

Table 1 Normal Developmental Tasks Across Ages

Normal Preschool Development (3-5 years)	Impact of ADHD
<p><u>Physical Development</u></p> <ul style="list-style-type: none"> • Eye-hand coordination • Gross motor development 	<ul style="list-style-type: none"> • Delayed development of small motor skills • Enhanced development of gross motor skills, although often lacking purpose and direction (e.g., acts as if driven by a motor)
<p><u>Cognitive Development</u></p> <ul style="list-style-type: none"> • Development of logical thinking skills • Language development gains • Natural curiosity 	<ul style="list-style-type: none"> • Impulsive behavior that may interfere with ability to think logically e.g., acts without thinking • May have highly developed verbal skills but unable to use language skills appropriately e.g., frequently calling out • Inability to curb curiosity resulting in frequent reprimands and negative attitudes toward schooling
<p><u>Social/Emotional Development</u></p> <ul style="list-style-type: none"> • Strong need for independence, autonomy, and competence • Positive response to daily routines, e.g., meals, dressing, arrival at school 	<ul style="list-style-type: none"> • Seeks independence when not ready • Has difficulty mastering developmental tasks • Is overly reliant on adults to manage daily routines
<p><u>Peer Relations</u></p> <ul style="list-style-type: none"> • Developing awareness of peers • Development of friendships 	<ul style="list-style-type: none"> • Has difficulty sharing materials and activities • Often rejected by peers because of impulsive or aggressive behavior
<p><u>Family Factors</u></p> <ul style="list-style-type: none"> • Development of independence from parents • Behavior influenced by family role models, e.g., parents, older siblings • Family environment (nurturing, language stimulation, consistency) important for school readiness 	<ul style="list-style-type: none"> • Frequent parent/child conflicts • Aggressive interpersonal interactions resulting in high levels of conflicts • Inattention and impulsivity may impede parental attempts at nurturing and interaction • Parental stress and social isolation • Noncompliance and aggression resulting in problems finding child care assistance (baby sitters)
<p><u>School Factors</u></p> <ul style="list-style-type: none"> • Adaptation to large group setting • Sharing favorite items (toys) • Introduction of enriched educational environment (books, puzzles, blocks) • Child should be able to control behavior based on task requirements (sitting quietly in a circle) • Development of ability to sustain attention and remain seated during pre-academic tasks • Mastery of developmental tasks, e.g., dressing, eating • Development of reading and writing skills 	<ul style="list-style-type: none"> • Difficulty controlling behavior to accommodate peers • Easily frustrated • Impulsivity and inattention result in need for extra time to master new materials • Easily frustrated by schedules, but becomes dependent on routine and is frustrated when interrupted • Inability to sit still and pay attention; easily bored • May require supervision and individualized program to master developmental tasks • Inattention and impulsivity may impede beginning academic development

Normal Middle Childhood Development (6-11 years)	Impact of ADHD
<p><u>Physical Development</u></p> <ul style="list-style-type: none"> Increased proficiency in gross and fine motor skills 	<ul style="list-style-type: none"> Delay in development of gross and fine motor skills Difficulty participating in sports, e.g., trouble following rules, inattention, refusal to take turns, motor difficulties
<p><u>Cognitive Development</u></p> <ul style="list-style-type: none"> Development of initiative and sense of purpose Strong learning drive and wish to do things Many interests; ability to focus on all areas of interest 	<ul style="list-style-type: none"> May lack motivation, initiative, and specific interests Problems with attention span, on-task behavior, following directions Restlessness interferes with achievement
<p><u>School Development</u></p> <ul style="list-style-type: none"> Ability to comply with rules and regulations that promote socialization rather than individual action Ability to manage independent seat work Move from memorization to conceptual understanding Ability to handle increased amounts of homework 	<ul style="list-style-type: none"> Difficulty adjusting behavior to tasks; problem following rules Difficulty concentrating when working independently Inability to sustain attention may interfere with conceptual learning Fatigued by end of day due to difficulty paying attention Inattentiveness results in failure to copy or understand homework assignments Noncompliant behavior at home results in failure to complete homework
<p><u>Peer Relations</u></p> <ul style="list-style-type: none"> Ability to give and take and engage in different play activities Able to accept ideas of others, control emotions, and tolerate frustration 	<ul style="list-style-type: none"> Immaturity in peer relationships; may be shy and withdrawn, or impulsive, selfish, and given to emotional outbursts; easily frustrated May be rejected by neighborhood children because of reputation for aggressiveness, immature conduct and poor athletic abilities Lack of friends may result in association with other problem children
<p><u>Family Relationships</u></p> <ul style="list-style-type: none"> Development of interests, competencies, peer relationships, and ability to follow rules in positive parenting time 	<ul style="list-style-type: none"> Family has difficulty planning social and recreational activities Supervision required most of time because of behavioral problems Difficulty following rules and completing chores at home
<p><u>Social/Emotional Development</u></p> <ul style="list-style-type: none"> Development of social/emotional competencies results in increased self esteem Affective stages of early childhood replaced by eagerness to learn and explore Less likely to challenge adults Interested in being part of peer groups 	<ul style="list-style-type: none"> Low self esteem because of difficulties learning new skills and poor peer relationships Frustrated by inability to do what other children can do Argumentative with adults, especially in reaction to criticism Impulsive/hyperactive behavior creates difficulty fitting in with peers

Normal Adolescent Development	Impact of ADHD
<ul style="list-style-type: none"> • Physical Development • Growth spurts 	<ul style="list-style-type: none"> • 70-80 percent of children with ADHD continue to show symptoms of the disorder in adolescence, though they may be reduced in intensity
<ul style="list-style-type: none"> • Development of secondary sexual characteristics 	<ul style="list-style-type: none"> • Sedentary fidgeting may replace gross motor hyperactivity • Neurochemical problems associated with ADHD, along with adolescent hormonal changes, may result in severe pre-menstrual disorder, e.g., mood swings, irritability, emotional overreaction
<ul style="list-style-type: none"> • Cognitive Development • Development of abstract thinking results in enhanced ability to solve problems; increased verbal skills; greater introspection 	<ul style="list-style-type: none"> • Delays in judgment, persistence, self-awareness and goal directed behavior in problem-solving areas • Increased verbal skills and introspection may provide valuable input in planning interventions
<ul style="list-style-type: none"> • Social/Emotional Development • Need for independence, autonomy and competency may result in confrontations with adults • Sensitivity to adult criticism 	<ul style="list-style-type: none"> • Frustration caused by inability to meet age-specific challenges • Criticism by adults may result in defiant behaviors • High risk of school failure due to emotional problems • Susceptibility to mental health disorders, e.g., depression, anxiety, antisocial behaviors; may lead to substance abuse • Gender sensitivity, e.g., impulsive-hyperactive girls may experience shame when criticized for behaviors accepted in male counterparts
<ul style="list-style-type: none"> • Peer Relations • Increased importance of peer group as adolescent develops independence from family 	<ul style="list-style-type: none"> • Parental restrictions limit age-appropriate independence • Immaturity, anxiety, withdrawal, and impulsive behavior result in poor peer relationships • Excessive concern with peer acceptance, especially among girls • Tendency to engage in high risk adolescent behavior (substance abuse, reckless driving, antisocial activities) to gain peer acceptance
<ul style="list-style-type: none"> • School Changes • Develops ability to change classes according to schedule • Ability to store and organize supplies and books in locker • Ability to stay on task and take notes in class • Ability to complete homework and long-range assignments • Ability to adapt to subject-based classrooms and lack of prolonged teacher contact 	<ul style="list-style-type: none"> • Confusion and disorganization result from inability to change classes as scheduled • Organizational difficulties resulting from poor attention, impulsive behavior, and hyperactivity • Difficulty bringing materials to class, completing assignments, and following instructions • Inconsistent class performance • Difficulty adapting to multiple classrooms and teachers
<p style="text-align: center;"><u>Sources:</u> Barkley (1990), CHADD (1996), Nadeau (1996), Shapiro et al, 1996</p>	