

INFANT INDICATORS OF GIFTEDNESS

All infants and toddlers reach milestones for healthy development. Some have accelerated development beyond their chronological peers.

ABOUT GIFTEDTYKES

Organization for
Parents/Guardians of
Potentially Gifted Infants and
Toddlers.

There are three main purposes
of GiftedTykes:

1. Identify and foster high potentials for the benefit of humanity.
2. Encourage research and communal exchange of educational advice among parents/guardians of high-potential infants and toddlers.
3. Provide stimulating intellectual resources for members and their children.

IS IT POSSIBLE TO IDENTIFY?

Intelligence testing has become viable with identifying gifted children in their formative years rather than in their infancy since displaying cognitive behavior is difficult. But it becomes clear that predicting general intelligence from infant cognitive development can be based on several indicators, considering that children continuously develop and hit certain milestones on a normed-based age range, which can be confounded by upbringing and environmental locus of control. Every child is different and develops at their own pace, and caregivers can promote advanced development through early intervention measures to ensure a healthy life. However, there is one indicator that is believed to remain relatively stable from infant to adulthood that can help predict long-term intelligence from infant testing—information processing capabilities.

What are information processing capabilities?

According to cognitive psychologists, information processing capabilities is a framework used to explain and describe mental processes. In other words, the human mind takes in information, organizes and stores it to be retrieved at a later time.

The Research Behind Infant Intelligence

Several studies have notably identified that information processing capabilities are propagated by the habituation paradigm or looking time at the same intermittently displayed stimulus; visual expectation, or reaction time towards a stimulus position among other stimuli; and, parental education, suggesting a genetic and environmental component to intelligence development.



Respectively, the shorter the looking time suggests higher cognitive ability because it is thought that infants have quickly encoded the stimulus and thus less likely to pay attention to it if appeared again; interest is lost. For visual expectation, infants displaying quicker reaction times towards a stimulus position suggests that memory of that stimulus was retained long enough to be able to recognize it again despite positioning of other stimuli. Lastly, parental educational background suggests there

is an inherent aspect of intelligence; parents child-rearing practices influence the developmental outcome relative to intelligence and by virtue, academic achievement. These capabilities suggest a strong predictive indicator of infant cognition and later cognitive development, which are assessed and corroborated by developmental and intelligence testing administered periodically during early childhood development.

What does this mean for identifying “giftedness” in infants?

It supports that reaching developmental milestones (e.g. motor, adaptive, cognitive, communication, and social-emotional domains) early are interconnected to information processing capabilities. Accelerated development is attributed to the infants’ inherent mental capacity to judge the environment and display responsive behaviors in less time as compared with the norm. In addition, intelligence testing measures different facets of mental capacity of information processes,

which makes it more reliable and valid indicator when identifying precocious children. Thus, information processing capabilities found with infants can similarly be used to identify “giftedness” in infants, though external influences, specific sensory disability, and general health could alter the trajectory of later cognitive development. Likewise, information processing capabilities in infants fails to account for other behaviors that demonstrate cognitive ability. Hence why it is imperative to provide early intervention to at-risk children to address the possible alterations.

SOURCES

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“Thus, information processing capabilities found with infants can similarly be used to identify “giftedness” in infants, though external influences, specific sensory disability, and general health could alter the trajectory of later cognitive development.”

So, is it possible to identify “giftedness” in infants and toddlers? It depends—yes and no. Early childhood development presents a constellation of changes of behaviors that influence cognitive development, or in this respect, fluid intelligence that no single measure can be used to assess “giftedness” in infants unlike the standard intelligence testing. Rather a set of instruments should be used to identify “giftedness” to control for other variables, which has proven to be difficult.

SIGNS OF GIFTED INFANTS AND TODDLERS

By using an array of testing instruments paired with caregiver observations, there are signs or indications that your infant or toddler may be potentially gifted or precocious.

Dr. Sandhu states that “a gifted child would show about 30% advanced development of some skills and abilities by weeks, months or even years.

An interesting research on developmental milestones of gifted children is presented in the following tables (Davidson Institute for Talent Development, 2018). It is a fact that gifted children tend to gain skills faster and sometimes with more ease than the average child with normal development. Naturally, the advanced development can and does show up in early life, making acquisition of other skills and abilities also at a faster pace. The following milestones have been gathered over many years of research on giftedness” (Early Signs of Giftedness).

Please note that these figures are just guidelines. There are other factors that may influence development such as general health, specific sensory disabilities, motivation, etc.

General Motor Examples

Ability	Normal Age (months)	Gifted Age (30% Advanced)
Sits up alone	7 months	4.9 months
Stands alone well	11	7.7
Crawls upstairs	15	10.5
Walks upstairs	18	12.6
Turns pages of a book	21	18
Skips with one foot only	48	33.6
Throws ball	48	33.6
Skips with alternating feet	60	42

Fine Motor Examples

Ability	Normal Age (months)	Gifted Age (30% Advanced)
Plays with rattle	3 months	2.1 months
Pulls strings adaptively	7	4.9
Holds Object (Finger+Thumb)	9	6.3
Holds crayon adaptively	11	7.7
Scribbles Spontaneously	13	9.1
Folds paper	21	14.7

Draws a person with 2 parts	48	33.6
Copies a triangle	60	42
Draws a person with neck, hands and clothes	72	50.4

Cognitive-Language Examples

Ability	Normal Age (months)	Gifted Age (30% Advanced)
Social smile at people	1.5 months	1.05 months
Searches with eyes for sound	2.2	1.54
Vocalizes 2 different sounds	2.3	1.61
Says 'Dada' (or equivalent)	7.9	5.53
Responds to name and 'no'	9	6.3
Looks at pictures in a book	10	7
Has vocabulary of 4-6 words	15	10.5
Follows directions to put object on chair etc.	17.8	12.46
3-word sentences	24	16.8
Gives full name	30	21
Counts object to 3	36	25.2



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