Recent research has led to the conclusion that Down children are capable of expressing complex feelings, of developing richer personalities, and of mastering higher degrees of learning using adaptive strategies (such as computer-aided learning to teach reading and writing). One developmental program that began with Down children as young as 30 months old and stressed positive parent-child communication eventually enabled the children to read at a second-grade level. The theory is that early stimulation helps to develop connections in the brain that might otherwise not have developed.

Although most people with Down syndrome were institutionalized until the 1970s, those with only moderate retardation are capable of achieving some degree of self-sufficiency. Today, with changed social attitudes and expanded educational opportunities, many lead productive, fulfilling lives. In less than a century, the expected lifespan of a person with Down syndrome has increased from nine years of age in 1910 to 19 or 20 after the discovery of antibiotics to age 55 today, due to recent advancements in clinical treatment.

More than 350,000 people in the United States have Down syndrome; one baby is born with Down syndrome for every 800 to 1,000 births in the U.S. Down syndrome babies are found in every ethnic group and socioeconomic class. About 5,000 babies are born yearly in the United States with Down syndrome. Twenty to 25 percent of children conceived with Down syndrome survive beyond birth. Women over age 35 have a one in 400 chance of conceiving a child with Down syndrome. For women age 40, the incidence becomes one in 110. For mothers age 45, the incidence increases to one child in every 35. Under age 30, women give birth to Down syndrome babies at a rate of one for every 1,500 babies born. However, women under age 35 actually bear 80 percent of Down infants, and recent studies suggest that the father’s age may play a role as well. Prenatal detection of Down syndrome is possible through amniocentesis and chorionic villus sampling and is recommended for pregnant women over the age of 35.

See also Mental retardation

Further Reading

Further Information
National Down Syndrome Congress. 1800 Dempster Street, Park Ridge, Illinois 60068-1146, (708) 823-7550, (800) 232-NDSC.
**Draw-a-person test**

A test used to measure nonverbal intelligence or to screen for emotional or behavior disorders.

Based on children’s drawings of human figures, this test can be used with two different scoring systems for different purposes. One measures nonverbal intelligence while the other screens for emotional or behavioral disorders. During the testing session, which can be completed in 15 minutes, the child is asked to draw three figures—a man, a woman, and him- or herself. To evaluate intelligence, the test administrator uses the Draw-a-Person: QSS (Quantitative Scoring System). This system analyzes fourteen different aspects of the drawings, such as specific body parts and clothing, for various criteria, including presence or absence, detail, and proportion. In all, there are 64 scoring items for each drawing. A separate standard score is recorded for each drawing, and a total score for all three. The use of a nonverbal, non-threatening task to evaluate intelligence is intended to eliminate possible sources of bias by reducing variables like primary language, verbal skills, communication disabilities, and sensitivity to working under pressure. However, test results can be influenced by previous drawing experience, a factor that may account for the tendency of middle-class children to score higher on this test than lower-class children, who often have fewer opportunities to draw. To assess the test-taker for emotional problems, the administrator uses the Draw-a-Person: SPED (Screening Procedure for Emotional Disturbance) to score the drawings. This system is composed of two types of criteria. For the first type, eight dimensions of each drawing are evaluated against norms for the child’s age group. For the second type, 47 different items are considered for each drawing.

*See also* Intelligence

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**Dreams**

The sequence of imagery, thoughts, and emotions that pass through the mind during sleep.

Dreams defy the laws of physics, the principles of logic, and personal morality, and may reflect fears, frustrations, and personal desires. Often occurring in story-form with the dreamer as participant or observer, dreams usually involve several characters, motion, and may include sensations of taste, smell, hearing, or pain. The content of dreams clearly reflects daytime activities, even though these may be distorted to various degrees. While some people report dreaming only in black and white, others dream in color. “Lucid dreaming,” in which the sleeper is actually aware of dreaming while the dream is taking place, is not uncommon. Research has indicated that everyone dreams during every night of normal sleep. Many people do not remember their dreams, however, and most people recall only the last dream prior to awakening. The memory shut-down theory suggests that memory may be one of the brain’s functions which rests during dreaming, hence we forget our dreams.

In order to understand how dreaming occurs, brain waves during sleep have been measured by an electroencephalograph (EEG). Normally large and slow during sleep, these waves become smaller and faster during periods of sleep accompanied by rapid eye movements (called REM sleep), and it is during these period when dreams occur. During a normal eight-hour period of sleep, an average adult will dream three to five dreams lasting ten to thirty minutes each for a total of 100 minutes.

Dreams—which Sigmund Freud called “the royal road to the unconscious”—have provided psychologists and psychotherapists with abundant information about the structure, dynamics, and development of the human personality. Several theories attempt to explain why we dream. The oldest and most well-known is Freud’s psychoanalytic theory, elucidated in *The Interpretation of Dreams* (1900), in which he suggested that dreams are disguised symbols of repressed desires and therefore offer us direct insight into the unconscious. According to Freud, the manifest content of dreams, such as daily events and memories, serve to disguise their latent content or unconscious wishes through a process he called dream-work, consisting of four operations. *Condensation* refers to the condensing of separate thoughts into a single image in order to fit the latent content into the brief framework of a dream. *Displacement* serves to disguise the latent content by creating confusion between important and insignificant elements of the dream. *Symbolization* serves as a further effort to evade the “censor” of repressed desires by symbolizing certain objects with other objects, as in the case of phallic symbols. *Secondary revision* enables the dreamer to make the dream more coherent by additions that fill it in more intelligibly while he or she is recalling it.

Although Carl Jung’s system of analysis differed greatly from that of Freud, the Swiss psychologist agreed with Freud’s basic view of dreams as compensating for repressed psychic elements. According to Jung’s theory, significant dreams (those that involve the collective unconscious) are attempts to reveal an image, or archetype, that is not sufficiently “individuated” in the subject’s personality. Another Swiss analyst, Medard Boss, offered yet another perspective on dreams as part