Newborns are equipped with a number of reflexes (Table 3.1) which are involuntary movements in response to stimulation. Some of the more common reflexes, such as the sucking reflex and rooting reflex, are important to feeding. The grasping and stepping reflexes are eventually replaced by more voluntary behaviors. Within the first few months of life these reflexes disappear, while other reflexes, such as the eye-blink, swallowing, sneezing, gagging, and withdrawal reflex stay with us as they continue to serve important functions. Reflexes offer pediatricians insight into the maturation and health of the nervous system. Reflexes that persist longer than they should can impede normal development (Berne, 2006). In preterm infants and those with neurological impairments, some of these reflexes may be absent at birth. Once present, they may persist longer than in a neurologically healthy infant (El-Dib, Massaro, Glass & Aly, 2012).

Table 3.1 Some Common Infant Reflexes

<table>
<thead>
<tr>
<th>Reflex</th>
<th>Description</th>
<th>Image</th>
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</table>
| Sucking  | Suck on anything that touches the lips. *Image source.* | ![Image](https://socialsci.libretexts.org/Bookshelves/Human_Development/Book%3A_Lifespan_Development_-_A_Psychological_Pers…)
| Rooting  | Turning the head when the cheek is touched. *Image source.* | ![Image](https://socialsci.libretexts.org/Bookshelves/Human_Development/Book%3A_Lifespan_Development_-_A_Psychological_Pers…)|
Motor Development

Motor development occurs in an orderly sequence as infants move from reflexive reactions (e.g., sucking and rooting) to more advanced motor functioning. As mentioned during the prenatal section, development occurs according to the Cephalocaudal (from head to tail) and Proximodistal (from the midline outward) principles. For instance, babies first learn to hold their heads up, then to sit with assistance, then to sit unassisted, followed later by crawling, pulling up, cruising, and then walking. As motor skills develop, there are certain developmental milestones that young children should achieve. For each milestone there is an average age, as well as a range of ages in which the milestone should be reached. An example of a developmental milestone is a baby holding up its head. Babies on average are able to hold
up their head at 6 weeks old, and 90% of babies achieve this between 3 weeks and 4 months old. If a baby is not holding up his head by 4 months old, he is showing a delay. On average, most babies sit alone at 7 months old. Sitting involves both coordination and muscle strength, and 90% of babies achieve this milestone between 5 and 9 months old. If the child is displaying delays on several milestones, that is reason for concern, and the parent or caregiver should discuss this with the child’s pediatrician. Some developmental delays can be identified and addressed through early intervention.

**Motor Skills** refer to our ability to move our bodies and manipulate objects. **Fine motor skills** focus on the muscles in our fingers, toes, and eyes, and enable coordination of small actions (e.g., grasping a toy, writing with a pencil, and using a spoon). Newborns cannot grasp objects voluntarily but do wave their arms toward objects of interest. At about 4 months of age, the infant is able to reach for an object, first with both arms and within a few weeks, with only one arm. At this age grasping an object involves the use of the fingers and palm, but no thumbs. This is known as the **Palmer Grasp**. The use of the thumb comes at about 9 months of age when the infant is able to grasp an object using the forefinger and thumb. **Now the infant uses a Pincer Grasp**, and this ability greatly enhances the ability to control and manipulate an object and infants take great delight in this newfound ability. They may spend hours picking up small objects from the floor and placing them in containers. By 9 months, an infant can also watch a moving object, reach for it as it approaches, and grab it.

![Image of hand grasping an object](https://socialsci.libretexts.org/Bookshelves/Human_Development/Book%3A_Lifespan_Development_-_A_Psychological_Pers…)

**Figure 3.7. Source.**

**Gross motor skills** focus on large muscle groups that control our head, torso, arms and legs and involve larger movements (e.g., balancing, running, and jumping). These skills begin to develop first. Examples include moving to bring the chin up when lying on the stomach, moving the chest up, and rocking back and forth on hands and knees. But it also includes exploring an object with one’s feet as many babies do as early as 8 weeks of age if seated in a carrier or other device that frees the hips. This may be easier than reaching for an object with the hands, which requires much more practice (Berk, 2007). Sometimes an infant will try to move toward an object while crawling and surprisingly move backward because of the greater amount of strength in the arms than in the legs.