

Human Development

Chapter 15 – Middle Adulthood: Physical and Cognitive Development

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Middle adulthood begins arbitrarily at 40 and may constitute 50% or more of the lifespan.

Includes continuity and change.

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Development in Middle Adulthood

Middle adulthood is more a state of mind, attitude, physical health, life choices etc.

There are physical and psychological clues.

Prime Time or the Beginning of the End

Middle aged people often feel safe, settled and secure.

It has been called the command generation.

Some loose vitality after forty.

Levinson contended that it is a time of moderate to severe crisis.

Most people experience a sense of ambivalence in that they may be at the peak of career, family, creativity but are aware of mortality and time seems to pass more quickly.

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Midlife Crisis and Related Myths

Transition Model – the view that changes in midlife are gradual.

Crisis Model – the view that changes in midlife are abrupt and often stressful.

People who address reality early are less likely to have a midlife crisis.

Wealthy people are more likely to experience crisis than poor or working class.

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Physical Continuity and Change

Change is inevitable. It affects people at different rates and affects some more strongly than others.

Changes in Capabilities

Changes affect sensory, motor skills and internal body functions.

Sensation

Visual acuity declines in mid 40s to early 50s

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Hearing becomes less acute after age 20 and declines gradually.

Sensitivity to smell, taste, and pain decline in middle adulthood but are more gradual and less noticeable than vision and hearing.

Motor Skills and Reaction Time

This drops off slowly in middle adulthood and more quickly in older adulthood. Actual performance tends to remain constant through middle adulthood with practice.

Internal Changes

The skeleton stiffens and shrinks

The heart pumps 8% less blood for each decade after adulthood

Skin and muscles lose elasticity and wrinkles develop.

Lung capacity decreases.

Subcutaneous fat deposits around mid section.

Menopause and the Climacteric

Menopause – the permanent end of menstruation; it occurs in middle adulthood and may be accompanied by physical symptoms and intense emotional reactions, more so in some women than others.

Climacteric – The broad complex of physical and emotional symptoms that accompany reproductive changes in middle adulthood, affecting both men and women.

Physical Changes and Symptoms

Menopause occurs between 45 and 55, although possibly somewhat sooner or much later in some women.

Less estrogen is produced and the reproductive system shuts down.

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The uterus shrinks and breast size reduces.

70% to 81% of women report hot flashes

50% to 60% of women report night sweats

Other symptoms like headaches and pains reported by women with previous history of the condition.

20% of women report symptoms as “bothersome”

Immediate Emotional Effects

Some feel a sense of depression and loss or not being feminine, particularly in those who have not had children and had not completely made up their minds about childbearing.

Most do not encounter such difficulties and experience a decrease in emotional difficulties during and after menopause.

Most women are more concerned about becoming widows at this time than they are about menopause.

Long Term Effects

Loss of estrogen causes changes in bone mass and in genitals.

It may increase a risk in coronary disease.

Sexuality in the Middle Years

Frequency of activity and number of partners declines in middle adulthood

Many healthy adults enjoy an active sex life into 70s and beyond.

Medications for health problems often have sexual function side effects.

Lack of opportunity can be a factor. Time pressures of the job and family may leave couples with little time or energy for sex.

Sexuality is refocused to sensuality for many middle adults.

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Physical changes in Middle Adulthood *table 15-1*

Sensation

- Decline in visual acuity, hearing loss
- Decline in taste, smell and sensitivity to pain

Reaction Time

- Slow decline in reaction time

Internal changes

- Slowing of the nervous system
- Stiffening and shrinking of the skeleton
- Loss of elasticity in skin and muscle, development of wrinkles
- Accumulation of subcutaneous fat.
- Decrease in heart lung capacity

Sex-related changes in men

- Gradual decline in production of androgens
- Increased difficulty in achieving erection.

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Health and Disease

As the body ages, it becomes increasingly vulnerable to disease.

The good news about Aging and Health

- Many losses in function can be stopped or slowed
- Even past 70, only 20% to 30% have symptoms of heart disease
- Much of the cognitive decline is treatable
- It is actually healthy to gain a pound or so a year with age
- Cranky old people were cranky young people

Major Disease of Middle Adulthood

The leading cause of people in middle adulthood is cancer followed by heart disease.

Through most of the lifespan, men die at roughly twice the rate of women their age. (job accidents, psychological factors, possible greater genetic predisposition)

Cumulative Effects of Health Habits

The life expectancy of people who live to age 45 in the US is about 80 years.

80% of people who live to age and remain healthy until age 65.

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Good Health Habits

Health experts believe that a program of regular exercise, lessend stress and good diet can slow the aging process.

Short term, mild exercise can produce impressive gains in strength and lung function.

Regular exercise can slow the deterioration of muscle tissue, reduce body fat, prevent deterioration of joints and combat some arthritis.

Poor Health Habits

Poor health habits in young adulthood often do not show up until middle adulthood.

Cigarette smoking contributes to cancer of the lung, mouth, pharynx, larynx, esophagus, colon, stomach, pancreas, uterine, cervix, kidney, ureter, and bladder.

Cigarette smoking contributes to respiratory and cardiovascular disease, arteriosclerosis, hypertension, and other diseases.

Of the 2 million deaths in the US in 1990, 20% (400,000) were caused by smoking-related illnesses.

There are 42 other carcinogens besides nicotine in cigarettes.

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36% of people over age 35 smoked in 1985

25% of people over age 35 smoked in 1990s

Higher percentages of smoking occur in certain demographic groups such as minority groups, low education, and those below the poverty line.

Alcohol consumption was linked to 100,000 preventable deaths in 1990.

Illicit drug use was linked to 20,000 preventable deaths in 1990.

Stress and Health

Stress plays a role in many of the diseases of middle adulthood.

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Table 15-2 Disease Conditions and Lifestyles

Heart and Circulatory Disease	High fat, refined carbohydrates, high salt; overweight; sedentary lifestyle; cigarettes; heavy drinking, alcoholism, unresolved, continual stress; personality type
Stroke	Sedentary lifestyle; low fiber, high fat, or high salt diet; heavy drinking, alcoholism (which contribute to vascular disease)
Osteoporosis and dental and gum	Malnutrition – inadequate calcium, protein, vitamin K, fluoride, magnesium, and vitamin D; lack of exercise; immobility; for women, low estrogen
Lung disease (emphysema)	Cigarettes, air pollution, stress, sedentary lifestyle
Obesity	Sedentary lifestyle; high calorie diet; high stress; heavy drinking, alcoholism; low self esteem
Cancer	Possible correlation with personality type; stress; exposure to environmental carcinogens over a long period of time; nutritional deficiencies and excesses; radiation; sex steroid hormones; food additives; cigarettes; occupational carcinogens (asbestos); viruses; reduced immunity.
Dementia and other forms of memory loss	Malnutrition; long illness and bed rest; drug abuse; anemia; other organ system disease; bereavement; social isolation
Sexual dysfunction	Ignorance (the individual and society at large); social stereotypic attitudes; early socialization; inappropriate or no partner; drug effects; long periods of abstinence

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Table 15-3 Stress Scale for Life Events

Death of spouse	100
Divorce	73
Marital separation	65
Jail term	63
Death of close family member	63
Personal injury or illness	53
Marriage	50
Being fired from work	47
Marriage reconciliation	45
Retirement	45
Change in family member's health	44
Pregnancy	40
Sex difficulties	39
Additions to family	39
Business readjustment	39
Change in financial status	38
Death of a close friend	37
Change in number of marital arguments	35
Mortgage or loan over \$10,000 (1967)	31
Foreclosure of mortgage or loan	30
Son or daughter leaving home	29
Trouble with in-laws	29
Change in work responsibilities	29
Outstanding personal achievement	28
Spouse begins or stops work	26

Starting or finishing school	26
Change in living conditions	25
Revision of personal habits	24
Trouble with boss	23
Change in work hours, conditions	20
Change in residence	20
Change in schools	20
Change in recreational habits	19
Change in church activities	19
Change in social activities	18
Mortgage or loan under \$10,000 (1967)	17
Change in sleeping habits	16
Change in number of family gatherings	15
Vacations	13
Christmas season	12
Minor violation of the law	11

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Ethnicity, Poverty, and Health

Minority groups and the poor bear the heaviest burden of disease and death.

Poor health is linked to unhealthy behaviors (smoking, drinking, drug abuse, obesity)

Death rates of self-identified blacks are twice that of white for 45 to 64 year-olds. (High murder rates in some lower-income neighborhoods are also a factor.)

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Drug abuse (including cigarettes and alcohol) and over eating help people cope with hopelessness in the short term.

Cognitive Continuity and Change

Serious cognitive change occurs much slower than previously thought and then only in certain areas of functioning.

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Other areas increase especially for college educated who remain active.

Fluid versus Crystallized Intelligence

Fluid intelligence – Abilities involved in acquiring new knowledge and skills.

Crystallized intelligence – Accumulated knowledge and skills based of education and experience.

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Between 45% and 60% of people maintain a stable level of overall intellectual performance well into their 70s.

10% to 15% show increased performances into their 70s.

30% decline.

Implications for Intellectual Functioning

Schaie found that intellectual decline is less in people with complex lives.

Intellectual activities requiring speed do seem to decline with middle age but people compensate with increased efficiency and general knowledge.

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Experience and Expertise

Declarative knowledge – Factual knowledge; knowing “what.”

Procedural knowledge – Action knowledge; knowing “how to.”

Expertise compensates for declines in remembering random, unorganized information.

Cognitive tests rarely measure experiential influences on the knowledge and problem solving of older adults. (Salthouse)

Cognitive Skills in Context

Adults with high degrees of *occupational self-direction* also have a high degree of intellectual flexibility. (Schooler)

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Society is beginning to recognize that older adults are here to stay and that they are lifelong learners.

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Functional Changes in Cognition

Schaie suggests that a change in cognition is a result of functional changes rather than natural changes over time.

Older adults look at interests, values and attitudes and may balk at performing tasks like IQ tests, which have little relevance to them.