Child & Adolescent Growth & Development

Resource Book

The Center for Child and Family Studies
College of Social Work

UNIVERSITY OF SOUTH CAROLINA
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The Center for Child and Family Studies was created in 1986 at the College of Social Work, University of South Carolina, to address issues related to children and families. Since that time, The Center has gained a national reputation for its curriculum development, research, conference planning, and student initiatives.

For more information about The Center for Child and Family Studies, please call (803) 777-9408 or write to

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How To Use This Resource Book

This Child and Adolescent Development Resource Book was created for use as both a training tool and a reference for child welfare workers. Information in the book is presented in training lectures and activities. Using the book in training should facilitate its use in practice. Workers are encouraged to keep the book handy after training for quick reference in working with child and adolescent clients and their families.

The first section of the book contains information on major theorists to help the worker understand the foundations of our current knowledge of human development. Some of this theory is still in use and some is not, but workers will find that at least a nodding acquaintance with it will help them understand something about how our knowledge has evolved and continues to do so.

The second section contains charts and tables that provide general guidelines on what to expect of children and adolescents at different ages and stages of development. These are divided into 7 stages of development from birth through adolescence.

In the training we treat development in four domains: physical, cognitive, socioemotional, and moral. We are treating language development as part of cognitive development, but in the tables, because of the amount of information on language development and its importance, we have given it a separate column. This curriculum also includes sexual development of children and teens in the domain of physical development.

The child welfare worker who can recognize normal milestones can also spot deviance from the norm, try to ascertain its cause, and suggest the most appropriate interventions. It is important to remember, however, that variations within 6 months before and after the “normal” time for an individual to complete a developmental task are also considered within the norm. Though the sequence of development is consistent for all individuals, each individual develops in a unique way.

The third section includes information to help workers understand and enhance growth in several areas that have lifelong implications: prenatal development, attachment, brain development, language development, and emotional intelligence.

The last section discusses specific aspects of trauma and the implications of trauma on the growth and development of children and adolescents.

The Glossary defines universal terms and language that will help the worker understand information on child and adolescent development, talk with families and other professionals about it, write reports, and request appropriate services.

The Suggested Readings section contains books, articles, book chapters, and Web sites that may be useful to the worker who wants further knowledge and understanding. Some of these sources were used in the development of this training.
Principles of Development

Growth is a result of both nature and nurture. It is influenced by a combination of genetic, biological, environmental, and experiential factors.

Development occurs from head to toe and from the center out.

Development occurs in four domains: physical, cognitive, socioemotional, and moral. These domains are closely interconnected developmentally. Different writers may divide domains somewhat differently—for instance, treating moral development as a part of socioemotional development or language development as a separate domain rather than a part of cognitive development. However it is presented, the information is essentially the same.

Though each individual develops in a unique way, the sequence of development is consistent for all individuals. This means that development in each domain is closely interwoven with development in the others, though it may not proceed across domains in a parallel fashion.

For each stage of development there are markers that tell whether or not the individual has achieved typical, or “normal,” development in the four domains. More broadly, there are developmental tasks that each individual needs to complete for each major developmental stage in each domain before he or she can proceed with optimum hope for success to the next stage.

Variations within 6 months before and 6 months after what is considered the normal time for an individual to complete a developmental task should still be considered within the normal range.

For most individuals, growth and development occurs within a family or family-like context. Thus the parent figures are the ones who are primarily responsible for seeing that the child has the needed supports for development and is protected from conditions that would impede development. To do this, caregivers need to understand the developmental process.

For individuals with conditions that may challenge normal development, it is important to understand optimum developmental possibilities within each domain at each stage and what can support or impede optimum development.
Developmental Domains

Physical development

Physical development encompasses all motor development and includes fine motor (picking up small objects, drawing) and gross motor (walking, climbing stairs) skills. It is a continuous process that depends on heredity, environmental factors (when activity is limited by prolonged illness), and specific disorders (cerebral palsy, intellectual disability, muscular dystrophy). Children typically begin to walk around 12 months, can climb stairs by 21 months, and run well by 2 years, but the age at which these milestones are achieved by normal children varies widely. Motor development cannot be significantly accelerated by using increased stimulation in the environment.

Cognitive Development

Cognitive development refers to the intellectual development of the child. Caregivers should help cognitive development along by reading to children from an early age, providing intellectually stimulating experiences, and providing warm and nurturing relationships. Intellect is measured in young children by observations of language skills, curiosity, and problem-solving abilities.

Language development is sometimes considered under the cognitive domain. The ability to understand language precedes the ability to speak, and children can usually understand a great deal even before they speak. Delays in expressive speech are typically not accompanied by other developmental delays, but all children with excessive language delays should be evaluated for the presence of other delays in development. Children who have delays in both receptive and expressive speech more often have additional developmental problems. Evaluation of any delay should start with an assessment of hearing. Most children who experience speech delay have normal intelligence. In contrast, children with accelerated speech development are often of above-average intelligence.

Speech progresses from the utterance of vowel sounds (cooing) to the introduction of syllables that start with consonants (ba-ba-ba). Most children can say “Dada” and “Mama” specifically by 12 months, use several words by 18 months, and combine words into sentences by 2 years. The average 3-yr-old can carry on a conversation. However, these milestones are highly variable.
Social/emotional development

Social/emotional development refers to the psychological maturation of children as their physical development allows them to interact more with other people and the external world. There are multiple theories of these forms of development in children and adolescents; the oldest and most famous are those proposed by Freud, Piaget, and Erikson. In general, these models are considered useful for describing aspects of development in some children, but none is universally applicable. Increasingly, appropriate attachments and nurturing in infancy and early childhood are recognized as critical factors in cognitive growth and emotional health. Emotional growth and the acquisition of social skills are assessed by watching children interact with others in everyday situations. When children acquire speech, the understanding of their emotional state becomes much more accurate.

Moral development

Moral development is the way in which children develop their sense of right and wrong. There are several child development theories regarding moral development (mainly Piaget and Kohlberg) but most agree that children develop their moral reasoning ability as their cognitive ability develops and also from the modeling that they see in their environment. Caregivers of children should be aware of the impact their actions have on the moral development of the children in their care.
In this curriculum we highlight a few theorists whose work has been important in child and adolescent development. While not all of their ideas are still in vogue, they are nonetheless important because, at the very least, they laid the foundations for more current developmental theory and knowledge. And in some cases, what they researched and wrote still has practical value and is widely used. A general familiarity with the names and ideas of both groups of thinkers should be a part of your understanding of developmental issues for children and adolescents.

The first theorist treated here is Abraham Maslow. His hierarchy of needs still forms a good framework for developmental issues throughout the life span. Following Maslow there is some information on Sigmund Freud and his work on psychosexual development. Next is Erik Erikson, whose more comprehensive psychosocial theory divides the entire life span into stages, each with a specific developmental challenge and task. Also included are Jean Piaget, whose work on cognitive-developmental theory describes a universal pattern of learning to think logically, and Lawrence Kohlberg, who built on Piaget’s theory to outline stages of moral reasoning.

To a large extent these early theorists made their observations on middle- to-upper-class individuals who were more or less alike culturally. In some cases they conducted their studies solely on males and formed their ideas from a male perspective. Later thinkers challenged much of their work for its gender, cultural, and racial bias. There was also a growing awareness of how profoundly human development and functioning were influenced by environmental or ecological factors beyond the strictly cultural. These concerns about the viability of earlier developmental theory led to more inclusive and comprehensive studies, some of which have radically changed our thinking.

The following sketches present both the thinking of the seminal theorists and the challenges posed to it by later theorists. Brain development and emotional intelligence, two focuses of recent study and writing related to human development, are treated later in this Resource Book.

Abraham H. Maslow (1908–1970)

Abraham Maslow was a psychologist who taught at Brooklyn College and Brandeis University. He is best known for his work in human motivation theory, which led to a therapeutic technique called self-actualization. Generally, when we talk about Maslow, we talk about his hierarchy of needs. Maslow’s hierarchy explains human behavior in terms of basic requirements for survival and growth. These requirements, or needs, are arranged according to their importance for survival and their power to motivate an individual. The most basic physical requirements, such as food, water, or oxygen constitute the lowest level on the hierarchy. These needs must be satisfied before other, higher needs become important to individuals. Needs at the higher levels of the pyramid are less oriented toward physical survival and more towards psychological well-
being and growth. These needs have less power to motivate people and they are more influenced by formal education and life experiences. This concept is useful in considering human development throughout the life span. Since childhood is the foundation for the rest of life, Maslow’s hierarchy can be particularly helpful as a framework for considering what a child needs for optimum growth and development.

Maslow’s hierarchy is depicted in the following pyramid:

**Physiological needs**: These are the basic requirements for human physical survival. They include such essentials as food, water, shelter, oxygen, and sleep. When these needs are unmet, human beings will focus on satisfying them and will ignore higher needs.

**Safety needs**: Once the individual’s basic physical needs are met, his or her needs for safety emerge. These include needs for a sense of security and predictability in the world. The person tries to maintain the conditions that allow him or her to feel safe and avoid danger. Maslow thought that inadequate fulfillment of these needs might explain neurotic behavior and other emotional problems in some people.

**Love and belonging needs**: When the individual’s physiological and safety needs are met, needs for love and belonging emerge. These needs include longings for an intimate relationship with another person as well as the need to belong to a group and to feel accepted. Maslow emphasized that these needs involve both giving and receiving love.

**Esteem needs**: Esteem needs include both self-esteem and the esteem of others. Self-esteem is the feeling that one is worthwhile, competent, and independent. The esteem of others involves the feeling that other people respect and appreciate the person. Once the person has satisfied his or her basic needs, concerns about worthiness emerge. The focus becomes not just surviving, but doing well according to meaningful communal standards.

**Self-actualization needs**: These are the needs associated with realizing one’s full potential. As these needs emerge, the person focuses on doing what he or she is meant to do in life—developing his or her talents and abilities to their fullest extent.

Since childhood is the foundation for the rest of life, Maslow’s hierarchy can be particularly helpful as a framework for considering what a child needs for optimum growth and development.

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**Sigmund Freud (1856–1939)**

Sigmund Freud, a Czech neurologist who practiced primarily in Vienna, is known as the father of psychoanalysis and is associated with the psychosexual perspective on personality development. In Freud’s view, human behavior and psychological functioning were motivated by two basic drives: sexuality and aggression. In his theory, there are five stages through which individuals pass in psychological growth and devel-
development, each centered on sexual impulses. These stages are oral, anal, phallic, latency, and genital. In developing through the five stages, Freud held, children progress from basic instinctual behavior, centered on getting the most basic needs met, to mature sexuality that is best expressed in a loving relationship with a partner.

Freud also believed that the personality has three parts.

The **id**, which exists from birth and is most prominent in the newborn baby, is the subconscious part. It is related to the individual’s most basic needs and wants, such as the desire for food.

The **ego** is the rational, conscious part. It begins to emerge later in infancy and helps the child relate to the realities of the environment and the constraints imposed by others without losing a healthy concept of self. For example, a young child cannot always be fed exactly when hunger strikes, but most older toddlers who are well cared for will learn to wait a reasonable time for food without losing trust that their hunger will be satisfied.

The **superego** can be thought of as something like the conscience. Ideally, it acts as a guide to behavior. It is associated with morality.

It is the ego’s job to mediate between the demands of the id, which can be ruthless if allowed free rein, and those of the superego, which can be overly harsh and restraining. A typical adolescent struggle between id and superego might, for example, revolve around the issue of sex. While the basic desire for sex would come from the id, the superego might produce feelings of guilt. It would be the ego’s job to consider both sides and resolve the dilemma. The individual who progresses ideally through the stages of development will have a healthy ego that helps him or her interact well with others and with the environment while maintaining a sound sense of self. To attain such ego function, the individual needs appropriate support and guidance from caregivers.

Much of Freud’s theory has been discredited by later thinkers, partly because it grew out of a male perspective and was generalized to women, in some ways harmfully. Karen Horney, Nancy Chodorow, and Carol Gilligan, among other writers, have refuted Freud’s male-biased theory with a positive model of female development and strength that builds on relationships. Freud’s theory also drew heavily on the memories of upper-class adults in a generally repressed period rather than on work with children, whose development it purports to outline. Today, too, it is apparent that Freud neglected the importance of sociocultural influences and, by concentrating solely on early childhood experience, the importance of later experience to development. Nevertheless, his work with disturbed clients formed the basis of our “talking” therapies, and in some large cities there are still practicing Freudian psychologists and psychiatrists.

---

**Erik Erikson**

**(1902–1994)**

Erik Erikson was a German-born analyst who learned not only from Freud’s work but also from his study of Sioux and Yurok Indians in the United States, where he spent much of his adult life as a teacher and clinical practitioner. Building on Freud’s psychosexual theory, Erikson
drew a broader and more positive picture of what ideally should happen in each stage of development. In his work on what came to be called psychosocial theory, Erikson not only put sexual and aggressive impulses into a larger context but also added adult stages to the course of development, thus becoming one of the first to view character formation as lifelong work.

In each developmental stage, Erikson said, a central conflict, or psychosocial crisis, must be resolved and new skills acquired in the process for the individual to continue to the next stage with optimal hope for success. His stages follow the epigenetic principle, according to which a biologically ordered plan must be followed systematically for an individual to develop fully. In Erikson’s view, a whole lifetime is necessary for the complete integration of the various aspects of psychosocial functioning. Crucial to success in the earlier stages are adequate support and guidance from caregivers. Somewhat like Freud’s thinking, Erikson’s envisions the accomplishment of the developmental tasks as generally a matter of learning to balance personal needs against those of society.

Also like Freud’s work, Erikson’s has been criticized for its Eurocentric male focus and has been expanded upon by subsequent theorists. Margaret Mahler and others stressed the need for a symbiotic relationship between the infant and the mother as the basis of the child’s later separation-individuation, the process of acquiring an awareness of the self as a separate and distinct entity apart from the parent. Barbara M. Newman and Philip R. Newman expanded on Erikson’s stages, coming up with a total of ten that they believe more accurately reflect life today.

Perhaps the most sweeping challenge to Erikson’s theory has come from such writers as Chodorow and Gilligan, among others. Women do not fit the pattern of finding identity apart from others, some of these writers believe, but rather develop identity in relation to others; generally, women value emotional ties more than men, who tend to strive for autonomy as their paths to individuality. Similarly, some writers say that the stages of development occur in a different order for men and women. That is, for men, identity formation comes before intimacy; for women, on the other hand, intimacy comes first.

Despite all the arguments surrounding Erikson’s theory and the useful amendments that have been made to it, it is still widely used, sometimes with one or more of these amendments, as a framework for the study of human development.

Jean Piaget
1896–1980

Jean Piaget, a Swiss researcher who was trained as a biologist and naturalist, became interested first in children’s reasoning processes and later in their moral development, judgment about ordinary happenings, and language. For his work
with children, he is associated with **cognitive-developmental theory**, which describes a universal pattern of learning to think logically.

In this developmental process Piaget posited four stages:

- **sensorimotor intelligence**—birth–18 months, characterized by the infant’s taking in the world only through the senses;

- **preoperational thought**—first use of language to 5 or 6 years old, characterized by the development of language and the use of symbolism and make-believe;

- **concrete operational thought**—from 6–7 to 11–12, when logic comes into play and helps in categorization of objects and ideas; and

- **formal operational thought**—adolescence through adulthood, marked by the capacity for abstract thought and complex problem solving.

Piaget believed that individuals learn through an ongoing process of **assimilation**, or taking new information into their existing body of knowledge, and **accommodation**, by which they adjust to and use their new knowledge.

Piaget posited his theories about cognitive development primarily on observations of his own three children. Since that time, it has become possible to do more systematic and scientific studies of children. Some of these studies have challenged Piaget’s theories, especially on cognitive development in infancy. More recent research shows that, rather than merely taking in through the senses what happens around them, infants learn, remember, and organize events into coherent patterns from a very early age. Research is continuing on all aspects of cognitive development. How—and how early—children learn the skills that prepare them for the stages ahead is currently one of the hottest topics in brain research and has filtered down into the popular literature as well, fueling what today appears to be an industry in products and programs designed to help parents give their infants a head start on success. In turn, this movement has produced a backlash of concern about the potentially detrimental effects such parental overstimulation could have on children’s lives.

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**Lawrence Kohlberg (1927–1987)**

Lawrence Kohlberg, a psychologist who was born in Bronxville, New York, taught for many years at Harvard. His theory of moral development builds on the work of Jean Piaget. Piaget believed that children are born without a moral consciousness but from the ages of 4 to 7, roughly, develop the first stage of morality, in which they see justice and rules of behavior as fixed in the grand scheme of things, beyond any human control. In the second stage, which many children have reached by 10 or so, they see rules and laws as made by humans and somewhat flexible, depending on the intent of those who may break them.

Kohlberg believed that moral development depended on moral reasoning and was learned in three levels, each having two stages. The levels
are:

**preconventional reasoning**—moral reasoning directed initially by the expectation of punishment from external sources and later by an interest in personal reward;

**conventional reasoning**—initially to get approval and later in response to law and a sense of duty; and

**postconventional reasoning**—moral reasoning guided by community versus individual rights and later by universal principles of ethics.

Kohlberg thought that most people never progress beyond the middle level.

Kohlberg’s theory has been criticized for emphasizing moral thought more than moral behavior, for cultural bias (his Western definition of justice does not carry across all cultures), for a perceived lack of reliability and validity in study methodology, and for its failure to consider strongly enough the role of family and culture in the development of moral reasoning.

Gilligan, who was Kohlberg’s student at Harvard, has also criticized his justice perspective as a male-oriented view and offered as a feminist counterpart the care perspective, which views moral development in terms not of individual rights but rather of people’s connectedness with others. The care perspective emphasizes relationship with and concern for others as the context of moral development. Not all feminist writers agree with Gilligan, however. Some find that qualities of both perspectives exist in both males and females to varying extents and that the two perspectives are not mutually exclusive.

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**Daniel Goleman**  
(1946–present)

In the 1990’s Daniel Goleman worked on the concept of emotional intelligence. Goleman describes it generally by saying that IQ alone is not the most important thing for success. Rather, emotional intelligence, or understanding and managing one’s feelings wisely, is more important.

While there have been critics of Goleman’s use of the term “emotional intelligence”, his concepts are widely accepted under the terms “self-awareness” or “emotional awareness”. Broadly the areas are described below:

**Perceiving Emotion.** The initial, most basic, area has to do with the nonverbal reception and expression of emotion. Facial expressions, such as happiness, sadness, anger, and fear, are universally recognizable in human beings and, therefore, critical in communicating emotion. Emotions researchers, evolutionary biologists, specialists in nonverbal behavior, and others, have made tremendous inroads into understanding how human beings recognize and express emotions. The capacity to accurately perceive emotions in the face or voice of others provides a crucial starting point for more advanced understanding of emotions.

**Using Emotions to Facilitate Thought.** This is the capacity of the emotions to enter into and
guide the cognitive system and promote thinking. For example, cognitive scientists point out that emotions prioritize thinking. In other words: something we respond to emotionally is something that grabs our attention.

Having a good system of emotional input, therefore, should help direct thinking toward matters that are truly important. As a second example, a number of researchers have suggested that emotions are important for certain kinds of creativity to emerge. For example, both mood swings and positive moods, have been implicated in the capacity to carry out creative thought.

**Understanding Emotions.** Emotions convey information: Happiness usually indicates a desire to join with other people; anger indicates a desire to attack or harm others; fear indicates a desire to escape, and so forth. Each emotion conveys its own pattern of possible messages, and actions associated with those messages. A message of anger, for example, may mean that the individual feels treated unfairly. The anger, in turn, might be associated with specific sets of possible actions: peacemaking, attacking, retribution and revenge-seeking, or withdrawal to seek calmness. Understanding emotional messages and the actions associated with them is one important aspect of this area of skill.

Many experts in this field stress the importance of these skills for humans to relate to one another and regulate their own behavior. They are central to many therapies used with those who have experienced trauma. Some examples are:

- Being able to control or redirect feelings to avoid fights or other dysfunctional behaviors
- Knowing how to get along with other people despite differences
- Being able to control one’s negative impulses and to delay gratification for a better future outcome
- Being assertive rather than passive
- Negotiating rather than fighting
- Taking responsibility for one’s actions
- Following through on commitments
- Having an objective view of one’s positive and negative traits and liking oneself despite recognized imperfections

Emotional awareness is also critical for children to be successful in school and is one area that may be deficient in children of poverty. The good news is that emotional awareness is a skill that can be taught. This is a major thrust of many child development programs.
Tables & Charts
Fetal Development

### 0 through 8 weeks

**Nervous System**
- **week 3**—Neural plate forms and will develop into nervous system.
- **week 4**—Cerebral cortex and vertebrae begin to form. Brain forms and begins rapid growth.

**Limbs**
- **week 4**—Buds that will become limbs have formed.
- **week 5**—Hands begin to develop. Nerves grow into limb buds.
- **week 6**—Elbows form; fingers begin to develop; and feet begin to form.
- **week 7**—Toes begin to form.
- **week 8**—Fingers and toes have separated.

**Respiratory System**
- **week 4**—Lung buds begin to develop, and bronchial tubes are forming.

**Digestive System**
- **week 3**—A tube develops that will become intestines, liver, pancreas, and bladder.
- **week 4**—A primitive stomach is in place.
- **week 5**—Liver begins rapid growth.

**Eyes, Ears, & Mouth**
- **week 4**—Eyes, ears, and mouth begin to form.
- **week 5**—Eyes have retina and lens.
- **week 6**—Tip of nose appears; teeth begin to form; and upper lip is formed. Eyes and ears begin movement to their normal positions.
- **week 7**—Eyelids are forming.

**Heart & Circulatory System**
- **week 2**—Primitive placental circulation begins. Embryo receives nourishment from the mother.
- **week 3**—The heart and primitive circulatory system begin to rapidly form and function.
- **week 4**—First heart beats can be detected.
- **week 5**—Blood cells are produced by the liver.
- **week 8**—The heart has almost completely formed.

**Skeletal & Muscular Systems**
- **week 5**—Cartilage and bones begin to form. Muscles for the skeletal system begin to form.
- **week 6**—Joints begin to form, and trunk begins to straighten.

**Urinary & Genital Systems**
- **week 5**—Permanent kidneys begin to form.
- **week 8**—Testes and ovaries are distinguishable.

---

This outline counts fetal development from the moment of fertilization. Gestational age is calculated from a woman’s last menstrual cycle and adds two weeks to the ages given.
After about the tenth week of development, exposure to teratogens is more likely to impair organ functioning rather than cause major physical abnormalities. From 28 to 38 weeks, the fetus gains most of its weight. A baby is considered full term when he/she is born 38 weeks after fertilization.
Small head circumference at birth can be an indicator of poor prenatal development and possible exposure to teratogens.

More than slow height and weight gain, poor development in head circumference can indicate developmental problems or child neglect.
Small head circumference at birth can be an indicator of poor prenatal development and possible exposure to teratogens.

More than slow height and weight gain, poor development in head circumference can indicate developmental problems or child neglect.
Growth Charts—Girls & Boys (2 Through 20)

Girls Height & Weight

Boys Height & Weight
The following tables have been designed for use in this training and in your work with children and families.

**Description of the tables**

The tables are divided into 5 columns at each of the 7 stages of child and adolescent development.

- physical
- cognitive
- language
- socioemotional
- moral

Usually language is considered under the cognitive domain, but in these developmental tables it is considered separately. It is important to note that each individual develops in a unique way, but the sequence of development is consistent for all individuals.

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<th>Each individual develops in a unique way.</th>
<th>However, the sequence of development is consistent for all individuals.</th>
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Child & Adolescent Development 25
### Birth–6 months

**Physical**
- Rapid height and weight gain
- Reflexes decline
- Sleep organized into a day-and-night schedule
- Holds head up, rolls over, and reaches for objects
- Responds to both a specific stimulus and the environment
- Is comfortable with routine stimuli; uncomfortable with new stimuli
- Hearing well developed; displays sensitivity to sounds of own language
- Eyes work together to perceive stimuli as organized patterns; can judge distance of objects in reaching for them
- Prefers pattern of human face over other patterns
- Grasps objects
- Sucks vigorously
- May experience erection during diaper change/sleep
- Sexual response is present from birth

**Cognitive**
- From birth, infant begins to “think” with eyes, ears, hands, etc.
- Repeats chance behaviors leading to pleasurable and interesting results—e.g., accidentally hits a swinging doll, likes the movement, hits it again
- Reaching, grasping, and manipulating objects turn baby’s attention to outside world
- Has recognition memory for people, places, and objects
- Forms perceptual categories based on objects’ similar features

### 7–12 months

**Physical**
- Sits alone, crawls, and walks
- Shows refined grasping ability
- Brings objects to mouth
- Understands more complex speech, such as phrases, short sentences
- By end of stage, has 3-D perception and can distinguish objects from their surroundings by shape, color, and texture
- Baby teeth begin to emerge

**Cognitive**
- Engages in goal-directed behavior
- Has recall memory for people, places, and objects
- Finds objects hidden repeatedly in one place, but not when moved
- Engages in deferred imitation of adults’ actions with objects
- By end of stage begins to understand physical causality—e.g., things fall without support

---

**Although there are many trial marriages . . . there is no such thing as a trial child.**

Gail Sheehy
### Language
- Coos and (by the end of this period) babbles
- Joins with caregiver in paying attention to labeling objects and events
- Babbling expands to include sounds of the family’s language—consonants and vowels
- Beginning to understand words—has a receptive vocabulary
- Uses preverbal gestures to communicate

### Socioemotional
- Infant forms attachment to primary caregiver, which is the foundation for future socioemotional and moral development
- First discriminating, then undiscriminating social responsiveness; prefers primary caregiver to stranger
- Shows almost all basic emotions
- Smiles and laughs socially
- Cries to signal needs (food, water, comfort); begins to acquire trust when needs are met
- Matches adults’ emotional expressions during face-to-face interaction
- Begins to distinguish own image in mirror from others’ images
- Fears loud noises, loss of support

### Moral
- Egocentric; no moral concept
- Groundwork for moral development being laid in tension between dependence on larger, powerful others and experience of having needs met; having needs met leads to trust and attachment
- Continues to be egocentric; no moral concept
- Groundwork for moral development continues to be laid in tension between dependence on larger, powerful others and experience of having needs met; having needs met leads to trust and attachment
### Infancy & Toddlerhood (0 Through 2)

#### 13–18 months

**Physical**
- Height and weight gain rapid but not as great as in first year
- Walking is more coordinated
- Manipulates small objects with improved coordination
- Notices physical differences in boys/girls and child/adult

**Cognitive**
- Experiments with objects in trial-and-error fashion
- Finds objects hidden in more than one place
- Sorts objects into categories
- Imitates actions across a change in context—e.g., imitates at home behavior learned at day care
- Sustained attention improves
- Object identity and object permanence

---

**Wonder is the beginning of wisdom.**

*Greek Proverb*

#### 19–24 months

**Physical**
- Jumps, runs, and climbs
- Manipulates small objects
- Enjoy their own nudity
- Both males and females may discover that touching the genital area produces pleasurable sensations.

**Cognitive**
- Develops language, use of make-believe, and symbolism; beginning at 2 (going to 7), cognitive development moves into a reliance on personal perceptions of the environment and egocentric thought
- Searches for objects when they have been moved while out of sight
- Imitates actions of an adult; tries to produce same effect even if not fully able
- Engages in make-believe play
- Sorts objects into categories more effectively
- Recall memory for people, places, and objects improves
**Language**
- Actively takes turns in games such as pat-a-cake and peek-a-boo
- Says first words around 12–13 months—e.g., mama, dada, doggie, bye-bye
- Spoken vocabulary increases rapidly to 200–300 words
- Begins to make 2-word combinations that mean something
- By age 2, makes simple sentences
- Starts to use words to influence a playmate’s behavior
- Likes to name objects
- Refers to self by name

**Socioemotional**
- Joins in play with familiar adults and siblings
- Recognizes image of self in mirrors
- Shows signs of empathy—e.g., may comfort hurt playmates
- Complies with simple commands
- Engages in imitative, turn-taking games with playmates
- May realize others’ emotional reactions differ from their own
- Fears heights, separation, strangers, surprise
- Tasks are separation (movement away from mother) and individuation (development of the self), as in exploring out of parent’s sight, though returning to be sure parent is still there
- Secure attachment aids healthy separation-individuation
- Begins to tolerate caregiver’s absences more easily
- Shows gender-stereotyped toy choices
- Self-control begins
- Toilet training begins

**Moral**
- Experience in having needs met by powerful others continues to lay groundwork for moral development
- Experience with being reprimanded signals misdeed; child’s sense of right and wrong comes from early caregiver responses
- By age 2, may begin to distinguish intentional or deliberate behavior from accidental behavior—e.g., may announce an action one is going to perform
- Experiences negative emotion with misdeed (disapproval by parent)
Infancy & Toddlerhood (0 Through 2)

25–36 months

A little nonsense now and then is cherished by the wisest men.

Willy Wonka

Physical
- Slower gains in height and weight than in toddlerhood
- Appetite usually increases
- Learns to run, jump, hop, throw, and catch
- Puts on and removes some items of clothing
- Uses spoon effectively
- Shows signs of coordination and aggression
- Likes talking about bodily functions; not embarrassed

Cognitive
- Development of language, use of make-believe and symbolism; has personal perceptions of the environment and egocentric thought
- Make-believe becomes less dependent on toys, less self-centered, and more complex
- Is aware of the difference between inner mental and outer physical events
<table>
<thead>
<tr>
<th>Language</th>
<th>Socioemotional</th>
<th>Moral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocabulary increases rapidly</td>
<td>Distinguishes his own intentional from</td>
<td>Has a concept of “right” vs. “wrong” based</td>
</tr>
<tr>
<td></td>
<td>unintentional acts</td>
<td>on personal wants and statements heard</td>
</tr>
<tr>
<td></td>
<td>Understands causes and consequences</td>
<td>from adults—e.g., may take a desired toy</td>
</tr>
<tr>
<td></td>
<td>Empathy increases</td>
<td>from another child and say, “You have to</td>
</tr>
<tr>
<td></td>
<td>Gender-stereotyped beliefs and behavior</td>
<td>share”</td>
</tr>
<tr>
<td></td>
<td>When the child perceives someone as</td>
<td>Can learn, with guidance, how one’s</td>
</tr>
<tr>
<td></td>
<td>“good” in one aspect, will assume that</td>
<td>negative behavior affects another and</td>
</tr>
<tr>
<td></td>
<td>person is “good” in every way</td>
<td>begin to modify behavior accordingly,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>which supports the continuing development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>of empathy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Responds to discipline and instruction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>that fit personal temperament—e.g., a shy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>child is overwhelmed and shamed by an</td>
</tr>
<tr>
<td></td>
<td></td>
<td>overly stern scolding</td>
</tr>
</tbody>
</table>
Early Childhood (3 Through 5)

3–4 years

Physical
- May no longer need daytime nap
- Continues to run, jump, throw, and catch with better coordination
- Begins to gallop and to skip on one foot
- Rides tricycle
- Uses scissors
- Scribbles become pictures; draws first picture of a person and can tell the difference between own writing and nonwriting
- Can recognize some geometric shapes and letters of the alphabet
- May masturbate
- May mimic sexual behavior

Cognitive
- Continuing language development, make-believe, personal perceptions of the environment, and egocentric thought
- Wants answers to many questions
- Understands causality in familiar situations
- Understands models and simple maps as symbols
- Uses private speech (talks to self) to guide behavior in challenging tasks
- Attention becomes more sustained and planful
- Aware of some features of written language
- Counts up to small numbers

5 years

Physical
- Body is streamlined and longer legged with proportions similar to those of adult
- Gets first permanent tooth
- Gross motor skills increase in speed and endurance; skipping on both feet appears
- Fine motor skills increase: ties shoes, draws more complex pictures, writes name
- Can visually discriminate fine-grained visual forms such as letters of the alphabet
- Find adult bathroom behaviors interesting
- May begin asking “where did I come from?”
- Curious about other sex (play doctor)
- Identify strongly with own gender and same sex parent

Cognitive
- Attends kindergarten or Head Start
- Continuing language development, make-believe, personal perceptions of the environment, and egocentric thought
- Ability to distinguish appearance from reality improves
- Attention continues to improve
- Recall memory, memory for routine or repeated behavior, and memory of important events all improve
- Understands that letters and sounds are linked in systematic ways
- Engages in simple addition and subtraction

Kids spell love
T - I - M - E.
John Crudele

32 © Copyright 2011 The Center for Child and Family Studies
Language
- Vocabulary reaches about 10,000 words
- Uses many complex grammatical forms—e.g., “Grammy’s sad, isn’t she?” and “I think it’s Billy’s birthday”

Socioemotional
- Shows better social awareness of people’s intentions
- Ability to predict, interpret, and influence others’ emotional reactions improves
- Relies on language to express empathy
- Gender-stereotyped beliefs and behavior continue to increase
- Grasps the genital basis of sex differences and understands that gender remains fixed

Moral
- Has a sense of reciprocity (e.g., sharing) as a social obligation but is still more concerned with “what’s in it for me”
- Does what adults say to avoid trouble
- Has acquired, at least as part of a basis for further moral development, many ideas and “rules” based on culture—e.g., in some Asian families, reverence for elders
Middle Childhood (6 Through 8)

Middle Childhood

The child supplies the power but the parents have to do the steering.

Dr. Benjamin Spock

Physical

- Slow gains in height continue
- Gradual replacement of primary teeth by permanent teeth throughout middle childhood
- Fine motor skills:
  - Writing becomes smaller and more legible
  - Drawings become more organized and detailed and start to include some depth
- Gross motor skills:
  - Can dress and undress alone
  - Organized games with rough-and-tumble play become more common
- Associates with same sex friends, often to the exclusion of others
- Curious about sex and pregnancy
- Very influenced by media
- Some sexual exploration with same sex
- Definite ideas about male/female roles
- Name calling and teasing

Cognitive

- Attends first through third grades
- Thought becomes more logical, helping the child categorize objects and ideas
- Can focus on more than one characteristic of concrete objects
- Attention becomes more selective and adaptable
- Can use rehearsal and organization as memory strategies
- Becomes more aware of the importance of memory strategies in task performance
- In writing, letter reversals decline
- By the end of this period, makes the transition from “learning to read” to “reading to learn”
- Mastering more complex mathematics skills
- Emotional intelligence is developing:
  - Self-awareness, understanding of own feelings
  - Empathy for the feelings of others
  - Regulation of emotion
  - Delaying gratification
## Language
- Talks freely and is still interested in new words
- Communicates in clear and complete sentences
- Asks many purposeful questions (when, how, why)
- Beginning to read
- Can give full name, age, sex, home address, and usually birthday
- Talks about home possessions; often reveals family secrets
- Carries on long conversations
- Enjoys riddles and simple jokes
- May use bathroom language
- Vocabulary increases rapidly throughout middle childhood
- Word definitions are concrete, referring to functions and appearance

## Socioemotional
- May have a special friend
- Likes action on television
- Enjoys books and stories
- May argue with other children but shows cooperation in play with a particular friend
- Self-concept includes identifying own personality traits and comparing self with others
- Self-conscious emotions of pride and guilt are governed by sense of personal responsibility and accomplishment
- Recognizes that individuals can experience more than one emotion at a time
- Attends to more cues (facial, situational, and memory of past experience) in interpreting another’s feelings
- Understands that different people can have different perspectives
- Becomes more responsible and independent
- Learns social problem solving as ideas on fairness and justice grow more complex

## Moral
- Still obeys adults to avoid trouble
- Beginning to understand the need for rules and fair play
- Has more objective ideas about fairness than before, especially in terms of “same” or “equal” treatment—e.g., “If Bobby gets one, I should have one, too,” and vice versa
- Around 6 or 7, also connects fairness with merit—e.g., “Kesha worked hard, so she deserves the award”
- Around 8, understands the concept of benevolence—e.g., “It’s OK for Kim to get a head start in the race because she has a limp and can’t run as fast”
- Can adapt ideas about fairness to fit varied situations

---

The greatest determining factor in a child’s dropping out of school is his success or failure by the end of the third grade.
Late Childhood (9 Through 10)

**Late Childhood**

The best inheritance a parent can give to his children is a few minutes of time each day.

M. Grundler

<table>
<thead>
<tr>
<th>Physical</th>
<th>Cognitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Girls’ adolescent growth spurt begins</td>
<td>• Attends fourth and fifth grades</td>
</tr>
<tr>
<td>• Gross motor skills are better coordinated: running, jumping, throwing and catching, kicking, batting, and dribbling</td>
<td>• Planning improves</td>
</tr>
<tr>
<td>• Reaction time improves, which contributes to motor skill development</td>
<td>• Continues to improve in using rehearsal and organization as memory strategies</td>
</tr>
<tr>
<td>• Fine motor skills improve: depth cues evident in drawings through diagonal placement, overlapping objects, and converging lines</td>
<td>• Can apply several memory strategies at once</td>
</tr>
<tr>
<td>• Develops “crushes” on peers</td>
<td>• Can learn memory strategy of elaboration (creating a link between unrelated items to help in remembering them)</td>
</tr>
<tr>
<td>• Sexual exploration with peers</td>
<td>• Long-term knowledge base grows in size and organization</td>
</tr>
</tbody>
</table>

**Cognitive**

- Attends fourth and fifth grades
- Planning improves
- Continues to improve in using rehearsal and organization as memory strategies
- Can apply several memory strategies at once
- Can learn memory strategy of elaboration (creating a link between unrelated items to help in remembering them)
- Long-term knowledge base grows in size and organization
- Improves in cognitive self-regulation (monitoring and directing progress toward a goal)
- Emotional intelligence is developing:
  - Self-awareness, understanding of own feelings
  - Empathy for the feelings of others
  - Regulation of emotion
  - Delaying gratification
- Thought continuing to be more logical; is getting better at categorizing objects and ideas
Language
- Grasps double meanings of words as reflected in comprehension of metaphors and humor
- Understanding of complex grammatical constructions improves
- Adapts messages to the needs of listeners in situations of complex communication
- Conversational strategies become more refined

Socioemotional
- Self-esteem rises (top dog of childhood now)
- Distinguishes between effort and luck as causes of successes and failures
- Has adaptive set of strategies for regulating emotion
- Empathy continues to improve
- Can view relationships between self and others objectively
- Understands the linkage between moral rules and social conventions
- Peer groups emerge
- Friendships are based on the pleasure of sharing through activities or time spent together
- Becomes aware of more gender stereotypes, including those involving personality traits and academic disciplines, but has a more flexible appreciation of what males and females can do
- Sibling rivalry tends to increase
- May confront decisions about alcohol and drugs

Moral
- From resolving peer disagreements, sees others’ perspectives and incorporates broadened view into growing concept of right and wrong, fair and unfair
- Generally, though concerned with approval, rewards and self-interest growing less me-centered and more prosocial
Early Adolescence (11 Through 14)

<table>
<thead>
<tr>
<th>Early Adolescence</th>
<th>Physical</th>
<th>Cognitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period of rapid skeletal and sexual maturation</td>
<td></td>
<td>Attends sixth through ninth grades</td>
</tr>
<tr>
<td>Preoccupation with body image</td>
<td></td>
<td>Thinking continues to be more concrete although some adolescents have more abstract, idealistic, and logical thinking</td>
</tr>
<tr>
<td>Girls’ adolescent growth spurt begins at 10.5 years on average; menarche occurs on average around 12.45 years (but changes can begin as late as 15.5 years)*</td>
<td></td>
<td>Interprets personality of others: uses previous information, detects situational variation in behavior, and looks for deeper, more complex causes of personality</td>
</tr>
<tr>
<td>Early-maturing girls more vulnerable to problems such as smoking, drinking, depression, eating disorders, negative self-image, isolation, submissive behavior, less popularity</td>
<td></td>
<td>Social cognition:</td>
</tr>
<tr>
<td>Boys’ adolescent growth spurt begins around age 12.5; early maturation positive for boys at this age (but changes can begin as late as 15.5 years)</td>
<td></td>
<td>† belief in an imaginary audience—that others are as preoccupied with one as oneself is (“everyone is looking at me”)</td>
</tr>
<tr>
<td>There is wide variation in beginning and completion of puberty</td>
<td></td>
<td>† personal fable—belief in personal uniqueness (“no one understands me”) and belief that self is invulnerable (“I won’t get hurt”)</td>
</tr>
<tr>
<td>Physical effects of puberty on development in other domains not as great as once thought; depends on social and cognitive factors</td>
<td></td>
<td>Able to understand others’ points of view</td>
</tr>
<tr>
<td>Adjusting to new body image and emerging sexuality</td>
<td></td>
<td>Greater attention span and ability to focus</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wants to do well in activities and in school</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ethnic minority youth learn how to negotiate 2 systems: their own culture and the dominant culture</td>
</tr>
</tbody>
</table>

* Most text books use these ages as the norm, although the latest information indicates these changes may occur a good deal earlier.

No one has yet realized the wealth of sympathy, the kindness and generosity hidden in the soul of a child. The effort of every true education should be to unlock that treasure.

Emma Goldman

No one has yet realized the wealth of sympathy, the kindness and generosity hidden in the soul of a child. The effort of every true education should be to unlock that treasure.
Language
- Does not like to communicate with adults
- May question adult authority and adult rules
- Enjoys talking with friends
- Conversations are often about social matters
- May complain that others do not understand
- Usually does not like grammar
- Likes to argue rather than discuss
- May use loud voice

Socioemotional
- 2nd separation-individuation task: begins to form identity and prepares for adulthood; conflict with parents is related to this task of gaining autonomy
- Girls may form identity and prepare for adulthood through establishing relationships and emotional bonds
- Pressure to conform with peers
- Heightened interest in body image affects feelings about body, thought processes, and social interactions
- Dating means companionship, intimacy, and support
- May be demanding and defensive
- Can be sensitive and worrisome about body features, personality, being embarrassed or left out, grades, tests, how things will turn out
- Transition to junior high stressful (no longer top dog)
- Many ethnic minority youths have multiple disadvantages:
  - Prejudice, discrimination, and bias because of their ethnic minority status
  - Stressful effects of poverty
  - Poverty, not ethnicity, explains some problems ethnic minority youths face
  - Even economic advantages of class can’t protect one from prejudice and discrimination
  - Recognizes that differences exist between and within groups

Moral
- Wants to be a “nice” person and live up to the expectations of people one knows and cares about; adopts parents’ moral standards on important issues; reason to be good is so others will think well of one (social approval) and one can think well of self
- Continues to learn culture-based moral values, though there may be conflict if these differ from the dominant society’s values
- Peers and media are largest influence on morals and resulting behavior
Adolescence is a period of rapid changes. Between the ages of 12 and 17, a parent ages as much as 20 years.

Anonymous

Middle Adolescence (15 Through 18)

Middle Adolescence

Adolescence is a period of rapid changes. Between the ages of 12 and 17, a parent ages as much as 20 years.

Anonymous

Physical

- Preoccupation with body image (continues throughout adolescence)
- Late-maturing girls (by 10th grade) are more satisfied with their body image than early-maturing girls
- Both boys and girls may experience eating disorders
- Greater sexual feelings, desire closeness with partner
- Identifies self as heterosexual, gay, lesbian, bisexual, or transgender
- May make poor sexual decisions resulting in pregnancy or sexually transmitted disease

Cognitive

- Attends tenth through twelfth grades
- Continuing formal operational thought with abstract, idealistic, logical, hypothetical-deductive reasoning, complex problem solving, and critical thinking
- May think in black and white and tolerate gray
- May enjoy debating and arguing
- Has a strong sense of awareness
- May be judgmental of adults or peers if they do not do what is “fair”
Language

- Does not like to communicate with adults
- May question adult authority and adult rules
- Enjoys talking with friends
- Conversations are often about social matters
- May complain that others do not understand
- Often argues rather than discusses
- Enjoys using debate as a means of expression

Socioemotional

- Building identity (separation-individuation task) continues; may be even more profound in middle and late adolescence than earlier; internal self, social self, self-esteem are prominent
- Parental-child interactions influence autonomy—e.g. relative strictness or permissiveness
- Gendered dating scripts may guide interactions; males: proactive, interested in girls’ physical qualities and may initiate relationship; females: reactive to males, interested in interpersonal qualities; group dates are common
- Interest in forming romantic relationships part of separation task; implies separation from family
- Identity involves gender role stereotyping; some minority cultures have larger gender difference in status than mainstream culture
- Concerned about own thoughts, opinions, and ideas
- May be more giving in relationships, more appreciative of family, more friendly and outgoing, better able to control and express feelings and accept criticism
- Cultural differences may cause conflict—e.g., Latino and Asian dating standards may be more conservative than those of the mainstream white and/or African-American cultures

Moral

- Wants to be a “nice” person and live up to the expectations of people one knows and cares about; may adopt parents’ morals on important issues
- “Personal choice” seen as justification for opposition to parental and societal standards
- Reason to be “good” is so others will think well of one (social approval) and one can think well of self (self-esteem)
- Physical, psychological, and culturally-defined gender differences may influence masculine and feminine moral behavior (e.g., “justice” masculine perspectives vs. “care” feminine perspectives), though many adolescents will have qualities of both
- Minority cultural perspectives may differ from those of the dominant culture; may be based more on familial and communal expectations; differences may cause moral dilemmas
- May feel peer pressure to become sexually active whether they feel ready or not
### Late Adolescence (19 Through Mid-20’s)

<table>
<thead>
<tr>
<th>Late Adolescence</th>
<th>Physical</th>
<th>Cognitive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• May be energetic and like to keep busy with extracurricular activities</td>
<td>• Attends twelfth grade +</td>
</tr>
<tr>
<td></td>
<td>• May engage in risky behavior</td>
<td>• Shows abstract, idealistic, logical, hypothetical-deductive reasoning, complex problem solving, and critical thinking skills</td>
</tr>
<tr>
<td></td>
<td>• Become sexually active, often with multiple partners</td>
<td>• Learns to balance pressures of school, social life, employment, and future planning</td>
</tr>
</tbody>
</table>

There are two lasting bequests we can give our children. One is roots. The other is wings.

Hodding Carter Jr
**Language**
- Beginning to seek communication with adults for future planning
- Likes to discuss rather than argue
- Enjoys talking with friends
- Conversations are often about the future including jobs and college plans

**Socioemotional**
- Continues to build identity—selection of areas of specialization and rejection of areas in which one lacks competence or interest
- Is concerned about readiness for facing the changes of adulthood
- May become frustrated or depressed
- May be anxious about future decisions; shows increased need to be independent from caregivers
- Shows interest in forming romantic, lasting relationships (part of the separation task in that it further separates the older adolescent from the family)

**Moral**
- More than earlier, may wish to meet responsibilities to one’s social or value system
- Wants to behave in a way that supports the system and helps one feel responsible
- The reason to be good is to keep the system from falling apart and to maintain self-respect as somebody who meets obligations
- Physical, psychological, and culturally-defined gender differences may influence masculine and feminine behavior (e.g., “justice” masculine perspective vs. “care” feminine perspective), though many adolescents will have qualities of both
- Minority cultural perspectives may differ from those of the dominant culture; may be based more on familial and communal expectations; differences may cause moral dilemmas

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**If I Had My Child to Raise Over Again**
by Diane Loomans

If I had my child to raise all over again,
I’d build self esteem first, and the house later.
I’d fingerpaint more, and point the finger less.
I would do less correcting and more connecting.
I’d take my eyes off my watch, and watch with my eyes.
I would care to know less and know to care more.
I’d take more hikes and fly more kites.
I’d stop playing serious, and seriously play.
I would run through more fields and gaze at more stars.
I’d do more hugging and less tugging.
Issues in Child Development
The prenatal period sets the stage for the rest of a child’s development throughout life. Though this may seem obvious to you, it may not be so obvious to some parents you work with. Helping expectant parents understand this and take care of themselves and their developing babies is one of the best ways we can prevent child maltreatment. The developing fetus is in need of nutrition, care, and protection from harm from the time the egg is fertilized. Several things increase the chances that a baby will be healthy. These include:

- safe exercise
- good nutrition
- consistent doctor’s care throughout the pregnancy
- social supports for the parent(s)

Teratogens

Teratogens, or things that are harmful to the developing child, include:

- cigarettes
- alcohol
- illegal drugs
- some prescription drugs
- radiation
- environmental pollutants
- disease (rubella, HIV-AIDS, other viral diseases, and bacterial and parasitic diseases such as toxoplasmosis)

Teratogens do the most harm during the embryonic phase, from fertilization to 12 weeks, when the parts of the body are forming. However, because their effects are complex, it is better for pregnant women to avoid them throughout pregnancy. The first eight weeks of development are crucial. During these early weeks, exposure to teratogens can cause major abnormalities.
Other harmful factors

- malnutrition
- lack of medical care (because of poverty or isolation, etc.)
- Rh negative blood
- chromosomal abnormalities
- emotional stress/lack of social support
- domestic violence
- mother’s lack of information about her needs during pregnancy

Attachment

Attachment refers to the close emotional bond children normally form with those who care for them early on, a mother, father, and/or other caregivers. This happens through regular positive contact and interaction between the infant and the caregiver(s) or other familiar figures, as when the adult feeds, comforts, plays with, and talks with the infant and the infant responds. In this way, ideally, the infant learns that he/she can communicate a need to the caregiver (often crying) and get a response that meets the need.

You can see attachment forming in the way a baby responds to the figure to whom he or she is becoming attached—for instance, the baby touches the parent’s face.

Parental behaviors that promote secure attachment are sensitive and loving handling of
the infant and responses to his or her emotional states—for example, not over handling or over-stimulating a tired baby.

The infant also plays a part by responding to and interacting positively with the caregiver. It is harder for some parents to respond in a consistently loving way to an infant who is often irritable and/or unresponsive.

The child who is securely attached generally prefers the parent to a stranger and is comfortable leaving the parent to explore farther afield but will then return to the parent. Children who are not so securely attached do not appear to prefer the parent or may be angry or disoriented when the parent returns after an absence.

Attachment is important because it is the first kind of relational experience the baby has and thus becomes the foundation for other relational experiences in life.

Attachment is necessary for the attainment of the developmental task Erikson describes for the first period of life: “basic trust versus basic mistrust.” The child who learns through attachment that his or her needs will be met is ready to proceed along the normal developmental path, many theorists believe; the child who does not learn this early in life is handicapped developmentally because this child cannot trust that his/her needs will be met.

Though early secure attachment is believed by many to be crucial to ongoing normal development in later stages, consistency of attachment is also important. Trust can be lost if attachment is not maintained. In some cultures children have more caregivers or are parented more by siblings or grandparents, for example, than by parents. These children may form more attachments or may form primary attachments not to parents but to other people.

Brain development begins in the third to fourth week after conception. By the end of the second trimester, the child has more than 100 billion neurons, or nerve cells—all that he or she will ever have. After birth, these neurons form connections, or synapses, in response to outside stimulation. Learning occurs through these connections.

Earlier thinking about children and how they learn viewed them as unreasoning beings who simply took in what was going on around them in infancy without being able to make sense of it until sometime later. More recent research on brain development has shown that this is not the case. In fact, children are reasoning beings even in the early months of life. They take in and assimilate
information and experience to acquire knowledge about the world and skills to function in it.

From more recent brain research we know that there are “windows of opportunity” for acquiring specific kinds of skills and information; times when a part of the brain can pick up and use this new material more easily than other times (for example, children are best able to acquire music and math skills from 1 to 5 years of age). Acquiring skills or information at these prime times helps future development occur in the best possible time and way. Learning (acquiring information and skills and knowing how to use them) occurs through a combination of things including genetics, interaction with and response from others, and other environmental stimulation.

Interactions with others and the environment help the child know which brain cell connections to keep and nurture and which connections to discard. Connections that are used over and over form the basis of the child’s brain organization and function. This is why stimulation and outside opportunities for experience are important.

However, some experts believe that our new knowledge about critical learning periods has led to excessive concern, resulting in some cases, in pushing young children too hard into learning situations. Over-stimulation can be harmful, just as under-stimulation can.

The brain continues to develop throughout life to adapt to experience.

This makes it possible for individuals to continue learning and in some cases to reverse the damage from periods of sensory deprivation.

From what we know now, though, it is far better for a child to get optimal care and stimulation for brain development early in life.

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**What children need in the first three years to achieve their highest potential**

- good parental health during the prenatal period
- a feeling of safety
- knowledge that their needs will be met
- a feeling of importance to others
- a balance of freedom and limits
- exposure to appropriate and diverse experiences involving, for example, toys, music, books, playmates, parents, and other adults
Children learn language in the social context—by hearing others use words and word combinations and connecting these with things, happenings, and other kinds of meaning. Words are symbols.

Attentive parents or other caregivers help babies learn to talk in several ways: by talking with them, especially slowly and distinctly and as if they could understand whatever is being said; by talking about what children are looking at or doing; and by playing games with them that involve words and taking turns as in conversation (for example, Pat-a-Cake).

Exposure to speech helps children learn to speak. More specifically, ways to help children learn to speak are

- **labeling** (identifying the names of objects);
- **echoing** (repeating what the child says); and
- **expanding or recasting** (restating what the child has said but in a more sophisticated form).

Babies with normal hearing prepare for language development by beginning to coo around 2 months and to babble around 6 months. They add consonants and syllables to the coos from 6 to 14 months and, on average, by 7 months are making some sounds of mature spoken language.

From 6 to 9 months children begin to understand words, or have a **receptive vocabulary**.

They say their first words around 12 months, on average. These are usually words that name important people (mama, dada), objects (car), or animals (doggie), or words that convey greetings or leave-takings (hi, bye-bye).

Once the child speaks his/her first word, the **spoken vocabulary** grows rapidly. Between 18 and 24 months it may grow from about 50 words to as many as 300 words.

At 20–26 months children start making two-word combinations that mean something (**telegraphic speech**).
By the end of the second year, most children are making simple sentences. From 2 to 3 years into the school years they are learning to make complex sentences. Parents can help by encouraging younger children to make whole sentences.

Children have to learn many things in learning language: word meanings and shades of meanings, pronunciations, word combinations and arrangements, sentence structure, nonverbal accompaniments to spoken language, tone of voice, acceptable volume in various situations, and adapting speech to make meaning clear to a variety of people.

Among the impediments to learning language are isolation, lack of response to attempts to speak, and disabilities such as deafness.

Culture plays a big part in how children learn languages. For example, in a large extended family that interacts regularly, a child is likely to be exposed to more talk and may learn more words faster than a child who interacts with one parent. Also, when the language spoken at home is different from the language of the culture in which a family lives, children in the family may have a harder time learning the culture’s language.

Depending on age, children may not

- remember what day of the week something happened ("Did Mommy leave on Monday, or was it Tuesday?")
- understand sequence expressed as before and after ("Did Tommy hit you before he took the cookie?")
- understand the difference between the and a and understand more/less and some/all comparisons
- understand do you remember questions
- be able to decipher embedded ideas ("Did the boy who hit you take your cookie?")
- understand the passive voice ("Were you hit by Janie?")
Adolescent Development

Socioemotionally, adolescents are undergoing another separation-individuation process comparable in many ways to that of infants between 18 and 30 months or so. This time, though, it is to prepare for leaving the family and beginning an independent life in the world. Like the infant, the adolescent takes risks and learns by mistakes in this process. As we will see, much of this behavior is due to the structure and development of the adolescent brain.

Cognitively, adolescents learn to think abstractly, idealistically, and logically. Rather than approaching a problem in a trial-and-error fashion, an adolescent becomes able to go about it systematically, in reasoned steps; to form a hypothesis and test it; and to assimilate what is learned into a developing worldview. We will examine the impact of brain development on teen’s decision-making abilities.

Physically, adolescent development includes sexual maturation, which is part of the preparation for adulthood. This is the time individuals define their sexual orientation, start to form romantic relationships, and perhaps begin having sexual relations.

Morally, adolescents are generally learning to frame their ideas about behavior less in the context of what’s in it for them and more in the context of family, community, and religious or ethical norms. But they are likely also to be testing out their own ideas of right and wrong, which may be at conflict with those of family, community, and church.

The Adolescent Brain

Anyone who has dealt with an adolescent (or been one) knows that teens are challenging. While most have believed that teens’ behavior is mostly influenced by the flood of hormones they experience, new research on the brain paints an additional picture.

Neuroimaging involves “mapping” activity in the brain using fMRI (functional magnetic resonance imaging). This technology shows areas of the brain that “light up” while subjects are involved in different tasks. This technology has shown us what areas of the brain are responsible for the different activities the brain performs. Using this technology we now know three things about adolescent brains:

- Brain cells, their connections and receptors for chemical messengers, called neurotransmitters, peak during childhood, then decline in adolescence.
- Connectivity among brain regions increases.
- The balance among frontal (executive-control) and limbic (emotional) systems...
changes and is unequally developed, leading to many risk-taking behaviors.

Many cognitive advances during adolescence stem from this better and faster communication in brain circuitry and increased integration of brain activity. To use a language metaphor, brain maturation is not so much a matter of adding new letters as it is one of combining existing letters into words, words into sentences, and sentences into paragraphs.

The relationship between the earlier maturing limbic system networks, which are the seat of emotion, and later maturing frontal lobe networks, which help regulate emotion, is dynamic. Appreciating the interplay between limbic and cognitive systems is imperative for understanding decision making during adolescence. The response to rewards in the nucleus accumbens (a collection of neurons that is thought to play multiple roles in reward, pleasure, addiction, fear and laughter) in the limbic system of adolescents is equivalent to that in adults, but activity in the adolescent orbitofrontal cortex, which corrects reward-related and punishment-related behavior, and thus influences decision making, is similar to that in children. The changing balance between frontal and limbic systems helps us understand many of the cognitive and behavioral changes of adolescence.

The prefrontal cortex, which is essential in judgment, decision making and impulse control, does not reach full maturation until the middle 20’s. However, the emotional part of the brain, the limbic system, has mostly reached its potential by the middle teen years. Some researchers differentiate between what they call “hot” and “cold” reasoning. So-called cold reasoning is the logical thought processes that we all engage in: Do I go to the bank or the dry cleaner’s first? Teens do this very well in academic and non-emotional settings. Hot thinking occurs when emotions are involved in the decision-making process. Emotionally charged times for teens occur when peers, physical arousal, and emotion are involved. For example, an adolescent male may tell you very logically that he knows to use condoms during sexual activity (cold thinking). He may even profess to use them. However, confronted with his date and his intense physical arousal (hot thinking) he decides to proceed with sex even though he does not have a condom. This pattern of thinking helps explain many risky behaviors in which teens engage. This changing balance between the brain systems involved in emotion and regulating emotion spawns increased novelty seeking, risk taking and a shift toward peer-based interactions.

It is also important to note that against the backdrop of healthy adolescence, which includes a wide range of mood fluctuations and occasional poor judgment, is the reality that many types of pathology emerge during adolescence, including anxiety disorders, bipolar disorder, depression, eating disorders, psychosis, and substance abuse.

One of the greatest challenges for parents and others who work with teens is to distinguish sometimes exasperating behavior from genuine pathology.
Sexual Development

Endocrine changes that increase hormonal levels drive the physical changes of puberty, which includes development of primary and secondary sexual characteristics (e.g., facial and pubic hair, broader shoulders, and deepening of the voice in boys; broader hips, developing breasts, pubic hair, and a less dramatic voice change in girls; increases in height and weight, changes in skin texture, and oiliness of skin in both boys and girls).

Puberty is a series of changes, a gradual process. It begins around 10.5 years of age, on average, in girls and around 12.5 in boys. There is a wide variation in when individuals begin and complete the processes of puberty.

Menarche, or the onset of menstruation, is sometimes named as a sign of beginning puberty in girls. There is no comparably dramatic marker in boys. Menarche occurs earlier now than it did in the past. In 1900, in the United States, it occurred on average at 14.2 years; now it occurs on average at 12.45 years. Most textbooks use these ages as the norm, although the latest information indicates these changes may occur a good deal earlier.

Both boys and girls generally become more concerned with the appearance of their bodies in adolescence than they were before. This concern may appear almost obsessive in early adolescence as young teens spend inordinate amounts of time on grooming, wardrobe planning, etc.

Recent research indicates that it is an advantage for boys to mature early but probably a disadvantage for girls, for whom early sexual maturity can increase vulnerability to such risks as alcohol and other drug use, depression, eating disorders, and earlier sexual experience with the related risk of pregnancy (Santrock, p. 339). Girls who mature earlier may also experience a more negative self-image, feelings of isolation, submissive behavior, and less popularity with peers (de Anda, p. 17; Singer & Hussey, p. 41).

What Adolescents Need

Although adolescence can be a period of great emotional turmoil for teens (and their caregivers), adolescents still need strong boundaries and guidance from their caregivers.

Throughout adolescence, boys and girls need their caregivers to provide them with tolerance, respect, open communication, belief in them, flexibility to accommodate the great changes they are going through, and the confusion these changes may produce. At the same time, they need clear and firm standards to help them stay on the right track.

Preparing for Adulthood

Like the toddler period, adolescence is a time of breaking away, exploring the world on one’s own, and beginning to detach or form a separate identity from parents or other caregivers. In adolescence, however, it is part of preparing for adulthood and beginning an independent life.

Building identity continues; it may be even more profound in middle and late adolescence.
than earlier; internal self, social self, and self-esteem are prominent.

Much of the behavior of adolescence that is trying to parents or other caregivers and sometimes risky to adolescents is somewhat related to this need to establish a unique identity that can go into adulthood but is also driven by neurobiological changes in the brain.

According to Erikson, this identity formation is the defining crisis of adolescence, and it is based on the individual’s psychological separation from the parents. His theory on separation, however, has been challenged because he did his research on white males and generalized that model to females. New brain research also casts more doubt on the total validity of Erikson’s theories of adolescence.

Adolescents’ need to be accepted and the differing developmental changes in their brains cause teens to often make poor decisions and engage in risk-taking behaviors. Peer influence is particularly strong during this time. Adolescents may adopt parents’ morals on important issues. At the same time, “personal choice” is seen as justification for opposition to parental and societal standards.

Because of the romantic and sexual feelings toward others that accompany developing sexuality in adolescents, they are interested in forming romantic relationships that imply some separation from the family, especially for older adolescents who may be considering settling down and creating new homes with partners.

Developing cognition also helps in the separation or detachment process. The adolescent is developing or has developed the ability to think abstractly, positing what-ifs about his or her adult life and how it can be shaped. With this reasoning capacity, the adolescent can prepare for an adult future.

Moral development plays a part in detachment from parental figures in that the adolescent learns to formulate ideals apart from his or her family’s morals and values. In a conscious process of trying out and keeping or discarding moral concepts, the adolescent develops an individual set of values into which he or she fits and around which adult plans can be shaped.

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**Risky Behavior**

The latest research on the adolescent’s developing brain tells us that the area of the brain responsible for logical thought and decision making remains underdeveloped until their mid 20s. This plays a factor in the risky behavior of some teens. In trying out new behaviors that they perceive as adult-like and engaging in activities because their peers are doing them, coupled with brain changes, adolescents tend to take risks. Many people think that adolescents tend to think of themselves as invulnerable to harm as well.

Another factor in risk-taking, for some adolescents, is that they feel their chance of becoming productive adults is very small (Santrock, p. 352). These youths are usually considered at high risk. High-risk problems include alcohol and other drug use. (Intravenous drug use is particularly problematic because it increases users’ chances of contracting HIV and getting AIDS) and other sexually transmitted diseases. At-risk teens are more likely to engage in indiscriminate sexual activity which may result in sexually transmitted disease or pregnancy and parenthood. At-risk teens have high rates of juvenile delinquency, school problems including dropping out, poverty,
homelessness, violence and victimization. These teens may also have eating disorders, mental health issues and have a higher risk of suicide. In many cases high-risk adolescents have not just one of these problems but several.

Santrock (pp. 352–353) suggests strategies for improving adolescents’ lives. These include, instead of trying to remedy specific single problems, promoting adolescent health or a cluster of health-related behaviors; developing more positive expectations of adolescents; creating better schools for them; offering education, incentives, and support to prevent teen pregnancy; and expanding programs that are working. Crucial factors in successful interventions are providing individual attention and developing coordinated services community wide.

Other suggestions are offering an array of services centered in schools (including health and mental health services and job training, for example) and evaluating the efficacy of social work interventions so that more of the successful ones can be offered and others can be changed or improved (Singer & Hussey, p. 44).

### Teens and Technology

Today’s teens face technological advances never before seen. Walk through any mall and you see teens texting and talking on cell phones. A 2010

**Who’s online? The internet by age groups**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Internet Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teens 12-17</td>
<td>93%</td>
</tr>
<tr>
<td>Young adults 18-29</td>
<td>93%</td>
</tr>
<tr>
<td>Adults 30-49</td>
<td>81%</td>
</tr>
<tr>
<td>Adults 50-64</td>
<td>70%</td>
</tr>
<tr>
<td>Adults 65+</td>
<td>38%</td>
</tr>
</tbody>
</table>

survey from the Pew Research Center’s Internet & American Life Project shows that the Internet is not just prevalent in our lives, it is our lives. Ninety-three percent of teens ages 12 to 17 go online, 75% of them own a cell phone, and 66% say they text. In fact, 58% of 12-year-olds now have mobiles, compared to 18% just five years ago. Sixty-two percent use the Internet to access information on news and politics, and some teens are even using the Internet as a guardian: 17% say they go online to research information about drug use, sexual health, and other topics that are awkward to talk about with real people.

The results of a Kaiser Family Foundation’s study, “Generation M2: Media in the Lives of 8- to 18-Year-Olds,” show young people certainly are not consuming media in moderation.

The study, released in January 2010, reveals that children ages 8 to 18 are being exposed to media an average of seven hours and 38 minutes per day. Due to multi-tasking (using more than one medium at a time), kids actually pack 10-1/2 hours worth of media use into those seven hours and 38 minutes.

Cell phone texting is not counted in the study, but the foundation addresses teens’ use of mobile media (such as accessing the Internet using a cell phone). The study shows teens spend about a half-hour a day talking on a cell phone and 49 minutes each day consuming media (music, games, TV, Internet) on a cell phone.

Though time spent texting was not counted as media use in the study, the foundation did find
that 7th- through 12th-graders reported spending an average of 1-1/2 hours a day sending or receiving texts. Doctors say poor posture, sleep deprivation and obesity are among the most alarming effects of teen technology overload.

One study has shown that when compared to subjects with restricted use of cell phones, young people with excessive use of cell phones (both talking and text messaging) have increased restlessness with more careless lifestyles, more consumption of stimulating beverages, difficulty in falling asleep and disrupted sleep, and more susceptibility to stress and fatigue. They behave more like larks than owls, suggesting a delayed biological clock. Another danger is texting while driving. Some studies have shown this behavior to be as dangerous as drinking and driving.

In addition, advancing technology has redefined the way people communicate. Social networking sites often result in a lot of gossip and slander and painful experiences for teens. There are sites that allow for anonymous postings that can be particularly contemptible. Teens are more likely to post a nasty comment than to convey the same material face-to-face.

Experts are just beginning to collect valuable information on the effects of communicating via technology—not seeing people face-to-face. Dr. David Walsh, a Minnesota resident and founder of the National Institute on Media and the Family, believes the media culture today is changing the way kids learn and cope with a wide variety of life situations.

Walsh has cited a survey in which Fortune 500 company CEOs found that people graduating from college today have more trouble working in groups, solving problems, and handling constructive criticism than college graduates from previous generations.

With all the warnings about teens’ use of technology there are also advantages. Teens often turn to sites like MySpace, Facebook, etc. for entertainment; social voyeurism passes time while providing insight into society at large. This may help some youth who have a limited social view of the world to expand that view. Another interesting finding is that the emergence of instant communication technology helps teenagers further develop existing relationships, decreasing their isolation. The technology offers the ability to access information and communicate with others at any time, in any place, regardless of the physical location of other people. People can maintain a constant connection with existing friends and family who might live in different countries, or they can form new relationships with individuals of other nationalities, regardless of time zones or locations.

Some speculate that the Internet gives teenagers the tools they need to open up and talk about personal issues; communication via the Internet gives teenagers the impetus they need because of anonymity. The ability to be somewhat anonymous gives teens less concern about how people see them. The end result is less inhibition and more intimate talk.

Playing online interactive video games may also help teens develop more emotional and social competence. It can teach teens the skills they need to make and keep friends, including turn-taking and complimenting a competitor on a good play. It also encourages critical thinking, planning, organization of thoughts, and cooperation.

Like most things, the Internet and technology in general are good tools when used in moderation but may become problematic if used in excess.
Child trauma occurs in various forms and many children entering the child welfare system have experienced many different types of trauma. These experiences range from abuse and neglect, involvement in accidents, to witnessing violence or the traumatic loss of a loved one or community violence that may be unrelated to the reason the child came to the attention of the child welfare system.

While trauma can be a onetime event or ongoing, most children who come to the attention of the child welfare system have likely had multiple exposures to trauma. Trauma can also be cumulative, with multiple traumatic events building upon one another in a negative way. Sustained, chronic or multiple exposures to trauma have an impact on children’s development and on their ability to form attachments and relationships, to self-regulate and to learn.

Poverty is considered a type of ongoing trauma. Children born into poverty may suffer the effects of trauma in many ways. They may suffer prenatally if their mother does not get the proper nutrition during prenatal development or if she is exposed to teratogens such as cigarettes, alcohol, drugs, lead paint, and mercury in food or other environmental substances in her home or workplace.

A child may continue to experience trauma related to poverty. In homes where there is generational poverty, children are not generally encouraged to use meaningful problem-solving strategies and communication skills. Studies show that the lower the educational level of the mother, the less they speak and read to babies and young children. This lack of verbal exchange may lead to children not being ready for school. Early interventions such as First Steps and Head Start assist families where this need exists.

Any traumatic experiences that are ongoing may cause a child to experience feelings of self-doubt, insecurity, shame, worthlessness and self defeat. Older children with language abilities are more likely to be able to recount traumatic episodes. In younger children, behavioral changes may be the only observable signs of trauma.

Childhood abuse or trauma has a pronounced effect on brain development. These changes can result in personality deficits such as an inability to be empathetic or even personality disorders such as narcissism, borderline personality disorder or others. This change in brain structure may
explain why early exposure to traumatic stress or disruptive changes in the environment may result in fundamental behavioral changes.

Of course, neither a onetime event nor recurring trauma solely determines the outcome for a child. Genetics and the child’s environment also play a factor in the way trauma is experienced and mitigated by the child. The family is known to play a vital role in determining the eventual impact of the traumatic experience on the child. Parental or other adult caregiver support is often determined to be a key mediating factor in how the child experiences and adapts to his or her circumstances. The support of the child’s family, along with adequate coping and emotional functioning of the child’s caregiver is a key in alleviating the development of problems in a child exposed to trauma.

Maltreatment is an ongoing trauma that affects many aspects of child development, including brain development. Abuse and neglect can affect development early in life and have long lasting effects. The brain adapts to negative environments as easily as it adapts to positive ones by creating neural pathways (brain circuits) that later become the basis for inappropriate reactions to trauma.

The consequences of maltreatment vary according to the following factors:

1. The child’s age and developmental status when the maltreatment occurs
2. The type of maltreatment
3. The frequency, duration and severity of the maltreatment
4. The relationship between the abuser and the child

While most traumatized children do not develop long term symptoms, a significant minority respond in a way that has a long lasting, major impact on their emotions and behaviors. These children are at risk for PTSD and that can occur regardless of whether the child is subjected to a single traumatic event or to an ongoing pattern of abuse and neglect. The older the child is when the maltreatment occurs or the longer the duration, the more likely he is to suffer from Post Traumatic Stress Syndrome (PTSD). Although we most often hear this term in connection with military personnel, it also occurs in children that have experienced trauma; particularly child abuse.

Generally speaking PTSD is identified by the following three symptoms that last more than six months: 1) re-experiencing the traumatic events through things such as obsessive recollections, flashbacks, nightmares; 2) avoidant symptoms such as a fear of being with people or certain situations; 3) signs of hyper arousal where a person is easily startled, irritable or over reactive.

Traumatized people often suffer from a combination of PTSD, depression and other anxiety disorders. The child may avoid stimuli associated with the trauma, having a numbing of emotional responsiveness, experience diminished interest in life’s activities and a sense of a shortened future. Many children who have experienced trauma do not make plans for the future because they have the belief that they may never become adults. While children may not report any of these thoughts or feelings, caretakers may observe them.

The most common symptoms of PTSD include:
1. **Re-experiencing the trauma.** Children may do this in several ways:

   **Flashbacks and memories:** These may be intrusive and interfere with function at school and home. In children, intrusive memories are more common than flashbacks. Flashbacks are vivid experiences that include visual and auditory events from the trauma; the child may feel like the trauma is happening all over again and may react with intense fear.

   **Behavioral re-enacting:** Children may act out aggressively toward others or do and say things that they have witnessed. Children are usually unaware that this behavior is connected to their abuse.

   **Re-enacting through play:** The child may represent the traumatic experience through repetitive play. For example, he or she may repeatedly act out exactly the same scene of people fighting, a car crashing or a house burning down.

2. **Symptoms of avoidance:** Children will try to avoid memories or situations that remind them of the traumatic event. The child may generally avoid general activities that could prompt excitement or fear or he may have specific fears.

   **Avoidance:** Children or adolescents with PTSD avoid thinking or talking about topics that may remind them of traumatic experience. Some, especially young children, may outright refuse to acknowledge that the abuse occurred.

   **Triggers:** Children may react to and attempt to avoid stimuli that trigger memories of abuse. Some common triggers include phrases, songs, scenes on television, a perfume, someone’s appearance, or even a fleeting facial expression. Anniversaries, dates and certain places may also be triggers.

3. **Physical Contact:** Children with PTSD have difficulty managing physical contact because of a heightened sense of vulnerability or because it may be a reminder of abuse. They may also avoid physical contact due to attachment issues. On the other hand, they may become indiscriminate with affection due to not knowing appropriate boundaries.

4. **Emotional numbing:** To manage difficult reactions to abuse, children with PTSD may have to suppress memories and almost all emotional reactions. These children may seem to be emotionally numb. Normal human interactions appear not to resonate with them; they laugh less and show less human connection and empathy.

5. **Sense of foreshortened future:** PTSD is associated with a sense of pessimism
about the future with affected people occasionally feeling that there is no future for them. In children, this may manifest as the belief that they will never become adults or as a lack of interest in planning for the future.

6. **Dissociation:** Dissociative episodes are periods of disconnection from the external environment. A dissociating child may appear to be absent or unresponsive for a few minutes or he may not show any emotion to an event that one would normally react emotionally. Events that remind the child of danger or threat may trigger these episodes. Children who display dissociation soon after the disclosure of abuse are at significantly increased risk for developing PTSD.

7. **Symptoms of increased arousal or hyper vigilance:** The child may appear on edge, notice small changes in his environment and closely track the behavior of others. A tone of voice or a slight change in a facial expression may be all it takes for a child to over react.

8. **Cognitive function:** Some studies have found that some children with PTSD exhibit abnormal neuropsychological functioning resulting in deficits in sustaining attention, problem solving and abstract reasoning.

9. **Sleep problems:** The child may have difficulty falling asleep. Many fears are experienced at night, such as imagining faces on the wall or eyes looking at the child. Many sleep disruptions, frequent nightmares and awakenings at night can occur. Nightmares are common in children with PTSD. They may directly relate to the abuse or more commonly, consist of frightening dreams with more generalized themes.

10. **Behavioral inhibition:** Some children with PTSD are inhibited in expressing their true emotions and become overly pleasing and attentive to their caregivers. This may particularly be the case if the child believes angering or disappointing the caregiver will trigger an negative encounter.

11. **Delays in development and learning:** In younger children traumatic events, particularly long-standing trauma or high-stress living conditions, are more likely to delay the development of the child in all domains. Delays or deficits may be seen in attachment, cognitive abilities and adaptive behavior in general. Extremely traumatized children may appear almost autistic and may display great difficulties in learning. Children may also lose previously acquired skills or show regression.

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**How Trauma Affects Attachment**

Earlier we learned that the child who learns through attachment that his or her needs will be met is ready to proceed along the normal developmental path. The child who does not learn this early in life is handicapped developmentally because this child cannot trust that his/her needs will be met. Neuroscientists are beginning to understand how the lack of attachment in infancy alters development of emotional areas of the brain.

Though early secure attachment is crucial to ongoing normal development in later stages, consistency of attachment is also important. Trust can be lost if attachment is not maintained.
In some cultures, children have more caregivers or are parented more by siblings or grandparents than by parents. These children may form more attachments or may form primary attachments not to parents but to other people.

If a child does not experience a close reciprocal emotional relationship with his caregiver(s), a secure attachment cannot develop. A child who is the victim of abuse/neglect may instead develop an attachment disorder.

The most serious form of this disorder is Reactive Attachment Disorder. While rare, the DSM-IV-TR describes Reactive Detachment Disorder as being caused by persistent disregard of the child’s emotional needs for comfort, stimulation, and affection; persistent disregard of the child’s physical needs; or repeated changes of primary caregiver that prevent formation of stable attachments.

The disorder is characterized by markedly disturbed and developmentally inappropriate social relatedness in most contexts before the age of five.

Reactive Attachment Disorder is a professional diagnosis for children with severe attachment problems. These most often occur when children have been unable to consistently connect with a parent or primary caregiver. This can happen for many reasons:

- A baby cries and no one responds or offers comfort.
- A baby is hungry or wet, and he or she is not attended to for hours.
- No one looks at, talks to, or smiles at the baby, so the baby feels alone.
- A young child gets attention only by acting out or displaying other extreme behaviors.
- A young child or baby is mistreated or abused.
- Sometimes the child’s needs are met and sometimes they aren’t. The child never knows what to expect.
- The infant or young child is hospitalized or separated from his or her parents.
- A baby or young child is moved from one caregiver to another (can be the result of adoption, foster care, or the loss of a parent).
- The parent is emotionally unavailable because of depression, an illness, or a substance abuse problem.

Application to Practice

What do attachment problems look like to the caseworker? When might a child need medical or professional intervention? The following are a few signs that a young child may not be developing normally:

- Avoids eye contact
- Doesn’t follow you with his or her eyes
- Doesn’t smile back when you smile (by about 4 months).
- No back-and-forth sharing of sounds, doesn’t coo or make sounds
- Seldom smiles and no back-and-forth sharing of smiles or other facial expressions (by about 9 months).
- No back-and-forth gestures, such as pointing, showing, reaching or waving (by about 12 months).
- Doesn’t show that he knows the name of familiar people or body parts by pointing to or looking at them when they are named (by about 18 months).
- Shows little pleasure in people and/or playful experience.
How does trauma affect the developmental domains?

Physical: While we have none for some time that alcohol and other drug use of a mother during pregnancy is harmful to the fetus, scientists now know that trauma to a fetus in utero can affect the child for the rest of his life. Emotional stress of the mother during pregnancy has a long-lasting impact on the child’s mental and emotional development, as well as puts the child at risk for illnesses such as cancer, heart disease and diabetes later in life.

Brain scans show that the brains of severely neglected and traumatized children are actually smaller than the brains of children not experiencing trauma. This aspect of the effect of trauma directly impacts all other areas of development. Also, If the child has suffered neglect, the nutritional needs for proper brain, bone and muscle growth and development may not have been present. This may result in the child never reaching his full physical developmental potential. Often, children experiencing trauma early in life are slower to reach developmental milestones.

Cognitive: Children suffering from trauma use their energy to try to stay safe. Having learned what trauma can do to attachment, we can anticipate that there may be deficits in cognitive development. If the child is expending energy trying to anticipate danger or trying to react appropriately to his caregiver, then he does not have energy available for learning the cognitive things he is supposed to. Additionally, children of trauma usually are not played with suitably so the learning a young child receives through play cannot occur.

Language: If not interacted with consistently, the child may be slower to talk and when he does so, his speech may not be as sophisticated. Studies have shown that children of poverty are spoken to two thirds less than children in homes above the poverty level. Children experiencing ongoing trauma or neglect may be spoken to even less or when spoken to the words used may be in anger and frustration.

Socio-emotional: We have learned that lack of attachment in infants affects a child’s other attachments in life because the child has not learned to trust others. Brain science can also explain some of the acting out or withdrawing behaviors often seen in children of trauma. As you recall, the brain communicates through nerve impulses sent to different areas of the brain. As the same stimuli comes into the brain over and over, the brain does not have to stop, identify the stimuli and direct it to the appropriate area. The neural pathway becomes automatic, like a rut in a dirt road.

Children who have experienced violence, yelling, or lack of response from their caregivers have learned every nuance of those responses. A tone of voice or simply a look that passes over a
caregiver’s face can start that automatic response. The child reacts in that “rutted” pathway, without conscience thought on his part.

The child may act out in anger or defiance or may withdraw into silence. This often results in pushing away the people the child needs the most or in difficulty sustaining friendships. These acts often appear as random to those around him, but understanding how the traumatized brain reacts can help caregivers and others understand those actions.
Glossary
Glossary

Adolescence. The period of life between puberty and adulthood, considered in this course to range from age 11 through age 20, though there are many individual variations. Adolescence is a period of transition from childhood to adulthood. Authorities usually consider this broad period to have three phases: early, middle, and late adolescence.

Attachment. A close bond between two individuals based on strong feelings and involving continuing interaction that nurtures the relationship. In a secure attachment, the young child generally prefers the parent or primary caregiver to a stranger. Secure attachment allows for the completion of the developmental task Erikson describes for the first period of life: attaining “basic trust versus mistrust.”

Childhood. The period between birth and adolescence. For the phases of childhood, see infancy, early childhood, middle childhood, and late childhood, listed in alphabetical order in this glossary.

Domain. A specific sphere of growth and development containing a set of common characteristics. The domains considered in this training are physical, cognitive (including language), socio-emotional, and moral. These domains are closely interconnected developmentally; however, in any individual, growth in one may not exactly and consistently parallel growth in the others.

Early childhood. The period from approximately age 2 through age 5, for purposes of this course. Authorities vary somewhat in the time period they assign to each of the phases of childhood, and it is recognized that any such divisions are by nature somewhat arbitrary.

Echoing. The act of repeating what a child says for the purpose of helping his or her language development.

Embryo. The developing baby from 2 to 8 weeks after conception. Some authorities define the embryo period as 2–12 weeks.

Emotional intelligence. The ability to recognize, understand, and control one’s own emotions so as to use them in ways that promote not only personal well-being but also that of others and of society generally.

Expanding or recasting. Restating what an individual has said but in more sophisticated form. This act helps children in language development.

Expressive vocabulary. The words an individual not only understands but can actually say. See receptive vocabulary.

Fetus. The unborn child from about 2 months after conception to the time of birth.

Fine motor skills. Those skills that enable the child voluntarily to reach objects and to grasp, hold, and transfer them from hand to hand.

Gross motor skills. Those skills that enable the
child to move around the environment efficiently, such as crawling, standing, and walking.

**Identity formation.** The process of deciding upon and beginning to form an identity as an individual with a specific place in society. According to Erikson, this is the defining task of adolescence.

**Impediment.** Anything that might keep a child from growing and developing as well as possible (abuse, neglect, lack of learning opportunities, crisis in the family, a physical or mental condition that could retard learning, and so on).

**Infancy.** The period from birth through the second year.

**Labeling.** Identifying aloud objects, animals, or individuals to help a child learn their names as part of speech development.

**Late childhood.** The period of roughly ages 6 through 10.

**Marker.** A milestone or attainment that measures the extent to which an individual has achieved typical, or normal, development in one of the four domains (e.g., in the physical domain, reaching a certain height and/or weight that is normal for the person’s age).

**Menarche.** The onset of menstruation in girls. Though this is sometimes named as a sign of beginning puberty, it actually occurs rather late in puberty. There is no comparably obvious marker in boys.

**Middle childhood.** The period of roughly ages 2 through 5.

**Need.** What an individual requires to grow and develop optimally (e.g., an infant needs frequent, loving touch to experience optimum growth emotionally and possibly even physically).

**Normal.** In accordance with the established norm or average. In child development there is a “range” of normal that allows for individual variations, usually within 6 months on either side of the norm.

**Prenatal.** The developmental period before birth when a child is carried in the uterus.

**Puberty.** A series of changes, beginning on average around 10.5 years in girls and 12.5 in boys, involving the maturation of the reproductive organs and accompanying secondary sexual characteristics. In the female, menstruation first occurs in puberty. At puberty individuals become capable of reproduction. There is a wide variation in when individuals begin and complete the processes of puberty.

**Receptive vocabulary.** The words an individual can discern and understand but cannot yet say. See expressive vocabulary.

**Task.** A function that must be accomplished by the individual as part of growth and development (e.g., learning to walk). Accomplishing a developmental task enables the individual to take on still more complex tasks.

**Telegraphic speech.** Two-word combinations that convey a meaning before a child is able to put whole sentences together (e.g., “more juice” or “baby cry”).

**Teratogens.** Agents or conditions that can cause birth defects if ingested by the pregnant mother (e.g., alcohol, caffeine, cocaine, some prescription drugs, environmental pollutants, rubella, HIV/AIDS, and so on). These are believed potentially to do the most harm during the fetus’s first 12 weeks, but because their effects are complex and research is not conclusive, it is better for pregnant women to avoid them throughout pregnancy.

**Toddlerhood.** Roughly, the period from a child’s first learning to walk through age 2.
Suggested Resources
The items listed below cover a range of subjects related to child and adolescent growth and development. Some of them were used in developing this book. Like any good resource list, and like the individuals it addresses, it too should grow and develop. If you know of good resources that are not included here and should be, please tell us so that we can add them to the list.


Education of Young Children.


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**Web Sites**

There are many Web sites related to child and adolescent development. Those listed below are general and for the most part noncommercial. They will lead you to other resources, some of them more specialized. If you do not find the information you need through these sources, you may want to conduct an Internet search on the specific topic(s) in which you have an interest.

- Child Development Institute. http://www.edipage.com/. Information on topics such as child development, learning and learning disabilities, parenting skills, health and safety issues, parenting of adolescents, communication, and parental stress.


- Early Childhood Education Web Guide. http://www.ecewebguide.com/. Information on child development, antibias re-
sources, discipline and guidance, health and safety, learning, child advocacy, and more.

Growth charts and other child development information.


Credits


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The Fetal Development Chart on pages 12 and 13 used the following sources of information:


The Growth Charts on pages 18, 20, 22, and 23 were developed by Kuczmasri RJ, Ogden CL, Guo SS, et al. 2000 for the National Center

The Head Circumference Charts on pages 19 and 21 have been adapted from KidSource On-Line, Inc., (www.kidsource.com); the original author is the U.S. Department of Health and Human Services.

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The Center offers much appreciation to Dr. Ellen F. Potter, College of Education, University of South Carolina, for her expertise and generous assistance in editing the final content of the Tables of Developmental Characteristics and Markers.

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