Infants and babies and toddlers! Oh, my!
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Newborns

- Reflexes
  - Crucial for survival
  - Evoke adult attention
  - Pediatricians check reflexes carefully, because weak or extremely rigid reflexes can indicate brain damage

Newborns come into this word with a set of abilities known as reflexes. These reflexes encourage adult attention and are necessary for survival. Most of these will disappear within the first few weeks after birth.
Several of the reflexes seen in newborns are essential for their survival. For instance, rooting is when a newborn turns his/her head toward the cheek which is being stroked by an adult. A newborn will also suck rhythmically if you insert a finger in his/her mouth. Both of these reflexes ensure that the newborn will be able to find and use the source of nutrition, either the mother’s breast or a bottle. These reflexes disappear by about the third month, being replaced by voluntary turning and sucking.

A newborn placed face down in a pool of water will paddle and kick. This obviously is a survival technique for a child accidentally dropped in water. The swimming reflex usually disappear by the sixth month. Though this reflex is in place, babies in water can swallow large amounts of water, lowering the necessary salt in the blood, causing brain swelling and seizures. Swimming lessons should be postponed until about three years of age (Berk, p. 149).

The Moro reflex can be seen when a loud noise is made around the newborn. Also called the Startle Reflex, the baby will extend arms and then quickly bring them back toward the body. The Palmer Grasp is when newborns grab the adult’s finger that was pressed against the baby’s palm. This grasp is so strong that infants can support their entire weight this way for a few moments.

The stepping reflex is just what it says. If you hold a newborn under his/her arms and permit the bare feet to touch a surface, the infant will lift one foot after another in a stepping motion. This disappears sometime after the second month. Some adults mistake this reflex as the actual beginnings of walking, but most children begin voluntary walking around twelve months of age.

The reason for the Babinski Reflex is not understood. This reflex is in response to a stroke on the sole of the foot from the toe to the heel. The baby’s toes fan out and curl as the foot twists in.
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Development occurs in three domains

- Physical
- Social/Emotional
- Cognitive
The development of the brain impacts all the domains of development. However, since the brain is a physical organ of the body, we will discuss it here with physical development.
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The brain is rapidly developing in the first few years of life. Synapses are being developed to connect synapses. The infant brain has between 100 – 200 BILLION neurons, many more than the adult brain. As neurons are not used, they are pruned. It’s a very realistic version of “use it or lose it”. We know that stimulation and warm, responsive care allow the brain to develop as it should. Children need to hear language. They need to be talked to, sung to, moved about, given experiences, allowed to explore, and read to. In short, they need to be a vital part of life and never ignored, neglected or abused. Warm, loving, responsive care will help ensure that the brain reaches its maximum potential and that children are given a solid foundation for their lives.
The Cephalocaudal trend refers to an organized pattern of physical growth and motor control that proceeds from head to tail. Children can control their necks and heads before they can walk. The Proximodistal trend refers to an organized pattern of physical growth and motor control that proceeds from the center of the body outward. Children can control their arms and hands before they can control their fingers.
The Cephalocaudal trend refers to an organized pattern of physical growth and motor control that proceeds from head to tail. The Head develops before the trunk. Children can control their necks and heads before they can walk. The Proximodistal trend refers to an organized pattern of physical growth and motor control that proceeds from the center of the body outward. The trunk develops before the limbs. Children can control their arms and hands before they can control their fingers.
There is no time after birth when growth is more explosive than during the first two years of life. Babies change from totally dependent on others to having some control over their own bodies and their own lives. They learn to walk, talk, reason, have friends, be social, add vocabulary, and any number of other important developmental tasks. The physical changes are the easiest to note.
Each child is different. When we look at milestones, it is important to remember that these are average times when various things happen. Some children reach them earlier, some later. There is a broad range of typical development. A child that walks or talks at a younger age than another child is not necessarily "better" or more advanced. However, if a milestone hasn’t been reached after a considerable amount of time passes, it can be a red flag that the child needs to be evaluated by a medical professional to determine if intervention is necessary. If intervention is necessary, the earlier the better. Milestones help us watch children to determine if the are moving along the right track in a reasonable amount of time.

Physical development (such as motor development) builds on itself. For instance, a child must turn over before he/she can crawl. Most children crawl before they pull up. Walking generally comes next. Children do not follow rigid guidelines; there are always exceptions. Remember that we are talking about the broad range of typical development.
Gross motor development refers to the large muscles, which control such things as sitting up and walking. Fine motor development refers to things with the small muscles, such as using the fingers. This baby is learning to hold his bottle, with his sister’s help.
If you remember Erikson’s theory, you will remember that he stated that infants and young children are in a stage of trust vs. mistrust. It is during this period of time that children learn that the world is a safe place, where adults can be trusted and where children can afford to love, attach, and belong. This is a very important time in a child’s life and can set the tone for his/her entire life. Adults who are nurturing, warm, and responsive will help the child feel that sense of trust.

Let’s explore some of the things that happen in the social/emotional domain during the first year of life.
Infants need **warm, nurturing, responsive** care

- Babies who receive this type of attention become securely attached to parent and/or caretaker

The importance of warm, responsive care in infancy cannot be overemphasized. Babies need to know that when they ask for help the only way they can (crying), their needs will be met quickly.
Infants generally exhibit with an attraction to pleasant stimulation or a withdrawal from unpleasant stimulation. Very early on, they begin to exhibit some of the basic emotions that are common to all humans. For instance, happiness can be expressed in smiles or laughter. These actions tend to evoke the same response in adults, completing the cycle of stimulation, encouraging the baby to smile or laugh again. These actions strengthen the bond between infant and adult.

As babies grow, they begin to want to control their own behavior and their world. When they are unable to do this, they can express their anger, sadness, and disgust. Sadness and disgust are less common than anger responses. Fear also appears during the second half of the first year. This is sometimes exhibited by the introduction of a new toy or an animal, but it most often appears as stranger anxiety, when a new person is introduced.
Babies have so much to learn. During the first year, their attention, memory, and language develop at tremendous speeds. Infants gradually shift from attending to one thing to being able to take in information more quickly, from multiple sources. By the end of the first year, children are able to sustain their attention to certain objects or activities.

By the age of about nine months, children are able to look for something which has been “lost” or go back to a toy that was put down. They are able to find an object hidden under a cloth. This recall memory increases over the next months.

One of the most incredible points of development is the acquisition of language. Vygotsky referred to cooing, babbling, and crying as preintellectual language. By the end of the first year, most children have words and most of those words are nouns...words that name things. Soon after, they begin to use holophrases. This means using one word to have multiple word meaning. For instance, a child may say “book” to name that object. Shortly before two-word phrases appear, the child may use the word “book” to mean “Read me a book.” At this age, children also understand simple commands such as, “Let’s put on your coat.” and they understand the word “no”.

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Between 12 and 18 months, children begin to walk and can even walk backwards. By the end of the second year, they can run, climb stairs, and jump. By the end of the third year, they are able to jump with their feet together, walk downstairs without help and ride a tricycle.

Fine motor skills are also improving as they become better at the pincer grasp (holding items between the thumb and forefinger), drink easily from a cup, begin to hold crayons and scribble, picking up tiny objects, and building and stacking with ease.
Remembering that all domains of development are intertwined, it's easy to see how motor development at the toddler stage encourages social behavior. Once children are able to move about on their own and make some decisions about their activities, it becomes easier to add another person to the scenario. While toddlers tend to be quite social, you will notice that they generally play beside one another (as these toddlers are doing), rather than playing WITH one another. This type of parallel play is a precursor to the type of interactive play that will come as they move into preschool years.
Around 18 to 24 months, children begin to use two-word phrases called telegraphic speech. The two words convey more meaning than just the words. For instance, a child may say, “Daddy go” to mean “Daddy is going to work.” This stage is followed by three word phrases and inflection to convey meaning. By the end of the second year, grammatical order is evident, although not always correct. Have you ever heard a two-year-old say, “We goed to the store.”? The meaning is clear; the trip to the store is in the past. The sentence even follows the conventional grammatical rules of English, whereby we normally add an “ed” to a very to indicate past tense. In this particular case, the grammar follows an exception, but that is outside the knowledge of a two-year-old! He’s correct; it’s the language that’s wrong!
Infant Development

Check for understanding.
Click the picture to go to milestone charts for infants and toddlers.
Self-regulation is how we convince ourselves to act in appropriate manners and not let our emotions control us. This requires impulse control. This begins in infancy when babies learn to self-soothe by turning away from a distressing sound to sucking on fingers or a pacifier. As children grow, they learn how to wait for things they want and how to use words instead of fists.

Parents and caregivers can help with this self-regulation by reading the child’s emotional state and responding to it. Children whose parents and caregivers respond to their emotional cues tend to be less fussy, to express more pleasurable emotions, be more willing to explore, and be easier to soothe. On the other hand, parents and caregivers who respond in impatience or anger create more anxiety in the child and make it more difficult to soothe him/her.
Temperament is part of what describes who we are. Temperament characteristics appear to be inborn and biological. We can, of course, change our behaviors as we grow, but our temperament guides what is most comfortable for us as we experience and approach the world.
Use your “Temperament Traits” handout to take notes as we view these short videos about temperament.
Children are influenced by the adults and society around them. Adults have an impact on how children grow and develop. Adults tend to use child-directed speech to help children develop language. This type of speech involves the adult mirroring the child’s speech and expanding on it. For instance, if a child points to the milk and says “muk”, the adult may say, “Yes, that’s milk.”, reinforcing the correct pronunciation and giving the child an example of a sentence. Vygotsky described it as the “zone of proximal development” in which adults move children to the next level of learning.
While all children need warm, nurturing, responsive care and stimulation to reach their potential, some children do not develop typically. These children need special approaches. Legislation mandates that children who require special supports to learn are placed in the least restrictive environment that meet their educational needs. Inclusive classrooms are classrooms where all children can learn. Students with learning difficulties or disabilities learn alongside typically developing students for part or all of the day.
Infants and toddlers need careful, watchful attention. They are not old enough to play on their own. An adult must be with them, watching them, during all waking hours. During sleep time, they must be in a crib or other safe sleeping place. It is important that children infants and toddlers receive all of their well-baby visits. The child’s pediatrician will have a schedule to follow.

Shaken baby syndrome happens when a baby is shaken violently, moving the brain back and forth in the skull. This can cause permanent brain damage or even death. Shaken baby most often is triggered by a baby’s persistent crying. Adults become frustrated and shake the baby to make him/her stop crying. Sometimes it works...when the baby becomes unconscious! If you are with a baby and frustrated by his/her crying, place the baby in a safe place, such as his/her crib and walk out of the room. While a baby’s cries generally need response, it is vital that we do not allow ourselves to become frustrated and injure the baby. A short period of crying while you calm yourself will not harm the baby, but a frustrated adult can. If you think a baby has been shaken, get medical help immediately. Minutes can mean the difference between life and death. Never, ever, ever shake a baby!

SIDS rates have dropped dramatically since 1992, when parents were first told to put babies to sleep on their backs or sides to reduce the likelihood of SIDS. Unfortunately, SIDS remains a significant cause of death in infants under one year old. Thousands of babies die of SIDS in the United States each year. SIDS is most likely to occur between 2 and 4 months of age. SIDS affects boys more often than girls. Most SIDS deaths occur in the winter.
The Back-to-Sleep campaign has reduced the incidence of SIDS. However, an unwanted side effect is that children are not spending time on their tummies and this is causing some severe physical problems. Being on their tummies allows children to develop neck and shoulder strength. It allows for proper development of the jaw. It even has implications for the sustained use of the fingers, such as when the older child is trying to hold a pencil for a period of time. It is very, very important that babies have tummy time every day, even as a newborn. Sometimes they are not happy about it, but if the adult lies on the floor with them, making eye contact and talking soothingly, they will come to accept and even enjoy it.
Developmentally appropriate guidance techniques

• Infants should never be punished
• Toddlers can be guided in order to help correct behaviors

It is important to remember that infants do not have control over their desires and emotions. They cry because they need an adult to help. They do NOT cry to annoy or anger their parent or caregiver. They do NOT cry because they are spoiled. A baby’s cry is a request for help in the only language that they have. Parents and caregivers must give warm, nurturing, responses to these cries and meet the needs of the infant.

Toddlers are gaining their own identity and testing the boundaries. They are working to become their own person and to have some control over their own bodies and lives. This, obviously, can lead to some conflicts. However, when this happens, toddlers can be guided into more acceptable behaviors by patient and caring parents or caregivers. Routines are important to toddlers. Routines help them know what is expected and how they can fit into the overall pattern. Even with consistent routines, toddlers will need help living within the boundaries. Helping children fit into the boundaries while allowing them to become themselves requires a gentle mood. Simple explanations help them understand and accept rules and boundaries. For instance, you can say, “Please don’t touch that. It might break and hurt you.” or “It hurts your brother when you pull his hair.” Toddlers need consistent limits set by adults they can count on. Clear rules and limits enable toddlers to learn to make good decisions. Toddlers often need help controlling their impulses and attentive adults can help with that. Desired behaviors can often be achieved simply by offering choices to children and reminding them of why they need to stay within the rules. If a child is out of control, he/she can be firmly but gently removed from the situation until he/she can control himself/herself to return to the group. This approach helps children learn to regulate their emotions as well as their actions.
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Babysitting

Check your knowledge.

Complete the babysitting jigsaw puzzle.
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