UNIT 5 PHYSICAL DEVELOPMENT DURING EARLY CHILDHOOD

Structure

5.1 INTRODUCTION

In this Unit, we will focus on the development that takes place during the first six years of the child's life in the physical development domain. Physical development relates to the overall physical growth of the body, the changes in body proportions with time, the development of the brain, muscles and the sense organs. In the following Sub-sections you will read about these aspects in detail, from birth to six years of age.

You will learn about how a child typically develops in the physical domain. You will also learn about the corresponding developments in children with visual impairment. You will read about the importance of early stimulation to promote the child's development.

Objectives

After studying this Unit, you will be able to:

- state the gain in height and weight during the early childhood years;
- describe the development of brain and the impact of visual impairment on brain development during early childhood years;
- describe the typical development of sensory capabilities during the early years and the impact of visual impairment on the development of sensory abilities;
- explain the importance of early stimulation of senses for children with visual impairment and some strategies of providing early stimulation; and

- explain how visual impairment affects sleep pattern and the impact of changed pattern on the child's development

5.2 GAIN IN LENGTH/HEIGHT AND WEIGHT

The most dramatic gains in height and weight occur in the prenatal period, when a single-celled organism grows to a baby that is 20 inches in length and about 2.5 to 3.0 kg in weight at the time of birth. **A baby who weighs less than 2.5 kg at birth is identified as a low birth weight baby**. These neonates (newborns) are 'at risk'. This means that their development is more likely to be affected by unfavorable experiences; therefore, there are more chances of their development being delayed. Thus, special care needs to be taken to enable the child who is 'at risk' to develop optimally.

After birth, infancy is the period of fastest growth. Changes are visible in the infant almost on a weekly basis. A growing baby doubles her birth weight by six months of age and triples her birth weight by the time she is a year old. A typical healthy infant weighs up to 8 to 9 kgs. by the time she is one year old.

Growth during the second year, though not as fast as in the first year of life, is still fast compared to the later years of childhood. By the time of the second birthday, children's weight increases by about 3 kgs and their height increases by about 12 cms.

The rate of physical growth is slower during the preschool years as compared to infancy and toddlerhood. However, preschool children show a steady gain in height and weight. They gain two to three inches in height every year. At the same time, the weight increases by about two kilograms every year. **A steady gain in height and weight usually indicates good physical growth**. During preschool years, along with the changes in height and weight, there are changes in the muscle tissue, adipose tissue, internal organs and various systems of the body.

Table 5.1: Average Weights and Heights of Indian Children

Age	Weight (Kgs)		Height (cms)	
	Boys	Girls	Boys	Girls
1 Year	9.6	8.9	75.7	74.0
2 Years	12.2	11.5	87.8	86.4
3 years	14.3	13.9	96.1	95.1
4 Years	16.3	16.1	103.3	102.7
5 Years	18.3	18.2	110	109.4
6 Years	20.5	20.2	116.0	115.1

Source: WHO Child Growth Standards, 2006-2007

Training Module 8 of PoshanAbhiyaan Scheme; Ministry of Women and Child Development, Government of India, 2018 (based on WHO Child Growth Standards, 2006-2007);https://icds-wcd.nic.in/nnm/NNM-Web-Contents/LEFTm MENU/ILA/Modules/NNmILAmodule-08-Assessment_Growth.pdf

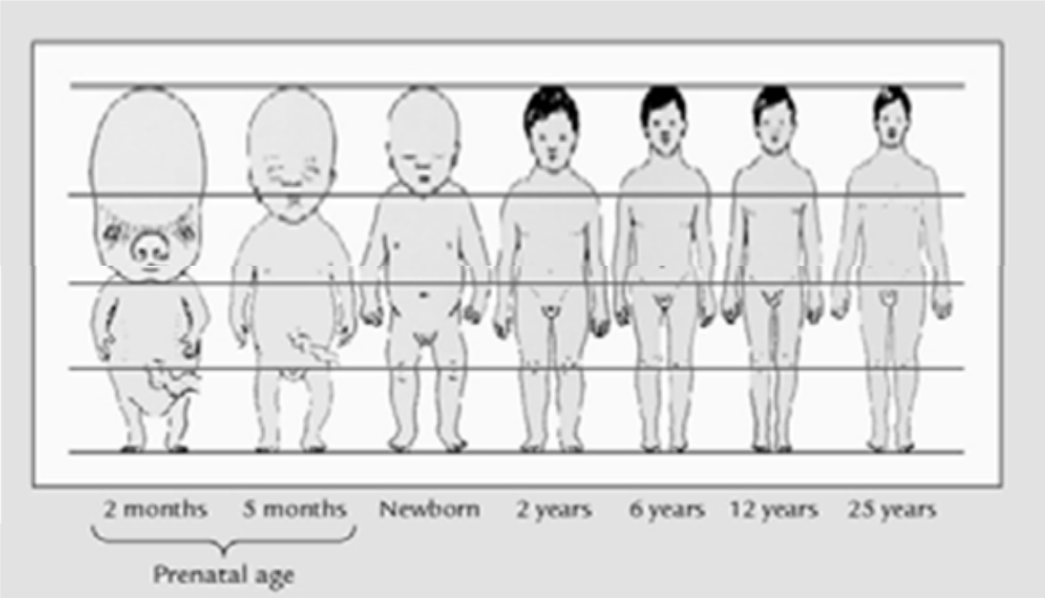

Fig. 5.1: Changes in body proportions from prenatal period till adulthood
Source: Berk, L. (2017). *Development through the Lifespan*. (7th Ed). Boston: Pearson.

5.3 DEVELOPMENT OF THE BRAIN

The brain is made up of neurons which can be called the 'messengers of the brain'. The neurons pass on (transmit) the inputs/information we receive from our environment through the five senses to the relevant area in the brain. The brain then processes (makes sense of) this information and directs our body to act in a particular way. These commands from the brain to the various parts and organs of the body are transmitted through the neurons.

While the brain has all the neurons it will ever have at the time of birth, the connections (synapses) between the neurons develop and multiply rapidly during infancy. The extent and complexity of the connections between the neurons influences the cognitive development of the child. **The more the connections, the better the functioning of the brain.** The formation of synapses is dependent on the type of environment the infant grows up in. The more stimulating the environment, the more will be the extent and complexity of connections. The formation of connection (synapses) between the neurons occurs most rapidly during the period of infancy. **The implication for us is to provide a stimulating environment to the infant right from the time she is born.**

By a stimulating environment we mean an environment where the child

- Gets opportunities to explore objects and places around her.
- Receives the loving attention of adults who talk and communicate with her
- Participates in meaningful and relevant play activities.
- Has play material and toys available (these do not have to be expensive toys).

As you will read through this Certificate Programme, you will understand that what the child finds stimulating will change with age as her abilities develop and interests change.

5.3.1 Impact of Visual Impairment on Development of the Brain

Visual impairment can result from damage to the brain and can also be caused due to eye diseases. Brain damage can be due to lesions in the brain or malformations in the brain. The type and severity of vision loss will depend on which area of the brain was affected and to what degree. Not all types of brain damage causes visual impairment. However, **visual impairment, especially severe visual impairment, affects the brain by causing structural changes in the brain.** This is because due to visual impairment the child acquires information more slowly and it also gets processed more slowly in the brain. The brain develops and evolves through both quality and quantity of information it receives. Since this flow of information to the brain (such as regarding shape, size, colour, distance and movement) is reduced due to visual impairment, ***it causes structural changes in the brain***, which means that the brain may re-organize itself functionally. The following information will help you to understand this point better.

A large part of our information about the world around us comes from our eyes. In fact 70% of all sensory receptors (i.e., nerves that help us to sense) are located in our eyes. Further, almost half (40%) of the cerebral cortex (this is a part of the brain), is used to understand what our eyes are seeing. What this means is that our eyes play a huge role in how we perceive the world, and our brain dedicates a lot of its resources to process what our eyes see. When the information from vision does not reach the brain, the brain structure recognizes itself.

Check Your Progress Exercise 1

1) Answer the following questions briefly in the space provided below:

   a) Why are neonates who weigh less than 2.5 kg at birth considered 'at risk'?

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   b) How does physical growth progress during the preschool years in terms of height and weight?

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c) What is the role of neurons in the brain, and how do these influence cognitive development?

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d) How does visual impairment impact the development of the brain?

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2) State whether the following statements are correct or incorrect.

a) The most dramatic gains in; ength and weight occur during the prenatal period. ( )

b) After birth, infancy is the period of fastest growth, with a typical healthy infant doubling her birth weight by six months of age. ( )

c) Growth during the preschool years is faster compared to infancy and toddlerhood. ( )

d) The brain is made up of neurons, which are responsible for transmitting information and commands throughout the body. ( )

e) The connections (synapses) between neurons develop and multiply rapidly during adolescence. ( )

f) Visual impairment can lead to structural changes in the brain, especially affecting the processing speed of information. ( )

5.4 SENSORY CAPABILITIES

By 'sensory capabilities' we mean the capabilities of the senses of vision, hearing, touch, taste, smell and kinesthetic sense. (Kinesthetic sense is the awareness of the position and movement of body parts. This sense uses sensory organs, known as proprioceptors located in joints and muscles).

It may surprise you to know that the infant is born with well-developed senses at birth. Our tendency is to think of newborn babies as helpless. While it is a fact that newborns are completely dependent on adults, **it is also true that they have capabilities that help them to adapt to their surroundings and ensure their survival.** These capabilities include the primitive reflexes and the sensory capabilities. In this section, you will read about the sensory capabilities. Primitive reflexes have been discussed in Unit 6 of this course.

On the basis of many research studies, it is now known that the eyes, ears and other sense organs function in a remarkable manner from birth onwards. In the very first month of life, the newborn responds to touch, heat and cold and can distinguish certain sounds, tastes and smells.They are more aware than we think them to be. Have you ever seen a baby a month old or

younger? Do you think she is born with some abilities? Write your thoughts in the space below:

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Let us read about sensory development during infancy and early childhood in detail.

5.4.1 Vision

- The newborn's eyes are sensitive to light. If placed in a dark room, her/his eyes search actively for light and if baby finds a source of light, she continues to look at it. This means that baby can differentiate between light and dark.
- Immediately after birth, the baby can follow a moving object with her eyes. The object should be moderately bright and should move slowly. The newborn is attracted by things that move, produce sound and those which have a light and dark contrast. The human face has all these characteristics and it greatly attracts the newborn. When the adults interact with the child, their eyes and mouth move frequently. In fact, the newborn baby continuously scans the surroundings and on seeing an object, the infant gives it a good deal of attention. The child thus seems predisposed (inclined) to look around and examine the world. Though she may not understand all that she sees, but she is building up a store of experience which will help her in learning later.
- The neonate can see objects and people clearly when they are at a distance of eight to ten inches from her face. This is usually the distance between the adult's and the baby's face when the baby is held in the arms. Thus, during these interactions the baby can clearly see the caregiver's face and gets an opportunity to examine it. This is the way in which the baby learns to recognize the people around her. This mutual gazing also helps to establish an emotional bond between the child and the caregivers.
- The infant's ability to focus on nearby objects and paying attention towards distant object increases with age. By the time infants are two to three months old, they pay attention to the details of objects. This helps them to discriminate among things and they are able to distinguish familiar objects and people from unfamiliar ones. An example of this ability to discriminate is that infants at three months of age can tell their parents' faces from those of others as now they intentionally begin to gaze at them for longer duration and also smile at then in order to attract their attention.

- The infant refines her visual capacities greatly over the first year. Her eye-hand coordination also improves as now she can reach out for the objects placed at distance, and also manipulates the objects in order to explore them. During the early childhood years, the improved sense of vision helps children to explore their surroundings rapidly.

Impact of Visual Impairment on the Sense of Vision

In case of children with visual impairment, the vision is impaired. You may be having questions in your mind such as – do blind children not see anything at all; what do children with low vision see? While you will study in detail about the nature of visual loss in Course 3 (BCD 101) , here we will explain some general points about impact of visual impairment on the sense of vision.

When we use the word 'visually impaired' or 'blind' we think that the person cannot see at all. But this is not true. **Only about 15 per cent fall into the "totally blind" category, who cannot see anything at all. Most of the people with vision loss are not completely blind. They may have some sight, which means they have low vision or residual vision.** This vision could allow them to see light or colour or shapes. However, they may have trouble reading street signs, recognizing faces, or matching colours to each other. Low vision affects different people in different ways. In case of some people, the vision may be unclear or hazy. In case of others, they may be able to see objects which are directly in front of them, but will not be able to see the object on the side. The reverse can also be the case.

Visual impairment can have a profound impact on a child's development, The early years of a child's life are a critical period for the development of visual skills, which form the foundation for later cognitive, motor, and social abilities. Visual impairment can limit a child's ability to explore and interact with their environment, hindering the development of these essential skills. It can also affect a child's ability to form connections and relationships, as much of early social interaction is based on visual cues. Furthermore, visual impairment can impact a child's educational progress, as much of early learning is visually based. **Therefore, early intervention is crucial to limit the impact of visual impairment on children's development and to support them in achieving their full potential.**

5.4.2 Hearing

- The newborn is responsive to sound from birth onwards as they show body movement in response to different sounds. Newborns can hear moderately loud sounds.
- Of all the sounds, the newborn is most responsive to the human voice. The newborn's preference for human speech is reflected in the fact that they move their arms, legs and body in rhythm to the caregiver's speech as early as twelve hours after birth. They respond more to high pitched voices (female) compared to low pitched voices (male). If the pace of the adult's speech is fast, the movements of the neonate become fast. If the rhythm of the speech slows down, so do the child's movements. While it will take the infant another three months to distinguish the mother's face

from other people's faces, she can discriminate the mother's voice from other female voices in the very first week of birth. This is probably because the baby has been hearing the mother's voice while in the womb and is already familiar with it.

- Different levels of sounds have different effects on the child. Loud noises distress the babies and they get startled, begin to cry, waving and thrashing their arms and legs. Soft sounds soothe them. Infants are also responsive to rhythm. They are soothed by rhythmic sounds such as music or ticking of the clock.
- During the first few months of life, infants begin to discriminate between different sounds such as a bell ringing, someone singing or a knock on the door.
- By six months, they are usually able to judge the direction of the sound source correctly.
- The hearing capabilities of children continue to refine with increasing age. They become better at differentiating between different types of sounds in their environment.
- Hearing plays a critical role in learning of language. Children use their hearing to listen to others talking. Through listening to language, they begin to understand and learn to use language.
- Listening skills are also very important aspect of formal schooling.

Impact of Visual Impairment on Inputs from the Sense of Hearing

Lack of vision affects the inputs received from the sense of sound in two broad ways:

a) **Firstly**, in a typically developing child, hearing and vision work together. For example, whenever the child hears any sound, she spontaneously turns towards the source of sound and identifies that particular object has caused that sound. But when vision is decreased or absent, then hearing continues to provide information, but vision is not available to confirm much of what is heard. **Sound without visual verification is only noise coming from nowhere.** Without seeing what is causing that sound, the child is not able to attach meaning to the sound and so that sound appears like noise to her. For example, if a phone is ringing some distance from the child, then child will hear the sound of ringing, but does not understand that sound is associated with the phone because of visual impairment. The child needs a lot of experiences of touching and holding objects, along with hearing the sound produced by these objects, in order for the child to associate the sounds meaningfully with the objects. In other words, only after much tactual, motor, and auditory interaction does sound acquire meaning. Only then can the sense of sound be used as a source of information. **So, in the absence of vision, sound helps the child to form an idea about her surroundings, people and objects around her, but this process takes time and requires deliberate teaching and is not automatic as it is in the case of children who have both vision and hearing**.

b) **Secondly**, sound is not as powerful a motivator as sight, and it takes a while for the child to connect sounds with specific objects or events. It takes about a year for a child who cannot see to start reaching for things based on the sounds they make. So the child usually does not start exploring the surroundings until she reaches this milestone. For children who can see, things like colour, pattern and shape, often motivate them to touch and explore. But a child who cannot see does not have access to these visual cues and so they child does not engage in as much purposeful touch and exploration because their environment remains unfamiliar and uninteresting.

We can that in the absence of sense of vision,the sense of hearing is not utilized to its maximum extent for learning to know about the environment. The lack of vision limits how the sense of hearing can be used.

5.4.3 Touch

- Newborns are responsive to touch — we all have experienced how the soothing touch of the mother calms a crying infant. Experiencing the loving touch of the caregivers is crucial for the infant's healthy emotional development. Touch also stimulates physical growth. It is because of this reason that giving massage to infants is such a common practice across most parts of our country.
- Touch is also a medium for developing attachment to the caregiver in the early months as the infant is usually comforted when being held up by mother or caregiver. Touch holds a deeper meaning for older children as well. You can generally find the pre-schoolers or school going children rushing towards mother when they fall down or feel threatened by any unfamiliar object.

Impact of Visual Impairment on Inputs from the Sense of Touch

Touch is an extremely important sense for a child who has blindness or low vision. Many children with blindness or low vision use touch as one of their primary means for gathering information. Therefore, it's a good idea to encourage child to touch objects as a way of exploring the world, from infancy onwards. As the child touches various objects, the adults need to point out the different features of what the child is touching. You will read more about the challenges in using the sense of touch to form concepts in Unit 7 and 8 of this Course.

5.4.4 Taste and Smell

- With respect to the sense of taste, newborns can distinguish between basic tastes of sweet, sour, salt and bitter. That they can differentiate between tastes is evident from their facial expressions. As they grow old, the infants begin to show their preferences of taste by refusing to eat or spitting out the food with specific taste. Food preferences on the basis of taste of food is very commonly seen in preschoolers and school-going children too.

- Newborns can also distinguish between good and bad smells. They can identify the location of the smell and protect themselves from unpleasant smells by turning their heads away from that location. The sense of smell refines with age.

Impact of Visual Impairment on Inputs from the Sense of Taste and Smell

Whether a person can see well or not, it does not change their ability to recognize or tell the difference between smells. Smell and taste are not often thought of as significant senses for gathering information about the environment, but they are important for a child with a visual impairment. Like vision, hearing, and touch, they can help the child in gathering information about the world. For example, the child may use the sense of smell when she is traveling to seek out clues in the environment which can tell her about her location and help her be more independent.

The child can also use both smell and taste to identify foods. You may find that child is resistant to tasting new foods or eating foods that have a certain kind of texture. If you notice the child hesitating to taste foods, you might want to consult with other members of the educational team, especially an occupational therapist or speech therapist, to get some ideas for increasing her interest and willingness to taste new foods.

To summarize, we can say that the development of senses of touch, smell hearing and taste is affected by absence or poor functioning of the sense of vision.

Children with visual impairment are generally at the risk of being under-responsive or over-responsive towards the stimulation they receive from their other intact senses as the integrative role played by the sense of vision is affected. For example, the children with visual impairment may become hypersensitive (over-responsive) towards sense of touch because they find it easy to understand an object by touching it and any small change in the structure or texture of objects may make the child alert. Similarly, for other senses too, children with visual impairment may show hypersensitivity. But when the children with visual impairment cannot draw a meaningful conclusion from the information they receive from any intact sense, they become less responsive (under-responsive) towards that sense.

5.5 IMPORTANCE OF PROVIDING SENSORY STIMULATION TO THE CHILD WITH VISUAL IMPAIRMENT

The senses help children to stay attuned (in touch with) with their environment and also help them to learn about the environment and interact with it in meaningful ways. Children require sensory stimulation of an appropriate nature and duration as per their age and abilities. Failing to provide children with adequate sensory stimulation puts them at a high risk of developmental and cognitive delays.

Vision is the sense through which children learn the most about their world. It is used for both gathering information about nearby objects (what can be touched) and those at a distance (beyond arm's reach). **For young children whose vision is developing typically (that is, there is no disability), 80 to 90 per cent of what they learn about the world comes to them through vision.**

In case of children with visual impairment, it is not possible for them to use vision as their primary sense for learning though children with low vision can rely upon their residual vision to some extent. **Children with visual impairment have to rely on the other senses — touch, smell, hearing and taste — to get information about what is happening around them and to learn.** These senses perform compensatory function in order to facilitate the learning. It is very important to provide an environment where the child receives optimal sensory stimulation to nurture her senses of hearing, touch, taste and smell since the sensory stimulation is linked to emotional, cognitive and physical development. In case of children with visual impairment, it is through sense of touch that the child gets concrete (specific) and precise knowledge of the world around her. Only through touch (tactual exploration) does the child with visual impairment get realistic information about object's shape, size, texture, smoothness weight, surface qualities and temperature. The sense of hearing is very important for a child with visual impairment. Lot of information can be collected by listening. In a classroom it helps her to understand teacher's instructions. Good listening is also required for developing good orientation and mobility skills.

But learning about objects, events and people through senses other than vision requires more effort. As compared to the sense of sight, the input from all the other senses may appear to the child to be disorganized, broken (discontinuous) and reduced. We have explained this aspect in Sub-section 5.3.2 when we discussed the impact of loss of vision on sense of hearing. **The role of the parents, caregivers and early childhood educators becomes important as they have to plan to help the child to learn through deliberate and intentional teaching.**

Stimulating the child's sense of touch through planned playful activities

The description of the sensory abilities of the children in the above sections brings out that the baby interacts with her environment, right from birth. **The implication for us as parents, caregivers or early childhood educators is that we should interact with the infant right from the time she is born.** Only then will the infant's development in different domains be fostered. We do not have to wait for some appropriate age or time to begin our interaction with the infant.

Interacting with the infant means

- talking to her even though she cannot speak yet
- lifting and holding her
- smiling at and touching her and
- looking after her needs so that she is comfortable.

How to Provide Sensory Stimulation

a) **In order to help the child to learn through the sense of touch, the teacher/caregiver must give verbal description when the child with visual impairment is tactually exploring the object. This helps in correct concept formation**. Parents can encourage the child to feel different objects around the house. This is the first step in teaching the child to use the hands. It will help in increasing the child's finger movements. The stimulation activities may include grasping and holding objects, transferring objects from one hand to the other, exploring objects, moving fingers, tactual discrimination, fine muscle control. Use of age-appropriate play materials and activities such as rattles, toys, singing lullabies, sand and water play, blowing whistles and use of puppets, stimulate the senses and help the child to achieve developmental milestones. Many of these activities will also be important for teaching pre-Braille skills. Some children may be resist touching objects; this is referred to as "tactile defensiveness." It can be challenging to cope with a child's avoidance of touch because it is very important for children with visual impairment to explore and gather information through touch.

b) **The training of the child's sense of hearing should start as early as possible**. The child with visual impairment needs training in listening to what is being said as well as picking up the main points of the conversation, ignoring distracting noises, knowing activities by their sounds, identifying people by their sounds. The objective of this training is to make the child aware of sounds, help her to identify different sounds, localize sounds (from where the sound is coming) and tracking different sounds. But as a parent or early childhood educator you must keep this point in mind that you do not burden the child with too many words.

c) Development of the sense of taste and smell is also very important when it comes to the training of children with visual impairment. These senses helps in development of concepts, developing awareness about surroundings and making comparison.

d) Often we use a combination of two or more senses to teach a child with visual impairment – this is called **'multisensory integration'.** This approach is extremely important for developing life skills among children with visual impairment and to foster their development in all developmental domains.

To summarize, in this section you have read how each sense is important in its own way in the development of a child and how the other senses play a complimentary role when any one or more senses are impaired due to disability.

In the various Units of Course 3 (BCD – 103) you will learn how to stimulate the senses of the child and help the child to learn. You will also read about how to stimulate the remaining vision of the child who has low vision.

5.6 SLEEP PATTERN

Newborns sleep for about 16-18 hours in a day — not continuously but there are periods of being awake and periods of sleep. While they are awake and alert, they look around and respond to their caregiver's voice, movements, and gestures, if the caregivers interact with them. In this way, the infant begins to learn about her surroundings — a process that will continue for the rest of her life.

Children with visual impairment face sleep-related challenges and difficulties.

Children may show bed-time resistance (not wanting to go to bed) and anxieties surrounding bed-time. This disturbs the circadian rhythm, which is the 24-hour cycles of alertness and sleepiness activated by our response to the light changes in our environment. The disruption of the circadian rhythm can cause many major health problems. The reason for this is because our body functions rely on the right hormones being produced at the right time during the 24 hour cycle. Many hormones and especially melatonin is only produced during the night. Lack of melatonin production can result in symptoms including memory loss, inability to concentrate, digestive problems and lack of energy.

Depression is another common health problem that is associated with lack of proper sleep and lack of melatonin production.

The immune system also does not work as well without melatonin, making the person with visual impairment more susceptible to illnesses.

Check Your Progress Exercise 2

1) Answer the following question briefly in the space provided below:

   a) Why is sensory stimulation important for children with visual impairment, and how can it be provided?

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2) State whether the following statements are correct or incorrect.
   a) Newborns can differentiate between light and dark.
   b) A completely blind person does not have residual vision.
   c) During the first few months of life, infants begin to discriminate between different sounds.
   d) Sound is as powerful a motivator as sight for infants.

3) What role does touch play in the development of a child with visual impairment?

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4) How does visual impairment affect the sense of taste and smell in children, and why are these senses significant?

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5.7 SUMMING UP

- In this Unit, you read about the development that occurs during the first six years of life in the physical domain. The neonate adapts and adjusts to her environment. She has well-developed sensory capabilities — she can see, hear, smell, taste and feel touch. The infant is born with reflexes which enable her to adapt to the environment.
- The development of the brain is rapid, and this period is crucial for the development of the nervous system. Growth in size occurs on a weekly basis during infancy. The weight of the infant doubles by the time she is six months old, and triples by the time she is one year old.
- Visual impairment in early childhood can significantly impact a child's development, particularly their visual skills, which are crucial for cognitive, motor, and social abilities. Newborns are responsive to sound, especially human voices, and this auditory sensitivity plays a critical role in language learning and formal schooling. However, visual impairment can disrupt the interplay between hearing and vision, making it difficult for the child to associate sounds with their sources, turning meaningful auditory information into mere noise. Therefore, early detection and intervention are vital to limit these impacts and support the child's development.

5.8 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress Exercise 1

1) a) Neonates weighing less than 2.5 kg at birth are considered 'at risk' because their development is more likely to be affected by unfavourable experiences, increasing the chances of developmental delays. Special care is needed for optimal development.

   b) During the preschool years, children show a steady gain in height and weight, with an average increase of two to three inches in height and about two kilograms in weight each year.

   c) Neurons, the 'messengers of the brain,' transmit information from the environment through the senses to the brain. The connections (synapses) between neurons develop rapidly during infancy, influencing cognitive development. A stimulating environment enhances the formation of these connections.

   d) Visual impairment can result in structural changes in the brain, affecting information processing speed. The eyes play a crucial role in sensory perception, and visual impairment may lead to delays in motor skills development, including ocular motor skills.

2) a) Correct
   b) Correct
   c) Incorrect
   d) Correct
   e) Incorrect

Check Your Progress Exercise 2

1) Sensory stimulation is crucial for children with visual impairment to compensate for the lack of vision. It can be provided by engaging the senses of touch, smell, hearing, and taste through intentional teaching, age-appropriate play materials, and multisensory integration.

2) a) Correct
   b) Incorrect
   c) Correct
   d) Incorrect

3) For children with visual impairment touch becomes a major sense for exploring the world. Encouraging tactile exploration and describing the features of objects through touch are important for their cognitive development. It also plays a crucial role in for emotional and physical development

4) Visual impairment does not impact taste and smell identification. These senses remain important for a child's independence and understanding of the environment. Taste preferences and the ability to identify foods through smell can be crucial for a visually impaired child's daily activities.