

Piagetian Concepts of Cognitive Development	Erikson's Social Emotional	Body Parts & Functioning	Health/Illness Concept	Cure	Instruction and Self-care Suggestions
<p>Concrete Operations (7-12)</p> <ul style="list-style-type: none"> • Concrete thinking • Begin to think more logically and to consider cause and effect • Develop concepts of conservation (i.e., can consider original and changed state) and reversibility • Classify on several dimensions • Think through a chain of events (e.g., 1st, 2nd, 3rd) • Concern with here and now • Trial and error problem solving • 8-year olds understand concept of days of the week, and number of days which must pass before an event • 9-year olds tell time correctly 	<p>Industry vs Inferiority (ages 7-8)</p> <ul style="list-style-type: none"> • Learn parents can be wrong • Avoid disapproval • Conform to group norms <p>(ages 8-9)</p> <ul style="list-style-type: none"> • Use rituals • Less dependent • See themselves in terms of labels (nice, mean) <p>(ages 9-10)</p> <ul style="list-style-type: none"> • Understand rules • Increased competition • Strong peer influence <p>(ages 11-12)</p> <ul style="list-style-type: none"> • Self-consciousness • Enjoys challenges • Eager to please 	<ul style="list-style-type: none"> • Better ability to name internal organs • Most can correctly identify the function of a specific body part (e.g. lungs) when asked • Only 38% of 10 to 11 year olds recognize the interconnections of the organs into body systems • Many misconceptions 	<ul style="list-style-type: none"> • Parrot-like responses, little comprehension • Enumeration of symptoms associated with illness • 9-10 year olds may be able to reverse from healthy to sick and back to healthy • Many believe illness is due to contamination • Some understand that causation is internal but have little understanding of the process • Do not think behaviour designed to improve future health is relevant to them • Unable to consider hypothetical results of present health options 	<ul style="list-style-type: none"> • Able to specify a specific action to cure • Taking medicine is one possible action • Later in the stage, they perceive themselves as doing something to MAINTAIN health • Begin to understand that the body can heal itself 	<ul style="list-style-type: none"> • Participation in self-direction of procedures • Teach about dose, times taken, indications for use, contraindications and side effects • Encourage responsibilities and chores • Can learn to take and record pulse if necessary • Use models/diagrams in teaching information
<p>Formal Operations (age 12+)</p> <ul style="list-style-type: none"> • Hypothetical-deductive reasoning emerges • Begin to explore logical solutions to concrete or abstract concepts • Later on, reason by analogy or metaphor • Systematically think about multiple possibilities • Project into the future • Recall past 	<p>Identity vs Role Confusion (age 13-14)</p> <ul style="list-style-type: none"> • Self-consciousness, moody • Develops consistent morals • Worry about loss of identity • Want limits AND freedom <p>(ages 14-15)</p> <ul style="list-style-type: none"> • Peer belongingness important • Seek independence <p>(ages 16+)</p> <ul style="list-style-type: none"> • Principles of ethics • Consider career directions 	<ul style="list-style-type: none"> • Knowledge of external and internal parts • Know much about how their bodies work and how they should be maintained 	<ul style="list-style-type: none"> • Stability of health beliefs occurs around age 11 to 13 • Equate health and illness • May consider mental health • Internalization of the agent <p>NB: A limited number understand the physiological processes/mechanisms involved</p>	<ul style="list-style-type: none"> • Able to state how medicine may help, or how eating good food will help 	<p>(Ages 13-15)</p> <ul style="list-style-type: none"> • Use models/diagrams in clarifying information • Practice or demonstrate independence skills and planning <p>(Age 16+)</p> <ul style="list-style-type: none"> • Use models/diagrams in clarifying information • Independent functioning • Can arrange for refill of prescribed medications when low • Can keep accurate records

Appendix D: Development of Self-Care Behaviours Specific to Asthma Management

Cognitive Developmental Stages	Tasks for Parents and Children
<p>Sensorimotor (age 0-2)</p>	<p>Toddler: Help hold the delivery device with mask Help clean the delivery device with mask Put the device in the box Can learn to take deep breaths Can pick a story to read after taking medication or select an activity Can hold a delivery device with mask on their favorite doll or toy</p> <p>Parent: Parent learns about and adjusts to diagnosis of asthma Learns asthma management</p>
<p>Preoperational (ages 2-7)</p>	<p>Child (ages 2-4): Can start to describe how they feel Can use a spacer (with the help of an adult) Recognize a few early warning signs</p> <p>Parent: Child may need reassurance that they are not being punished by being unwell</p> <p>Child (ages 4-7) Can use an inhaler if prescribed Can help assemble nebulizer treatments Recognize the names of medications Recognize some asthma triggers Should participate in activities that build stamina Able to learn what wheeze and tightness are</p>

Adapted with permission. Elizabeth N. Kerr, PhD, C. Psych. *Developmental Summary: Increasing Patient Involvement through a Developmental Perspective*. Toronto: The Hospital for Sick Children.