the aged. Some difficulties can be offset by physical actions (i.e., movement of the head to compensate for loss of peripheral vision). In order to obtain the most satisfaction from a visually stimulating environment, individuals should be aware of techniques that can assist them to effectively cope with normal changes of aging and make life more satisfying.

**Hearing.** Hearing is the second most important sensory process. Even though there is little loss of hearing during the early and middle adult years, loss of acuity is significant for tones in the higher range. As with vision, hearing loss accelerates, for some, at later ages. Audition is composed of various kinds of reactions, but fundamental is the detection of pitch, intensity of sound, and the period of occurrence. As individuals age, their reactions to pitch and intensity change. However, there does not appear to be any significant inability to detect time-interval changes. Also important to hearing is attention. The ability to focus attention on a given sound may enable it to be heard. Older people often are less attentive, and the consequence will appear to be a hearing loss.

One apparent outcome of hearing deficits is increased difficulty in understanding speech. As people grow older, it becomes more difficult to hear high-pitched sounds and sounds of low intensity. Older males have greater hearing loss than do older females. Thus, older people enjoy music that has low-pitched sounds and is even in intensity. Not infrequently, older people play their radios and television sets at a high volume in order to hear them.

Hearing deficiency cannot be measured as easily as visual acuity. Defective hearing is an auditory impairment severe enough to minimize an individual's ability to communicate easily, thereby interfering with satisfactory interpersonal relations and interactions with the environment. Defective hearing does not always produce a poor capacity for environmental interaction because there are compensatory factors. Individuals may be able to read lips or utilize a hearing aid or other devices. However, decrease of both sight and hearing can prove disastrous to the individual so afflicted. The result is a serious adaptation problem, and the person will probably be adversely affected in many areas of social life.

Impaired hearing tends to hinder people from participating in many of the normal activities associated with social intercourse. The hard-of-hearing person becomes isolated from peers and significant social others; problems that occur in personal communication can be devastating.

There are techniques by which hearing loss can be mitigated. Learning to live within the limitations imposed by such loss can focus attention on heightened use of new skills, residual abilities, and available opportunities.
Taste and Smell. There are even fewer data concerning smell than there are for taste. There may be some anatomical changes in the olfactory receptors, but no conclusive evidence has appeared in recent years. It is assumed that some decrease in sensitivity occurs with advanced age, the lack of research in the senses of taste and smell provides little basis for this. If there are sensory changes due to aging, then such experiences as enjoyment of eating and appreciation of pleasant odors are lost to older individuals.

Touch. The sense of touch contributes significantly to successfully manipulating objects with the hands and bringing the body in contact with objects, as in sitting on a chair. Touch also has a role in maintaining balance. The receptors of the sense of touch provide the central nervous system with information about how the weight-bearing parts of the body make contact with the object, thereby assisting in determination of what body adjustments need to be made to maintain balance. Evidence of this is easily observed in cases with which one can balance on a small object with the bare feet, as compared with the difficulty when one is wearing thick-soled shoes.

There has been relatively little research into tactile sensitivity. A few studies indicate that touch varies with the part of the body that is stimulated. Some information is available which suggests that there is probably a diminishment in tactile sensitivity with aging. Nevertheless, the basic data are so scarce that few generalizations can be made. While touch may remain unchanged through much of middle-adult life, there may be some notable decrease after 55 years of age.

Other Sensations. There are several sensory receptors, other than the five major faculties discussed above, about which comparatively little is known. Most is known about the proprioceptors and the receptors of balance and pain. Proprioceptors (sense organs within the joints) serve an important role in maintaining balance as well as in providing information about the location of the body in space. As the joints of the body move the proprioceptors provide feedback that assists in identifying the movement and location of a body part as it comes to rest. The ability to utilize the sensations in the joints appears to be reduced in the aged, although precise data concerning the decline are not available at this time.

Balance or physical equilibrium, is the result of the action of the central nervous system upon the sensations received from the proprioceptors and receptors of touch and sight and also of the vestibule of the ear (inner ear). The relationship of the proprioceptors, touch, and sight to the maintenance of balance was discussed earlier. The function of the inner ear is to receive and transmit sensations concerning head movements. Information about the movements of the head is utilized by the central nervous system in adjusting the body position to maintain balance. Because of the importance of the vestibular receptors in balance, any physical upon ability to balance. Vestibular of organic deterioration but because is a decrease in the central nervous sys tematic movements by which balance is maintained.

Pain is an important sense that also must have an external cause. Older persons sense pain more intensely than do younger individuals. Pain is extremely adaptation to it. This makes objective reports that while older adults appear to be post-surgical pain, there is little in changes in pain sensation.

Psychomotor Capacity. Reduction in a similar in many ways, and related to the depletion of energy that occurs in aged persons typically have less time to a variety of stimuli, requiring in general are less able to perform strenuous weight lifting, or jumping. Of course, older adults, well into their eighties, as these athletic tasks, and do them well. Distance running and walking. Third, climbers, gymnasts, tennis players, but vigorous physical activities.

Changes in psychomotor capacity do not have implications beyond a decrease in phyc has been a consistent squash raquet hits or her game leveling off or actually in moving arms and legs and fatigue of the ball is somewhat impaired; and is the result, the individual therefore begins to alterations are not immediately apparent upon consciousness, and he or she is frustrations that accrued from playing themself, but he or she may also be doing healthy exercise. In addition, the loss of impact of age upon him or her.

When a person is afflicted by senso brought about by disease, the impact decrements are gradually imposed upon all, there are compensatory experiences in depressed as he or she confronts th
lar receptors in balance, any physiological changes have an immediate effect upon ability to balance. Vestibular sense may decline in the aged, not because of organic deterioration but because of poor circulation. Another possibility is a decrease in the central nervous system's ability to coordinate the subconscious movements by which balance is maintained.

Pain is an important sense that alerts the organism to danger from internal or external cause. Older persons seem not to be affected by pain as much as younger individuals. Pain is extremely difficult to measure because of personal adaptation to it. This makes objective recording suspect. However, it has been reported that while older adults appear to be free of the torments of disease and post surgical pain, there is little in the way of clinical evidence to support changes in pain sensation.

Psychomotor Capacity. Reduction in psychomotor performance with aging is similar in many ways, and related in part, to the decline in sensory capacity. Aged persons typically have less muscular strength, have increased reaction time to a variety of stimuli, require more time to complete a motion, and in general are less able to perform strenuous exercise such as swimming, running, weight lifting, or jumping. Of course, there are many exceptions; quite a few older adults, well into their eighties and some in their nineties, perform all of these athletic tasks, and do them well. Older adults have been noted for long-distance running and walking. There have been notable canoeists, mountain climbers, gymnasts, tennis players, handball players, and other performers of vigorous physical activities.

Changes in psychomotor capacity do occur with age and these changes have implications beyond a decrease in physical performance. An individual who has been a consistent squash racquets or racquetball player over the years sees his or her game leveling off or actually deteriorating. There is greater difficulty in moving arms and legs and fatigue comes more quickly; the ability to return the ball is somewhat impaired; and the entire game may be off stride. As a result, the individual therefore begins to play more cautiously. Although these alterations are not immediately apparent, they do finally impose themselves upon consciousness, and he or she is less likely to enjoy the activity. The satisfactions that accrued from playing the game decline, a sad experience in itself, but he or she may also be denied one of the better opportunities for healthy exercise. In addition, the loss may be compounded by the realization of the impact of age upon him or her. The peer associations, social intercourse, and enjoyable leisure slowly begin to erode.

When a person is afflicted by sensory loss from an accident or condition brought about by disease, the impact is felt immediately. Although sensory decrements are gradually imposed upon the individual, and sometimes not at all, there are compensatory experiences readily available, the individual is often depressed as he or she confronts the reality of the aging process. Adjus-
ing to these problems, while still having the ability to participate in compensatory experiences and maintaining satisfaction in life, is of paramount importance to older adults. Learning about the aging process and utilizing interventionist methods to reduce or oppose negative outcomes to recreational experiences is of singular importance to the recreationist, especially therapeutic recreationists, who may be employed within the community recreational service department.

Cognitive Factors in Aging

The senses are the receptors for collecting and categorizing information about both the internal and external environments. However, the senses are not designed to assess the information. The process of making value judgments, that is, giving meaning to what the senses have obtained, is perception. Some sensory stimuli are unconscious and not perceived, but for the most part, perception consists of conscious appreciation of sensory stimuli. All data received are not of equal import. Time, distance, speed, shape, or color may be perceived differently by young and old. Unless there is a disease-related or other special factor inducing upon sensory and perceptual processes, age-caused dysfunctions are not relevant. It is only after the seventh decade that declines in function become noticeable and tend to affect behavior.

With perception there is also the process of closure. Closure, as the term implies, is the final step in decision-making associated with evaluation of stimuli. Older adults are thought to become more conservative and, therefore, less able to reach decisions. This tendency is real, but it may partially explain why some older people are incapable for closure (e.g., they are unable to decide).

Further, mental reaction time, which deals with the organization and evaluation of sensory input, appears to be reduced in older persons. However, there has been little research into perception, and what there is too scanty to permit generalization.

Intelligence. Intelligence is the ability to learn or understand from experience. It includes the ability to acquire and retain knowledge, to respond quickly and successfully to new situations, and to find solutions to problems through the use of reason. Although the intelligence of older adults has received considerable attention, whether or not it declines with age remains unanswered. As with most intelligence testing, the information used may not be pertinent to the group that is being tested. Skepticism about the validity of intelligence tests to age has produced the need for more research to clarify those factors that make a test relevant to older people.

It may be possible to raise intelligence levels through educational exposure. Education appears to be closely associated with intelligence. Moreover, the mental abilities of adults are probabilistic in nature, as socioeconomic conditions will influence. With better opportunities for improvement in mental ability, it is possible that such experiences can be organized and will have a great impact on the ability to learn.

Therefore, recreational settings that include such experiences can be organized and will have a great impact on the ability to learn. Adults differ tremendously in their life experiences, occupational background, and other factors. These factors have been studied extensively, and their impact on learning and memory is well known. When the additional research is done, it is likely that a single discrete item will be found.

Intelligence testing for older adults is also affected by prior factors. Tests for the older adult with items reflecting their social and academic experiences in life will be most appropriate. It is very likely that the general intelligence of the older adult is not the same as that of younger adults. While perceptual-integrative abilities remain intact, other abilities that also affect learning and memory are affected by age changes in intelligence and education. When the additional research is done, it is likely that a single discrete item will be found.

Learning. Learning and memory is the successful organization in the long-term memory affecting learning. Successful acquisition of new information can be directed to that information. Also, individuals can also acquire information without short-term memory. In addition, mental and physical states are important contributors to learning. It would appear from some research that learning increases with age, although such data is not conclusive. Any person can learn at any age, although older people can be more difficult to learn. If the learning task involves manipulation of symbols and reduced intrusion from pre-existing good performance by elderly individuals.
tual abilities of adults are probably a function of their cultural situation. Thus, socioeconomic conditions will have a tremendous influence on mental functioning. With better opportunities offered, older adults may show a marked improvement in mental ability. Physical activity, as well as cognitive exercises, may have a great impact on the ability of older persons to gain and retain mental activity. Therefore, recreational service agencies should develop program activities that include such experiences for the elderly. Many education-related experiences can be organized and will serve a dual purpose: to provide expected recreational outcomes and to assist in enhancement of intellectual potential.

Adults differ tremendously in terms of emotional states, educational experiences, occupational backgrounds, health status, and environmental condition. These factors have been shown to impact on intelligence test scores. It must be remembered that intelligence is a matrix of abilities, and not merely a single discrete item.

Intelligence testing for older adults may not actually be measuring appropriate factors. Tests for the elderly might be more valid if they were constructed with items reflecting their social and cultural milieu. Some mental abilities are dramatically reduced with age, and some remain at the level that was always present. It is very likely that the amount of education a person has affects his or her general intelligence more than does age. Research appears to indicate that people with initial higher levels retain their verbal abilities into old age, while perceptual-integrative abilities tend to decline. Further, there are biological factors that also affect intellectual capacity. These variables must be considered collectively in any discussion of the intelligence of older people. When the additional research is available that can reveal some explanation of age changes in intelligence educators and recreationists will be in a better position to serve this population.

**Learning.** Learning and memory can hardly be dissociated. The act of learning is the successful organization, acquisition, storage, and retrieval of information in the long-term memory system. There is a complex of factors affecting learning. Successful acquisition of information requires that attention be directed to that information when it is presented. Even though people can also acquire information without directed attention, such material resides in short-term memory. In addition, motivation, speed, socioeconomic status, and mental and physical states all play a role in learning.

It would appear from some testing that learning performance declines with increasing age, although such declines are not readily apparent until after middle age. Any person can learn at any age. Older adults may typically learn anything that other people can if they are allowed sufficient time. Efforts that involve manipulation of symbols or objects, definitive and assured responses, and reduced intrusion from previous learning are particularly useful in obtaining good performance by elderly individuals.
Memory. Memory may be classified as short and long-term. Short-term memory usually involves recalling information for a brief period. Long-term memory is information that is stored cerebrally for later recall.

Experimental studies of simple short-term recall indicate only slight evidence of reduction with age; perhaps no decrements at all. However, if there is any form of interference with memorization by the aged, decline becomes evident. The more complicated a memory task is, the more apparent age-related decrements. This is probably due to interference with the process of assimilating information. It is likely that younger persons are more capable of dealing with interference with short-term memory than older adults.

The memorizing capacities of the elderly seem to be more affected when information to be learned is offered in quick sequence, when material is shown only briefly, and when the learning task is complex.

Long-term memory shows less decline with age then does short-term memory. With advancing age, retention of auditory material appears to be far superior to that of visual material. When material can be both seen and heard, retention is greater than if either sense is utilized independently. Older adults seem to recall events that happened long ago. Intelligence appears to be associated with memory retention. A few older people have no memory loss at all. Those who use their powers of recall tend to maintain both short-term and long-term memory well into old age.

Many people are affected by memory deterioration in old age. There has been little research to discover ways of combating this apparently inevitable impairment. Nevertheless, there may be some interventionist procedures that could be significant in the ability to recall. It is not, however, unusual for middle-aged persons to find that they have trouble remembering words or phrases which they used infrequently. In some instances, this momentary memory gap is filled when concentration is applied.

Reasoning. Reasoning is a process that may offer constructive solutions to problems or may aid in conceptualizing about and organizing information in rational ways. The ability to think brings some system to the variability of data presented to an individual. Without the capacity to organize and categorize a person would be unable to differentiate between data inputs and could not generalize or formulate principles upon which to base subsequent actions.

Specificity permits the thinker to understand and bring order to the complex pieces of information that perception typically arrays for the mind. Specificity functions on several planes. The simplest is based on perception and sensation. Whenever there is reduction in capability of these functions, there is a parallel lessening of the ability to think or reason. Secondly, specificity is concerned with a generalized response to stimuli. This is a process in which, despite any differences that occur in given stimuli, the more nearly similar such stimuli are the more likely they are to be treated as equivalent.

The ability to respond to variation with advanced age. It has been observed that humans become more precise and particular in their use of generalizations as response to stimuli is sufficient time. As a result of this, the capacity of tasks that require responses in more time is often a task for the elderly.

When data have been differentiated, data is often more easily processed. A railroad crossing with a railroad signal is there, who authorized it and what this signal is the effect of this?

The elderly tend to be fundamentally different in their conceptualization and to reject selecting one action as correct and to accept other actions in investigations that have been conducted. The concept of conceptualization at advantageous decline in the ability to follow. But, this generalization almost always has been made.

Despite all of the evidence to conceptualize and do it well. There which consistently indicate decline, may be at fault. Because the experiences of the elderly habitually with abstract items, the temporary secondary nature of thought engagement years ago did not.

The formulation of concepts or learning ability. However, concept and learning ability. A significant ability to form concepts seems to be the contrived items of the instrument. Developing variables. Older adults correctly, then do younger adults.

Problem Solution. The resolution to reliable information as well as conceptualization, which involves the
stimuli are the more likely they are functionally equal. This is vital if classification is to take place.

The ability to respond to various stimuli in a generalized way diminishes with advanced age. It has been determined that most older adults formulate more precise and particular differentiations and, therefore, have lessened ability for generalized response to stimuli than younger individuals. When there is sufficient time, elderly persons tend to become uncertain in the performance of tasks that require response generalization.

When data have been differentiated, they must be classified. Such classification permits data to be processed in generalities. This is less difficult than attempting to work with everything in particular. For example, whenever we approach a railroad crossing with a flashing red light, the stimulus from this action can be dealt with as a unit of a class, instead of determining why the signal is there, who authorized its presence, and so on. The supposition made about this signal is the effect of response generalization and classification.

The elderly tend to be fundamentally inept at concept formulation. Conceptualization usually deals with making logical inferences and generalizations. Older persons tend to refuse involvement of a higher level of generalization and to reject selecting one, when offered the opportunity to do so. The investigations that have been conducted show congruence in conclusions concerning conceptualization at advanced age. The evidence indicates an unmistakable decline in the ability to formulate concepts as a person becomes older. But, this generalization always has exceptions.

Despite all of the evidence to the contrary, there are older adults who conceptualize and do it well. There is some probability that the tests utilized, which consistently indicate decline in performances of specification and classification, may be at fault. Because tests rely upon items of abstraction, and the experiences of older adults have not generally included preparation for dealing with abstract items, the test is weighted against the elderly. While contemporary schools encourage generalization and inference, the schools of 60 years ago did not.

The formulation of concepts cannot be independent from intelligence and learning ability. However, conceptualization is not absolutely dependent upon intelligence and learning. A significant part of the decrease with age in assessed ability to form concepts seems to be authentic and is not produced by any contrived items of the instruments used to measure or by the stimulus of introducing variables. Older adults seem to choose less abstract and more concrete tasks than do younger adults.

**Problem Solution.** The resolution of conflict situations requires accessibility to reliable information as well as the ability to reason logically. Unlike conceptualization, which involves the processes of specification and classification
of perceived information, the solution of problems is based upon successful projection of available alternatives by forecasting probable outcomes. Thus, logical decisions must be made about the mental data that perception and learning develop. Being able to understand classified information, characteristics that such data contain, and the differences between them permits the individual to come to some decision concerning a given problem.

Problem resolution places older persons in a handicapped position if many variables must be handled at the same time. Older adults find it harder to understand, in the sense of defining stimuli and, therefore, have greater difficulty remembering this information when the sequence for problem solving necessitates its use. The incidence of errors in solving problems increases steadily as an individual grows older.

The elderly person usually require a longer time to discover the exact objective of the specific problem. Their quest for information is predisposed toward trial-and-error inquiry, instead of focusing attention on one route to the target. They obtain information aimlessly and tend to have difficulty in segregating the pertinent from the impertinent. Therefore, they are predisposed to be inundated by massive disconnected facts. They also lean toward repetitive behavior, an inclination that can be troublesome in situations in which the essence of problems and their solutions is consistently and quickly undergoing modification. Repetitive behavior can be advantageous in situations in which there is little change or such slow change that the method is not disruptive.

Problem-solving ability can be weakened when there is rigidity of thought. To resolve problems it is usually necessary to move openly from one kind of thought to another. There is little definitive evidence that inflexibility is the major cause for the difficulty the person who is elderly experiences in problem solving. The ability to switch from one kind of problem to another is placed under most stress when there is information that offers possibilities for both correct and incorrect decisions. When this happens, the older adult seems to be in the greatest quandary.

As with other mental capacities a general tendency toward decrease is noted in problem-solving ability. But, older people are just as able to perform abstract reasoning in conjunction with concrete tasks. There are older persons who have little or no difficulty dealing with abstractions. Moreover, some investigations indicate that educational background and occupational experience play a role in abstract reasoning. If an individual, for example, has had to make deductive efforts throughout a career, it is likely that deductive performance will be maintained into old age. This suggests that there are cultural and social influences which have much to do with problem-solving abilities.

Creativity. Creativity is a mental process, translated into manual, symbolic, or oral forms, that is either a new way of looking at old ideas or a way of developing new ideas. Innovative processes are considered creative behavior. But at best infrequent. There is evidence response to a set of circumstances by subjectivity of subsequent originality, lack of sufficient knowledge, have necessary, and have the intelligence.

Although some research has the years of 30 and 39, there are not equal enough so that it should not be noncreative at some predeem. have displayed creative power. It seems to be a parallel between solve problems declines with age. Creativity will also decline. Despite the arts, sciences, and humanities, not be catalogued and that crea

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In order for the individual to suffer a successful life, the individual usually feels as if needs must be achieved if horn

Hunger. Little is known about conflicting information is generated. Some older people appear to have many older adults continue to take in any appreciable way as if.

Older adults generally require age. If, as some research indicates, the later life, rather than caloric reduction is needed. Of course, with the aging metabolic rate and this may have
opining new ideas. Innovative problem solving or that which is original may be considered creative behavior. By its very nature, an original solution is rare or at best infrequent. There is evidence that most people tend to repeat the same response to a set of circumstances and this repetition decreases the probability of subsequent originality. In order to be creative an individual must possess sufficient knowledge, have the capacity to expend the kind of effort necessary, and have the intelligence potential required for output.

Although some research has reported that creativity tends to peak between the years of 30 and 39, there are exceptions in every field. The decline is gradual enough so that it should not be assumed that the elderly inevitably become noncreative at some predetermined advanced age. Some extraordinary people have displayed creative power well into their 80s and 90s. Particularly has this been true of artists, musicians, writers, dancers, and scientists. However, there seems to be a parallel between creativity and problem solving. If the ability to solve problems declines with age, it is probable that for most people creativity will also decline. Despite the lessening of high-quality work in the various arts, sciences, and humanities, it is significant that individual difference cannot be catalogued and that creativity may continue very late in life.

**Essential Needs**

In order for the individual to sustain him or herself, certain basic needs must be met. Among these are the need for food, rest, sexual activity, and other similar experiences. Drives, for example, are unconscious bodily states that the individual usually feels as tension. These drives require some action to mitigate the feeling of lack of closure or incompleteness. Satisfaction of such needs must be achieved if homeostasis is to be maintained. Among the primary needs that have been investigated are hunger, thirst, sleep, temperature control, and others. Sexual activity is usually included as a basic need, although it relates to preservation of the species rather than to survival of the individual.

Hunger. Little is known about age-related changes in the hunger drive. Conflicting information is generated about the nutritional needs of older adults. Some older people appear to have less appetite then do younger persons, but many older adults continue to enjoy good food and do not reduce their intake in any appreciable way as they age.

Older adults generally require fewer calories because they use fewer as they age. If, as some research indicates, there is a decrease in the ability to taste in later life, than caloric reduction may not be as nettlesome as it may be imagined. Of course, with the aging person there is a consequent slowing of the metabolic rate and this may have some affect on food intake. However, typi-
cal eating patterns can produce adipose tissue, if there is no reduction due to the lessened metabolic burn.

In many ways, eating may be considered a social habit whose intensity does not diminish with age despite the need for reduced caloric intake. Food consumption has a meaning to most people beyond the essential nutritional requirements. Eating carries with it significant social overtones that in no way are correlated with satiation of hunger.

It is not rare to find older adults, living alone, who make no pretense of preparing a proper meal. Little or nothing is consumed because preparation is hurried, without thought for a balanced diet, and more concerned with cost than with nutritional value. Frequently, the meals are not appetizing. If eating could be coupled with some form of social activity, perhaps the older adult would be more concerned with preparation and food value and enjoy the meals more. It is well known that the most common causes of dietary insufficiency in older adults are poor eating habits, poverty, and health-related problems. Other age-related changes having an effect on eating habits include reduced gastric acidity, bile duct and pancreatic diseases, not to mention diminished ability to taste.

Rest. Sleep is necessary for rejuvenation in all humans. Older adults require whatever amounts of sleep they have become habituated to during the normal course of their lives. Nevertheless, as the individual ages, the method of sleeping may change. An older adult may obtain his or her total amount of sleep without actually sleeping through an entire night. Frequent naps during the day, particularly when listening to the radio or watching television, are not uncommon. Sometimes the aged person may fall into a light sleep while engaged in conversation. Individuals may also complain that they do not sleep at night. This may be because they are gaining sufficient sleep from the naps during the day. Habitual naps in the late afternoon can result in what appears to be insomnia. More likely, though, the need for sleep is being fulfilled.

Sexual Activity. Other than hunger, the single most important drive in humans is for sexual activity. Continued sexual activity well into old age has been documented. Sexual activity is not only likely, it is desirable for those older adults who participate. According to Masters and Johnson, regularity of sexual intercourse is one of the major factors for continued and enjoyable sexual capacity. Probably there is no condition as sexless old age. Older women are capable of engaging in sexual activity as long as they live. Males may also find satisfying sexual outlets in advanced age under favorable physical and emotional conditions. While the male’s sexual response wanes with age, regularity of sexual engagement in a stimulating marital situation can extend the healthy male’s capacity into the eighth and ninth decades of life. Recent phar-
maceutical aids have also enabled otherwise penile dysfunctional individuals to engage in sexual activity.

The aging process affects the genital organs. In females there is a post menopausal decrease in estrogen. Thus, the lining of the vagina becomes thinner, resulting in less protection for adjacent structures—the bladder and urethra, and the labia majora tend to be reduced in size, thereby constricting the opening of the vagina. Lubrication also decreases. Fortunately, artificial lubricants appear to compensate for natural losses and any discomfort that ensues from hormone imbalance.

In males, boredom with the partner is the chief cause for decrease or cessation of sexual activity. Cultural and health-related conditions may also be issues. Other factors involved in loss of sexual responsiveness include gross weight gain, mental or physical exhaustion, physical disability due to infirmity, psychological impotence, alcoholism, or other substance imbalance. The dominant factor in male sexual behavior is the opportunity for engaging in regular sexual activity.

Motivation. The primary sources of motivation are self-preservation, sex, hunger, and avoidance of pain. However, there are routine ways for satisfying these stimuli. Such physiological and psychological urges are indirectly associated with specific behaviors within the sociocultural sphere of life. A much more meaningful conception offered as an analysis for later human motivation is concerned with sociopsychological needs and the behaviors expressed as adults attempt to satisfy them. There is a fundamental desire for security, recognition, response, and new experience. Each of these stimuli is a powerful element in motivating human behavior.

Individuals are motivated by objectives and intents that when achieved correct any disturbance in their equilibrium. Any deficiency in these basic desires can trigger responses designed to correct any of the perceived inadequacies accompanying the frustration of essential purposes. Specific immediate motivations are even more precise and directly serve personal objectives that underlie the more remote and general needs, wants, and drives of the organism. Motivation becomes the task of organizing activities based upon presisting natural purposes of the individual and then manipulating the environment so that objectives significant to the individual develop and are acted upon.

Integral motivation is that which is inherent in the social milieu. Most commonly there are recognition for efforts performed, interaction with personalities other than one's own, satisfaction and achieving objectives that have been set by the self or by others, a feeling of mastery of skills or situations, and personal fulfillment through realizing one's own potential. All of these may be considered as social motives that operate upon and stimulate behavior.

The social motives of cooperation, recognition, and satisfaction through personal achievement appear to be beneficial to the individual. A highly de-
sirable motive is knowledge of one's own progress. The most significant motives are those growing out of needs, interest, and activities accepted by the adult. The desire to achieve certain skills or re-activate skills that may have been long unused may help in solving immediate problems. In addition, the acquisition of information and understanding, the development of attitudes and appreciations for successful, enjoyable life; the securing of recognition by others for performance well done; and security gained as an outcome of cooperative efforts or timely contributions are all real and sound motivations.

Stimulation and maintenance of interest are extremely important not only in holding the attention of the older adult, but in providing incentive for continuing growth and personal enhancement. In later life, a shift of interest from family and occupation is probably necessary to elicit sustained effort. It may be that personal satisfaction found in recreational activities can be an appropriate substitute and compensation for the original stimuli that encouraged action during the formative and mature adult years. Recreational activities offer the least threat to the security of the individual and promote the possibility of specific forms of self-expression and self-realization without aggressive competitive behavior that can often lead to frustration, anxiety, or both.

Motivation for successful aging can be learned. Awareness of personal inadequacies can be offset by acquisition of new interests and skills even at an advanced age. Learning to recognize and satisfy one's own needs is a basic survival function. A completely self-actualizing person has the inner resources required to reach out to others and offer whatever assistance is necessary. Moreover, such an individual will have a broad perspective concerning benefits to the community at large. People who are able to decide for themselves and make those selections that best meet their own needs without being other-directed will probably have a more successful aging experience than those who are imposed upon and cannot make choices for themselves.

Moods and Emotions. Moods and emotions are quite distinct. Love, hate, fear, and anger are emotions. Anxiety, sadness, and gladness are moods; they are the bases on which emotions occur. An individual may experience a mood without knowing why. Emotions are definite mental states, typically of an excited character, and are always related to actual or imagined situations. They are frequently accompanied by obvious physiological changes. Thus, for example, fear is a consequence of being threatened in some way. The emotions usually cause changes in the vaso-motor or gastrointestinal systems as the individual prepares for flight or fight. Strong emotions produce equally strong physiological responses.

Moods may change rapidly or slowly, depending upon the person. Some people have a constancy of mood, are usually happy or sad, anxious or placid. Others show mood swings and oscillate from one mood to another without apparent reason. Emotions or feelings are more easily observed in persons with shifting moods. Not only the changes they occur is absolutely individu-
shifting moods. Not only the changing of moods but the intensity with which they occur is absolutely individual. Most emotions are related to the existing mood of the individual: anxious people have fears; sad people undergo anguish or dissatisfaction; and people who are glad experience the happiness of affection, achievement, good health, or complacency.

Loss is a major factor in the emotional experience of elderly people. Losses in every phase of his or her life force the older adult to use tremendous amounts of physical and emotional energy in grieving and in recuperating from it, adjusting to the changes that occur from loss, and restoring him or herself after being subjected to the stresses that accompany these anguishes. The older adult experiences human feelings that are similar for people of every age, but there is a singleness of the nature of such feelings as they mirror the life events of the aging person.

It is a common error to believe that older people do not experience strong emotional responses to their situation. Emotional outbursts and mood changes are readily evidenced. Grief, guilt, loneliness, and fear are some emotional states that manifest themselves as significant others begin to die off. Unless the older adult has developed a compensatory circle of acquaintances to mitigate reduction in social contacts that death effects, the daily emotional needs of the individual probably will not be satisfied. A variety of defense mechanisms may be brought into play so that the aging person can adapt to the social and environmental pressures that threaten stability. As individuals age, they may find it expedient to add new defenses while giving up old ones; however, some defenses may persist throughout life but with variations in significance at different stages.

Summary

Physical changes appear to be inevitable as the individual grows older. Many changes associated with the aging process have to do with the maintenance of homeostasis or the decreasing ability to maintain it. A number of stressful circumstances, including biological decline, begin to intrude upon the individual. Although each individual is unique, and variations in capacity to adjust are well known, it is probably safe to state that there is a general decline in physiological functions, and this is coupled with changes in sensory acuity, motor ability, and nervous tissue. All of these diminutions begin to occur during middle age, but they gain prominence late in the seventh decade of life.

Experimental evidence with regard to perception is limited and what is available is as yet unclear. Nevertheless, there does seem to be a slow and regular decline in several perceptual functions as the individual ages.

Some study has been given to mental functioning, but evidence is not complete. Certain aspects of intelligence appear to show a decline with age while
others show stability over time. Although some memory change occurs, it is in the main relegated to the retrieval function. Aging also reduces the ability to classify information and make logical inferences, but a great deal depends upon the educational level and occupational experiences of the individual in question.

Drives seem to lose potency with increasing age, but so many forces impinge that little behavioral change is noted. Motivation has more to do with behavioral directions. Older adults tend to direct their energies towards threats to themselves and removing anxiety-provoking agents. Motivation, which guides behavior toward specific objectives, can be modified in older adults so that attitudes and actions change.

Emotions are always within each person. Some individuals lose their sense of feeling, but this should not be construed as evidence of an absolute decline in emotionality for all older people. Emotions still play an important part in reactions to the deprivations and other environmental stresses that society and growing old inflict upon the individual.

Biological changes affect the elderly person’s energy level, ability to recover from stressful situations, the effectiveness of the sensory system, and the capacity to react to certain stimuli. Such biological changes actually mean that more effort and planning are required to accomplish in later life what was performed without thought and, relatively automatically, at an earlier age. Physical changes require adaptation, and many older adults learn to adjust to biological declines by conserving strength, becoming more efficient in what they do, and attending to their health needs instead of taking them for granted.

With all of the real problems that confront the aging person, most are able to adapt to a variety of losses and adjust quite effectively. The reason for this ability to cope in the face of biological and psychological diminution may be that none of these declines occurs suddenly. The aging process is gradual, and an individual learns to adapt almost without recognition of the fact. Moreover, the individual’s personal image of the self does much to offset some of the losses experienced. If there are compensatory involvements, the significance of deficiencies will probably be reduced proportionally.

Elderly persons have amazing personal resources that enable them to function despite biological and social stresses that intrude upon a satisfying existence. Whatever residual strengths the older person has should be called upon and the emphasis put upon these instead of upon obvious physical and mental deficits. What can be done assumes greater importance than what might have been or what is now contraindicated.

Social Roles.

All the world’s a stage, and all the men and women merely players. To have their exits and entrances parts, his acts being seven ages.

OLDER ADULTS DO NOT AUTOMATICALLY pre-select permanent social roles. Aging older develops behavioral patterns or prosaic modifications in order and to obtain some preferential treatment. As people are gaining room for maneuvering in a restricted stereotype. Of course, age is a stereotype of the harassed and despairing.

SOCIAL ROLES

The same set of social forces effect life cycle, but the particular features of the role and then an aging adult is a function of personal traits and experiences. Any role is flexible, as well as status loss or gain. Each individual, as the concept of self, must also be understood.

Socialization. Socialization is the process of transmission and beliefs that are then translated into behavior. A participant in socialization toward a specific way of life when an individual assumes a place in