



# Child Development

From birth to age five

A guide for practitioners

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# Child Development

## From birth to age five

A guide for practitioners

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# FOREWORD

Child development is arguably the most fascinating and important human drama there is. What could be more amazing or more crucial than how a human child takes shape? After the child itself, parents are the prime players – but they take on their roles with not much more experience than their baby, and precious little knowledge. That’s where child development professionals come in. Paediatricians and other practitioners are in the business of guiding and supporting young parents as they navigate the exciting journey of bringing up their children. But who guides the professionals? Who teaches them how to talk to parents so that they actually follow medical advice? Who shows them how to listen to what parents are really asking? Who helps them to see the difference between normal parental anxiety and serious red flags?

That’s what this book is for.

Dr Ajay Sharma is a developmental paediatrician with over 30 years experience helping parents bring up their children, many of who have developmental disabilities. “Child Development: A Guide for Practitioners” distils the wisdom of more than three decades of experience with families into a user-friendly handbook and ready reference, specially tailored to the Indian context. Doctors and other professionals will find this an indispensable reference in their busy clinics. The book contains reminders of the basics – developmental milestones, needs for each phase of a child’s growth and the importance of responsive parenting and stimulation. Dr Sharma’s advice on asking parents the right questions and then listening to their answers is invaluable for arriving at the correct diagnosis.

Having grown up in India himself, Dr Sharma understands what a wealth of resources the Indian family provides for bringing up children. When Dadaji tells his stories or Masi gives the kids a go at rolling chapaties, they’re building young brains as surely as any school. This book celebrates those uniquely Indian contributions to child development.

The Latika Roy Foundation is a Dehradun-based organisation working with disabled children for the last 25 years. We have collaborated with Dr Ajay Sharma to produce this book as a service to those children and their families. We believe in the power of parents to change the world for their children and we know they depend upon the advice and guidance of their physicians and the other child development professionals in their communities.

By making child development expertise easily available in one place, this book is an important step towards realising our dream of a better world for disabled children.

**Jo Chopra**  
Executive Director  
Latika Roy Foundation



# PART ONE

## DEVELOPING CHILDREN, REALISING POTENTIAL

Every developing child has an inherent potential which can be realised later in life. Evolution or nature provides a template in our genes for some amazing abilities to develop. However, children need the right nurture – care and stimulation – to fulfil their potential.

Children are vulnerable to various genetic and environmental risks that can impede their progress. Many children with a high level of such risks may lag in their development and not achieve their full potential, but for some, these risks may result in a disorder and severe long-term difficulties. We can help children by preventing these risks and giving them early help.

Parents want to know if their child is developing well; they want to help the child as early as possible if there is any difficulty. Informed and supportive parents, carers and teachers enhance children's potential by giving them the right care and stimulation, and by reducing the impact of risks. This book provides the necessary information needed to help practitioners and parents in their efforts.

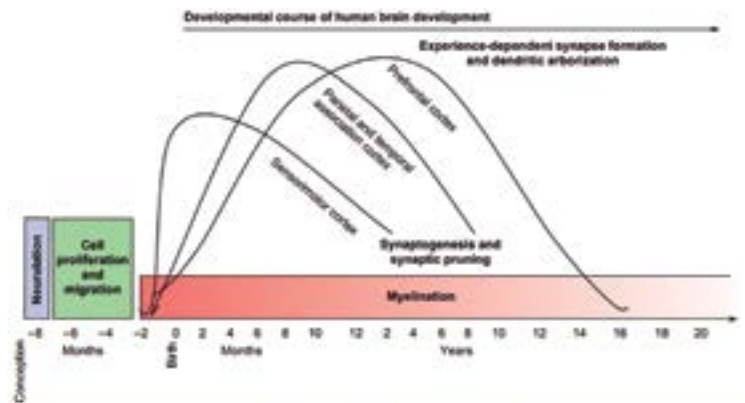


## The Five Steps to Brain Formation

1. *At 3—4 weeks of gestation, neurons, the basic unit of the brain, form and proliferate* by connecting with the dendrites or roots of other neurons.
2. *By birth, almost all the 100 billion neurons have been created and have migrated to the right place in the brain.*
3. *During the first few years of life, neurons form synapses* or connections to communicate with each other and with the rest of the body. Connections are formed and strengthened for many years depending on the part of the brain and the child's experiences.
4. *During childhood, excessive and unused connections are pruned* in tandem with experience, to achieve efficiency. Use it or lose it!
5. *Until adolescence, myelination or sheathing continues to form over connections*, to improve their speed and function (Figure 1).

**Figure 1: The importance of making connections**

Children's brains are most responsive to stimulation and learning during the first few years of childhood.



The course of human brain development: The formation of brain cells is complete by birth but connections continue to form and strengthen for many years depending on the part of the brain and inputs from experience.

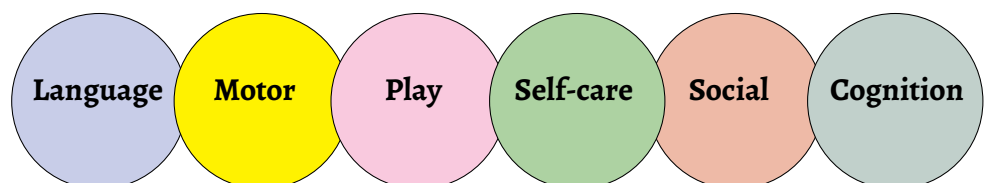
Source: Thompson and Nelson, 2001 (with permission)

## The Interconnected Domains of Development

Development doesn't just happen by itself or unfold as the child matures. It is shaped, positively or negatively, by the interactions between **three major influences**:

- Parenting influences** (for example, sensitive, responsive parenting is a positive factor).
- Biological influences** (for example, genes, events during pregnancy and childbirth, health and nutrition, vision and hearing).
- Environmental influences** (for example, opportunities to learn and socialise, praise and encouragement, and socio-economic stability).

**Figure 2: The overlapping domains of development**



Child development is a dynamic process of growth and transformation described and assessed in interconnected, interdependent domains – groups of abilities or behaviours – that serve a function. Difficulties in one domain often affect other domains and the overall function of the child. For example, understanding and speaking a language and using gestures serve the function of communication (Figure 2).



## The Normal Range of Child Development

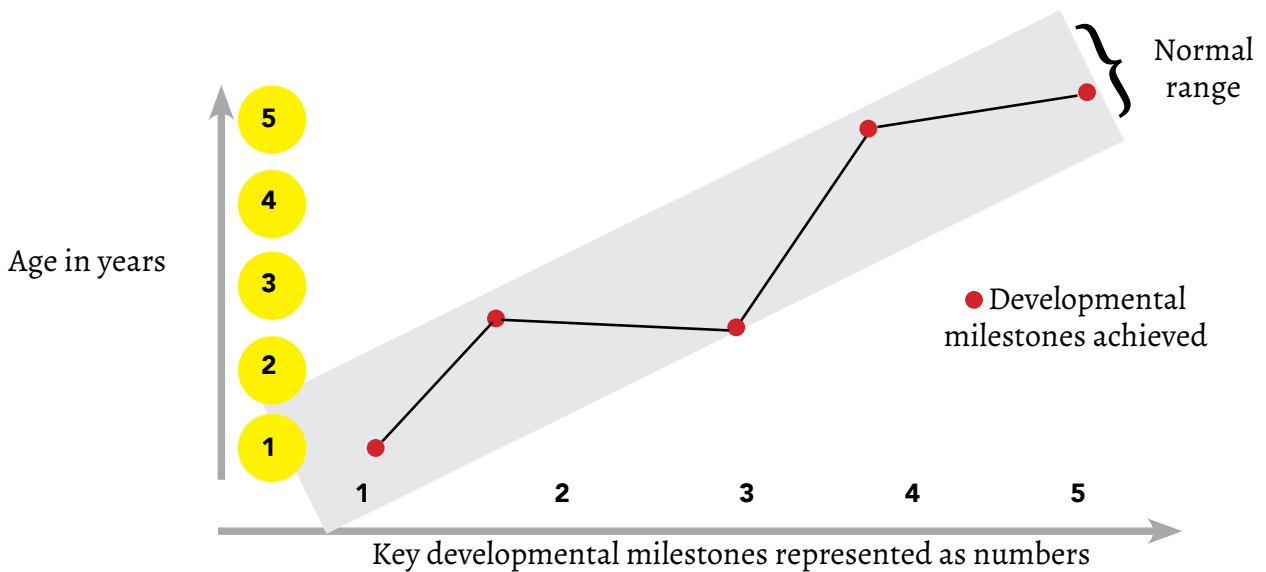
The rate of children’s developmental progress differs from child to child. The exact ages of acquiring abilities vary among children, just as height or weight do. Even for the same child, progress may be slower or faster than expected at a different age, at different milestones (Box 1). Such variations occur within a range that is normal for the population and is called the normal range of developmental progress (Figure 3).

### BOX 1: WHAT IS A MILESTONE?

The age at which about half of all children achieve an ability or a functional skill. Milestones are useful markers to compare children’s developmental progress but remember that there is a wide variation in the rate of development, mostly attributable to genetic and environmental factors. The age for achieving any milestone usually varies within a normal range.

● Birth ● 1y ● 2y ● 3y ● 4y ● 5y

**Figure 3: The normal range of child development**



Developmental abilities come together to enable functional skills (Figure 4).

### Figure 4: From ability to functional skills

Abilities such as movements and speech sounds emerge and become refined with time.



Abilities become integrated to form functional skills such as communicating and learning.

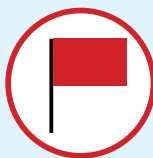


## Significant Delays

When a child's progress is well below the normal range, it could be because she has a significant delay. A significant delay is not just a delay; it often indicates a lasting impairment (Box 2), usually accompanied by red flags (Box 3).

### BOX 2: WHAT IS A SIGNIFICANT DELAY?

- The delay is in more than one domain.
- There are red flag markers in development.
- There are risk factors about the child, parents or social environment.



### BOX 3: WHAT ARE RED FLAGS?

A red flag is a sign that indicates a significant delay in achieving a crucial ability by a certain age, such as not walking independently by the age of 18 months, or an unusual pattern, such as consistent use of only one hand (handedness) before age two.

## Protective and Promoting Factors of Development

The three factors that protect a child from the effects of risk factors and promote development are:

- Good **health and nutrition**.
- Stable, loving relationships, and **sensitive, responsive parenting**, which foster positivity and resilience.
- Stimulating interactions through **opportunities to learn, play, and interact with others**.

EXPLORE AND UNDERSTAND THE RISK FACTORS AND REASONS FOR THEM.

INFORM, ENCOURAGE AND SUPPORT PARENTS TO INCREASE THE PROTECTIVE AND PROMOTING FACTORS IN THE CHILD'S ENVIRONMENT.

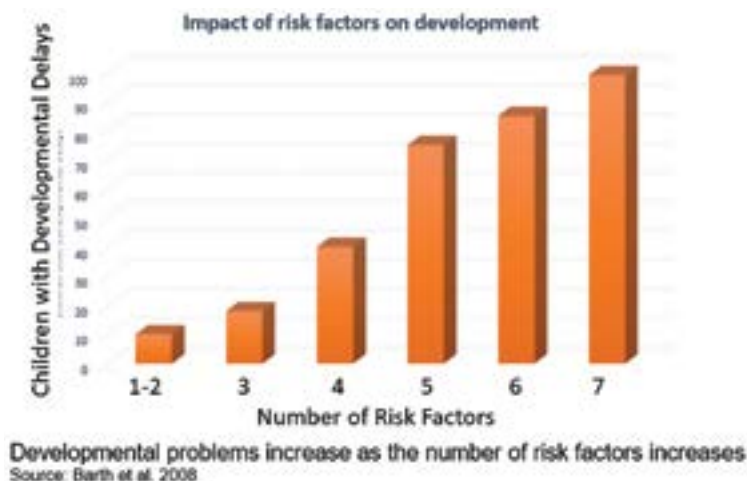


## What to do About Risk Factors

Tip the balance in favour of the child by increasing the promoting factors and preventing or decreasing the risk factors (Figure 5). This is described in more detail ahead.

Children who are exposed to multiple risk factors (please see [Table 12](#) on page 33) have fewer connections in their brain and an imbalance of neurotransmitters. They are more vulnerable to developing hypertension, diabetes and heart disease in their adult life.

**Figure 5: The more the risk factors, the higher the risks**



### a. Explore and understand

Ask about risk factors and the possible reasons for them. For example, lack of stimulation may be due to a lack of resources, lack of parental awareness, or poor parental physical or mental health.

### b. Inform and support

Parents want to do their best for their child but often need support to change behaviours or situations (Annexure 1). Be supportive so as not to undermine their confidence while informing them about the risk factors affecting their child and their impact on development (Box 4).

### c. Early intervention

Early intervention consists of activities that stimulate new connections in the brain and lay the foundation for better life outcomes for learning and working. Learning happens best in interactions that are interesting and involve the child (Box 5).

#### BOX 4: BASIC INFORMATION TO OFFER PARENTS

##### Provide simple information to parents on:

- Nourishing the child better, for example through dietary changes, and vitamin and iron supplements.
- Preventing illness, for example through immunisation.
- Testing or treating for worms or iron deficiency.
- Mentally stimulating the child through communication, reading and play.

#### BOX 5: HOW TO HELP PARENTS PROVIDE EARLY INTERVENTION

##### Help them understand their child's needs by:

- Recognising their child's strengths and challenges.
- Understanding the best ways of communicating and working with their child.
- Keeping up with their child's changing needs over time.

##### Encourage them to use natural settings and activities by:

- Enabling them to form nurturing relationships with their children.
- Encouraging them to utilise natural learning opportunities in their day-to-day lives.
- Suggesting a variety of enjoyable activities that they can do with their child.

##### Support families and enhance their resources by:

- Helping build their confidence in their own strengths and capabilities to help their child.
- Assisting them to access helpful resources.
- Working in partnership with them to help them navigate the maze of services.

## Unusual Patterns of Child Development

Sometimes, development progresses in ways that are unexpected or unusual, either because of a deviation from the normal pattern or a dissociation among the various domains. It is important to recognise these patterns as they often indicate an impairment or disorder requiring further investigation (Box 6).

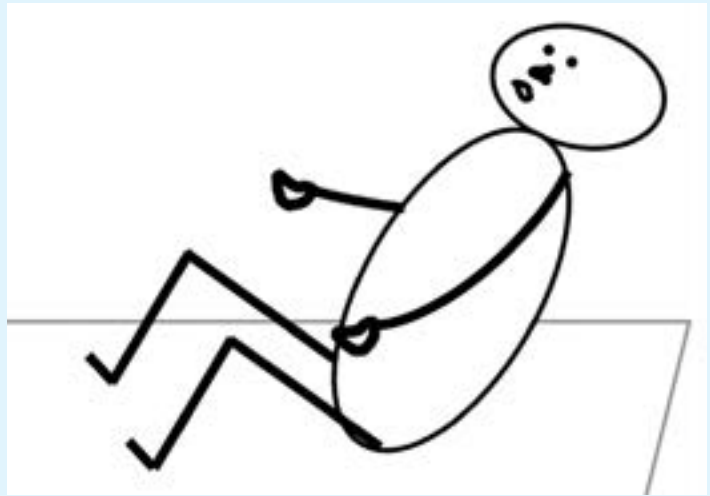
### 1. Deviation from the norm

Despite huge variability, some sequences or patterns are an integral part of a child's development. For example, children sit before they stand. An infant who cannot sit, even when supported, but can stand with support may have a motor disorder (Box 6).

Similarly, children understand language before they express or speak it. A child who speaks better than he understands has deviated from the typical pattern and may have a communication disorder.

#### BOX 6: WHY IS A MAJOR DEVIATION FROM THE NORM SIGNIFICANT?

A major variation in integral sequences of development may indicate a lasting impairment.



Leg muscle stiffness prevents an infant from sitting even with support.

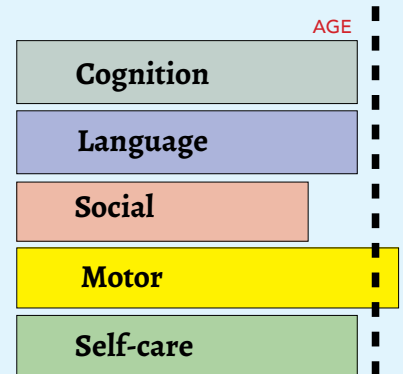


## 2. Dissociation of domains

The domains of development usually progress at a similar pace. A marked difference in their progress, for example a relative lag in social development, may indicate an underlying impairment (Box 7).

### BOX 7: WHAT IS DISSOCIATION OF DOMAINS?

Developmental domains are said to be dissociated when there is a significant difference in their progress. Dissociation may indicate an underlying impairment.



## 3. Plateauing or regression of development

About a third of autistic children plateau or regress (Box 8) in their language and social skills at about 18–24 months. Some rare neurological conditions can also cause loss of skills or regression. Children whose development plateaus or regresses must receive an urgent neurological examination and assessment (Box 9).

### BOX 8: WHAT IS DEVELOPMENTAL PLATEAUIING AND REGRESSION?

Children who have progressed typically but then stop advancing in one or more domains of development are said to have plateaued. The loss of previously acquired skills is known as regression.

### BOX 9: WHAT TO DO IF YOU SUSPECT A DEVELOPMENTAL DELAY

- A developmental assessment is required to confirm a developmental delay, and to identify the likely cause and ways of helping.
- A children's doctor should advise parents about the child's health, development, hearing and vision.
- A therapist should advise on ways to promote the child's development.



# PART TWO

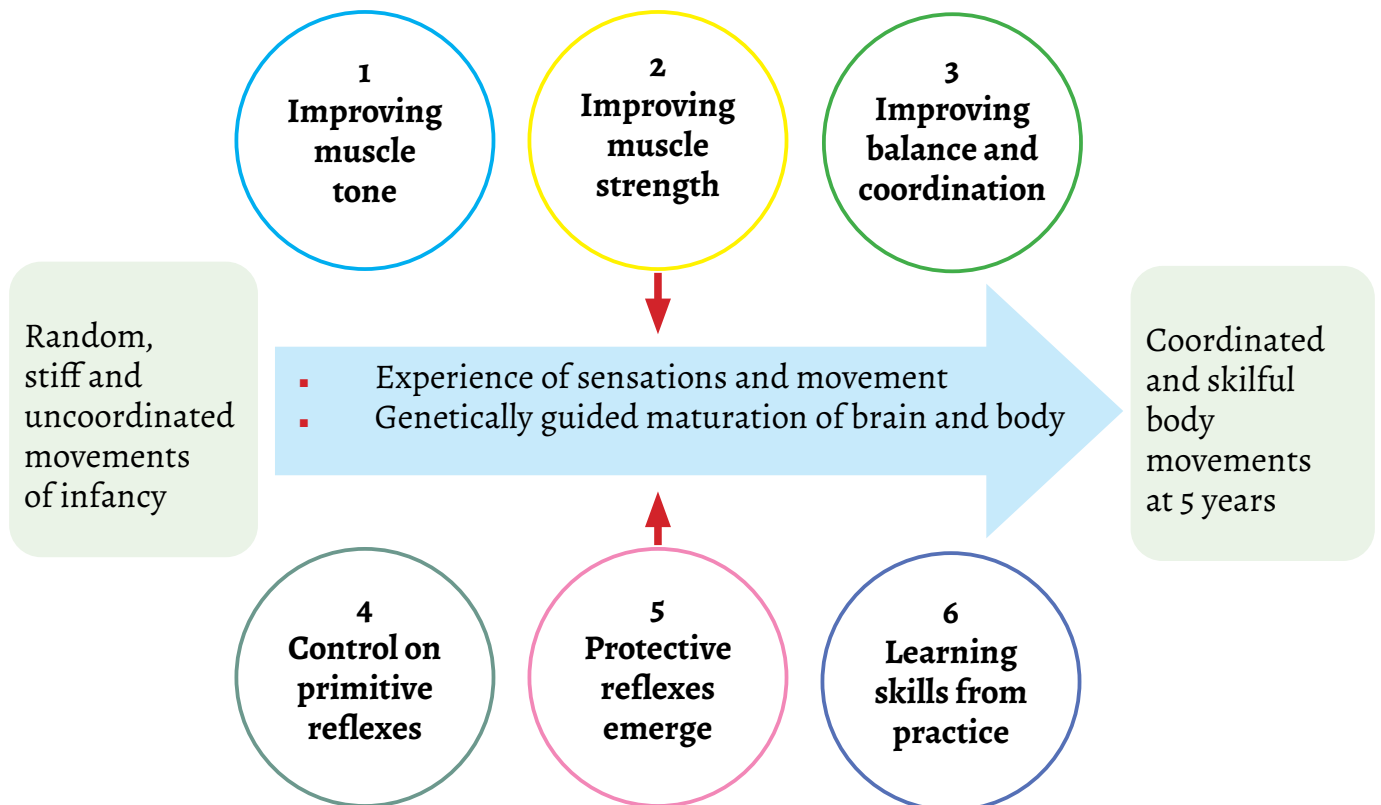
## AREAS OF CHILD DEVELOPMENT



### How Motor Skills Develop

Motor skills – those related to movement and posture – develop substantially during the first five years (Figure 6).

**Figure 6: Six important changes in the first five years**





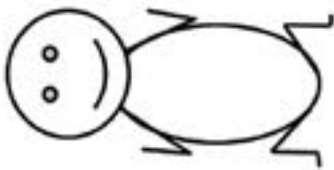
The six main changes that occur are:

1. Improved muscle tone (Boxes 10, 11)
2. Improved muscle strength
3. Improved balance and coordination
4. Control over primitive reflexes
5. Emerging protective reflexes
6. Learning skills from practice

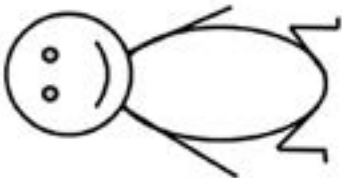
These are described in greater detail below:

## 1. Improved muscle tone

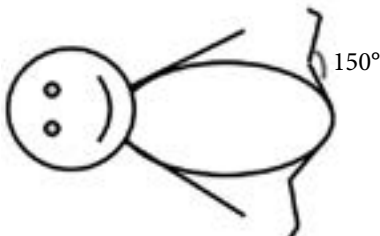
- *First few weeks and months:* Baby's hands are fisted, and her arms and legs are folded and cannot be straightened because of the high flexor tone in her limbs.



- *2 months:* Arms straight, legs flexed.



- *9 months:* Arms and legs more or less straight.



### BOX 10: WHAT IS MUSCLE TONE?

**Tone** is the tension in the muscles that makes the body stiff or floppy, depending on brain function and muscle movements.

**Flexor tone** is the tone in the front.

**Extensor tone** occurs in the back, the arms, legs and trunk muscles.

### BOX 11: HOW TO CHECK MUSCLE TONE

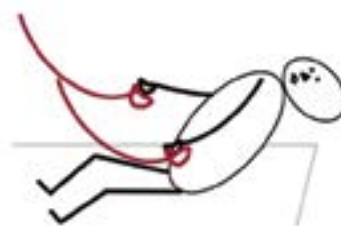
**Ask:** "Is your baby too floppy or too stiff?"

**Look** for tightly fisted hands, thumb held in hand, tight and straight or crossed legs (a sign of increased tone).

**Feel** for stiffness or floppiness in arms and legs.

**Do** the pull-to-sit manoeuvre by gently pulling the infant to sit by grasping his shoulders or holding his hands, and lowering him on his back again. Observe the neck and shoulder posture.

Impaired muscle tone manifests as hypotonia and hypertonia.



Low muscle tone (hypotonia) with flopping back of head and loose legs



Increased muscle tone (hypertonia) with stiff back, neck and leg muscles

## 2. Improved muscle strength

- *4 months:* He holds her head stable while sitting.



- *6–7 months:* He supports his body weight on his legs in supported standing.



- *10–12 months:* He stands, holding on.



## 3. Improved balance and coordination

- *4–5 months:* Her hand movements are coordinated with her eye and head movements (Box 12).



- *5 months:* She is well coordinated as she reaches out to grasp.



- *8 months:* Her balance has improved so she doesn't tip over as she reaches out.



- *2 years:* She stoops to pick up objects; she no longer needs to keep her legs wide apart while walking.



### BOX 12: WHAT IS BALANCE AND COORDINATION?

**Balance** is the ability to maintain body posture while sitting or moving. It improves with the maturity of vestibular (inner ear), cerebellar (brain) and sensory perception and experience.

**Coordination** refers to the working together of hands, body and vision with purposeful and effective movements. It improves with the development of the brain and with practice.

- *3 years:* She runs well, and can catch a ball.



- *4 years:* He hops on one foot.



#### 4. Control over primitive reflexes

- 3—4 months: Primitive reflexes (Box 13) disappear as the motor cortex matures (Box 14).

#### BOX 13: WHAT ARE PRIMITIVE REFLEXES?

**Primitive reflexes** are seen in the first few months after birth. They are reactions to stimulation, such as change in posture or noise, and are generated by the lower or primitive brain.

As the motor cortex matures and takes control, these reflexes gradually disappear by 3—4 months.

#### BOX 14: HOW TO TEST PRIMITIVE REFLEXES

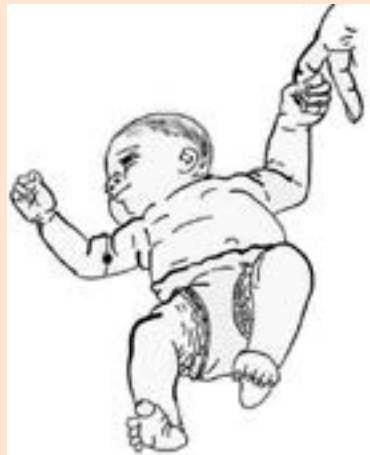
##### Moro reflex

Drop the hand supporting the infant's head by 2—3 cm. The reflex is present if there is a wide symmetrical abduction or spreading out of the arms and opening of the hands, followed by the arms coming together.



##### Grasp reflex

Stroke the infant's palm. The reflex is present if she grasps your finger hard.



##### Asymmetric tonic neck reflex (ATNR)

Turn the infant's face to one side. The reflex is present if his arms and legs on that side extend and flex briefly on the other side.



#### 5. Emerging protective reflexes

- 6—8 months: Protective reflexes (Box 15) begin to emerge, and persist for life (Box 16).

#### BOX 15: WHAT ARE PROTECTIVE REFLEXES?

Protective reflexes are those that save us from injury when there is a sudden, unexpected change of posture in any direction. The absence of protective reflexes may indicate an impairment.

#### BOX 16: HOW TO TEST PROTECTIVE REFLEXES

##### Forward and sideways reflex

Gently push the baby from behind or side (keeping the other hand on her other side to prevent a fall). Her arms will move forward or sideways if the forward or sideways reflex is present.



##### Downward reflex

To elicit the downward parachute reflex, hold the baby firmly under the arms and bring her body down quickly. She will straighten and widen her legs if the reflex is present.



## How Fine Motor Skills Develop

Fine motor skills enable children to use their hands and body to play, learn and do day-to-day work. They represent increasing levels of coordination and integration in development.

*Early infancy:* Baby's finger and hand movements are uncoordinated.

*5 years:* She uses her hands and fingers efficiently to play with toys, draw, write, and use day-to-day objects, such as cups, spoons, buttons and laces. Different abilities come together to make this possible (Table 1).

**TABLE 1: DIFFERENT ABILITIES COME TOGETHER FOR FINE MOTOR COORDINATION**

Eye-hand coordination	Cognitive ability	Refined coordinated movements
<p><b>4 months</b> Looks at hands and objects held</p> 	<p><b>Birth onwards</b> Interested in how things feel, look and sound.</p>	<p><b>9—10 months</b> Both hands work together, for example, to hold an object in one hand and explore with the other.</p> 
<p><b>5 months</b> Looks and reaches out to touch</p>	<p><b>15 months</b> Learns how things relate together, and how to use day-to-day objects, such as by putting a cup to mouth and pushing a car.</p>	<p><b>12—13 months</b> Grasp and release become refined as baby uses her fingertips to grasp, and can release gently and precisely.</p>
<p><b>9 months</b> Holds objects in her hands and explores with fingers while looking at them</p>	<p><b>From age 2</b> Remembers, copies and plans activities, such as drawing pictures and making models with blocks.</p>	<p><b>From age 2</b> Prefers one hand for refined activities while the other supports.</p>

### BOX 17: HOW TO HELP PARENTS PROMOTE FINE MOTOR DEVELOPMENT

#### Advise parents to:

- Use simple toys, such as wooden blocks, beads and thread, boxes, pencils, paper, spoons, cups and dolls.
- Give praise for completing simple day-to-day activities, such as doing up buttons, tying laces and changing clothes.
- Organise and label things to make it easy for the child to find them.
- Consider changing the physical environment, such as by using Velcro, thicker pencils, stable paper pads and adjusting the height of desks.
- Give pre-school children simple step-by-step instructions for tasks.
- Demonstrate or model activities.
- Talk about how to do the activity as they model.
- Use a variety of activities to maintain interest.
- Allow time for practice.

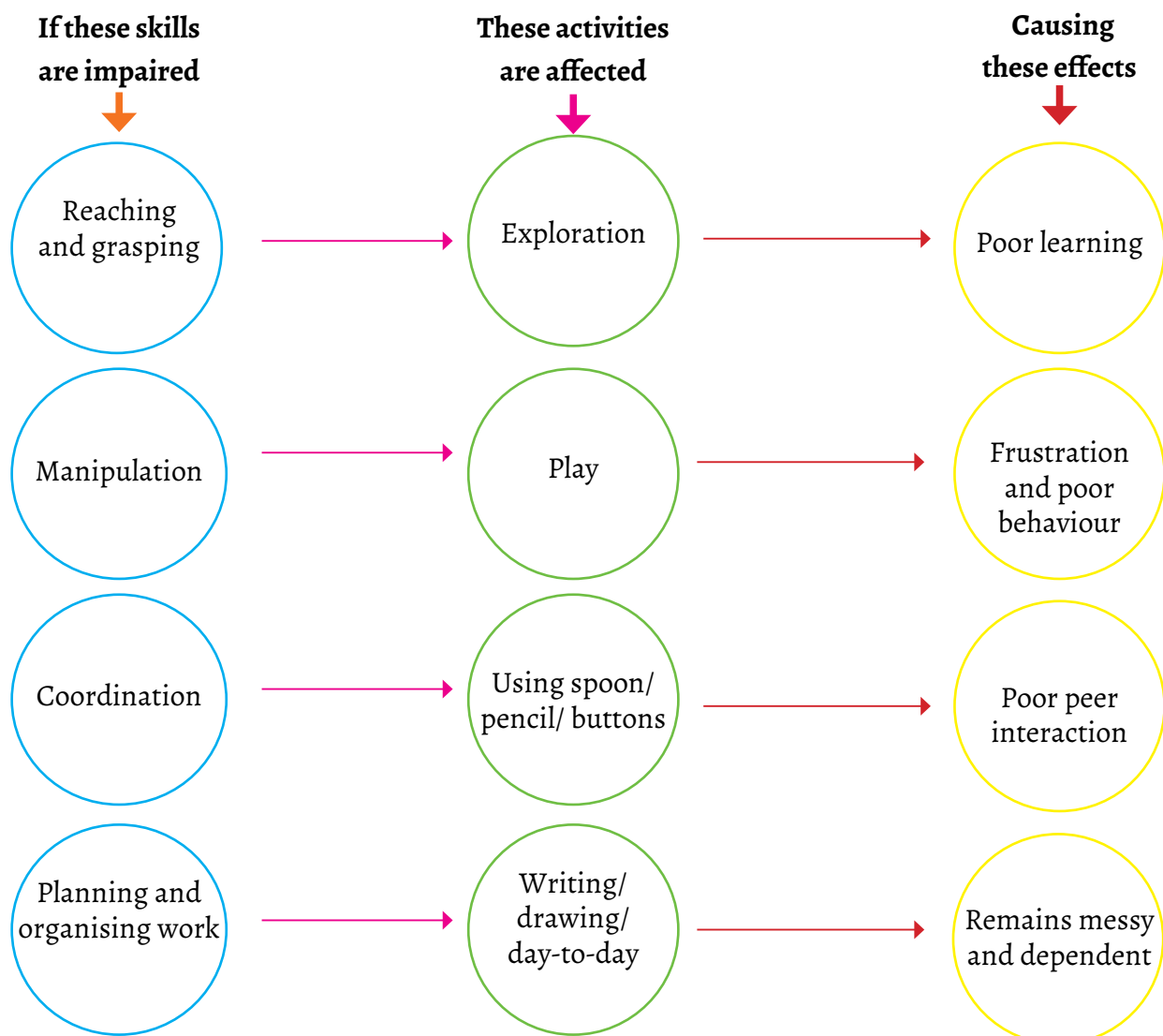




### How poor fine motor skills affect children

Poor fine motor skills have far-reaching effects on children’s exploration, play, learning and self-care (Figure 7). For more ideas on supporting children’s hand function, please see Annexure 2.

**Figure 7: How poor fine motor skills affect children**



## How Cognition Develops

Learning and problem solving form the building blocks of cognitive development.

### 1. Learning begins in the womb

Infants perceive touch, sound and their mother's emotions in the womb. These influence their development before birth. Maternal stress and ill-health have adverse effects on growth.

### 2. Learning occurs by watching, listening and exploring

Soon after birth, infants can notice changes in light, movement and sound. They begin to recognise the associations in these changes. That becomes the foundation for learning about speech

sounds, objects and people. Experiences in the child's environment help form learning networks in the brain that lead to new functions. Learning is greatly enhanced by infants imitating and practising sounds, touching and relating things together.

### 3. Learning through experience that actions have consequences

When children watch recurring acts and events in the physical and social world, they form a basic understanding that actions have consequences. This gradually becomes established as a mental concept that children can apply in their activities.

- *By 9—10 months:* Infants begin to show an understanding of some of the common ways in which the physical world works. Two important concepts learnt in infancy are:

- *Cause and effect:* An action can lead to a result. For example, pulling a string can help bring a toy closer.



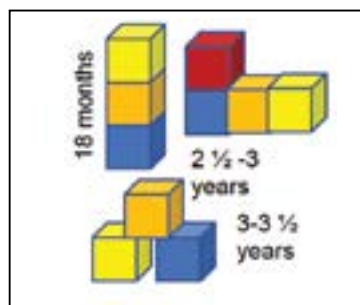
- *Permanence of objects:* When things go out of sight they don't just disappear, and can be searched for.



- *18 months—3.5 years:* Children learn to make simple models and complete jigsaw puzzles. They learn to relate objects and shapes in different ways as follows:



- To copy a model of blocks made out of sight, the child must look at the model, work out the pattern, remember it and organise the movements to make it. Watching a demonstration makes the task easier.



- Matching shapes in a jigsaw puzzle requires looking at the shape, choosing the right hole for it to go into and coordinating movements to fit the shape in; younger children attempt to force the shape in a wrong hole.





## Promoting cognitive development

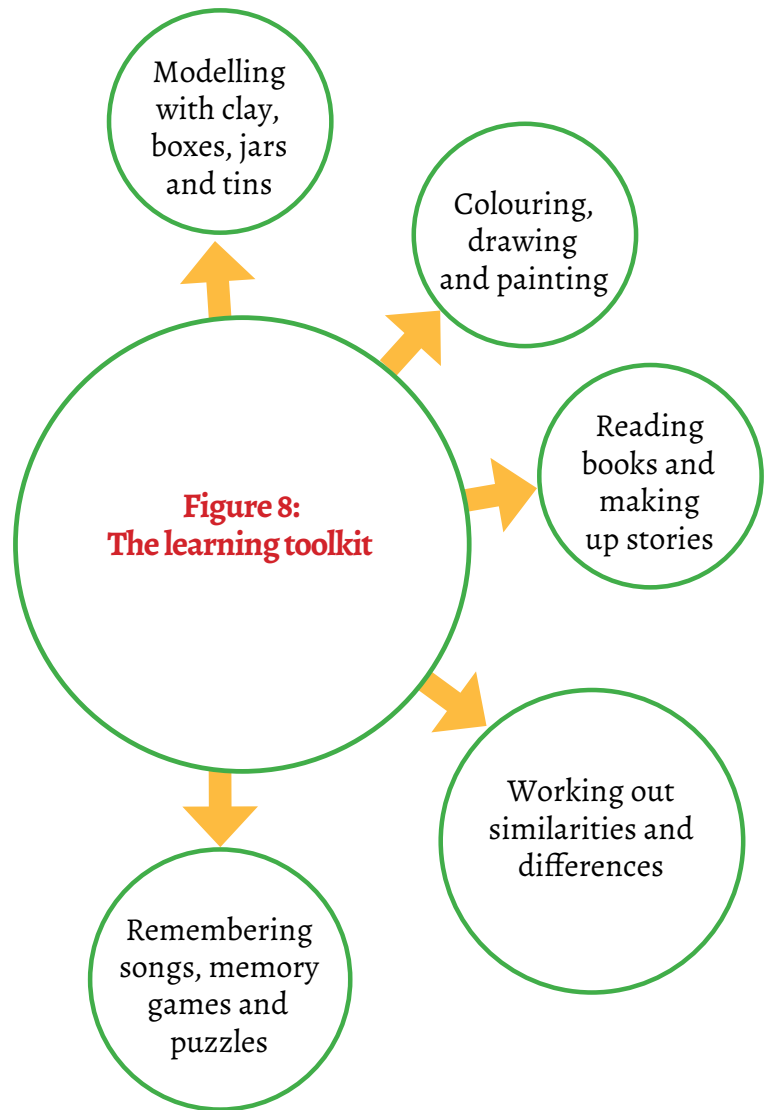
Children don't need expensive toys or electronic goods to learn. Books and readily available household toys and materials provide fantastic opportunities for creativity (Figure 8).

Learning thrives when there are varied and exciting opportunities and challenges, with time, encouragement and plenty of praise even for making an effort (Box 18).

### BOX 18: HOW TO HELP PARENTS PROMOTE COGNITIVE DEVELOPMENT

#### Advise parents to:

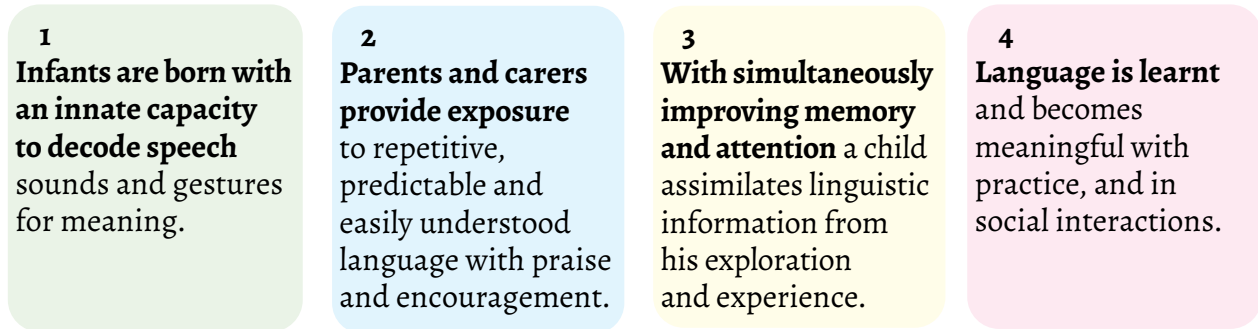
- Listen to their child.
- Encourage him to describe and explain things.
- Have genuine respect for his ideas.
- Encourage original thinking and ideas.
- Encourage him to think about their ways of thinking.
- Praise him frequently, even for trying.



## How Language Develops

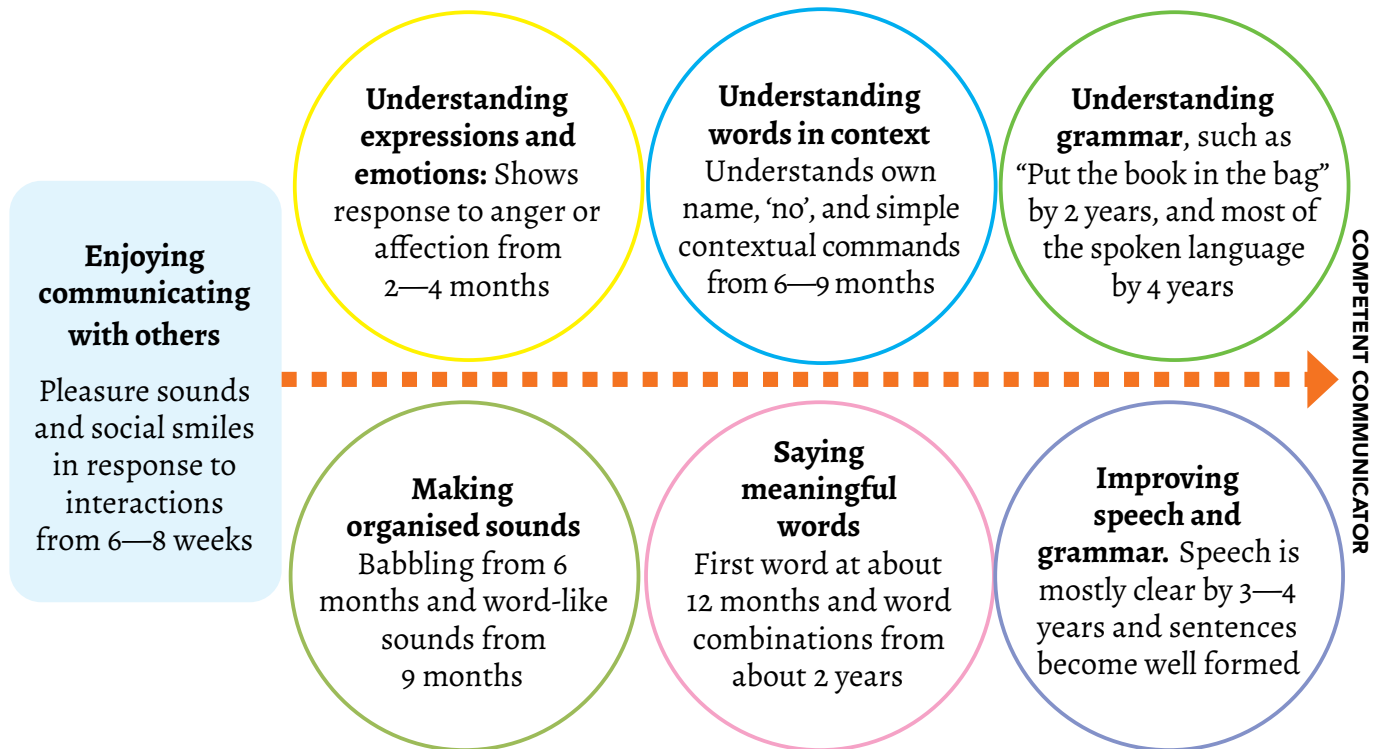
Language enables children to express their needs, share their feelings and thoughts, and learn from others. Language development involves many processes coming together to shape it (Figure 9).

**Figure 9: How children learn language**



The ability to comprehend and express language develops with understanding generally leading and expression following (Figure 10).

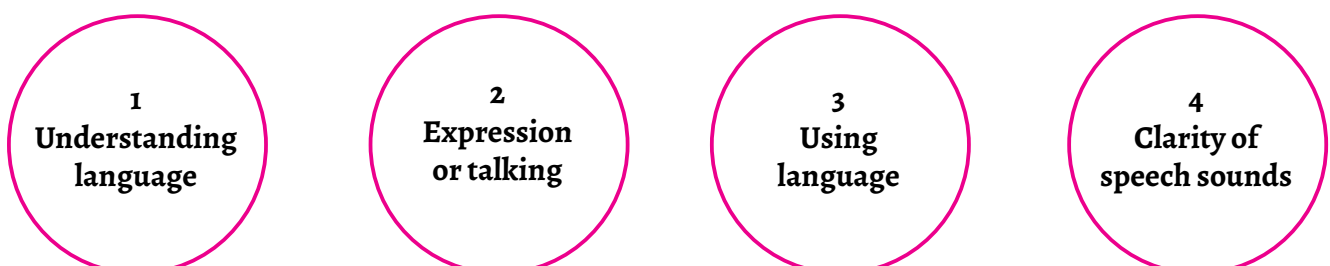
**Figure 10: The timeline of language progress**



## Assessing children's language

To assess a child's language, consider the four aspects of language – understanding, expressing, using language, and clarity of speech sounds (Figure 11) – by asking his parents as well as observing him yourself (Table 2).

**Figure 11: Assessing children's language**





**TABLE 2: HOW TO ASSESS CHILDREN'S LANGUAGE**

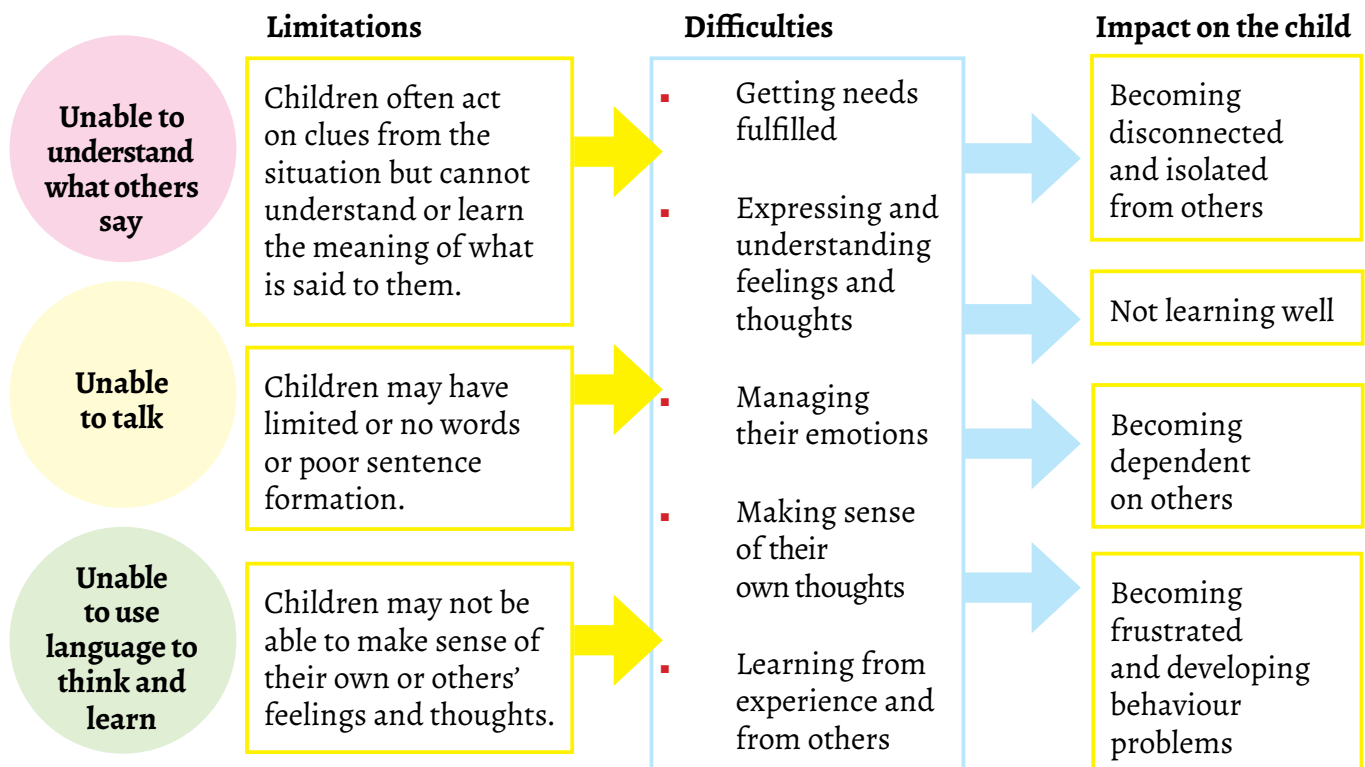
Aspect	Ask parents	Observe
<b>Understanding language</b>	<p>“Would he give you an object even if you didn't look or point at it?”</p> <p>“What does he not understand?”</p> <p>Parents often overestimate children's language because children act on their understanding of routine situations and non-verbal clues.</p>	<p>Use toys, objects and/ or pictures (Annexure 3) to assess understanding. Without pointing or looking, ask the child: “Give me —”.</p> <p>(One keyword understanding)</p> <p>“Give me — and —.”</p> <p>(To assess two words understanding)</p> <p>“Can you put — on — and then give me —?”</p> <p>(To assess understanding of joined up sentences)</p> <p>Show the action pictures and ask: “What is this child doing?”</p>
<b>Expressing or talking</b>	<p>“How many words can he say?”</p> <p>“Does he combine words or sentences?” (Ask for examples.)</p>	<p>Use toys and objects, and ask him to name them or describe their function. For example, point and ask: “What do we do with this?”</p> <p>To get a sample of his expressive language, encourage him to talk about a picture, story, his home or school.</p>
<b>Using language and speech</b>	<p>“Do you understand most, some or very little of what he says?”</p> <p>“Does he stammer?” (Ask for examples.)</p> <p>“Does he use language to ask, comment or describe things?”</p>	<p>Listen to his speech during the activities above, and note how he uses language to express his needs, to comment and to describe.</p>



## How poor language skills affect children

Poor language development leads to cognitive, functional, emotional and social difficulties (Figure 12).

**Figure 12: How poor language skills affect children**



Children communicate best when they're interested and motivated. Help parents pick up skills (Annexure 4), create opportunities and provide resources like toys, pictures and books to help their child communicate better (Box 19).

### BOX 19: HOW TO HELP PARENTS PROMOTE LANGUAGE DEVELOPMENT

#### Advise them to:

- Talk to their baby from the early months, especially during care routines and play, even when she isn't talking back.
- Respond to her actions as if they understand.
- Minimise background noise so baby can listen to their voice.
- Communicate using a variety of ways – words, gestures, signs, pictures and objects.
- Simplify speech: use short sentences, emphasise keywords, use gestures, and pause every now and then to give baby a chance to communicate. Follow what she's paying attention to and talk about what captures her interest.
- Use everyday activities such as putting away the shopping and sorting the laundry as occasions to chat.
- Respond to her chatter instead of correcting her errors.
- Set up a daily routine of looking at picture books together and talking about the pictures, rather than just asking: "Where's the —" or "What's that?" questions.
- Have exploratory conversations where they elaborate on what she says. For example, by talking about why a character does something and how he feels before and after.

## How Social Understanding Develops

Children become aware of themselves as individuals, and develop self-esteem. They're also interested in others, and learn that others have intentions, desires, beliefs and emotions through their interactions with them. A step-wise progression of social knowledge is apparent in their behaviour (Table 3).

TABLE 3: THE DEVELOPMENT OF SOCIAL UNDERSTANDING		
Age	Understanding herself	Understanding others
4 weeks		Understands the emotional tone of her carer's voice.
6 weeks	Smiles in response to others' smiles.	
4 months	Spontaneously initiates smiles at others.	
9 months	Shares interest by pointing and drawing others' attention.	Is curious about the interests of others, and looks at what they point at.
2 years	Can identify herself in a photo, and say her name; enjoys showing off ("Look, I did this!").	Understands intentions behind the actions of others, such as switching on the light.
2.5 years		Recognises when someone is upset and offers comfort – may hug someone who's crying.
3 years		Knows that people act on their beliefs, such as by looking for something and expecting to find it.
3.5 years	Talks about herself ("I'm good at running") and her feelings ("I like playing with my friends"); becomes embarrassed at being praised.	
4.5 years	Self-evaluates and compares herself with others ("I'm better at drawing than he is").	
5 years		Understands that others' feelings affect their thoughts and actions, for example, negotiate to get what she wants.

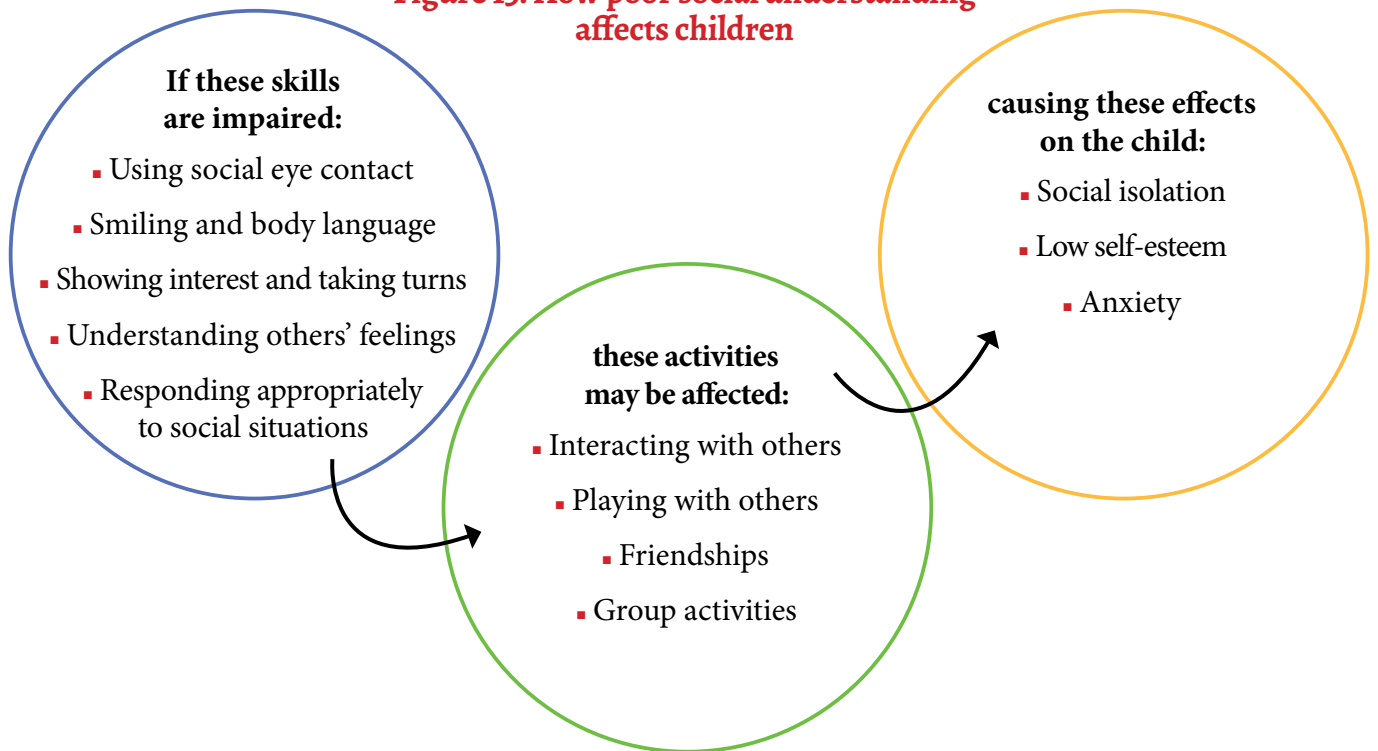
## Assessing children's social understanding

Impaired social skills can result in many difficulties for a child (Figure 13). Social skills assessments (Table 4) help identify children who may have difficulties in interacting and playing with their parents or peers (Box 20). Arrange an assessment with a communication specialist or psychologist if:

- He behaves like a younger child.
- He doesn't engage in to-and-fro conversation.
- His parents say he stays aloof from other children his age.

TABLE 4: HOW TO ASSESS CHILDREN'S SOCIAL SKILLS	
<b>Ask</b> the parents and carers age-appropriate questions, for instance: "How does your child —?" →	<ul style="list-style-type: none"> <li>■ Interact with you?</li> <li>■ Interact with other children of the same age?</li> <li>■ Play imaginatively? (Age 2 and above)</li> <li>■ Play and interact with other children of the same age? (Age 3 and above)</li> </ul>
<b>Observe</b> Create situations and activities that enable his social skills to be observed: →	<ul style="list-style-type: none"> <li>■ Observe him playing with other children</li> <li>■ Play with him, interactively making stories</li> <li>■ Have a conversation about his interests</li> </ul>
<b>Note</b> how well the child does the following: →	<ul style="list-style-type: none"> <li>■ Takes social interest, initiates interactions and responds</li> <li>■ Takes turns, asks, gives and shows</li> <li>■ To-and-fro communication</li> <li>■ Makes eye contact and gestures in communication</li> </ul>
<b>Consider</b> whether his social behaviour is: →	<ul style="list-style-type: none"> <li>■ Age appropriate</li> <li>■ Like a younger child</li> <li>■ Unusual or odd in any way</li> </ul>

**Figure 13: How poor social understanding affects children**



**BOX 20: HOW TO HELP PARENTS PROMOTE SOCIAL UNDERSTANDING AND SELF-ESTEEM**

**Advise parents to:**

- Create opportunities for playing and sharing fun activities with other children.
- Give them responsibility and opportunities, even with small tasks, and praise them for trying.
- Recognise that every child is good at something; praising the positive aspects will help their child's self-esteem.
- Encourage children to talk about their and others' feelings, using real situations or stories.
- Listen to their worries and suggest ideas about mending friendships.



## How Play Develops

Play is a very important part of development. It offers a unique window for observing a child because it combines and enriches nearly all aspects of development. The key milestones for the development of play are in the table below (Table 5).

TABLE 5: THE DEVELOPMENT OF PLAY	
Age	Milestone
<b>First few months</b>	Baby enjoys touching, feeling, looking at and hearing the sounds of toys. Play helps her integrate her sensations and movements. It becomes more responsive and fun when her parents and carers join in.
<b>6—8 months</b>	She plays to have social fun, enjoying activities like clapping hands and peekaboo.
<b>12 months</b>	She begins to use toys and objects for their purpose, pushing rather than banging a toy car, and putting a cup to her mouth.
<b>15—18 months</b>	She begins to use toys and objects for their purpose with her carers, for example, by putting a cup to her carer's mouth.
<b>From 18—20 months</b>	He begins to use toys and objects for their purpose with dolls or action figures, for example, by putting a cup to a doll's mouth.
<b>From 2 years</b>	She plays in a pretend way, such as by giving a pretend drink to her mother or doll, or using a wooden block as a car.



## How to help parents play with their child

Playing with young children doesn't always come naturally to new parents. You can help them succeed by guiding them towards appropriate activities for different age groups and developmental stages. (Box 21).

### BOX 21: HOW TO HELP PARENTS PLAY WITH THEIR CHILDREN

#### For under 6 months

- Imitate the sounds their baby makes, use lots of facial expressions and have a 'conversation' with him.
- Sing their favourite songs or lullabies to their baby.
- Talk to their baby as they do things.
- Show their baby things in his surroundings, for example, "Look at those bright lights".
- Point out brightly coloured pictures in books.
- Let him touch objects with different textures.
- Hold a toy within reach so that he can touch it.

#### For 6—12 months

- Use routine, such as bedtime, to interact with baby.
- Read or describe pictures from books.
- Play peekaboo: Cover his face, then remove hands saying, "Here you are!" or "Peekaboo!".
- Hide a toy under a blanket and ask him: "Where has it gone?" Search with baby.
- Play hide and seek by hiding and urging him to find them.
- Imitate baby's sounds. Encourage interaction by taking turns listening and copying each other's sounds.

#### For 12—24 months

- Sing songs or nursery rhymes with baby.
- Keep reading and talking together. Ask questions like, "Where is the doggy?" Praise him when he points to the object: "Yes, you know!".
- Play hide and seek.
- Play pretend games using toy phones, teddies, and toy cars.
- Help baby stack blocks and make models.
- Explore the outdoors by taking walks, running, and jumping.

#### For children older than 24 months

- Continue to read a storybook every day. Give the child time to look at the pictures before reading the words.
- Ask questions such as, "Why did he do that?", "What happens next?".
- Dance and jump around to music with the child.
- Support the child's imagination by providing dress-up clothes like scarves, hats, cups and plates, and other toys.
- Play creatively with crayons, play dough and colours.
- As the child gets older, encourage games with other children.

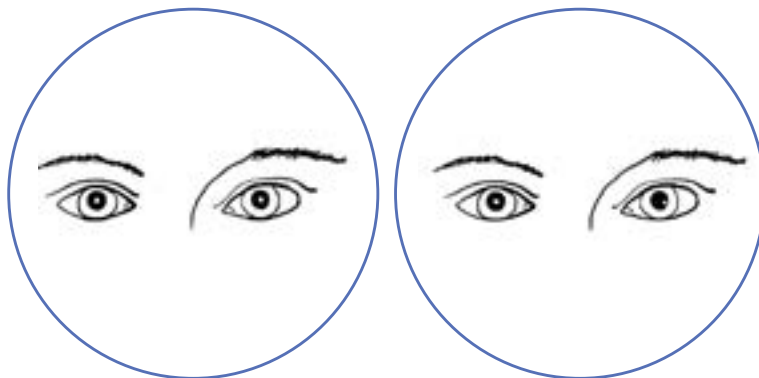


## How Vision Develops

Children’s visual behaviour changes with age, as their vision improves (Table 6). Poor vision (Figure 14) affects every aspect of a child’s development.

Age	Visual milestone
<b>Birth</b>	Baby looks towards diffuse light, such as towards windows, and blinks at a flash of light.
<b>6—8 weeks</b>	His eyes follow a human face with eyes held at about 30 cm away from him.
<b>3 months</b>	He watches his own hands.
<b>4 months</b>	His eyes follow adults in the room.
<b>5 months</b>	He looks at and reaches out to pick a 1” block at 20 cm.
<b>9 months</b>	He looks at and reaches with his index finger for tiny objects, such as grains of dal or mustard seeds at 30 cm.
<b>2—2½ years</b>	He can match pictures at 3 metres.
<b>3½—4 years</b>	He can match letters for a vision test at 3 metres.
<b>4 years</b>	His eyesight is as good as an adult’s.

**Figure 14: Corneal reflections of light in the eye**



**Normal:** Corneal reflection of light from a pen torch is in the centre of the cornea in both eyes.

**Abnormal:** Corneal reflection is to the right in the left eye, possibly due to in-turning or a squint of the eye.

To assess a child's vision (Box 22), observe the child and use the checklist (Table 7) to ask her parents the right questions. For red flags for vision problems, please see Table 8 overleaf.

### **BOX 22: HOW TO ASSESS VISUAL BEHAVIOUR**

- Use bright, shiny toys or objects to check visual following.
- Let an infant lie flat on her back; an older child should be in her parent’s lap.
- **Don’t make sounds while checking visual following, as they may give her auditory clues.**
- Observe the way she looks, follows and coordinates the movements of both her eyes.
- Use a pen torch to look at the corneal reflection in both eyes to detect a squint (Figure 14).
- Look for abnormal movements like nystagmus.

Age	Milestone	✓	✗
<b>From 1 week</b>	Does baby turn to diffuse light?		
	Does he stare at your face?		
<b>By 2 months</b>	Does he look at your face and follow it if you move from side to side?		
	Do his eyes move together?		
<b>By 6 months</b>	Does he look around with interest?		
	Does he try to reach for small objects?		
	Do his eyes move together?		
<b>By 9 months</b>	Does he poke or rake tiny objects or crumbs while looking closely?		
<b>By 12 months</b>	Does he point to things to ask or show?		
	Does he recognise you and others family members from across the room, before you speak to her?		

*Refer the child for a vision check by an orthoptist or vision specialist if you have any concerns about his visual behaviour.*

**TABLE 8: RED FLAGS FOR VISION PROBLEMS**

Age	Flag
By 6 weeks	Baby doesn't look at a face or bright object held close to his face.
By 5 months	He doesn't show interest in or reach out to pick up small objects.
After 9 months	He doesn't fixate sharply on very small objects.
After 12 months	He looks at objects too closely.
Any age	His eye movements are erratic.
	His eyes cross, turn in or out, or move independently.
	He turns or tilts his head to one side, uses only one eye to look at things or looks from the corner of his eyes.





## How Hearing Develops

Hearing impairment is common in children. It affects the development of language, learning and behaviour. Knowing about normal hearing behaviour (Table 9) and being aware of the risk factors (Box 23) can help you identify hearing impairment early.

**TABLE 9: HEARING MILESTONES**

Age	Hearing milestone
Birth	Baby is stilled or startled by sudden sounds.
First few weeks	She can tell the general direction of a sound.
3—4 months	She turns to the direction of a sound.
6—8 months	She can locate the source of a sound.
9—12 months	She can discriminate well between speech sounds.

### **Box 23: Risk factors for hearing impairment**

- A family history of sensorineural hearing loss (SNHL).
- The child's mother had an infection like toxoplasmosis, rubella, herpes, cytomegalovirus or syphilis during her pregnancy.
- Ear, head or face anomalies.
- Severe jaundice (hyperbilirubinaemia) that calls for exchange transfusion.
- Baby weighs less than 1.5 kg at birth.
- She has a genetic syndrome with SNHL, like Down Syndrome.
- She has a childhood disease associated with SNHL, like meningitis, mumps or measles.
- She's on ototoxic medication, such as Gentamicin.
- She's had a recurrent or persistent middle ear effusion ('glue ear') for at least three months.
- She's had a head injury with a fractured temporal bone.



Early identification (Box 24) is done through a combination of asking questions and observing the child (Table 10), eliciting parental concerns and acting on any red flag findings (Table 11).

**BOX 24: HOW TO IDENTIFY IMPAIRED HEARING AND THE NEED FOR FURTHER ASSESSMENT**

**Ask**

- Questions from the Hearing Behaviour Checklist for Parents.
- Risk factors at birth, in health or the family history that increase the likelihood of an impairment (Box 23).

**Observe**

The hearing behaviour of the child is observed throughout the assessment although such impressions are often unreliable and must be interpreted with caution. Children with hearing difficulties can quickly respond to visual clues, giving the false impression that they can hear. Get an audiology assessment if the parents are concerned or if there is a significant impairment present. If you're concerned, arrange a test by trained clinicians or audiologists.

**TABLE 10: HEARING BEHAVIOUR CHECKLIST FOR PARENTS**

Age	Milestone	✓	✗
<b>Shortly after birth</b>	Is she startled by sudden, loud noises?		
<b>By 1 month</b>	Does she pause, quieten and 'listen' to sounds such as of people talking?		
	Does she quieten or smile to the sound of your voice when she cannot see you?		
<b>By 4 months</b>	Does she turn her head and eyes towards you if you talk from her side?		
<b>By 7 months</b>	Does baby turn immediately to the sound of your voice from across the room or to other quiet sounds?		
<b>By 9 months</b>	Does she listen attentively to familiar everyday sounds and search for other quiet sounds coming from out of her sight?		
<b>By 12 months</b>	Does baby respond when her name is called?		
	Does baby respond to 'no' even if she cannot see the accompanying gesture?		

*Advise the parents that if they suspect that their baby's hearing is not normal or if they cannot answer 'yes' to any of the questions above, they must seek advice from a hearing specialist.*

**TABLE 11: RED FLAGS FOR HEARING IMPAIRMENT**

The child isn't aware of day-to-day sounds.
He doesn't respond when called.
He listens to TV or the radio at a loud volume.
He stops vocalising after early babbling.
He has other speech and language impairment.
He speaks too loudly.
He has frequent ear infections or discharge from the ears.

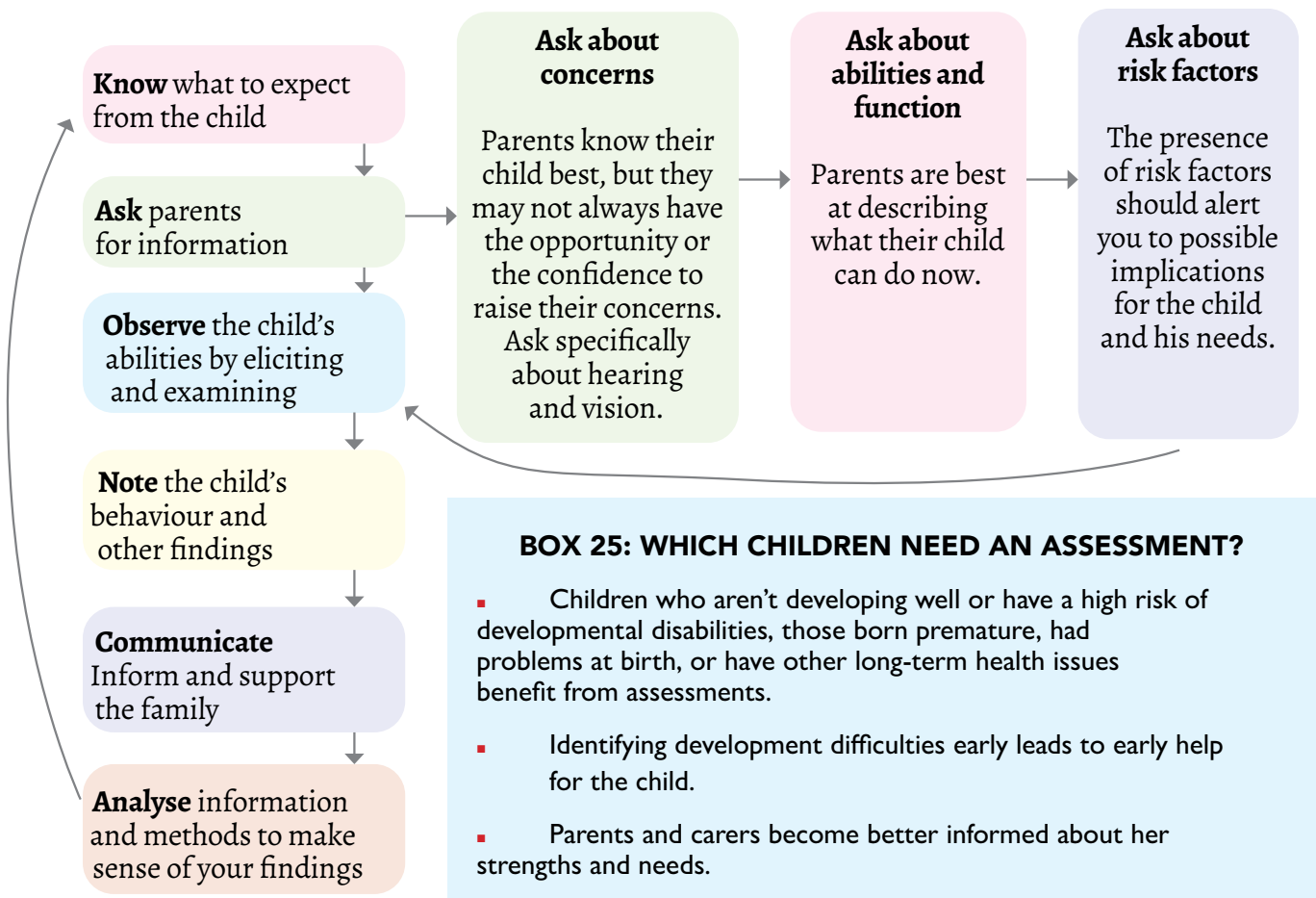


# ASSESSING DEVELOPMENT

# PART THREE

Children who aren't developing well or have a high risk of developmental problems (Table 12) must go through a comprehensive assessment (Box 25). Identifying developmental challenges early enables parents and carers to become better informed about the child's strengths and needs, and leads to early help for the child (Figure 15).

**Figure 15: How to assess development**



**TABLE 12: RISK FACTORS FOR DEVELOPMENTAL DELAYS AND DISABILITIES**

Origin	Risk factor
<b>Birth</b>	Pregnancy (maternal illness, poor nourishment, alcohol, smoking or drugs). Prematurity (less than 37 weeks at birth). Low birth weight (less than 2 kg). Neonatal problems (for example, meconium aspiration, resuscitation, hypoxia, ventilation, seizures). Feeding problems
<b>The child</b>	Chronic ill-health, (for example, anaemia, recurrent diarrhoea, malaria or TB). Malnourishment and stunting of growth (below the fifth percentile on height or weight for age). Head circumference below the fifth percentile for age. Chronic ill-health (for example, anaemia, recurrent diarrhoea, malaria or TB).
<b>The family</b>	Parents' health including mental health (for example, depression, psychosis), poor parental education. Social background (for instance, low financial status, inadequate housing, no support from the extended family or neighbours). Siblings (for example, chronic health problems or developmental concerns).

Asking open-ended questions and listening well gets better information than asking close-ended or leading questions and interrupting parents (Box 26).

### BOX 26: HOW TO ASK PARENTS QUESTIONS

#### Do ask

- What are your concerns about your child's development?
- How does he communicate with you?
- How does he play?

#### Don't ask

- You aren't worried about your child's development, are you?
- Doesn't your child talk well with you?
- Your child plays quite well, doesn't he?

- GIVE TIME – DON'T BE RUSHED.
- BE ATTENTIVE.
- BE POLITE.
- DON'T INTERRUPT.
- CONFIRM YOUR UNDERSTANDING.



## A Method for Assessing Development

All newborn infants must have a physical examination by a competent clinician within a week of birth to identify any significant health problem. When assessing development, look at the child's progress across all the domains of development (Box 27). This section describes a method for doing this for some key age groups. Children are not, of course, seen only at these ages, but you can adapt and apply this information to guide your practice.

### BOX 27: SEVEN TIPS TO ENGAGE CHILDREN IN ASSESSMENTS

- Approach the child gently, with a reassuring smile.
- Make it sound like fun: "We're going to do something interesting now!"
- Praise and motivate him.
- Be encouraging: "I'm sure you can do this".
- Join in activities like a friend, not like a parent or a teacher.
- Be interested in her interests to start a conversation.
- Be aware of stranger anxiety – don't be overfriendly and loud.

### HOW TO USE THIS SECTION

Information on assessing each age group begins with the abilities expected in each domain. Use an approach that's suitable for the ability, such as asking parents, observing, or both, to find out whether the child has achieved the described ability. For each skill at a particular age, look at the suitable approach to assessment and red flags as indicated by these symbols:



**Ask parents**



**Observe**



**Ask parents as well as observe**



**Red flags**

At each age, some steps remain the same. Pause after giving instructions to observe better.

## Age: First few days

### Abilities

- 💡 She sucks well during feeding, turns towards her mother's breast if it's brushed against her cheeks and opens her mouth if her upper lip is stroked.
- 💡 She recognises her mother's smell and voice soon after birth.
- 💡/👁️ She looks at faces and objects, if nearby, and stares towards diffuse light.
- 💡/👁️ She's startled by sudden loud noises.
- 💡 She makes little cooing or grunting noises and cries quite strongly.
- 💡/👁️ She can grasp a finger placed in her hands strongly.
- 👁️ She has the Moro reflex.

### Emerging abilities

- 💡 Within a few days, an infant can interact with her carers through eye contact and spontaneous or imitative facial gestures like protruding her tongue or pouting her mouth.
- 👁️ Her muscles are weak; she has no control of her head posture or back.
- 👁️ Her arm and leg movements are jerky and random, gradually becoming smooth and coordinated over the next few months.





## Age: About 2 months

### Abilities

#### 1. Movement and posture

- On her back (supine), baby's arm and leg movements are smooth, not jerky. Her hands open intermittently.
- In ventral suspension, her head is in line with her body. When lying on her abdomen (prone), she can hold her head up.
- She grasps strongly at a finger placed in her palm (grasp reflex).

#### 2. Language and communication

- She makes little cooing noises.
- She makes facial, tongue and body movements in response to playful 'talking' by her parents.

#### 3. Social

- She smiles in response to a smile and playful 'talking' by her parents.

#### 4. Cognitive

- She pays attention to faces and recognises people.

#### 5. Visual and hearing behaviour

- Her eyes briefly follow a pencil light or bright object held at about 30 cm, from the side towards the midline.
- Lying on her back, she turns her head towards a sound; is startled by loud sounds, and stills to listen to a bell rung gently and continuously (4 weeks).



2 month old, lying with hands visible



2—3 month old being held by mother

## How to observe abilities at about 2 months

### 1. Ask if the parents have any concerns:

- 💡 About baby's health or development.
- 💡 About her feeding, sleeping, making little sounds, smiling, responding or moving her arms or legs.

### 2. Observe the infant lying on her back wearing only a nappy:

- 👁️ Look for any absence or asymmetry of movements.
- 👁️ Gently move her arms and legs – feel for excessive floppiness or stiffness.

### 3. Perform the 'infant motor examination' sequence:

- 👁️ Place your hands over the infant's palms, hold her hands and gently pull her to sit (support her head, if necessary). Watch and feel for effort at the shoulders, neck and head.
- 👁️ Place her in supported sitting. Watch and feel her head and back posture.
- 👁️ Hold her under her arms in a vertical position. Feel the tone and watch the leg posture for stiffness or scissoring.
- 👁️ Hold her in ventral suspension. Watch her head control.
- 👁️ Test for her Moro reflex. Watch for any asymmetry.

### 4. Ask and observe for red flags (Table 13):

- 👁️ Observe her response as you smile and talk to her.
- 👁️ Observe her visual behaviour by holding your face 30 cm from hers and moving slowly from side to side when she fixes her eyes on your face. Repeat with a shiny toy or a pencil torch.



TABLE 13: RED FLAGS AT ABOUT 2 MONTHS

- 👁️ She keeps her hands fisted all the time.
- 💡/👁️ She doesn't respond to loud sounds.
- 👁️ She doesn't watch things as they move.
- 💡/👁️ She doesn't smile in response to a smile or when spoken to.
- 👁️ She can't hold her head up when pushing up on her tummy.



## Age: About 4 months

---

### Abilities

#### 1. Movement and posture

- 🧠/👁️ Baby keeps his head in midline when lying on his back.
- 🧠/👁️ He has good head control in a supported sitting posture, without head lag when pulled to sit.
- 👁️ He can hold his head well above the line of the body when held in ventral suspension.
- 🧠/👁️ He keeps his hands mostly open, not fisted; he brings his hands together in midline over the chest.
- 👁️ He can now hold a small toy placed in his hands and often brings it to his mouth.
- 🧠/👁️ He reaches with both hands together to grasp a toy.

#### 2. Language and communication

- 🧠 He makes a lot of little sounds, beginning to babble.
- 🧠 He establishes eye contact with others while making sounds towards them.

#### 3. Social

- 🧠 He looks at his parent's eyes and smiles.
- 🧠/👁️ He responds to playful interactions with pleasure.

#### 4. Cognitive

- 👁️ His hand and eye movements are coordinated, for example, he looks at a toy held in his hand.
- 🧠 He recognises familiar people and objects from a distance.

#### 5. Visual and hearing behaviour

- 🧠/👁️ He may move his head from side to side as if searching for a sound's source.
- 🧠/👁️ He is very alert visually, and often preoccupied with a nearby human face.
- 👁️ He follows a dangling toy at 15—25 cm from his face through half a circle, horizontally, from side to side.



When prone, lifts the head up to 90°



Watches toy held in hands

## How to observe abilities at about 4 months

### 1. Ask if the parents have any concerns:

- 🧠 About the child's health or development (Table 14).
- 🧠 About his feeding, sleeping, making little sounds, smiling, responding or moving his arms or legs.

### 2. Observe the infant lying on his back wearing only a nappy:

- 👁️ Look for any absence or asymmetry of movements.
- 👁️ Gently move his arms and legs – feel for excessive floppiness or stiffness.
- 👁️ Place a small toy or block in his hand and observe his holding and visual regard.

### 3. Perform the 'infant motor examination' sequence:

- 👁️ Place your hands over the infant's palms, hold his hands and gently pull him to sit (support his head, if necessary). Watch and feel for effort at the shoulders, neck and head.
- 👁️ Hold him vertically from under his arms. Check for stiffness or scissoring. He doesn't yet bear weight in supported standing.
- 👁️ Place him on his abdomen (prone) and watch him lift his head to 90°.
- 👁️ Hold him in ventral suspension and observe his head control.
- 👁️ Test his Moro reflex. Look for any asymmetry.

### 4. Observe his visual and social responsiveness

- 👁️ Smile and talk to baby and note his response.
- 👁️ Place a small toy in his hand. Observe how he holds it and his visual regard.
- 👁️ Hold your face 30 cm from his and move slowly from side to side when he fixes his eyes on your face. Do the same with a shiny toy or a pencil torch.



Can hold head stable by 4 months



TABLE 14: RED FLAGS AT 4 MONTHS

- 🧠/👁️ He doesn't watch things/ people as they move.
- 🧠/👁️ He doesn't respond to sounds.
- 🧠/👁️ He doesn't smile at people.
- 👁️ He cannot hold his head steady.
- 🧠/👁️ He doesn't coo or make sounds.
- 👁️ He keeps his hands fisted.
- 👁️ He has trouble moving one or both eyes in all directions.

## Age: About 6 months

### Abilities

#### 1. Movement and posture

- 👂/👁️ Baby rolls over from front to back and, by 7 months, back to front.
- 👂/👁️ She begins to sit without support with a straight back (5—9 months).
- 👂/👁️ She reaches out and grasps objects with a palmar grasp, and passes a toy from one hand to the other.
- 👂/👁️ She bears weight on her legs in supported standing.
- 👂/👁️ Lying on her abdomen (prone), she lifts her head and chest up well.
- 👁️ Her primitive reflexes have disappeared or are much weaker now.

#### 2. Language and communication

- 👂 She babbles tunefully, and uses single or double syllable sounds ('a-a', 'adah', 'baa').
- 👂 She responds to her name.

#### 3. Social

- 👂 She shows affection for her caregivers.
- 👂/👁️ She shakes a rattle deliberately while looking at others.
- 👂 She begins to show awareness of strangers.

#### 4. Cognitive

- 👂/👁️ She is curious about objects; she looks at and reaches for them.
- 👂/👁️ She passes things from hand to hand while looking.

#### 5. Visual and hearing behaviour

- 👁️ She stares at small, interesting objects held 30 cm away.
- 👂/👁️ She turns to locate the source of a sound.

### How to observe abilities at about 6 months

#### 1. Ask if the parents have any concerns:

- 👂 About the child's health or development (Table 15).
- 👂 About her feeding, sleeping, making little sounds, smiling, responding or moving her arms or legs.



Can sit with little or no support



In supported standing, bears weight on legs



When prone, lifts head and chest above the surface

**2. Observe baby lying on her back wearing only a nappy:**

- Look for any absence or asymmetry of movements.
- Gently move her arms and legs – feel for excessive floppiness or stiffness.
- Place a small toy or block in her hand, and observe her holding and visual regard.

**3. Perform the ‘infant motor examination’ sequence:**

- Place your hands over baby's palms, hold her hands and gently pull to sit (support her head, if necessary). Watch and feel for effort at the shoulders, neck and head.
- Place her in supported sitting in her mother's lap. Watch and feel her head and back posture.
- Hold her vertically from under her arms. Feel for tone and watch her leg posture.
- Hold her in ventral suspension. Watch her head control.
- Check for her Moro reflex. By now it should be absent or weak.

**4. Observe her visual and social responsiveness**

- Talk to baby and smile to observe her response.
- Observe her visual behaviour towards objects and faces.

**5. Throughout the assessment, observe:**

- Her vocalisation, social interaction, vision and hearing behaviour.



**TABLE 15: RED FLAGS AT 6 MONTHS**

•	She doesn't reach out for things/ people that are within reach.
•	She seems very stiff, with tight muscles.
•	She seems very floppy, like a rag doll.
•	She doesn't respond to sounds around her.
•	She doesn't make vowel sounds ('ah', 'eh', 'oh').
•	She doesn't laugh or make squealing sounds.
•	She doesn't show affection for caregivers.
•	She has lost previously acquired skills.

### Abilities

#### 1. Movement and posture

- 👂/👁️ Baby sits independently, without losing his balance.
- 👂/👁️ He crawls (from 7 months) and pulls to stand (7—12 months).

#### Fine motor

- 👂/👁️ He reaches out with one hand, grasps a toy and explores it with his index finger, paying proper visual attention.
- 👂/👁️ He picks up tiny objects (like crumbs), or a string, with thumb and index finger (pincer grasp).

#### 2. Language and communication

- 👂 He babbles loudly and tunefully in long repetitive strings of syllables, for example, 'da-da-da', 'mum-mum'.
- 👂 He responds when his name is called (6—10 months), and understands 'no!' and 'bye-bye' (6—9 months).
- 👂 He points at things with his fingers.

#### 3. Cognitive

- 👁️ He looks at and visually searches for toys that are dropped or moved out of sight (permanence of object).
- 👁️ He can play with simple action toys, for example, pop-up toys (cause and effect understanding).
- 👁️ He can solve simple problems, like getting an object he can't reach by pulling a connected string.

#### 4. Social

- 👂/👁️ He shakes a bell to ring it, and shares his enjoyment.
- 👂/👁️ He looks between objects and people to share interest.
- 👂/👁️ He's wary of strangers.
- 👂/👁️ He plays social games like peekaboo, claps his hands in imitation, and gives things to others.

#### 5. Visual behaviour

- 👁️ He looks at and pokes at 1 mm objects using his index finger.
- 👁️ He visually follows moving toys across the room.



Shakes a bell



A cause and effect toy

#### 6. Hearing behaviour

- 👂 He turns to search and localise faint sounds on either side.

#### 7. Independence

- 👂 He holds, bites and chews small pieces of food.



## How to observe abilities at about 6 months

### 1. Ask if the parents have any concerns:

- 💡 About baby's health or development (Table 16).
- 💡 About his making sounds and moving his arms and legs.
- 💡 About his feeding, sleeping, response to play, making sounds, smiling and moving his arms and legs.

### 2. Observe infants and toddlers as follows:

- 👁️ Put a small toy in front of baby and let him explore.
- 👁️ Offer a 1" block, on a flat surface. Observe his grasp.
- 👁️ Offer another block in the same way. Observe how he relates the blocks together.
- 👁️ Take two blocks and click them together a few times. Observe how he imitates.
- 👁️ Draw his attention as you drop the blocks into an empty box.
- 👁️ Replace the blocks with a small pellet (paper is safest) and call his attention to it. Observe his visual attention and grasp.
- 👁️ Replace the pellet with a small toy and, after drawing his attention to it, cover it with a cloth. Observe any searching behaviour.
- 👁️ Offer a bell, shake it, and place it before him. Observe if he shows others as he rings the bell, and how he uses his index finger to explore it.
- 👁️ Offer him a toy with a string attached. Observe if he pulls the string to reach the toy.
- 👁️ Replace this with a pop-up or action toy, activate it a few times and leave it before him. Observe his attempts to activate it.
- 👁️ Engage him verbally and in play, such as with peekaboo or by clapping your hands.

### 3. Observe his movements:

- 👁️ Observe his posture and movements in independent sitting and crawling; support him to stand and observe his leg posture.

### 4. Throughout the assessment, observe:

- 👁️ His vocalisation, social interaction, vision and hearing behaviour.



Pulls with a string



Puts blocks in and out of a box



Pincer grasp

Finds a toy



TABLE 16: RED FLAGS AT 9 MONTHS

- 💡/👁️ Baby doesn't bear weight on legs.
- 💡/👁️ He doesn't sit, even with help.
- 💡 He doesn't babble ('mama', 'baba', 'dada').
- 💡/👁️ He doesn't play any games involving back-and-forth play.
- 💡/👁️ He doesn't respond to his name.
- 💡 He doesn't seem to recognise familiar people.
- 💡/👁️ He doesn't transfer toys from one hand to the other.
- 💡 He has lost previously acquired skills.

### Abilities

#### 1. Movement and posture

- 🧠/👁️ Baby pulls to stand and walks along furniture; she may stand alone.
- 🧠/👁️ She walks with one hand held.

#### Fine motor

- 👁️ She can grasp small objects like 1” blocks, with her fingertips (mature grasp).
- 👁️ She can release a toy gently to give it to others.

#### 2. Language and communication

- 🧠 She uses tuneful strings of babble to communicate, tries to copy words and may say a word or two, such as ‘mama’ or ‘dada’.
- 🧠 She understands simple, frequently used directions, such as, “Give it to mama/ papa”.
- 🧠 She uses body language to communicate, such as by shaking her head for ‘no’, waving bye, and pointing to objects to ask for or show.

#### 3. Social

- 🧠 She is anxious around strangers and cries if her parents leave.
- 🧠 She enjoys playing games like peekaboo and pat-a-cake with adults.
- 🧠/👁️ She gives adults toys and objects when asked.

#### 4. Cognitive

- 🧠 She searches for things that are hidden from sight; she looks in the correct place when a toy drops out of sight.
- 👁️ At 13 months, she places one cube on top of another.
- 👁️ She puts little objects in and out of a cup or a box.
- 🧠/👁️ She uses objects such as a hairbrush, telephone or toy car functionally.

#### 5. Visual behaviour

- 🧠/👁️ She searches for things that are hidden from sight; she looks in the correct place when a toy drops out of sight.



Puts one block on top of another



Mature grasp



Wikimedia Commons



A pop-up toy

#### 6. Hearing behaviour

- 🧠/👁️ She locates sounds and responds to her name.

#### 7. Independence

- 🧠 She drinks from a lidded cup, holds a spoon and attempts to feed herself.
- 🧠 She helps with dressing by holding out her arms.

## How to observe abilities at about 12 months

### 1. Ask if the parents have any concerns:

- 💡 About baby's health or development (Table 17).
- 💡 About his walking, talking, understanding, hearing and vision.
- 💡 About his eating and sleeping.

### 2. Observe infants and toddlers as follows:

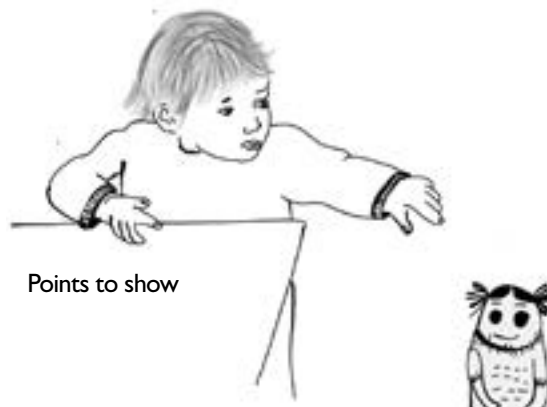
- 👁️ Put some toys, such as a small car, comb or hairbrush, spoon, cup, telephone or doll before the baby. Observe how he explores and uses them.
- 👁️ Offer him a 1" block on a flat surface. Observe his grasp.
- 👁️ Show him how to put one block on top of another. Observe his attempts to do the same.
- 👁️ Replace the blocks with a small pellet (paper is safest) and draw his attention to it. Observe his visual attention and grasp.
- 👁️ Draw his attention to a small toy, then cover it with a cloth or cup. Observe any searching behaviour.
- 👁️ Shake and place a bell before him. Observe if he shakes the bell to show it to others, and how he explores it using his index finger.
- 👁️ Offer him a toy with a string attached. Observe if he pulls the string to get the toy.
- 👁️ Replace this with a pop-up or action toy. Activate it a few times to show him how to use it and then place it before him. Observe his attempts to activate it himself.
- 👁️ Engage him verbally and in play, for example, through peekaboo or clapping hands.

### 3. Observe his movements:

- 👁️ Encourage him to crawl by placing a toy a little distance away; stand him up holding on to a support.

### 4. Throughout the assessment, observe:

- 👁️ His vocalisation, social interaction, vision and hearing behaviour.



**TABLE 17: RED FLAGS AT 12 MONTHS**

- 💡/👁️ Baby doesn't crawl.
- 💡/👁️ She can't stand when supported.
- 👁️ She doesn't search for things that she sees you hide.
- 💡 She doesn't use word-like sounds.
- 💡/👁️ She doesn't use gestures, such as waving or shaking her head.
- 💡/👁️ She doesn't point at things.
- 💡 She's lost skills she once had.

### Abilities

#### 1. Movement and posture

- 🧠/👁️ The child walks independently with her feet slightly apart for balance.
- 🧠/👁️ She squats to pick up a toy from the floor.

#### Fine motor

- 🧠/👁️ She may show a preference for using one hand over the other.
- 👁️ She turns the pages of a book, several at a time.
- 👁️ She holds a pencil with her whole hand, not her fingers.

#### 2. Language and communication

- 🧠/👁️ She uses a mixture of word-like sounds (jargon) and several (6–20) words.
- 🧠/👁️ She obeys one keyword instructions, for example, “Get your shoes” or “Shut the door”.
- 🧠/👁️ She points to some body parts, like hair, shoes or nose on request.

#### 3. Social

- 🧠 She plays contentedly alone but likes to be near a familiar adult or older sibling.
- 🧠/👁️ She’s beginning to understand what someone else may want or like from their expressions and actions (18–24 months).

#### 4. Cognitive

- 👁️ She does to-and-fro scribbling with a pencil.
- 👁️ She makes a tower of three 1” blocks.
- 🧠/👁️ She uses objects functionally and socially, such as a hairbrush on her mother’s hair, or a cup to her mother’s mouth.

#### 5. Visual behaviour

- 🧠/👁️ She’s interested in pictures, and watches the movement of people, animals and vehicles.



Bends down to pick up objects



To-and-fro scribbling with an immature pencil grasp

#### 6. Hearing behaviour

- 🧠/👁️ She locates sounds and responds to her name.

#### 7. Independence

- 🧠 She uses a spoon to feed herself.
- 🧠 She indicates her toileting needs.

## How to observe abilities at about 18 months

### 1. Ask if the parents have any concerns:

- 💡 About the child's health or development (Table 18).
- 💡 About her walking, talking, understanding, hearing or vision.
- 💡 About her eating and sleeping.

### 2. Observe pre-school children as follows:

- 👁️ Place a few 1" blocks in front of her and encourage her to build a tower.
- 👁️ Replace the blocks with a simple shape-matching puzzle with a circular hole and a matching shape (can be made with coloured paper, cardboard, plastic or wood) and encourage her to do the same.
- 👁️ Place a paper and a crayon or pencil before her (don't put the pencil in her hand) and encourage her to use it. Observe if she prefers using one hand over the other, her pencil grasp, and her drawing.
- 👁️ Show her a small picture book. Name a few pictures and encourage her to describe them. Observe how she communicates and shows.
- 👁️ Use simple toys such a doll or teddy bear, cup, spoon or brush, and observe her 'feed' the doll or teddy or give 'food' to her mother or the examiner. Encourage her to speak and play. Observe how she uses the toys, and her social interaction.
- 👁️ Point to a distant object to see if she turns to look at it.
- 👁️ Ask her, or ask her parent to ask her to point to her hair, shoes and nose.

### 3. Observe her movements:

- 👁️ Ask her to pick an object off the floor.
- 👁️ Encourage her to walk.

### 4. Throughout the assessment, observe:

- 👁️ Her vocalisation, social interaction, vision and hearing behaviour.



Matches one puzzle shape



Makes a tower of three 1" blocks



Points to some body parts



TABLE 18: RED FLAGS AT 18 MONTHS

- 💡/👁️ Baby doesn't walk.
- 💡/👁️ She doesn't point to show things to others.
- 💡/👁️ She doesn't respond to her name.
- 💡 She doesn't say any words clearly.
- 💡/👁️ She doesn't mind or notice when a caregiver leaves or returns.
- 💡/👁️ She's lost skills she once had.
- 💡 She's lost skills she once had



## Abilities

### 1. Movement and posture

- 🧠/👁️ The child runs with good balance, avoiding obstacles.
- 🧠/👁️ He walks up and down stairs holding on to a rail or wall, two feet to a step.
- 👁️ He throws a small ball overhand and forwards.
- 👁️ He walks into a large ball when trying to kick it. He kicks well at 2½ years.

### Fine motor

- 👁️ He holds a pencil between his thumb and fingers (2½ years).
- 🧠 He usually uses his preferred hand.
- 👁️ He can turn pages one at a time.

### 2. Language and communication

- 🧠 He uses 50 or more recognisable words (frequently repeating words) and joins two or more words together.
- 👁️ He can name familiar objects and people in pictures.
- 🧠 He refers to himself by name or pronoun (“me”).
- 🧠/👁️ He understands two keyword commands, for example, “Put the spoon in the bag”.
- 👁️ He can select an object when asked to pick it from a display of three or four objects.
- 🧠/👁️ He understands action words, such as ‘running’, and ‘eating’, from about 2½ years.

### 3. Social

- 🧠 He constantly demands attention.
- 🧠 He plays contentedly near other children but not with them.

### 4. Cognitive

- 👁️ He can build a tower of six or seven cubes.
- 👁️ He can place simple shapes like a circle, square and triangle in a jigsaw puzzle, if given in the right order, at 2 years, and in random order at 2½.
- 👁️ He makes circular scribbles with a pencil; can imitate a vertical line and a horizontal line (2½ years).
- 👁️ He can match four colours correctly (2½ years).

### 5. Play

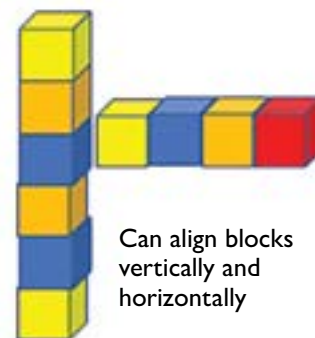
- 🧠/👁️ He pretends in play, for example, a brick is used as a car or a banana as a telephone. He feeds a doll (2½ years).



Does circular scribbles and copies a straight line



Can turn pages one at a time



Can align blocks vertically and horizontally



Puzzle pieces in the random/ right order

### 6. Independence

- 🧠 He can use an open cup to drink and a spoon to feed himself.
- 🧠/👁️ He locates sounds and responds to his name.

## How to observe abilities at about 2—2½ years

### 1. Ask if the parents have any concerns:

- 💡 About the child's health or development (Table 19).
- 💡 About the child's walking, talking, understanding, hearing or vision.
- 💡 About the child's eating and sleeping.

### 2. Observe pre-school children as follows:

- 👁️ Place a few 1" blocks in front of the child and encourage him to build a tower and train.
- 👁️ Arrange the shapes of a simple shape-matching puzzle with a circle, square and triangle randomly and then correctly above the puzzle; encourage the child to do the same. Observe whether he matches randomly or well.
- 👁️ Give him a piece of paper with a pre-drawn vertical and horizontal line and ask him to copy it with a pencil or crayon. Demonstrate, if necessary. Observe if he prefers using one hand over the other, his pencil grasp, and his scribble or drawing.
- 👁️ Name some pictures in a small picture book and encourage him to describe them. Observe how he communicates and shows.
- 👁️ Place five or six familiar objects before him, such as a ball, cup, spoon, doll and plate in a semicircle (Annexure 2). Ask him to name each toy. Then ask: "Give me the —(naming a toy)", without looking or pointing at it to avoid giving clues. Then ask for two things at the same time: "Give me — and —". Note his understanding and expression.
- 👁️ Put blocks or cards of four colours in front of him and ask him to find those of the same colour.
- 💡 Engage him verbally and in play.

### 3. Observe his movements:

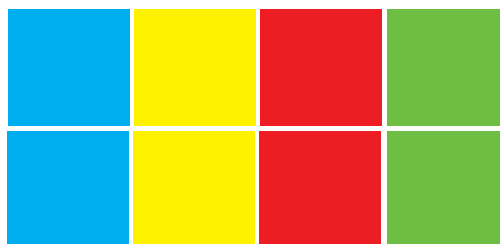
- 👁️ Get him to throw and kick a ball.
- 👁️ Get him to pick up an object from the floor.

### 4. Throughout the assessment, observe:

- 👁️ His vocalisation, social interaction, vision and hearing behaviour.



Easily completes a puzzle of three shapes



Can match colours



Can give an object on request



TABLE 19: RED FLAGS AT 2 ½ YEARS

- 💡/👁️ The child doesn't use many single words.
- 💡/👁️ He doesn't know what to do with everyday things, such as a brush, phone, fork or spoon.
- 💡/👁️ He doesn't follow simple instructions.
- 💡/👁️ He drools.
- 💡/👁️ He walks unsteadily.
- 💡/👁️ He's lost skills he once had.

**Abilities**

**1. Movement and posture**

- The child can stand and walk on tiptoes.
- She can throw a ball to another person and catch a large ball.

**Fine motor**

- She holds a pencil between her first two fingers and thumb.
- She can cut paper with toy scissors (neatly from 3½ years).

**2. Language and communication**

- 💡 She uses three- or four-word sentences and asks ‘who’, ‘what’, and ‘where’ questions.
- 💡 She uses prepositions such as ‘in’, ‘on’, and ‘under’, pronouns such as ‘I’ and ‘you’, and plurals.
- 💡 She follows instructions with three keywords, for example, “Put the red pencil in the cup”.
- 💡 She identifies pictures with action words, for example, “Which one is running/ eating?”
- 💡 She identifies objects by function, such as “Which one do we eat with?”
- 💡 She understands descriptive concepts, such as ‘big’, ‘little’, ‘hot’ and ‘the same’.

**3. Social**

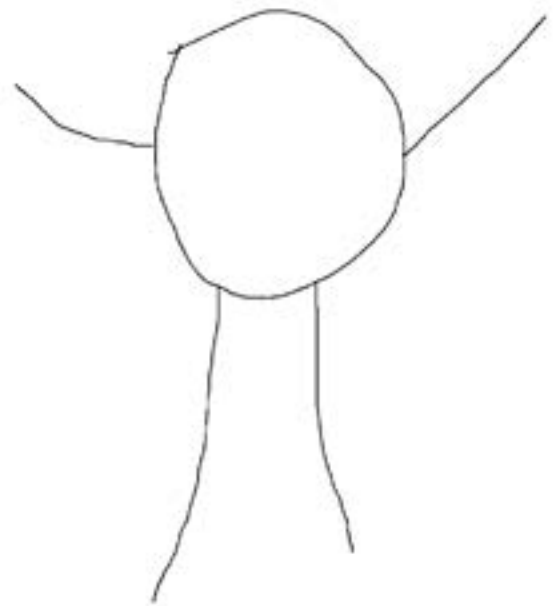
- 💡 She joins in play, takes turns and shares with other children.
- 💡 She understands the idea of ‘mine’, ‘his’, and ‘hers’.

**4. Cognitive**

- She builds a tower of 9–10 blocks, a 4-block train with a chimney, and a bridge of 3 blocks from a model (33–42 months).
- She counts by rote up to 10 or more and, when asked, can give “just two” objects.
- She copies a circle, imitates a cross and draws a person with a head and one or two other parts.
- She can match colours and knows the names of some colours.

**5. Play skills**

- 💡 She plays imaginatively (make-believe) about daily events, invented people and objects.



Draws a simple figure when asked to draw a person



Action pictures

**6. Independence skills**

- 💡 She can feed herself well, wash her hands and put some clothes on.

## How to observe abilities at about 3 years

### 1. Ask if the parents have any concerns:

- 💡 About the child's health or development (Table 20).
- 💡 About her walking, talking, understanding, hearing and vision.
- 💡 About her eating and sleeping.

### 2. Observe pre-school children as follows:

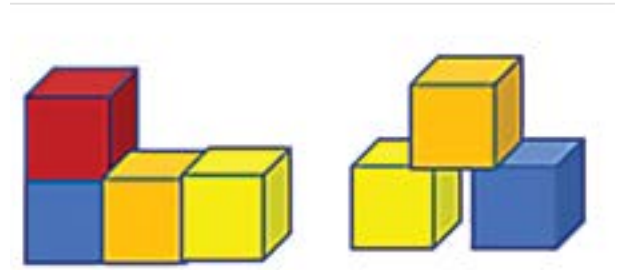
- 👁️ Make a model of a bridge or train with 1" blocks behind a sheet of paper so that she can't imitate you, and then ask her to do the same.
- 👁️ Place blocks or cards of four colours in front of her and ask her to match and name the colours.
- 👁️ Offer a simple shape-matching puzzle with a circle, square and triangle. Arrange the shapes in random order. Observe whether she matches them randomly or well.
- 👁️ Present a pre-drawn circle and 'V' shape and ask her to copy them. Demonstrate, if necessary. Then ask her to draw a man.
- 👁️ Show her some action pictures and ask: "Which one is running/ eating/ sleeping/ drinking?" Observe how she communicates and shows.
- 👁️ Place five or six items with which she is familiar in a semicircle before her. Give three-keyword directions, such as "Put the red car on the plate", without looking or pointing at them to avoid giving clues.
- 👁️ Use simple toys and objects to encourage her to pretend play. Observe her social imagination.

### 3. Observe her movements:

- 👁️ Get her to run, throw, catch and kick a ball.

### 4. Throughout the assessment, observe:

- 👁️ Her vocalisation, social interaction, vision and hearing behaviour.



Can copy a three or four-block model of a bridge and a train



Can copy a circle and a 'V' shape



TABLE 20: RED FLAGS AT 3 YEARS

- 💡/👁️ She is unsteady and falls a lot.
- 💡/👁️ She has very unclear speech.
- 💡/👁️ She doesn't put two or more words together.
- 💡/👁️ She doesn't understand simple instructions.
- 💡/👁️ She can't use simple toys and simple puzzles.
- 💡/👁️ She doesn't show any pretend or make-believe play.
- 💡/👁️ She doesn't play with other children.
- 💡/👁️ She doesn't make eye contact.

### Abilities

#### 1. Movement and posture

- He stands on one foot for three to five seconds, and hops on one foot.
- He's good at throwing and catching.

#### Fine motor

- He holds and uses a pencil in a dynamic tripod grasp with good control, like an adult.

#### 2. Language and communication

- 🗣️/👂 His speech is now mostly clear and intelligible.
- 🗣️/👂 He listens to and describes events from the past, sometimes confusing fact and fantasy.

#### 3. Social

- 🗣️/👂 He understands taking turns and sharing.
- 🗣️ He would rather play with other children than alone.
- 🗣️ He shows a sense of humour in social activities and talks about his interests.
- 🗣️ He is sympathetic towards playmates in distress.

#### 4. Cognitive

- He builds three steps with six blocks after the demonstration.
- He copies a cross, and draws a person with a head, legs and trunk and, usually, arms and fingers.
- He matches and names the primary colours correctly.
- He counts by rote up to 20 or more, and up to four or five with one-to-one correspondence (Annexure 2).

#### 5. Play skills

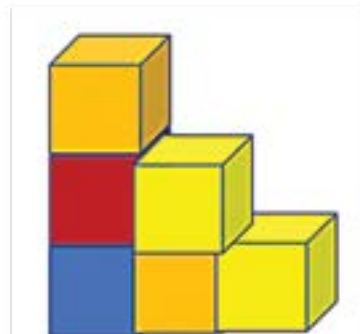
- 🗣️ He role-plays with dressing-up and takes part in complicated games.

#### 6. Independence skills

- 🗣️ He washes and dries his hands.
- 🗣️ He can dress and undress (except shoelaces).



Names four colours correctly; counts correctly up to 20



Copies a six-block model of steps



## How to observe abilities at about 4 years

### 1. Ask if the parents have any concerns:

- 💡 About the child's health or development (Table 21).
- 💡 About his walking, talking, understanding, hearing and vision.
- 💡 About his eating and sleeping.

### 2. Observe pre-school children as follows:

- 👁️ Make a model of three steps with six 1" blocks, behind a sheet of paper to avoid imitation, and ask him to do the same.
- 👁️ Take blocks or cards of four colours and ask him to name the colours and count.
- 👁️ Present a pre-drawn circle, cross and square and ask him to draw the same (Annexure 3). Demonstrate, if necessary. Then ask him to draw a man. Observe his pencil grasp and drawing.
- 👁️ Place six to eight items that he is familiar with in a semicircle before him. Give him a joined-up four- or five-keyword direction, in short joined-up sentences, for example, "Put the red car on the plate, and spoon in the cup", without looking or pointing to avoid giving clues. Note his understanding and expression.
- 👁️ Encourage him to pretend play with the toys.

### 3. Observe her movements:

- 👁️ Get him to throw, catch, run and kick a ball.

### 4. Throughout the assessment, observe:

- 👁️ His vocalisation, social interaction, vision and hearing behaviour.



Copies a circle, a cross and, by 4½ years, a square



Draws a person with a head, body and some facial features



**TABLE 21: RED FLAGS AT 4 YEARS**

- 💡/👁️ He falls down a lot.
- 💡/👁️ He has trouble scribbling.
- 💡/👁️ He is disinterested in interactive games or make-believe play.
- 💡/👁️ He doesn't follow two-keyword requests.
- 💡/👁️ His speech is unclear and difficult to understand.
- 👁️ He ignores other children or doesn't respond to people outside the family.
- 👁️ He's lost skills he once had.

### Abilities

#### 1. Movement and posture

- The child walks on a narrow line. She stands on one foot for 8—10 seconds.
- She hops 2—3 metres forward on each foot.

#### Fine motor

- She writes and draws with good control.

#### 2. Language and communication

- 🗣️ Her speech is clear, fluent and grammatically correct.
- 🗣️ She uses the future tense. She can say her home address, full name, age and usually, birthday.
- 🗣️ She understands most of what is said and uses terms such as 'first' and 'last'.

#### 3. Social

- 🧠 She can hide and modulate her emotions socially and responds appropriately.
- 🧠 She chooses her own friends, wants to please them and be like them.
- 🧠 She shows a definite sense of humour.

#### 4. Cognitive

- She can make models with blocks, such as four steps from 10 blocks when shown (5—5½ years).
- She copies a square and a triangle.
- She draws a person with head, trunk, legs, arms and features.
- She counts 10 or more things correctly, and knows numerical order, for example, "Show me the third block".

#### 5. Play skills

- 🎮 She plays imaginatively, and creates scenes and stories using miniatures. She understands rules of games.

#### 6. Independence skills

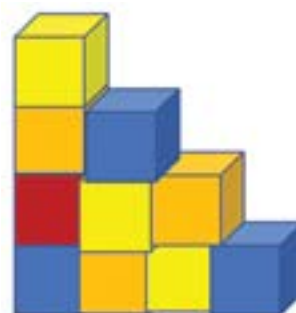
- 🧼 She washes and dries her face and hands.
- 👕 She dresses, undresses, and can use the toilet independently.



Has a mature grasp



Draws a person with its main features and an outline of its clothes



Copies a 10-block model of steps

## How to observe abilities at about 5 years

### 1. Ask if the parents have any concerns:

- 👁️ About the child's health or development (Table 22).
- 👁️ About her walking, talking, understanding, hearing and vision.
- 👁️ About his eating and sleeping.

### 2. Observe pre-school children as follows:

*(New step/observation)*

- 👁️ Make a model of four steps with ten 1" blocks, behind a sheet of paper to prevent imitation, and ask her to do the same. Observe her attempts.
- 👁️ Use blocks or cards of four colours in front of her, and ask to name the colours and count.
- 👁️ Present a pre-drawn circle, cross, square and triangle shapes and ask her to draw the same. Demonstrate, if necessary. Ask her to draw a man. Observe her pencil grasp and drawing (Annexure 3).
- 👁️ Place six to eight familiar items in a semicircle before her, and give her a joined-up five- or six-keyword direction, such as, "Put the red car on the big plate and the spoon in the cup". Avoid looking at the objects as this would give her clues. Note her understanding and expression.
- 👁️ Have a conversation with her about her interests, school and friends.
- 👁️ Encourage her to pretend play with the toys.

### 3. Observe her movements:

- 👁️ Get her to throw, catch, run and kick a ball.

### 4. Throughout the assessment, observe:

- 👁️ Her vocalisation, social interaction, vision and hearing behaviour.



Copies a triangle shape



Arrangement for checking language skill



**TABLE 22: RED FLAGS AT 4 YEARS**

- 👁️/👁️ She doesn't respond to people well or have conversations.
- 👁️/👁️ She has trouble focusing on one activity.
- 👁️/👁️ She's unusually withdrawn and inactive.
- 👁️/👁️ She doesn't use plurals or past tense properly.
- 👁️ She can't brush her teeth, wash or dry her hands, or get undressed without help.
- 👁️ She's lost skills she once had.

## The Essential Physical Examination

### 1. Growth

Measure the child's height, weight and head circumference, and plot the measurements on a growth chart (Annexure 5). Children with stunted growth may be poorly nourished, have a thyroid deficiency, iron deficiency anaemia or chronic illness. They are at a much higher risk of developmental problems.

#### *Malformation*

Look for dysmorphic features and congenital malformations. Unusual facial or other features may indicate a genetic disorder.

### 2. Basic neurological examination

#### *Examine:*

- Posture as she sits, stands and walks
- Muscle tone
- Muscle strength
- Tendon reflexes
- Asymmetry in any of the above

A child with a developmental impairment may also have a neurological disorder like cerebral palsy or muscular dystrophy.

### 3. A complete systemic examination by a children's doctor

Some conditions that cause developmental problems, like metabolic problems, also affect other body systems.

### 4. Signs of injury

These may indicate child abuse, be accidental or self-inflicted, and require early identification and treatment.



Measuring head circumference



Measuring length of infants less than two years of age

## Making Sense of Assessment Findings

There are four main steps to making sense of the findings of an assessment:

1. **Understanding the impact of the risk factors** on the child's development.
2. **Understanding the significance of any delay** or impairment.
3. **Combining information** to decide the next step.
4. **Using an algorithm** to explore the likely causes of a significant delay or impairment in:
  - Motor development
  - Language development
  - Global development

These steps are described in more detail below:

### 1. Understand the impact of the risk factors on the child's development

Ask the child's parents about any factors that might put the child at risk. Then assess their likely impact on his development (Table 23).

**TABLE 23: LEVELS OF RISK AND THEIR IMPACT**

<b>No risk</b>	No risk in any category.	Advise the parents on preventing future risks.
<b>Uncertain risk</b>	One or two risk factors with no definite impact, such as poverty in the context of a supportive environment and sensitive parenting.	These children may be vulnerable to even minor adversity. Provide early intervention, and advise parents on nutrition, care, and ways to ensure good health.
<b>Definite risk</b>	Multiple risk factors or a single risk factor with a significant impact on the child's health, care or function, such as severe neglect or premature birth requiring intensive care, or recurring or severe ill-health, or poverty affecting care and nourishment.	These children are very likely to have poor achievement outcomes. They would benefit from early intervention, supported education, and ongoing help and support for their parents.

### 2. Understand the significance of any delay or impairment

Some degree of delay at any age is normal. For example, some typically developing two-year-olds may function at 20-month level. A two-year-old child functioning below 18 months' level indicates a significant delay that is likely to have a long-lasting impact on her progress. A child functioning in between these two levels is considered to have a borderline developmental delay. The borderline level is likely to be significant if there are other risk factors or red flag indicators present. In this situation, a full assessment of health and development and ongoing monitoring is required (Table 24).

**TABLE 24: SIGNIFICANCE OF DELAYS OR IMPAIRMENT**

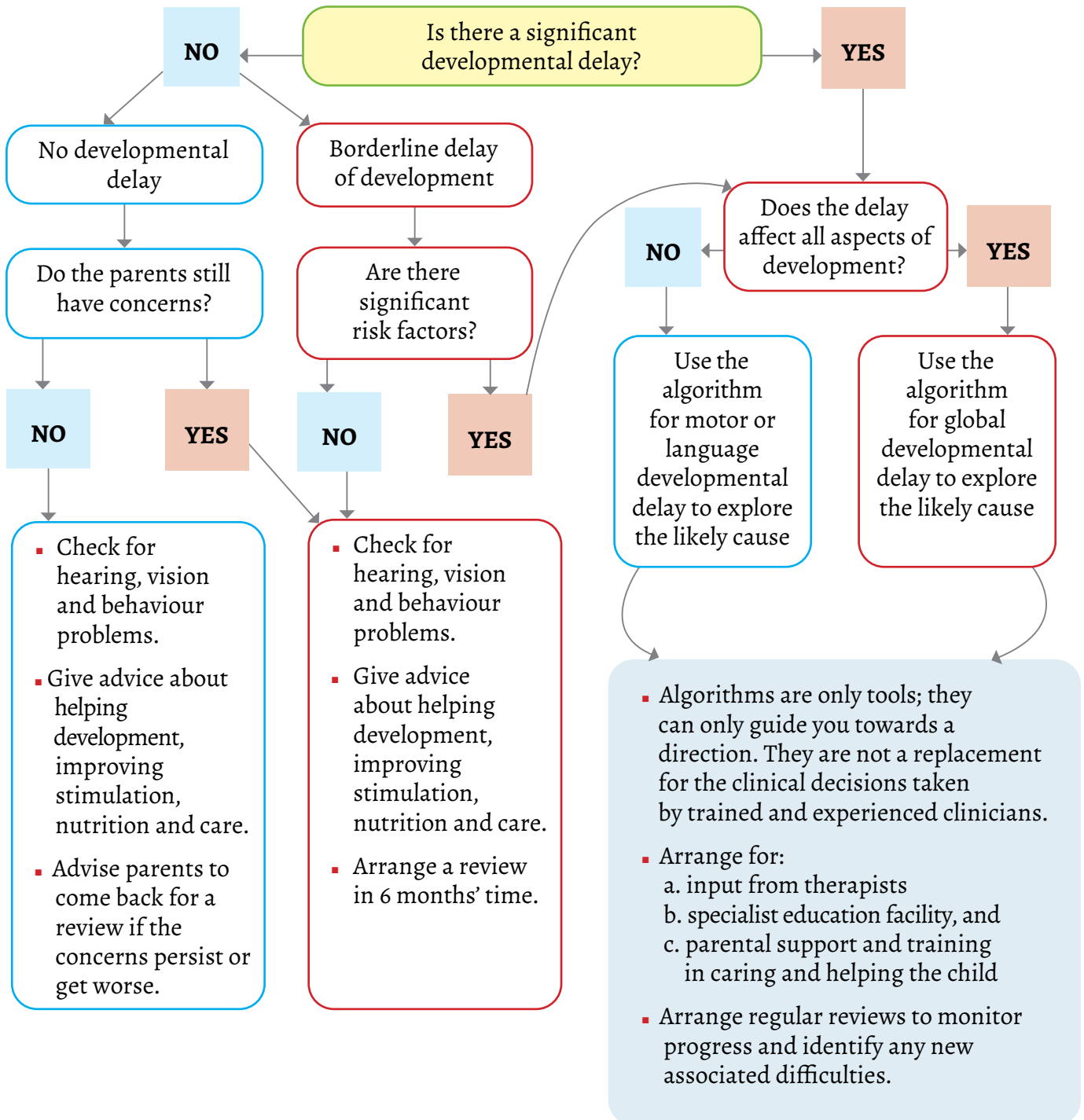
Age (years)	Typical range	Borderline range*	Significant delay**
1	Up to 9–10 months	Up to 7 months	Below 7 months
2	Up to 20 months	Up to 18 months	Below 18 months
3	Up to 2½ years	Up to 2 years	Below 2 years
4	Up to 3½ years	Up to 3 years	Below 3 years
5	Up to 4 years 3 months	Up to 3½ years	Below 3½ years
		* More significant if there are associated risk factors or red flags	
		** Likely to have long-term impairment	



### 3. Combine the information to decide the next step

Follow the process outlined below (Figure 16).

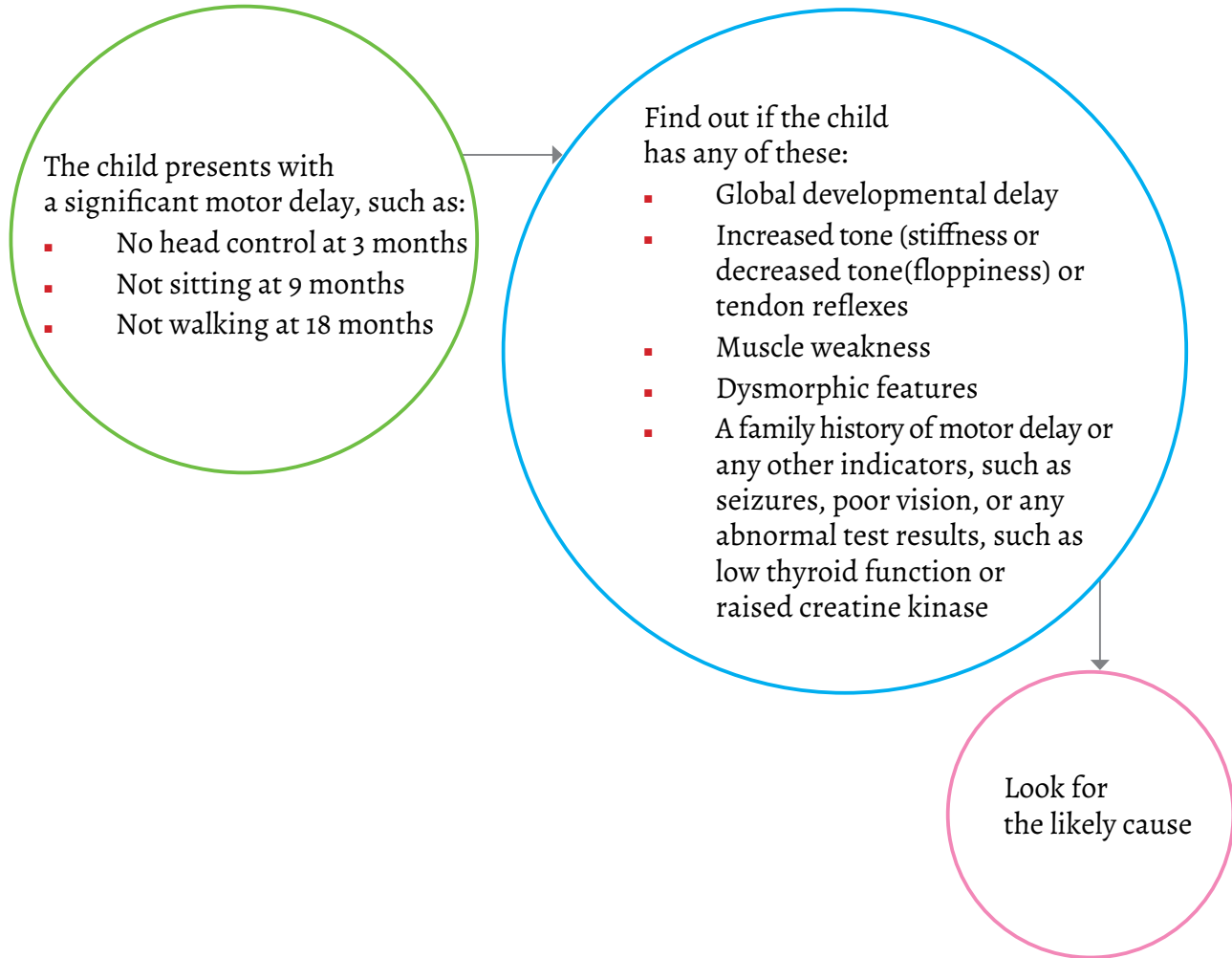
**Figure 16: Deciding the next step after an assessment**



#### 4a. An algorithm to explore the causes of motor delay

Follow the process outlined below (Figure 17). If you suspect a delay, consider some of the likely causes (Table 25).

**Figure 17: Exploring the cause of motor delay**



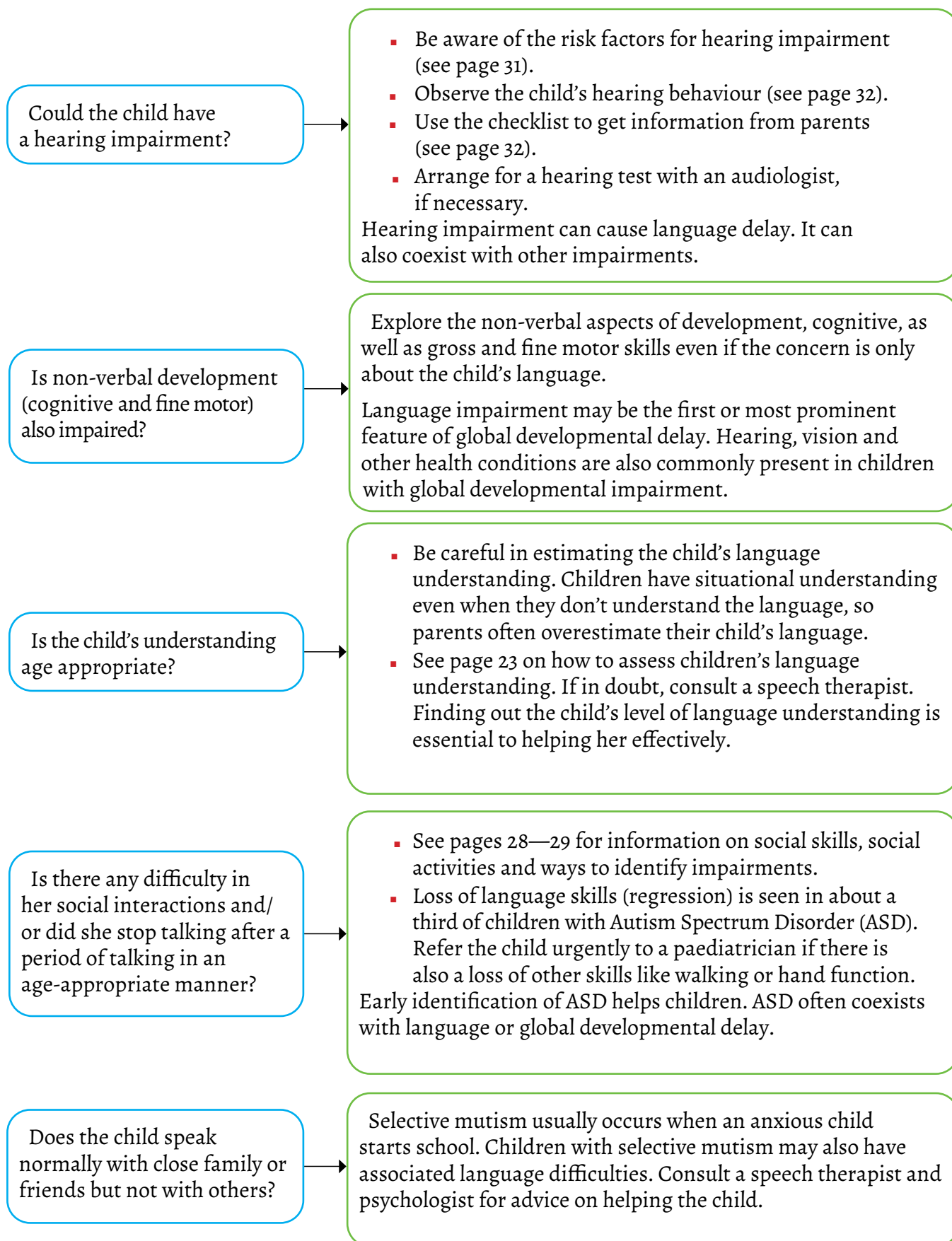
**TABLE 25: POSSIBLE CAUSES OF MOTOR DELAY**

Global impairment	Abnormal muscle tone/ posture/ reflexes	Dysmorphic features	Muscle weakness	Family history	Other indicators	Likely cause
+/-	Usually increased tone and reflexes		+		+/- seizures Birth hypoxia	Cerebral palsy
++	Hypotonia	+				Down Syndrome or other genetic syndrome
++	Hypotonia					Global development delay
	Hypotonia		++	+/-	Raised CK (CP)	Muscular dystrophies, such as Duchenne
+			+	+/-	Poor health Enlarged liver	Metabolic disorders
					++	Familial, like bottom shuffling

#### 4b. An algorithm to explore the causes of language delay

Children with language delays or impairment have a high risk of developing behaviour problems and reading difficulties (Figure 18). Advise parents on how to manage their behaviour, promote reading (Annexure 6) and help their child's language development.

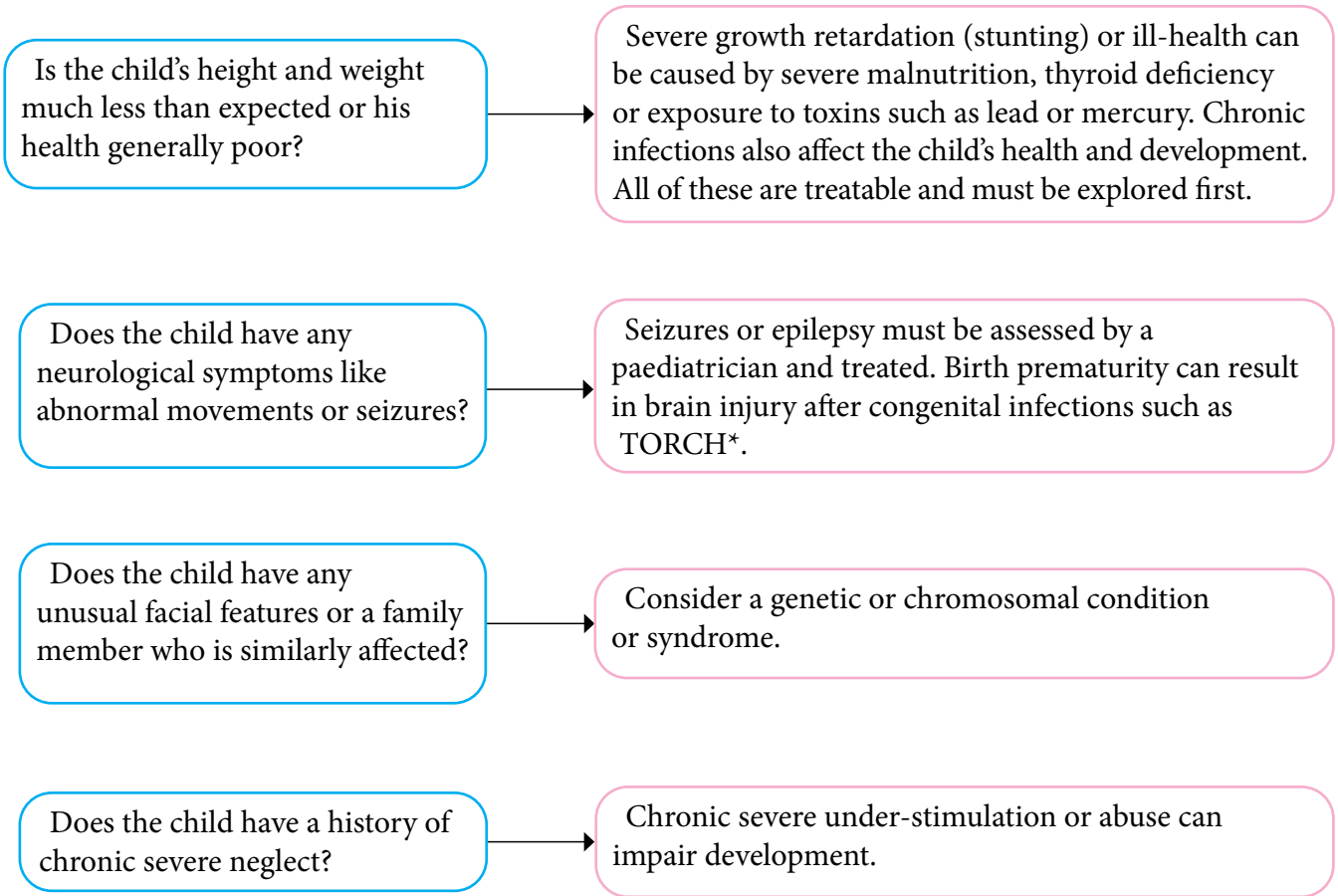
**Figure 18: Exploring the causes of language delay**



#### 4c. An algorithm to explore the causes of global developmental delay.

Global developmental delays or impairment affect multiple domains (Figure 19), such as non-verbal (cognitive/ fine motor) and language development.

**Figure 19: Exploring the causes of global delay**



\**Toxoplasma, Rubella, CMV and Herpes*

# Frequently Asked Questions

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## **Q Does a mild developmental delay matter?**

**A** Don't neglect mild delays! They usually result from inadequate stimulation due to poverty, family circumstances or lack of awareness. However, the reason might also be one of the many lesser known genetic conditions or poor vision, hearing or health. Some causes, such as nutritional deficiencies, iron deficiency anaemia, stunting and thyroid deficiencies, can be prevented or treated. These must be the first questions we ask.

EARLY INTERVENTION CAN BE LIFE CHANGING FOR CHILDREN AT RISK FOR DEVELOPMENTAL DISABILITIES

## **Q Does a significant or severe developmental delay improve with time?**

**A** All children learn and improve with time. However, severe delays aren't just delays. They're impairments with long-term implications for children and their families. There's no way to accurately predict the extent to which a child will improve. Timely help using evidence-based methods is the best way to ensure progress.

## **Q What is the difference between specific and global delay?**

**A** When development is affected in only one domain, such as language, for example, we call it a 'specific' developmental delay. The term 'global' is used when both verbal (language) and non-verbal (cognitive or learning, thinking, problem solving) aspects are affected.

## **Q Why should we look for the cause of a developmental delay?**

**A** Some developmental delays, like those caused by thyroid hormone deficiency or iron or nutritional deficiency may be treatable. Others may be a presentation of a condition like autism or cerebral palsy which may benefit from suitable treatment. Parents whose children are diagnosed with genetic conditions need advice. It is crucial for an assessor to explain to parents that neither they nor their way of bringing up the child is to be blamed for the child's difficulties.

## **Q Where can I get more information about developmental delays?**

**A** Reliable sources include [enablenet.info](http://enablenet.info), [latikaroy.org](http://latikaroy.org), and [nayi-disha.org](http://nayi-disha.org).



# After the Assessment: Taking Helpful Action

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## 1. Inform the child's parents

This is the main way to enable parents to look after their child in the best possible way. Give them information about:

- **Your findings:** Be positive, honest and empathetic. Explain in simple language.
- **The implications for the child:** How any identified difficulty may affect her function and behaviour.
- **The risks for the future:** How the present difficulties may increase the risk of future difficulties.
- **How to help:** What they can do to help their child and what others, such as therapists, can do.

## 2. Refer and follow up

- Refer the child to other professionals such as therapists for vision or hearing checks.
- Arrange a follow-up, if required.
- Link parents to support services.
- Inform parents about local NGOs, and services for social, financial and professional support.
- If appropriate, offer parents information about online sources of information and support.

# And Finally, Some Important Messages!

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1. **Your purpose is to help the child and her family, not upset or burden them.**  
Work as a team with others. Organise and coordinate to reduce stress for the family.
2. **Every assessment is also an intervention.**  
Be mindful of your actions – the child and the family are learning from you!
3. **Do no harm.** Know your limits and seek help and advice from others. Never give false assurances or advice.
4. **Helping doesn't have to wait until after the assessment. You can always help:**
  - Improve the care of the child.
  - Improve her diet and nutrition.
  - Show her parents ways to stimulate her.
  - Improve her health.
  - Support her parents psychologically, socially and financially.
5. **Communicate with empathy.** Finding out that your child has a long-term problem is the hardest thing to bear. Sugar-coating doesn't help, but listening, empathy and support do.
6. **Do's and don'ts of good practice**
  - Do partner with parents to achieve the best outcome for their child. Make sure they feel that you have listened to them, and that they understand your description of the child's needs.
  - Don't make premature judgements about the presence or absence of a problem. Gather and analyse the information before coming to any conclusions.
  - Don't give false assurances as this can delay getting the child the help she needs.
  - Don't unnecessarily worry the child and her family.
  - Do be honest and supportive. Discuss the next steps with them carefully.
  - Do acknowledge that all children and all families have their strengths. Stress this to the parents.

# 1. Supporting Parents of Children with Disabilities

---

Helping the family is the best way of helping the child – they mutually affect each other's wellbeing. Parents know their child, they live with and care for the child; they are best placed to help the child. They may, however, be hampered in their efforts due to:

- Lack of knowledge about the child's condition and needs.
- Not receiving adequate support.
- Their negative feelings towards the child adversely affecting parent-child interactions and the child's behaviour.

As a practitioner, you know more about the child's difficulties and needs and how to meet those needs. Enable and support the family and work together with them to achieve the best outcome for the child.

There are several ways you can help and support a family:

## 1. Talking to families and carers

Parents are affected by the way practitioners talk to them and they remember what was said to them for a long time. Being sensitive to parents' situations and feelings and talking to them in a supportive and honest way gives them the confidence to deal with the child's difficulties effectively. Parents often feel overawed by the situation and don't have the confidence to ask the right questions. Be respectful of their situation and help them ask for more information; you should also provide some follow-up contact that parents can approach later.

## 2. Helping the family understand the child's condition

The family needs to understand what is affecting the child, how it can get better or what may happen in the future. They must learn some skills and acquire some knowledge to help the child. Provide information in a way that they can understand. Ask them to tell you what they've understood. Arrange for training so that they can learn the required skills for helping their child.

## 3. Listening and explaining

Working with and supporting a family requires patient listening and finding out about their beliefs and understanding. At the same time, you must be open and honest about describing the child's situation and needs without undermining the parents' efforts or making them feel small. All families are different but most need help in understanding what has caused the condition. If this is not explained well, some parents may suffer long-lasting guilt or blame themselves unnecessarily.

#### **4. Support networks**

The whole family is often deeply affected by a child's difficulties and the uncertainty around what is wrong or what may happen in the future. This affects their ability to help the child. They need resources and support to help the child. Some parents, however, become isolated because of the social stigma about disability. Provide information about parents' groups or voluntary organisations and encourage them to stay connected with their local community.

Caring for a child with a developmental disorder is costly for families in terms of both time and money. Families are usually not aware of the available benefits and services. Give them information or direct them to a suitable source of information.

#### **5. Parents may need help organising activities for the child**

Like others, children with developmental disorders benefit from inclusive leisure activities. It is not always easy for parents to find such activities and many parents may not be able to afford them. Help parents find supportive and inclusive activities for their child.

#### **6. Be positive**

Be realistic, but also positive and hopeful. Parents go through an inevitable phase of confusion and sadness. They don't need false reassurance. They need to hear positive messages about their child and appreciation of their efforts.



## 2. Activities to Promote Children's Hand Function

---

It is best to think of activities for each level of the child's arm and hand: shoulder, whole arm, whole hand and fingertips. Here are activities you should suggest to parents whose children's hand function needs strengthening. Remind them that children are better able to use their hands when they are in a stable posture – there should not be any undue stress on their body or legs, so consider providing support to stabilise their body and feet.

### 1. **Shoulder level**

**Create activities that make the child move his arms in big circles**

- Waving a ribbon or a cloth (tie the ribbon or cloth to the the child's wrist or a bracelet if they cannot hold it). Doing this activity to music or in a group with others makes it more creative and interesting.

### 2. **Whole arm**

**Create activities that move the raised arm**

- Get the child to draw or colour on paper or board at shoulder level while standing.
- Tape the paper to the underside of a table. Have the child lie on his back under the table, extend his arm with crayon or chalk in hand, and draw on the paper.

### 3. **Whole hand**

**Create activities to do with the whole hand**

- Squeezing a sponge or a soft ball: Get the child to soak the sponge in water and squeeze it out.
- Putting lids on containers: Getting kids to sort the right lids for containers facilitates categorising as well as hand movements.
- Kneading dough is a good activity and becomes interesting when it's part of making something with coloured clay.

### 4. **Fingertips**

**Create activities that get children to use their fingertips**

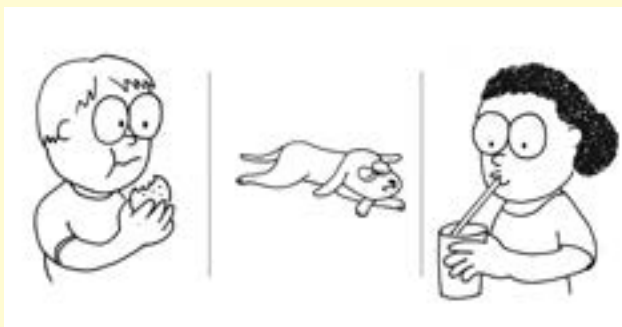
- Sorting buttons or coins and putting them in containers.
- Building models with small cubes.
- Picking up small things with tongs or tweezers to put in containers.
- Using elastic bands to tie twigs or bits of string together.

### 3. Basic Objects and Pictures for Assessments

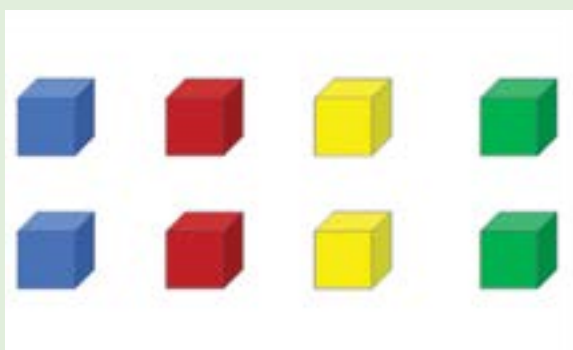
Here's an idea of the sort of objects and pictures you can use to conduct your assessments. Share it with parents and encourage them to use similar objects with their children at home.



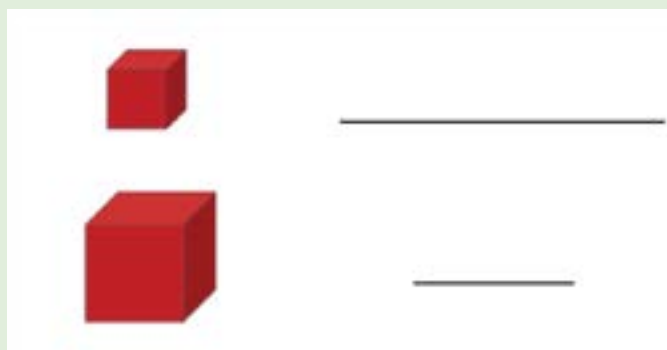
Use familiar toys, objects and pictures to assess a child's language skills.



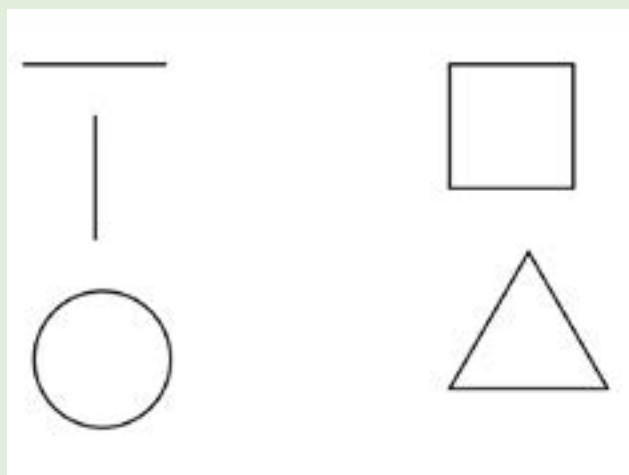
Use action pictures like these to assess language development in younger children by asking, "Who is eating/ sleeping/ drinking?"



Blocks in primary colours can be used to assess a variety of abilities, such as hand function and grasp, colour matching and naming, building models of trains, towers and bridges, and counting.



Objects and drawings like these can be used to assess descriptive language concepts by asking, "Show me the big/ small one," or "Which one is longer/ shorter?"



Use shapes like these to assess a child's pencil grasp and cognition. Point to one of the figures and say, "Draw one like this one".



# 4. Helping Children's Language Development

---

Children learn to talk through their interactions with others. Here are some tips to share with parents so that they can help their children develop better language skills.

## 1 Activities to do with a child who is not yet talking

- **First, some basics on how to make interactions more effective:**
  - Reduce or stop background noise such as television or radio.
  - Gain your child's attention – create interest with enthusiasm.
  - Encourage the child to listen to different sounds, to look at you or to look at the object or picture you want to show her.
  - Pay attention to the child and respond to her effort to interact with you.
  - Be patient and give time for her to respond.
  
- **Sounds**
  - Listen to the sounds the child makes.
  - If she makes a sound instead of a word, accept that sound as the word and say the right word back to them. For example:  
Child: "Ka".  
You: "Yes, car!"  
Avoid asking the child to "say this" and "say that" as this can discourage her from wanting to talk.
  - Make sounds that match with the actions of toys or animals.
  
- **Gestures and pointing**
  - Get the child to look at you and then use gestures like pointing, eating or drinking while saying a word. This will help the child understand the meaning of the word.
  
- **Nursery rhymes and action songs**
  - Sing and repeat songs and action rhymes. Keep activities short!
  - Use lots of gestures and facial expressions.
  
- **Offer choices as often as possible** (for example, "Would you like some water or some milk?" while holding one in each hand. Respond to the child's looking or pointing).
  
- **Turn-taking**
  - Take turns singing.
  - Games with anticipation: 'peekaboo', 'ready, steady, go'.
  - Copying or imitating each other's sounds.
  - Share toys, like by rolling a car or ball back and forth between you.

## 2. Supporting a child who is not using sentences well

### ■ First, some basics

- Use actions and gestures with what you say – sometimes learning an action for a word can help children learn the word itself.
- Wait and listen for the child to talk. Give her time to respond.
- Model words over and over. Use the right words even if the child gets it wrong. Don't force him to repeat words after you.
- Speak slowly and clearly but with normal intonation and emphasis.
- You may have to raise the volume of your voice slightly, but don't shout.
- If you're using pictures, start with simple pictures and point to the part of the picture that you're referring to.

### ■ Choose an activity depending on the situation and the child's ability

- Model language: Comment and repeat simple words and phrases when playing favourite games or during everyday activities like housework.
- Build and expand: If your child says a word, say it back to him adding another word to show him he can say more more. For example:  
Child: "Daddy"  
You: "Daddy gone"  
Child: "Ball"  
You: "Yes, big ball! Let's play with it!"
- Don't just limit your language to naming things. Use a range of words, like naming words ('banana', 'cup', 'spoon', 'nose', 'eyes'), doing words ('run', 'jump', 'sleeping', 'eating'), describing words ('hot', 'cold', 'big', 'little') and position words ('in', 'on', 'under').
- Play games: Playing gives children a chance to use language in a fun way and strengthens their inner language.
- Play pretend games, starting with mimicking day-to-day activities like cooking and getting ready.
- Expand games to include storymaking, for example, running a shop, getting dolls/ toys to mix together at a birthday or wedding party.
- Have conversations: Remember a conversation is interactive, NOT just questions and answers!
- Let your child start the conversation. Wait for them to say something.
- Be encouraging and accept what your child says even when you're not sure what he means.
- Talk about things that your child may be interested in. For example, going to a park with a friend, travelling on a train or going to a shop.
- Read out a story and talk about how the characters feel and behave.

### Avoid

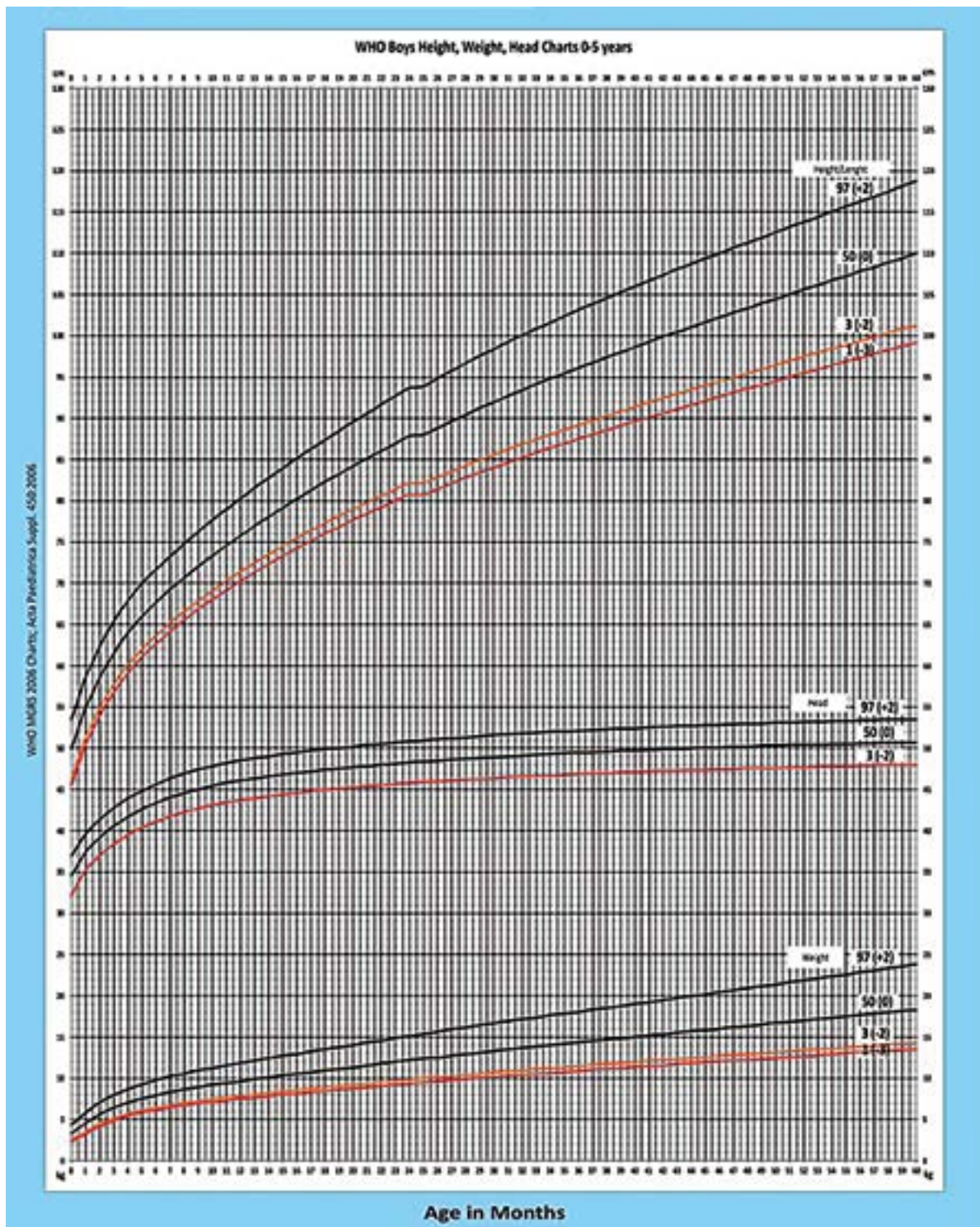
- Asking them to correct themselves and say it again
- Finishing their sentences for them
- Asking too many questions

# 5. Using Growth Charts

Ensure that the measurement is accurate – using wrong measurements creates false anxiety or reassurance and can be harmful to the child.

For infants born premature (before 37 weeks gestation) apply correction before plotting on the chart, until the age of two years. For example, an infant born at 32 weeks needs correction of  $40 - 32 = 8$  weeks, so, at the age of six months, the measurement will be plotted at the four-month mark.

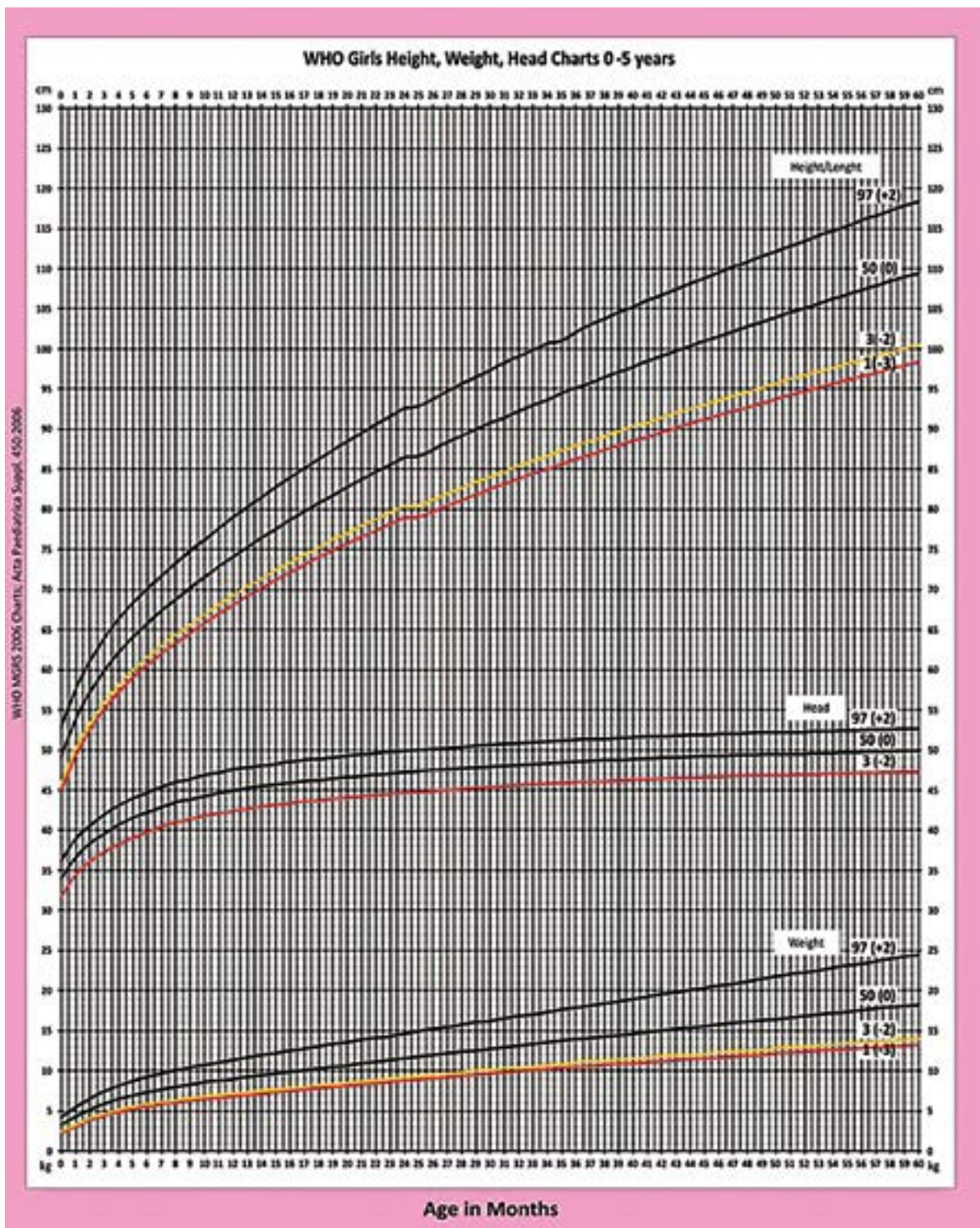
Measurements of length or height are difficult to do accurately in children under the age of two years. Use the right equipment and only measure length/ height when there is reason to do so. Don't rely too much on any one measurement.





Seek the advice of a paediatrician if:

- Growth appears to be below the red line, indicated by 1(-3).
- Growth appears to be below the yellow line, indicated by 3(-2)) with other concerns about health.
- Serial measurements taken about three months apart indicate a fall towards the red line, mainly when associated with other concerns about health.



# 6. Supporting Movement And Mobility

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There are many activities that parents can do to support their child's movement and mobility in the course of their daily routines. Share the ones listed here, and advise them to keep these simple interventions fun and stress-free for baby and themselves.

## Birth—4 months

When picking up baby, make sure to support him behind the head and shoulders.

- Use a soft cloth or mat to place baby on his back. Hold a toy or hanging mobile to encourage movement. Tickling his hands or feet will also encourage movement.
- Place baby on his front on a soft sheet or mat a few times every day, with a toy in front of him that he can look at or play with. Always be with him when he is on his tummy. Don't place him on his tummy just after feeding.
- Place him on his side a few times a day, supported by a cushion or pillow. This encourages him to bring his hands together.
- Gently stroke and massage him to help him develop body awareness and the sensation of touch, as well as relax and strengthen his muscles. This is a good time to talk and interact with him.

## 4—8 months

- **Lying on his tummy a few times a day is important for baby. It strengthens his neck and shoulder muscles.**
  - Encourage baby to push up on his arms and reach for toys. He will soon start to do this on his own. Pushing up will also strengthen his body for sitting.
  - Place some toys around him to encourage him to turn and reach in all directions.
- **Practise rolling him between his back and front.**
  - Guide him by placing your hand on one hip and moving him over slowly, so that he is lying on his side.
  - Guide him over onto his front. You may need to help him free his arms. Throughout, give him time to move with you.
- **Practise sitting**
  - Place baby on your lap, facing you. He enjoys songs, playing games and gently bobbing up and down or rocking. At first he will need to be held securely. As he progresses you can support him by holding just his hands or around his pelvis.
  - Sit with baby between your legs. Support your back against a wall or sofa, if needed, for comfort. Support baby from behind and set up a toy in front to play with together. Interesting toys for this age group include: mirrors, rattles and texture books to feel and point to.
  - Encourage baby to hold toys of various shapes and textures with two hands, for example, a bottle and toys to pass between hands.
  - As he approaches eight months, baby may be able to sit unsupported. Encourage him to prop himself up with his hands in front or to the side. You could use cushions to support him if he is unsteady. Continue practising sitting with your support if needed.



## 9—12 months

- Place baby on his tummy. At this age he is likely to twist and turn. Encourage him to push up from this position to experience being on his hands and knees.
- Rather than always picking him up, encourage him to climb up on you.
- Encourage him to play in kneeling, with toys placed on a sofa or low table in front of him. This will help strengthen his leg muscles for standing and walking.
- Encourage him to pull up and stand against furniture by placing toys at different heights. Stay behind him, if needed, for safety.
- In sitting, place toys around baby. Play and encourage him to turn and move.

### Baby walkers

Your child does NOT need a baby walker to learn to walk.

- A baby walker can expose your child to potential dangers, as they allow him to reach places he wasn't able to reach from the floor, or fall down steps. If you do use a baby walker, make sure the environment is safe and child-friendly.
- Walkers may topple over if they catch on a rug or threshold. Floors must be smooth and even when walkers are used.
- It is far better for baby to play on the floor than to use a walker. Children need to play on the floor to develop strength, balance and coordination skills.



# 7. Supporting Children's Reading and Literacy Skills

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Children's ability to read is built on the foundation of sound recognition and spoken words. Supporting children's language helps their reading ability to develop and activities to help reading skills also help the learning of language – the two are closely related.

Here are four activities that promote children's reading skills. Explain them to parents so that they can follow up with the child at home.

## 1. Oral language activities

**Talking with children: First, reduce or stop other noises such as TV and radio. Then, do the following activities as appropriate for the child's age:**

- **Self-talk:** Give a running commentary, with interest, about the activities that you do with your child. For example, "I am washing my baby", "I am going to get a toy now". Speak clearly and keep your sentences short.
- **Parallel talk:** Give an ongoing description of the child's activities. For example, "You are eating a biscuit".
- **Repetitions:** Repeat what the child has said. For example:  
Child: "Dog".  
You: "Dog running".
- **Expansions:** Say a more sophisticated version of what the child has said:  
Child: "Dog".  
You: "Yes, that is a dog, the dog is running".
- **Expansion + Elaboration:** Encourage expanding of what the child has said and provide a model. For example:  
Child: "Dog".  
You: "What is the dog doing?"  
Child: "Dog eating".  
You: "Yes, the dog is eating his food".

## 2. Language sound awareness activities

### Play with the sounds of words

- Use a percussion instrument (or tap on a pot!) to break a word into its sound units or syllables. For example, "To-ma-to", "aa-loo ka-cha-loo".
- Give children some of the sound units of a word for them to put the word together. For example, "To-ma-?".

### Sing and play with rhymes

- Sing and enjoy rhymes with the child.
- While singing a nursery rhyme, ask the child to complete the rhyme.
- Recite sentences with repeated sounds, for example, "*Chandu ke chacha ne Chandu ki chachi ko chandi ki chammach se chatni chatai*" or "Peter Piper picked a pot of pickled peppers". Ask the child to find the sound that repeats.

### 3. Print awareness activities

#### Share a storybook or picture with salient print

- Choose (or create by enlarging the print size in a picture story) a picture or storybook with print embedded within the illustrations. Children are more likely to visually attend to print when they are reading books in which print is a salient feature. Encourage the child to attend to print features by asking questions, making comments about the print, and tracking the print while reading.

#### Print enriched play

- Make and use street or shop signs in play. Make up such signs for games or draw the child's attention to signs as you take him for a walk.

### 4. Interactive reading

Storybook reading is a powerful enhancer of oral language proficiency, particularly for vocabulary development. Active participation occurs when children are asked to name and point to items and events. The following behaviours can be used while reading a story in an interactive manner:

- Repetitions: The adult repeats what the child says verbatim.
- Expansions: The adult repeats what the child says but adds additional linguistic information.
- Open-ended questions: The adult asks the child questions requiring more than a yes/no response, such as 'who' and 'what' questions.
- Praise: Give the child positive feedback about his involvement.





## ADDITIONAL RESOURCES

# 1. Hearing Tests for Children

Clinicians usually observe or ask about children's hearing behaviour, and refer them for testing to audiologists when necessary. A range of hearing tests are conducted in a soundproof room. One of these is described below.

### The Distraction Hearing Test

Age	7–18 months
Testing room	Soundproof, free of distractions
Testers	Two trained staff – an examiner who acts as a distractor, and an assistant

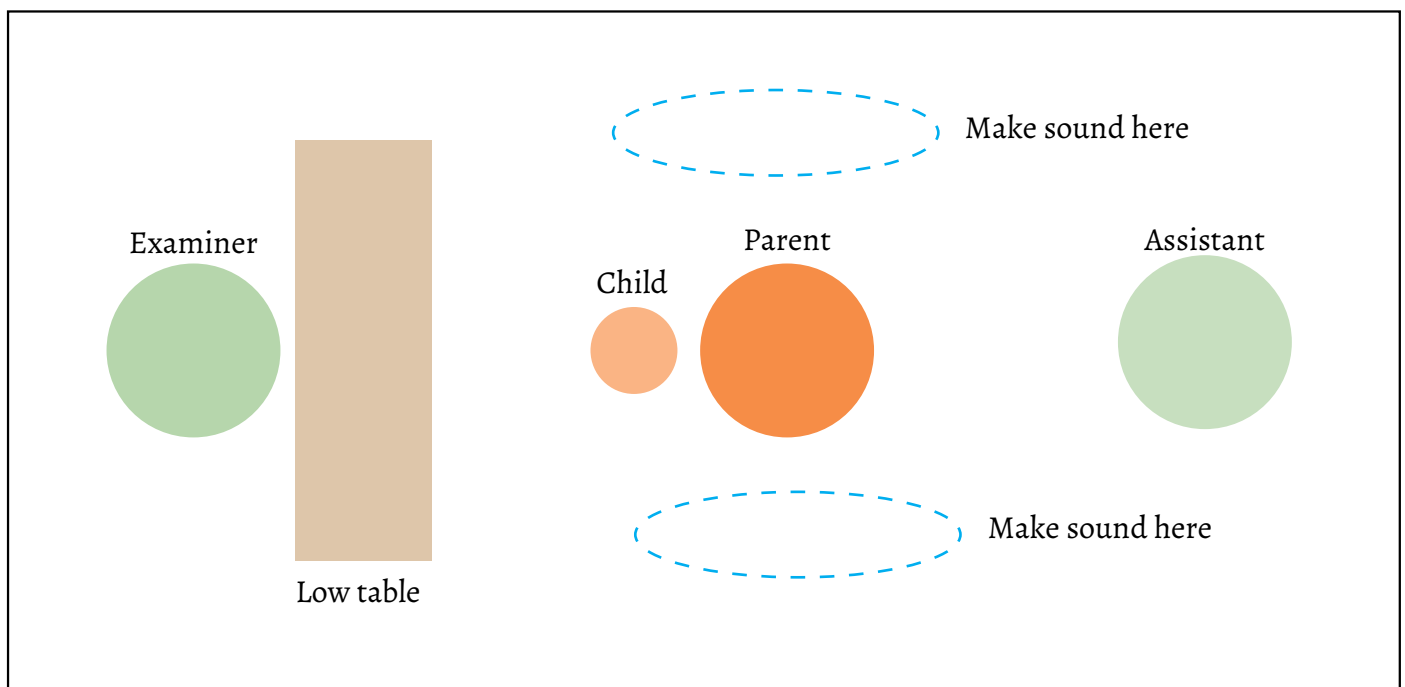
#### Process

1. Seat the child in his parent's lap, supported at the waist and facing forward. Seat the distractor in front of the child, preferably with a small table in the middle, and the assistant behind the parent.
2. The distractor draws the child's attention to a small toy without making much noise and hides it under a cloth.
3. As soon as the toy is hidden, the assistant presents a sound stimulus for five seconds on a horizontal level with the ear at a 45° angle. Low pitched 'oo, oo' or humming and high pitched 'ss, ss' are suitable sounds at 30 decibels of loudness. The examiner watches the child's response.
4. If the child turns to look at the assistant, the assistant smiles and gently guides the child's attention back to the examiner with minimal interaction.
5. Repeat steps 1–4 on the other side.

#### Points to note about the Distraction Hearing Test

Poor technique or an unsuitable environment for this test create a high chance of missing the hearing loss if:

- The child reacts to a visual cue, such as knowing someone is behind her.
- The child reacts to a sound cue, such as a loud sound behind her.
- The sounds are too loud.





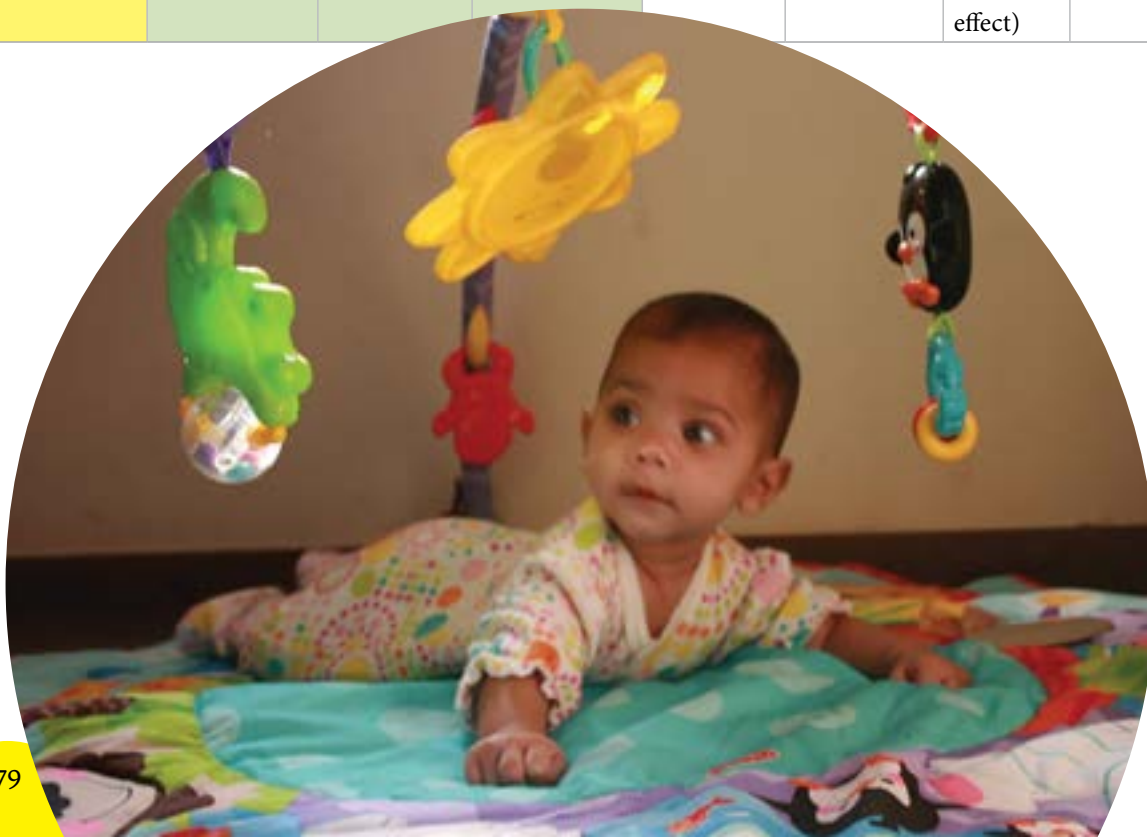
## 2. A Framework for Developmental Observations: Birth—13 Months

	Newborn	3 months	4 months	6 months	8 months	9 months	12 months	13 months
<b>Posture/ gross motor movements and reflexes</b>								
<b>Supine</b>	Head to side	Head in midline		Lifts head spontaneously				
<b>Pull to sit</b>	No head control		Good head control	Lifts head in anticipation				
<b>Sitting</b>	Flopping forward	Head held up, back curved	Straight back, head control	Sits with hand for support	Sits with no support			
<b>Prone</b>		Lifts head and shoulders	Most primitive reflexes markedly lessen by this age and are outgrown by 6 months	Chest off on hands	Forward parachute			
<b>Supported standing</b>				Bears weight on legs in supported standing	Downward parachute reflex	Stands holding on	Walks with hand held	Walks alone
<b>Hand function/ fine motor</b>								
Look for the way of approaching with one or both hands, grasping and releasing spontaneously and on request								
	Persistent fisting beyond 2 months is abnormal	Hands open, finger play	Reaches with one hand: 5—6 months; starts to mouth: 6 months; transfers from hand to hand: 7 months		Index finger approach: 8—9 months	Pincer grasp: 9—10 months; releases 1" brick in a container	Mature grasp of 1" brick	Can give a toy when asked
<b>Visual behaviour</b>								
<b>Visual fixation and following</b>	Looks towards a bright light	Follows face beyond midline	Follows objects 180°		Fixes eyes on 1 mm sized sweets (like cake decorations)			

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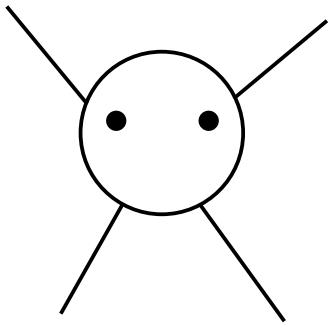
	Newborn	3 months	4 months	6 months	8 months	9 months	12 months	13 months
<b>Hearing behaviour</b>								
<b>Response to sound</b>	Startled	Searches for sound		Turns head towards sound				
<b>Language and communication</b> Observe vocalisation and gestures to attract others' attention, indicate needs, in response to others' vocalisation and to share emotions								
		Cooing		Responds to own name	Babbling: 6—9 months		Understands words: 8—10 months	
<b>Personal-social</b> Note awareness of parents/ carers and strangers, initiation of interactions and response to others' approaches								
	Smiles responsively: 6 weeks			Stranger awareness: 6—7 months	Waves bye-bye	Points to request and to show: 9–12 months		
<b>Play</b> Observe how the child uses the toys (that is, exploratory or functionally), and whether or not he plays socially with others, such as by sharing the fun								
				Bangs and mouths	Looks for a fallen toy; pulls a toy with a connected string	Plays pat-a-cake; presses button to activate a toy (cause and effect)	Holds the phone to ear	Uses a cup/ spoon/ brush on himself



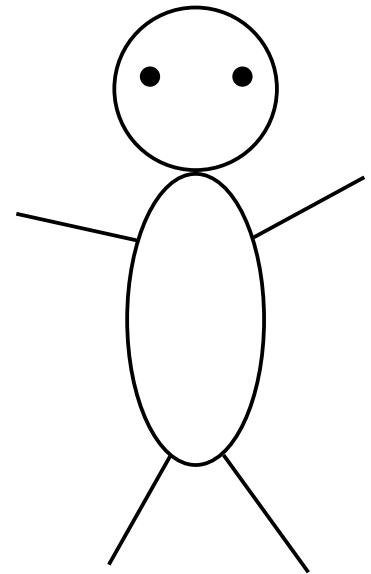
# 3. A Framework for Developmental Observations: 15 Months—5 Years

	15 months	18 months	2 years	2 ½ years	3 years	3½ years	4 years	5 years
<b>Fine motor/ perceptual coordination</b>								
Note spontaneous effort, attention to directions, ability to copy from a model, attention to task, and quality of movements								
<b>Constructional skills with 1" cubes</b>	Puts one cube on top of another	Makes a tower of 3 cubes	Makes a tower of 6 cubes	Puts 3 cubes in a row for a 'train'	Makes a 'train' with a 'chimney'	3-brick bridge from a model	Steps of 6 cubes from a model	Steps of 10 cubes from a model
<b>Pencil grasp and drawing</b>			In prone at distal end	Middle of pencil	Mature grasp (tripod grasp)			
	Makes a mark on paper	Straight scribble	Circular scribble	Line in imitation	Copies: O	Copies: +	Copies □ : 4—4½ years	Copies: Δ
<b>Shape sorting (visuo-spatial skills)</b>		Simple shapes: O and □	O, □ and Δ	O, □ and Δ given in a random order	Good scanning of shape sorter before putting shape in, and rotating shapes to align; little or no pushing of shapes			
<b>Language, communication and social interaction</b>								
Note way of talking, use of language to express needs, share interest and converse								
<b>Understanding</b>	Simple requests in context: "Give me —"	Knows 2—3 body parts	Gives 2 or more objects when asked	Prepositions: 'in', 'on'; gives objects by function*	Prepositions: 'under' / 'over'; Size: 'big' / 'small'	Size: 'longer' / 'shorter'; names four colours (colour matching 2½ years)	Can follow a 'joined up' direction**	
<b>Communication and social interaction</b>	Initiates communication, shows, points, many spontaneous words, repeats words		Puts 2 words together in phrases		Sentences of 3+ words, personal pronouns ('I', 'mine'). Can give full name and sex. Asks 'what' / 'where' questions		Joined sentences, speech mostly clear	
<b>Play and social interaction</b>								
Note initiating interactions and responding to parent/ examiner/ other children, and use of eye contact and gestures								
	Brushes own/ mother's hair	Brushes doll's hair, may feed/ put doll/ teddy to bed	Plays with small toys, relates 2 toys. Watches other children.		Develops sequence with small toys. Plays with other children. Can share. Offers comfort.		Role plays and makes up stories. Understands how others may think.	
* First, make sure there is a cup, a glass and a spoon within the reach of the child, and then, without indicating with your finger or eyes, say, "Give me the one we drink with" or "Give me the one we eat with".								
** First, make sure that the two things that you want to ask for are within the reach of the child, and then, without indicating with your finger or eyes, say, "First give me the pencil and then put the spoon in the cup".								

Getting children to draw a human figure, a man or daddy, or woman or mummy is an easy way to glimpse an aspect of their developmental maturity. By the age of three years most children draw a person as a circle with arms and legs coming out of it, sometimes with some added dots for eyes.



By five years, however, their drawing is much more refined, with the head and the trunk drawn separately and arms and legs coming out of the trunk.





## **About the Author**

Dr Ajay Sharma (FRCP, DCH, MSc) is a neuro-developmental paediatrician. He recently retired as the Clinical Director of Community Children's Services at Evelina Children's Hospital at Guy's and St Thomas' Hospital, London. He is a regular volunteer at the Latika Roy Foundation, Dehradun, and an advisor for Nayi Disha, Hyderabad.

Ajay has worked with children with a wide range of developmental disabilities, and has a passion for enabling parents and practitioners to improve children's outcomes. He has created resources to help parents and practitioners learn and apply ways to promote children's development, organised and taught at training programmes, and spoken at conferences internationally. He has written books and articles on child development and an early intervention method (EmPOWER) for autism. He runs a website ([www.enablenet.info](http://www.enablenet.info)) to empower parents and practitioners on autism and child development.





## **About the Publisher**

The Latika Roy Foundation (LRF) is named after Latika Roy, an inspiring teacher who set off in the 1950s to pursue her passion for education under the renowned Maria Montessori, and a girl named Moy Moy, who had a rare form of cerebral palsy. What began as a school for three children now offers cradle-to-adulthood services, including early intervention, special education, therapy, vocational training and placement assistance, counselling, outreach and advocacy, among others. With a vision of a better world for children with disabilities and a mission to provide specialised, localised services to children with disabilities and their families, LRF is a family-centred, rights-based organisation that strives to ensure that every child is recognised as precious.

Every child's as  
unique as their fingerprint but  
as different as we are from each other,  
we are also more similar than not in how we  
developed in and outside the womb. This book,  
although conceived specifically as a guide for child  
development practitioners, will be an invaluable aid to  
anyone working with or raising kids.

Written by a paediatrician with decades of experience  
both in India and the West, it presents in an easy-to-  
follow way, the key stages of development and what  
practitioners can do to ensure that the children  
in their care achieve their best potential.



**Latika Roy Foundation**

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