

Physical development



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The major milestones related to physical development in adolescence are rapid physical growth and change, which is referred to as the adolescent growth spurt. The height and weight drastically increases in adolescents, causing the individual to be viewed as adult sized. During these physical changes, the adolescent views themselves differently and it changes the view that they have of themselves. The onset of puberty that occurred in late childhood begins the production of sex hormones by the ovaries (estrogen) for females, triggering the growth of the ovaries and uterus and the testes (testosterone) in males, triggering the growth of the testes and penis. Due to the production of these hormones, the adolescent females body begins ovulation and menstruation and the adolescent males body begins the production of sperm cells. These are the primary sex characteristics that indicate that the adolescent has the ability to reproduce. These physical changes are accompanied by the activation of sexual desire and corresponding increases in dating, kissing, masturbation and other sexual activity.

The more obvious physical changes that are occurring are the development of the secondary sex characteristics. These secondary sex characteristics in females are the accumulation of fat in breasts that result in a slight bump, followed by the gradual enlargement of the breasts over the period of several years. As well, there is also a growing accumulation of fat around the hips resulting in giving the appearance of the adult female body and the changing of the pitch of the voice. Furthermore, at the time of menstruation body hair begins to grow. The secondary sex characteristics in males are the

broadening of the shoulders, lowering of the voice and the growth of body and facial hair, which gives the appearance of an adult male.

An additional physical change that occurs is the growth spurt that the brain encounters. This growth spurt in adolescents generates the thickening of the cerebral cortex and the neuronal pathways grow to be more effective.

Cognitive development shifts from concrete operational thought (late childhood) to formal operational thought (adolescence). The formal operation stage is when the adolescent has the ability to apply logic to abstract concepts. Formal operational thinking includes systematic problem solving and hypothetico-deductive reasoning. Systematic problem solving is the adolescents ability to systematically explore an issue or problem to determine the answer. Hypothetico-deductive reasoning is the adolescents ability to develop conclusions from an idea that is hypothetical. In addition, thinking is demonstrated through logic, abstract and formal reasoning. Because of these capabilities, the adolescent spends much of their time considering abstract issues such as truth, justice, equality, the meaning of life and the question " Who am I?" Although, most adolescents have reached this level of formal operational reasoning, the adolescents cognition at times often retains an immature quality. However, some adolescents do not begin this shift or reach this advanced level of thinking until early adulthood and in some instances may not reach it at all.

Furthermore, adolescents often possess a form of egocentrism, which distorts his or her perception of reality. Adolescent egocentrism is defined by four primary characteristics. The first characteristic is the imaginary

audience, which is when the adolescent thinks that everyone is watching his or her every action. The second characteristic is the personal fable, which is when the adolescent believes that not another person has similar problems or understands what the individual is going through. The third characteristic is excessive hypocrisy, which is when the adolescent feels that his or her behavior is justified and that everyone else's behavior is not. For example, the adolescent thinks that is alright to be disruptive in class, but if the teacher leaves the classroom for any reason the teacher's behavior is viewed by the adolescent as wasting his or her time. Finally, there is pseudostupidity, which is basically oversimplified logic. For example, when an adolescent says that, "Smoking will cause lung cancer, so why don't smokers quit?" the adolescent does not understand the factors associated with the addiction to nicotine.

In addition, there is the beginning of the heightening of sexual or romantic interest in others during the cognitive development of adolescents.

The major milestones related to physical development in early adulthood are the continuation of growth and strength. As well, physical speed and endurance begins to decline, the ability to hear high-pitched tones declines after the age of twenty. An additional physical change that occurs is the growth spurt that the brain encounters. This growth spurt in early adulthood generates the development of the frontal lobes of the cerebral cortex, which controls planning and logic. Furthermore, the continuation of new synapses form, the tissue that wraps nerve cells continues to grow (myelinization), which enables the delivery of messages sent by the axons. The major milestones related to physical development in middle adulthood is a slow

decline of the body, physical speed, reflexes, endurance and eyesight. The decline of eyesight is due to the loss of rod cells in the individual's retina, which requires many individuals to need reading glasses. In middle adult females, the decline of estrogen (menopause) begins and menstruation stops. Whereas, middle adult males have a gradual decline of sperm and the testes begin to shrink. The major milestones related to physical development in late adulthood are the continued decline of the body, physical speed, reflexes and endurance. Additionally, the ability to hear low-pitched tones begins to decrease when the individual is in his or her sixties. Furthermore, the sense of smell declines, which affects the individuals taste of food. Even though the individuals sense of taste remains the same throughout early, middle and late adulthood.

Cognitive development in early and middle adulthood is the increase of knowledge of information, the meanings of words and vocabulary. In middle adulthood, an individual begins to experience forgetfulness, object recognition declines and performing complex memory tasks decline. However, research as indicated that the creativity reaches its peak in middle adulthood. As well, there is a slight increase in the individual's ability to solve problems of life. Cognitive development in late adulthood slightly declines in performing abstract problem solving, perceptual integration, diverting thinking, most cognitive tasks that must be performed quickly, and some aspects of short-term memory. Additionally, older adults tend to perform less well on short-term memory tasks that require recall than on tasks that require recognition. In conclusion, older adults perform cognitively as well as younger adults on some tasks (learning and reasoning about

everyday concepts), do better than younger adults on some tasks (word meaning and wise decision making), but older adults perform less well in other ways (abstract reasoning and diverting thinking). However, it is important to place the few cognitive declines that occur through early, middle and late adulthood into perspective. The declines that do occur are not significant in most real-life situations and not all individuals age at the same rate. Over all, an individual's health has an affect on the decline of his or her cognitive development.

An individual's pleasure of being with others, pleasure in activities, self-consciousness and honesty of expressing his or her feelings remain steady during early, middle and late adulthood. However, the individual's aspirations of power, assertiveness and the necessity of achievement appears to decrease. Furthermore, middle and late adulthood exhibits more insightfulness, dependability, candor and acceptance of hardships faced during this time.

Some psychologists propose that development during adulthood is made up of a progression of stages or periods. The first stage is that not every adult is thought to go through each stage. The second stage is that the order of the stages can differ for some individuals. The third stage is that biological maturation does not control the timing of each stage.

The role of Erikson's Stage of Generativity versus Stagnation indicates that the individual must come to grips with what his or her life as become during this stage. The adult by this time usually recognizes that the elaborate dreams that the individual had during early adulthood cannot be satisfied.

Consequently, the challenge of Generativity versus Stagnation is the ability of the individual to discover meaning in the stuff that the individual can do in his or her work and family and the ability to continue to be productive.

However, if the individual can not do this they will compare and harshly view themselves as they are with what or who they wish they actually were, which will lead the individual to give up and be idle.

The social development in adolescence is a time of drifting and sometimes breaking away from the family unit. The adolescent's relationship with peers becomes more of an importance to the adolescent than his or her relationship with the parents, in terms of attachment and influence. The shift of the adolescent from parents can be seen in the dramatic increase in conformity to the ideas, judgments, values, attitudes, language and style of dress of the peer group the adolescent is engaged in. Additionally, when friendships and romantic relationships become more intense, the adolescent becomes less interested in activities involving his or her family. Furthermore, the adolescent begins to reject some values of the family and may begin to resist the authority of his or her parents. While not all adolescents become rebellious, most all adolescents do become detached from his or her parents.

The adolescent emotionally remains attached to his or her parents and that the adolescents' happiness is clearly connected to this attachment, more so than the adolescents' attachment to his or her peers. Additionally, most adolescents that maintain a close attachment to his or her parents are most likely to be successful academically and to engage in satisfactory peer relationships. Furthermore, these adolescents are more likely to not become involved in antisocial behavior and drug use.

Some strategies that can be used to help adolescents with their problems is for parents to be involved in their child's education, after school activities, to know who their friends are, to maintain an open line of communication and to not be judgmental.