

## What Makes a Baby's Environment Stimulating?

The scientific evidence is clear. A baby who lives in a stimulating environment develops more brain connections. This can have a lifelong positive impact on the child's intelligence.

Just what makes a baby's world stimulating? Some parents mistakenly think that buying expensive learning toys is the answer. In reality, a stimulating environment is one in which a curious baby can safely explore and try things. Since babies learn through their senses, they need lots of opportunities to touch, taste, smell, hear, and see interesting things. Fortunately, providing such opportunities does not require lots of money. It just takes an understanding of babies' needs and a willingness to meet them.

A baby's environment is any place that the baby goes. Besides the child's own room and home, his or her environment might include a child care center, grandparent's house, the neighborhood seen from a stroller ride, and the supermarket. All of these places can provide opportunities for babies to experience new things and learn through their senses.

### SENSORY STIMULATION

Each sense develops at its own rate. Together, they give infants information about their world.

#### Vision

Newborns can only see objects at close range to their faces. They see best with their *peripheral vision*, or from the sides of their eyes. Caregivers can stimulate vision at this age by slowly moving toys or other objects within the newborn's field of vision. Another way to provide visual stimulation is to allow the baby to focus on your face. You can hold the baby close to your face while widening your eyes and moving your head slowly back and forth.

By three months of age, most babies like to watch objects that move in circles, such as mobiles. Babies also enjoy looking in a mirror. They often favor bright colors and patterns that have a sharp contrast. Their eyesight improves quickly, and they soon may be able to see better than their parents!

#### Hearing

Babies can distinguish between sounds at a very early age. Most newborns will turn their heads and eyes in the direction of human voices. Many experts believe that babies can identify their mother's voice even before they are born.

Hearing sounds is important for language development. Reading books, playing music, talking, and singing are all simple ways to expose babies to sounds and prepare them for language development. It is important to converse with them by responding to their babbling and other sounds they make.

#### Touch

Newborns need to be touched by their caregivers to develop normally. Holding and cuddling babies stimulates their brains to release the hormones needed for growth. Being soothed by touch also reduces stress in babies and teaches them how to calm themselves. Massaging infants' arms and legs and stroking their hair are good ways to stimulate the sense of touch. Even routine activities, such as dressing and changing diapers, are opportunities to provide nurturing touch.

As babies' motor skills develop during their first year, they begin to reach out and use their sense of touch to explore objects in their environment. Babies need a safe environment that contains objects with various textures, shapes, and sizes. Most babies enjoy playing and splashing during their bath. Plastic cups and floating boats or other toys help them experiment with the water.

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Of course, they need constant supervision while they are in water.

### Smell and Taste

The sense of smell allows babies to bond with their mothers as soon as they are born. As babies become familiar with the smells around them, the smells can be used to comfort them. For example, it may be possible to soothe a crying baby by placing a cloth that has the mother's scent near the baby. A natural preference for familiar smells may be why young children do not like to have their favorite blankets or stuffed animals washed.

Initially, the sense of taste is stimulated as babies progress from drinking breast milk or formula to other foods. Once they are able to bring objects to their mouths, babies also use the sense of taste to explore their world. Later, most babies enjoy sampling new foods.

You can stimulate their natural curiosity by encouraging older babies to smell a flower. Allow babies to explore as much as possible, but keep a watchful eye. They may attempt to taste the dirt from a potted plant or the sand in the sandbox.

A stimulating and nurturing environment has long-term benefits for children. Those who receive warm and stimulating care tend to have stronger attachments to their caregivers. They also tend to do better in school and can manage stress more easily than children who received less stimulation. However, it is possible for a baby's environment to be overly stimulating. Caregivers need to watch for indications that babies are being over-stimulated and provide them with adequate quiet time.

### Taking Action

Imagine that your family will be caring for a foster child—a four-month-old baby boy. The room that will become his nursery is a small bedroom that currently has white walls. Describe your plan for making the nursery an environment that will be stimulating for the growing baby. Discuss possible décor, furnishings, and toys you could include.

## Reflexes in Infants

Although newborns have little control over their muscles, they are not completely helpless. All babies are born with a set of reflexes—instinctive, automatic responses—that make it possible for them to survive. There are two basic types of reflexes: primitive reflexes and protective reflexes. Most people are familiar with the protective reflexes, because these reflexes continue throughout a person’s life and get stronger as the person gets older. These include blinking, coughing, gagging, yawning, and even breathing.

Primitive reflexes are unique to infants and gradually disappear during the first year of life. These reflexes are described in the chart below. Primitive reflexes are significant because they provide clues about an infant’s development. These reflexes normally appear and disappear by certain ages. If they fail to follow this schedule, it may indicate that there is a developmental problem. As a result, babies are usually tested for these reflexes soon after they are born and again during check-ups.

Primitive Reflexes		
Reflex	Description	Duration
<b>Rooting</b>	When a newborn’s cheek is stroked, the head turns and mouth opens to search for the object.	Disappears at about fourth month.
<b>Sucking</b>	When a nipple or finger is inserted into the infant’s mouth, rhythmic sucking occurs.	Changes into voluntary sucking by second month.
<b>Palmar grasp</b>	When pressure is applied to an infant’s palms, the fingers curl in a strong enough grasp to support the infant’s own weight.	Weakens after third month and disappears by one year.
<b>Moro</b>	A loud noise or jolt causes infants to extend their arms and then bring them back toward the body in a grasping action. Also called the “startle reflex.”	Disappears at about fifth month.
<b>Babinski</b>	When the side of an infant’s foot is stroked from the heel toward the toes, the toes fan out and the foot twists inward.	Disappears at about ninth month.
<b>Stepping</b>	Infants who are held above a surface will make stepping movements like walking.	Disappears at about third month.
<b>Righting</b>	Newborns who are held upright try to keep their head up and eyes open. Also called the “china doll reflex.”	Disappears at about third month.
<b>Swimming</b>	Newborns who are placed in water make swimming motions.	Disappears within first few months.

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**Taking Action**

Some of the primitive reflexes serve obvious purposes. For example, newborns need to suck when an object is placed in their mouths in order to survive. Other primitive reflexes seem less useful. However, many of these reflexes prepare newborns for the voluntary movements and motor skills that they will need to develop later. Choose four of the primitive reflexes and describe how those reflexes help a newborn survive or how they might prepare the newborn for skill development. Research these reflexes, if necessary.

1. Reflex: \_\_\_\_\_

Purpose: \_\_\_\_\_

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2. Reflex: \_\_\_\_\_

Purpose: \_\_\_\_\_

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3. Reflex: \_\_\_\_\_

Purpose: \_\_\_\_\_

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4. Reflex: \_\_\_\_\_

Purpose: \_\_\_\_\_

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## Making Baby Food

Not everyone reaches for a jar of baby food when it is an infant's mealtime. Many parents find it's not difficult to make their own baby food using fresh, nutritious ingredients. This allows them to control quality and avoid the additives found in some commercial baby foods.

### TIPS FOR COOKING FOR A BABY

- Foods for a baby should be thoroughly cooked, but not overcooked. Nutrients are lost when food is boiled in water.
- Steaming food is the best way to preserve vitamins and minerals. A steamer is a deep pan with a tight-fitting lid that holds another perforated pan or insert near the bottom of the pan. The food is held above rapidly boiling water and cooks in the rising steam.
- Slow cookers simmer foods slowly in their own juices. They are good for tenderizing meats and poultry.
- Foods can be baked in a dish with a cover or wrapped in a double layer of aluminum foil. Usually, a small amount of water is added to prevent burning.
- Use extreme caution if defrosting or heating baby food in a microwave oven. Microwaves can heat food unevenly and form hot spots. One spoonful may be cold, yet the next spoonful could burn the baby's mouth. Always stir the food well and test it before feeding the baby.
- Only introduce one new food at a time. Follow the "four-day wait" rule when introducing a new food to the baby. Give the baby that same single food for four days to be sure that there are no allergic reactions to that food.
- Do not be afraid to try different combinations of foods if the baby has not had an allergic reaction to any of them. Babies have not yet developed a sense of which foods go together and which do not.
- Avoid using salt and sugar as flavorings. They are not needed for health. Sufficient natural salt and sugars are found in fruits, vegetables, meats, and milk.

### MAKING HOMEMADE BABY FOOD

- Take special care when preparing foods for babies because they are more vulnerable to germs than older children and adults.
- Always wash your hands, the equipment, and the work area thoroughly before making baby food. Blenders and food processors can be tricky to clean. Pay special attention to the blades and where parts come together. Any old food particles on these parts, could contaminate the food you are preparing.
- Raw food contains bacteria. Never let cooked food come into contact with raw food. Thoroughly wash cutting boards and utensils that have been used with raw foods before reusing them.
- Cooked, cooled food can be made into a thick paste or liquid, called a *puree*. Generally, the highest speeds on a blender or food processor are used in making food for very young infants because they produce the smoothest consistency. Food mills, strainers, graters, and forks take more time, but they can be used. As babies get older, they can handle more texture.

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- Baby food can spoil easily because it is served warm—the temperature at which bacteria grow rapidly. Serve only the amount that you think the baby will eat. Keep the rest refrigerated or frozen. Dispose of any uneaten portions after a meal.
- Most parents prefer to make large batches of baby food at one time, freezing the extra in individual portions by pouring the food into ice cube trays and covering them with plastic wrap. After the cubes are frozen, they should be transferred to plastic freezer bags, labeled, and dated.

### **Taking Action**

Devise a chart to plan what homemade foods you might feed a nine-month-old baby for lunch and supper for one week. Select two days of menus, and explain how you would prepare the foods included.

## Preventing and Treating Ear Infections

Ear infections are one of the most common reasons that infants and toddlers are taken to the doctor. It is estimated that three out of every four children in the United States have had an ear infection, also known as *otitis media*, by the age of three. An ear infection results when the *eustachian tube*—the passageway that ordinarily drains fluid and bacteria from the middle ear—is blocked. When this tube is blocked, fluid builds and bacteria multiply. Infants and young children get ear infections more often because their eustachian tubes are shorter and more horizontal. This makes it easier for bacteria to get from the nose and throat into the middle ear.

### Contributing Factors

Researchers have identified several factors that increase the likelihood of ear infections:

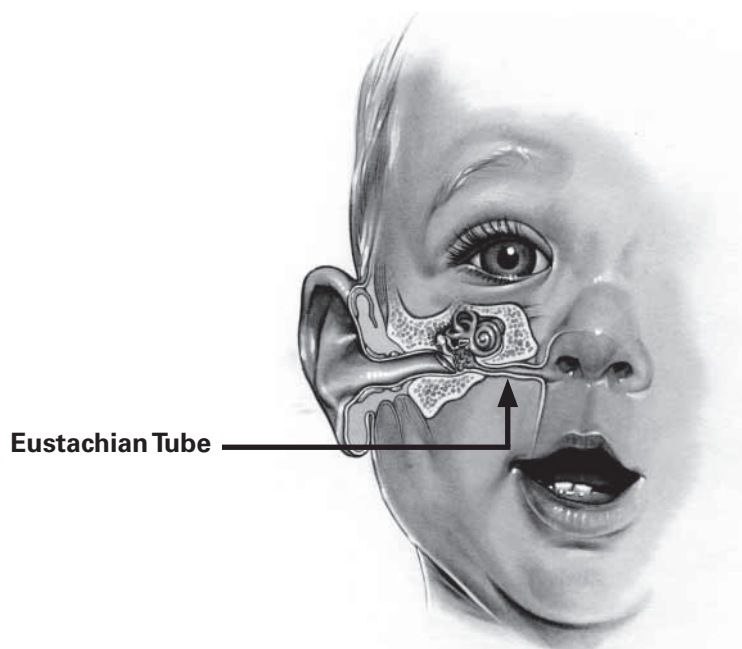
- Colds, sinus infections, allergies, exposure to tobacco smoke, and teething. All cause extra fluids to be produced, as well as swelling. This can block the eustachian tubes.

- Drinking from bottles or toddler cups while lying down. This may cause the milk or juice to irritate the eustachian tubes.
- Being in a child care setting with many other children. While ear infections are not contagious, children in child care are exposed to more viruses and other infections that weaken their immune systems.

One factor that *reduces* the risk of frequent ear infections is breast-feeding. Breast milk contains antibodies that increase a child's immunity to infections. Breast-feeding also keeps the baby's head in a propped position during feeding. When parents bottle-feed, they should make sure that the baby is kept in a semi-upright position.

### Symptoms

Symptoms of an ear infection in an infant include fever, continuous crying, loss of appetite, and difficulty sleeping. Ear infections usually have symptoms similar to a cold and are often preceded by a cold.



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Many parents suspect that their babies have an ear infection when they are pulling at their ears. However, infants under one year of age are not able to indicate precisely the area that is causing pain. Babies who pull at their ears may be teething or simply fascinated with the discovery of their ears. Pulling on the ear may be more significant when other symptoms are present.

### Treatment

If parents suspect that their child has an ear infection, they should take the child to a doctor. The doctor will check for redness of the eardrum and fluid in the middle ear. If there are signs of a bacterial infection, the doctor may prescribe an antibiotic for treatment. To help relieve the pain, the doctor may also recommend a pain medication or eardrops. A warm, moist cloth applied to the ear can also help reduce the pain. Parents may be asked

to bring the child back after a few weeks to make sure that the treatment was successful.

When children have frequent viral ear infections or bacterial infections that do not respond to antibiotics, the doctor may recommend ear tubes. The procedure involves placing tubes into small holes in the eardrums to allow fluid to drain from the middle ear. Light general anesthesia is used for the procedure that is performed by an ear, nose, and throat surgeon. Ear tubes usually remain in the ear for six months to a year. Most ear tubes eventually fall out on their own, but they may also be removed by the doctor.

It is important that parents take ear infections seriously. Frequent ear infections can cause damage to the eardrum and middle ear. This damage can lead to hearing loss and may delay speech development in young children.

## Taking Action

Research additional information related to ear infections. Then use a computer to create a one-page handout for parents and other caregivers. The handout should describe the symptoms of ear infections, as well as possible ways to prevent them. The importance of seeking medical attention should be emphasized.