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PART 3

Watch Them Bloom

From those first smiles and the very first steps, to the first day at school and eventually college, one of the greatest joys of parenthood is witnessing your child grow and flourish. However, parenting is much more than simply watching from the sidelines – it is also about knowing what to expect, understanding why it happens and taking intentional steps to nurture and support your child's growing-up journey.

Part 3 of this book discusses child growth and development, with comprehensive chapters covering different stages of childhood, growth tracking and monitoring, common growth issues, developmental milestones, as well as common neurodevelopmental issues.

An Overview of Child Growth and Development

Being a parent means you have the front-row seat to the breath-taking spectacle of your child's growth and development. From the delicate fragility of infancy to the burgeoning independence of adolescence, each stage presents unique challenges and triumphs. Understanding these developmental phases can equip you with the knowledge and patience to support your child's journey.

Did you know?

At birth, the average baby's brain is about 25% the size of an adult brain. It doubles in size in the first year and reaches 90% by age 5.

Infancy (0-12 months): The rapid ascent

Growth

Infancy is a period of phenomenal growth, arguably the fastest a human will ever experience. In the first year, babies' weight can triple, and their height can increase by 50%. Head circumference also sees significant growth, reflecting the rapid development of their brain.

- **Weight:** Newborns typically lose a small amount of weight in the first few days, but they quickly regain it and continue to gain about 150-200 grams per week for the first few months. By six months, their birth weight often doubles.
- **Height:** A baby grows about 2.5 cm per month during the first six months. This rapid elongation slows slightly in the latter half of the year.
- **Head circumference:** This is a crucial measure of brain growth. A baby's head circumference grows about 2 cm in the first month and approximately 12 cm in the first year.

Factors affecting growth: During this stage, **nutrition** is paramount. Breast milk provides the essential nutrients for this rapid growth. **Genetics** also play a significant role, predetermining a child's potential for height and weight.

Development

This is the foundation-laying stage, a period of astonishingly rapid development. Physically, newborns transition from reflexive movements to purposeful actions. They learn to lift their heads, roll over, sit, crawl and eventually, take their first wobbly steps. Sensory exploration is paramount; they discover the world through their senses, including touch, taste, smell, sight and sound.

Cognitively, infants begin to understand *object permanence* (the understanding that things continue to exist even when out of sight) and develop early language skills, from cooing and babbling, to responding to familiar voices. Socially and emotionally, they form deep attachments to their caregivers, building trust and emotional security.

Key developmental markers:

- **Physical:** Head control, rolling over, sitting, crawling, walking.
- **Cognitive:** Object permanence, responding to their name, understanding basic cause-and-effect.
- **Social/emotional:** Smiling, recognising familiar faces, forming secure attachments.

Sleep myth

Myth: "Babies need silence to sleep well."

Fact: Babies in the womb are used to constant noise (heartbeat, digestion, and muffled voices). After birth, gentle background sounds like white noise can help soothe babies and mimic the womb environment.

Toddlerhood (1-3 years): The energetic sprout

Growth

After the first year, growth slows down but remains steady. Toddlers become more active, and their increased mobility contributes to a leaner physique. Weight gain is approximately 2-3 kg per year, and height increases by about 12 cm. Head circumference growth also slows to about 2.5 cm for the entire year.

Factors affecting growth: Toddler growth can be a source of parental concern due to picky eating habits. However, as long as the child is offered a balanced diet, their growth will likely stay on track. **Physical activity** becomes a major factor, with toddlers expending more energy, which can influence their body composition.

Development

Toddlers are powered by a boundless curiosity, eager to explore every corner of their environment. Physical development continues at a rapid pace, with improved coordination and motor skills. Language explodes, with a burgeoning vocabulary and the formation of simple sentences to express their needs and ideas.

Cognitively, they develop symbolic thinking, leading to imaginative play and the use of objects to represent other things. Socially, they start asserting their independence, often leading to tantrums and power struggles. This is also a time of developing empathy and learning to share.

Key developmental markers:

- **Physical:** Running, jumping, climbing, fine motor skill development.
- **Cognitive:** Symbolic play, understanding simple instructions, early problem-solving.
- **Social/emotional:** Developing independence, expressing a wide range of emotions, engaging in parallel play.

Preschool (3-5 years): The steady climb

Growth

Growth in the preschool years is more gradual and predictable. Children gain an average of 2 kg and grow about 7 cm per year. Their bodies become more proportional, and their physical appearance begins to resemble that of an older child rather than a baby.

Factors affecting growth: Nutrition remains key, but a child's exposure to different foods and a healthy diet can impact their long-term health. **Sleep** also becomes a vital factor. Adequate rest is essential for the production of human growth hormone (HGH), which is primarily released during deep sleep.

Development

Preschoolers experience significant social and cognitive growth. They become more adept at language, using complex sentences and engaging in conversations. Imaginative play becomes more elaborate, reflecting their growing understanding of the world.

Cognitively, they develop a deeper understanding of numbers, letters and concepts like time and space. They begin to think logically and solve simple problems. Socially, they learn to cooperate, share, and take turns, forming friendships and navigating social interactions. Emotionally, they develop greater self-awareness and learn to regulate their emotions.

Key developmental markers:

- **Physical:** Improved coordination, refined motor skills, developing drawing and writing skills.
- **Cognitive:** Recognising letters and numbers, understanding stories, asking "why" questions.
- **Social/emotional:** Cooperative play, forming friendships, showing empathy, following group rules.

Middle childhood (6-12 years): The age of competence

Growth

This period is characterised by slow and steady growth. On average, children gain 2-3 kg and grow 5-6 cm per year. This stable growth allows their bodies to mature and their motor skills to be refined.

Factors affecting growth: Hormonal changes begin to subtly influence growth as the body prepares for puberty. **Lifestyle factors**, such as diet, exercise, and sleep, continue to be influential. The onset of **puberty** can differ greatly among children, causing variations in their growth patterns.

Development

This period is marked by consolidating skills and building confidence. Children become more physically coordinated, mastering skills like riding a bike and playing sports. Cognitively, they develop stronger logical thinking skills, allowing them to understand abstract concepts and solve more complex problems.

They begin to take pride in their abilities and achievements in school, acquiring knowledge and skills in various subjects. Socially, they form strong friendships and develop a sense of belonging to peer groups. They learn to navigate social hierarchies and develop their own unique identities. Emotionally, they develop a sense of competence and learn to manage their emotions effectively.

Key developmental markers:

- **Physical:** Refined motor skills, participation in sports and activities.
- **Cognitive:** Logical and abstract thinking, problem-solving, academic progress.
- **Social/emotional:** Strong friendships, sense of belonging, building self-esteem, emotional regulation.

Adolescence (13-18 years): The final spurt

Growth

This is the second major period of rapid growth. The adolescent growth spurt is driven by the hormonal changes of puberty. It is a time of significant change, with the body developing into its adult form.

- **Girls:** The growth spurt in girls typically begins between the ages of 10 and 12, with peak growth occurring around age 12. They can grow 20-25 cm and gain 15-20 kg during this period.
- **Boys:** Boys' growth spurt generally starts later, around age 12 to 14, with peak growth around age 14. They can grow 25-30 cm and gain 20-25 kg.

Factors affecting growth: Hormones, especially HGH and sex hormones (oestrogen and testosterone), are the primary drivers of this growth. **Genetics** play a significant role in determining

the timing and magnitude of this final growth spurt. **Nutrition** and **lifestyle** are still crucial for providing the building blocks for this rapid development.

Development

Adolescence is a period of dramatic physical, cognitive and social changes. Puberty brings about significant physical transformations, including growth spurts and the development of secondary sexual characteristics. Cognitively, they develop abstract and critical thinking skills, allowing them to consider hypothetical situations and engage in complex reasoning.

Socially, they strive for independence and autonomy, forming their own values and beliefs. They navigate complex social relationships, and romantic interests often emerge. Emotionally, they experience a wide range of emotions, often with heightened intensity. They grapple with questions of identity and purpose, and their place in the world.

Key developmental markers:

- **Physical:** Puberty, growth spurts, sexual maturity.
- **Cognitive:** Abstract thinking, complex reasoning, identity exploration.
- **Social/emotional:** Independence, evolving relationships (including romantic interests), developing personal values.

Growth myth

Myth: "Children grow at a constant, steady rate throughout childhood."

Fact: Growth occurs in spurts, not steadily. For example, infants can gain about 25 cm in the first year, while growth slows during early childhood and spikes again during puberty.

Understanding growth spurts

Growth spurts are natural periods of accelerated physical growth, primarily in height and weight. They are driven by hormonal changes and are a normal part of child development.

- **Infancy:** The most rapid growth spurt occurs in the first year of life.
- **Early childhood:** Growth slows but remains steady.
- **Puberty:** The second major growth spurt occurs during adolescence, with girls typically starting earlier than boys.

Signs of a growth spurt

- Increased appetite
- Increased need for sleep
- Temporary clumsiness
- Muscle aches and growing pains
- Changes in mood

Supporting your child during growth spurts

- Provide a healthy and balanced diet.
- Ensure adequate, quality sleep.
- Encourage regular physical activity.
- Be patient and understanding, as mood swings and clumsiness are common.

Each stage of child growth presents unique challenges and opportunities. By understanding these phases and providing consistent support, you can help your child navigate the ups and down of childhood and adolescence, empowering them to reach their full potential.

Keeping Track of Child Growth

As parents, we're constantly marvelling at the rapid changes our children undergo. From those first toothless smiles to the lanky limbs of adolescence, growth is a visible testament to their health and development. While every child grows at their own pace, understanding and tracking their growth patterns can provide valuable insights into their overall well-being.

Why tracking growth matters

Beyond the simple joy of seeing your child grow taller and stronger, tracking their growth serves several crucial purposes:

- **Early detection of health issues:** Deviations from expected growth patterns can be an early indicator of underlying health problems. Conditions like hormonal imbalances, nutritional deficiencies, or chronic illnesses can affect a child's growth. Regular monitoring allows for timely intervention and treatment.
- **Monitoring nutritional adequacy:** Growth is directly linked to nutrition. Tracking growth helps ensure your child is receiving the necessary nutrients for optimal development. Consistent weight gain and height increases indicate adequate caloric intake and nutrient absorption.
- **Assessing developmental progress:** Growth is a factor that impacts overall development. Tracking child growth provides a broader picture of your child's progress, often complementing their developmental milestones.
- **Peace of mind:** For many parents, tracking growth offers reassurance that their child is developing normally. It provides a tangible way to measure progress and address any concerns proactively.

Fun facts

- In the first 3 months, babies gain about 25 grams (about 1 ounce) every day – about the weight of a small grape!
- By 5 months old, babies typically weigh double their birth weight, and triple it by their first birthday. That's some serious growing!
- From ages 5 to 12, kids grow about 5 cm (2 inches) taller each year, almost the length of an adult's thumb!

A guide to track your child's growth

Tracking your child's growth can be done easily at home. Here's a simple guide:

1. **Gather your tools:**
   - A reliable digital baby scale (for infants) or a standard weighing scale (for older children).
   - A measuring tape or a stadiometer (a height measuring device).
   - A growth chart (available online or from your paediatrician).
   - A notebook or digital app to record measurements.
2. **Measure weight:**
   - For infants, weigh them without clothing or diapers.
   - For older children, weigh them in light clothing, preferably at the same time of day.
   - Record the weight in kilograms.
3. **Measure height:**
   - For infants, lay them flat on a firm surface and measure from the top of their head to the bottom of their heels.
   - For older children, have them stand straight against a wall with their heels, buttocks, and shoulders touching the wall. Ensure their head is level and measure from the floor to the top of their head.
   - Record the height in centimetres.
4. **Measure head circumference (for infants up to 2 years):**
   - Use a flexible measuring tape to measure around the largest part of the head, just above the eyebrows and ears.
   - Record the measurement.
5. **Record and plot measurements:**
   - Record the measurements in your notebook or app.
   - Plot the measurements on a growth chart.
6. **Consistency is key:**
   - Measure your child's growth at regular intervals, such as monthly for infants and every few months for older children.
   - Use the same scale and measuring technique each time to ensure accuracy.

Understanding growth charts

Growth charts are standardised tools that track and compare your child's growth to that of other children of the same age and sex. They typically include percentiles, which indicate where your child's measurements fall relative to other children.

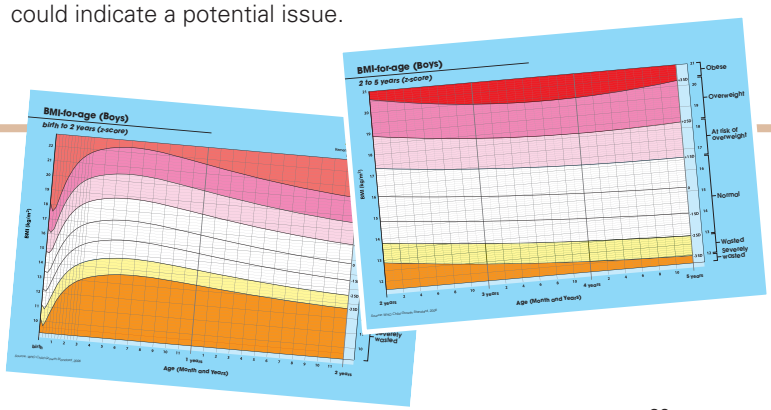
Types of growth charts

The World Health Organization (WHO) has a variety of Growth Standards that can be used to track your child's growth. These charts are used for children from birth to 5 years and are based on data from healthy, breastfed infants.

- **Weight-for-age:** These charts are used to track your child's weight according to his/her age from birth to 5 years old. With these charts, you can detect if your child is underweight.
- **Length/height-for-age:** These charts are used to track your child's length or height according to his/her age from birth to 5 years old. With these charts, you can detect if your child is shorter than expected for their age.
- **BMI-for-age:** These charts are used to track your child's Body Mass Index (BMI) according to his/her age from 2 to 5 years old. With these charts, you can detect if your child is underweight, at a healthy weight, overweight or obese.
- **Other charts:** There are also other types of charts which can be used to track growth such as weight-for-length/height, and head circumference (used especially in infancy). There are also growth charts for children aged 2-18 years from the Centres for Disease Control and Prevention (CDC).
- Visit this link to download and print a growth chart:
  - WHO: https://www.who.int/tools/child-growth-standards/standards
  - CDC: https://www.cdc.gov/growthcharts/cdc-charts.htm

Interpreting growth charts

- **Percentiles:** A percentile shows how your child's measurements compare to other children of the same age and gender. For example, if your child's weight is in the 50th percentile, it means that your child is heavier than 50% of peers and lighter than the other 50%.
- **Growth curves:** Lines on the chart represent typical growth patterns. Ideally, your child's measurements will follow a steady curve over time.
- **Significant deviations:** A significant drop or jump from your child's usual growth curve or percentiles may be cause for concern. Consult your paediatrician if you notice any significant changes.
- **Individual variation:** Remember that growth charts are just a guide. Children grow at different rates, and some children may naturally be taller or shorter, heavier or lighter, than others.
- **Head circumference:** For babies, head circumference is tracked to monitor brain growth. An unusually large or small head circumference could indicate a potential issue.



When to consult a paediatrician

While growth charts provide valuable information, they should not replace professional medical advice. Consult your paediatrician if you have any concerns about your child's growth, especially if you notice:

- Sudden or significant changes in growth patterns.
- Failure to gain weight or height.
- Concerns about your child's overall health or development.
- If your child's growth percentile drops two major percentiles.
- Head circumference that deviates greatly from expected growth.

By actively tracking your child's growth and understanding the information provided by growth charts, you can play a vital role in ensuring their healthy development. Remember, every child is unique, and growth is just one piece of the bigger picture. Enjoy the journey of watching your child grow and thrive!

Dealing with Common Growth Issues

Watching your child grow and develop is a source of immense joy. However, there can be moments of concern, particularly when you notice they seem to be lagging behind their peers. Growth, in its simplest terms, is an increase in size and complexity, and it's a complex process influenced by genetics, nutrition, hormones and overall health. Understanding common growth issues can empower you as a parent to seek timely help.

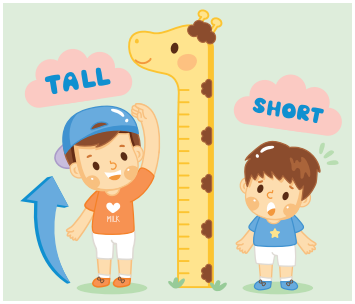
Common growth issues

Growth issues can manifest in various ways, impacting on both physical and developmental aspects. Some of the most common include:

- **Short stature:** This refers to a height significantly below the average for a child's age and sex. It can be caused by a variety of factors, ranging from genetic predisposition to underlying medical conditions.
- **Delayed puberty:** This occurs when the physical changes associated with puberty, such as breast development in girls and testicular enlargement in boys, occur later than expected.
- **Failure to thrive (FTT):** This describes a condition where a child fails to gain weight or grow at the expected rate. It can be caused by inadequate nutrition, medical conditions or psychosocial factors.

Did you know?

Stunted growth may not always be obvious. A child may look healthy but still be stunted due to chronic undernutrition in the early years.



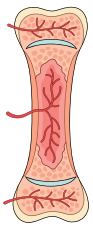
Causes of growth issues

The causes of growth issues are diverse:

- **Genetic factors:** Genetic disorders such as Turner syndrome, Down syndrome and familial short stature, can significantly impact growth.
- **Hormonal imbalances:** Deficiencies or excesses in growth hormone, thyroid hormone, or sex hormones can disrupt normal growth patterns.
- **Nutritional deficiencies:** Inadequate intake of essential nutrients, such as protein, vitamins and minerals, can hinder growth and development.
- **Chronic medical conditions:** Conditions like coeliac disease, inflammatory bowel disease, kidney disease and heart disease can interfere with nutrient absorption and overall growth.
- **Psychosocial factors:** Severe stress or chronic neglect and emotional deprivation can negatively impact growth and development, particularly in cases of FTT.
- **Medications:** Certain medications, such as long-term corticosteroid treatment, can have side effects that slow down growth.
- **Endocrine disruptors:** Environmental toxins that interfere with hormone functions.

Did you know?

Bones have a 'growth deadline'. Once puberty is completed, growth plates close – no further height can be gained. This makes early nutrition very important.

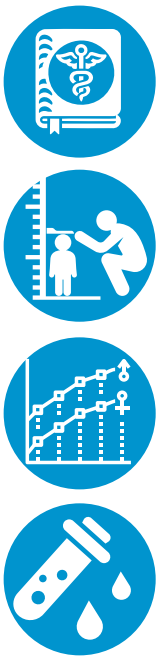


Symptoms and diagnosis

The symptoms of growth issues vary depending on the underlying cause. Common signs include:

- Height or weight below the expected percentile for age.
- Delayed onset of puberty.
- Poor appetite or difficulty feeding.
- Delayed developmental milestones.
- Excessive fatigue or weakness.
- Changes in body proportions.

Diagnosis typically involves a comprehensive evaluation, including:



- **Medical history:** A detailed review of the child's medical history, including birth history, family history, and any previous illnesses.
- **Physical examination:** Measurement of height, weight and other physical parameters, as well as an assessment of pubertal development.
- **Growth charts**: Tracking the child's growth over time using standardised growth charts.
- **Blood tests:** To assess hormone levels, nutrient deficiencies, and markers of underlying medical conditions.
- **Imaging studies:** X-ray, MRI, or CT scans may be used to evaluate bone age, detect structural abnormalities, or assess the pituitary gland.
- **Developmental assessments:** Standardised tests to evaluate cognitive, language, motor and social skills.
- **Genetic testing:** If a genetic condition is suspected.

Treatment options

The treatment of growth issues depends on the underlying cause. Some common treatment approaches include:

- **Hormone therapy:** Growth hormone therapy may be prescribed for children with growth hormone deficiency. Thyroid hormone replacement may be necessary for hypothyroidism.
- **Nutritional support:** Ensuring adequate nutrition is crucial for healthy growth. This may involve dietary modifications, nutritional supplements, or feeding therapy.
- **Treatment of underlying medical conditions:** Addressing any underlying chronic medical conditions, such as coeliac disease or inflammatory bowel disease, is essential for improving growth.
- **Psychosocial support:** Addressing psychosocial factors, such as stress or neglect, is crucial for children with failure to thrive or developmental delays. This may involve targeted therapy, family counselling, or social work interventions.
- **Surgery:** In some cases, surgery may be necessary to correct structural abnormalities or remove tumours.
- **Puberty blockers/hormonal treatments:** For cases of precocious or very delayed puberty, medications to either delay or induce puberty may be used.
- **Occupational and physical therapy:** To help with motor skill development.
- **Speech therapy:** To help with language development.

Growth myth

Myth: "Drinking milk makes you tall."

Fact: Milk helps as it's rich in calcium and protein, but it's not a magic potion. A child's height depends more on genetics and an overall balanced diet.

Importance of early detection and intervention

In conclusion, growth issues and delays can arise from a complex interplay of genetic, hormonal, nutritional and psychosocial factors. Regular physical checks and growth tracking are essential to identify and treat any potential problems. Early detection and if necessary, timely treatment, is crucial for optimising growth and development. Addressing growth issues promptly can prevent long-term complications and ensure children reach their full growth potential.

Developmental Milestones and Delays

As parents, we eagerly anticipate each "first": the first smile, the first step, the first word. These milestones are more than just cute moments – they're key indicators of your child's development. Understanding these milestones can help you support your child's growth and identify any potential delays.

What are developmental milestones?

Developmental milestones are skills or behaviours that most children achieve by a certain age. They are grouped into several main domains:

- **Gross motor skills:** Involve large muscle movements, like crawling, walking and jumping.
- **Fine motor skills:** Involve smaller, more precise muscle movements, like grasping objects, drawing and manipulating small objects.
- **Language skills:** Encompass understanding and expressing language, including babbling, first words, forming sentences and later, reading.
- **Cognitive skills:** Include abilities related to thinking, learning, problem-solving and remembering.
- **Social and emotional skills:** Involve interacting with others, understanding emotions and developing self-regulation.

Milestones by age group

It's important to remember that every child develops at their own pace. Below is a general guideline – some children may reach milestones a little earlier or later than others, and that is perfectly normal.

Age group	Gross motor	Fine motor	Language	Cognitive	Social/ emotional
0-3 months	Moves arms and legs, lifts head briefly when on tummy by 3 months.	Opens and closes hands, brings hands to mouth.	Coos, makes gurgling sounds, smiles at the sound of your voice.	Pays attention to faces, tracks moving objects with eyes.	Begins to smile at people, can briefly calm themselves.
4-7 months	Rolls over, sits with support (sits without support closer to 6-7 months), supports weight on legs.	Reaches for objects, transfers objects from one hand to the other.	Babbles, responds to their own name, distinguishes emotions by tone of voice.	Explores objects with hands and mouth, finds partially hidden objects.	Enjoys social play, responds to others' emotions.
8-12 months	Crawls, pulls to stand, may take first steps.	Bangs objects together, uses pincer grasp (thumb and forefinger) to pick up small objects.	Says "mama" and "dada," respond to simple words like "no," imitates sounds.	Plays peek-a-boo, understands object permanence (objects still exist when hidden).	Shows stranger anxiety, cries when parents leave.

Age group	Gross motor	Fine motor	Language	Cognitive	Social/ emotional
1-2 years	Takes a few steps alone by 12-15 months, walks steadily by 18 months, runs closer to age 2, climbs stairs with support.	Scribbles, turns pages of a book, stacks 4-6 blocks by 2 years.	Says several single words, points to objects when named, follows simple instructions.	Finds hidden objects easily, begins to sort shapes and colours.	Shows increasing independence, imitates others, plays alongside other children.
2-3 years	Jumps, kicks a ball, runs easily.	Draws circles, uses utensils, turns doorknobs.	Uses 2-4-word phrases by age 2, expanding to more complex sentences by age 3, can follow two-step instructions (e.g. "Pick up the toy and give it to me"), understands prepositions (in, on, under).	Completes simple puzzles (e.g. shape sorters, 3-4-piece jigsaw board, matching objects by shape and colour), engages in pretend play.	Begins to take turns, expresses a wide range of emotions, interactive play with other children.
3-5 years	Hops, balances on one foot, climbs stairs with alternating feet.	Draws a person with a few body parts, uses scissors, copies simple shapes.	Speaks in complex sentences, tells stories, understands most spoken words.	By age 5, most children can count to 10, understand time concepts (yesterday, today, tomorrow), knows colours and shapes.	Plays cooperatively with other children, understands group rules, expresses feelings verbally.

• Visit this link to check out a more detailed list of developmental milestones by age:
https://mypositiveparenting.org/360-growth-and-development-toolkit/child-development/developmental-milestones/

Understanding developmental delays

While every child develops at their own pace, consistent and significant delays in reaching developmental milestones can indicate a developmental delay. Recognising these delays early is crucial for providing timely intervention and support, maximising a child's potential. A **developmental delay** occurs when a child does not reach developmental milestones within the expected timeframe in one or more areas, such as motor skills, language, social skills or cognitive abilities.

Red flags

It's important to observe your child's development and note any potential red flags. Here are some warning signs across different age groups:

Infancy (0-12 months)	Toddlerhood (1-3 years)	Preschool (3-5 years)
• No response to sounds or voices • Difficulty rolling over or sitting up • Persistent stiffness or floppiness • Failure to grasp objects • Lack of eye contact • Limited or no babbling	• Difficulty walking or running • Frequent falls or clumsiness • Lack of interest in playing with toys • Limited social interaction with others • No single words by 18 months • No two-word phrases by 2 years • Extreme tantrums or behavioural issues	• Difficulty speaking clearly and in sentences • Inability to follow simple instructions • Lack of interest in playing with other children • Problems with toilet training • Difficulty drawing or colouring • Struggles with basic counting or letter recognition

Global prevalence

• 52.9 million children under 5 years had developmental disabilities in 2016 [1]

• 1% to 3% children under 5 years had global developmental delay (GDD) [2, 3]

Reference

[1] *Global Research on Developmental Disabilities Collaborators (2018). Developmental disabilities among children younger than 5 years in 195 countries and territories, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. The Lancet. Global health, 6(10), e1100–e1121. https://doi.org/10.1016/S2214-109X(18)30309-7*

[2] *Sharma, A. R., Siddiqui, M. S., Magar, S., Kale, A., Nelanuthala, M., & Singh, S. P. (2023). The Etiological Profile of Global Developmental Delay at a Tertiary Care Hospital in India: An Observational Study. Cureus, 15(6), e41066. https://doi.org/10.7759/cureus.41066*

[3] *Mithyantha, R., Kneen, R., McCann, E., & Gladstone, M. (2017). Current evidence-based recommendations on investigating children with global developmental delay. Archives of Disease in Childhood, 102(11), 1071–1076. https://doi.org/10.1136/archdischild-2016-311271*

Possible causes of developmental delays

Developmental delays can be caused by a variety of factors, including:

- Genetic conditions (e.g. Down syndrome, Fragile X syndrome)
- Premature birth or low birth weight
- Exposure to infections and toxins during pregnancy
- Birth injuries
- Infections or illnesses
- Environmental factors (e.g. lack of stimulation, malnutrition)
- Autism spectrum disorder
- Attention-deficit/hyperactivity disorder (ADHD)
- Learning disabilities
- Speech and language disorders

What to do if you have concerns

If you notice your child is consistently missing milestones, try not to panic. Every child develops at different rates. However, it's important to:

- **Talk to your paediatrician:** They can assess your child's development and provide guidance.
- **Early intervention:** Early intervention services can provide support and therapy for children with developmental delays.
- **Document observations:** Keeping a record of your child's development over time can be very useful for your paediatrician.

Supporting your child's development

As a parent, you play a vital role in helping your child grow, learn and thrive. Here are some meaningful ways to nurture their development:

- **Educate yourself:** Understand your child's unique needs and explore the resources available to support them.
- **Advocate for your child:** Partner with your child's healthcare providers and educators to ensure they receive the appropriate support and services.
- **Create a supportive environment:** Provide a nurturing and stimulating home environment that encourages your child's development. Offer activities and opportunities that encourage play, exploration and learning.
- **Engage in play and interaction:** Spend quality time together, engaging in activities that promote their development, such as playing with them, or reading or talking with them. Play is crucial for learning and development, while reading and talking will foster language development.
- **Encourage peer social interaction:** Arrange playdates and opportunities for your child to interact with other children.
- **Connect with other parents:** Join support groups or online communities to network and share with other parents facing similar challenges.
- **Celebrate small victories:** Acknowledge and celebrate your child's progress, no matter how small.

By learning about developmental milestones and providing a nurturing environment, you can help your child reach their fullest potential. Early identification and intervention can have a significant and positive impact to a child's developmental trajectory. Cherish each step of their journey, knowing that with appropriate support and resources, children with developmental delays can reach their full potential and lead fulfilling lives.

All parents want the best for their children. We watch them grow, learn and develop, hoping they reach their full potential. However, sometimes, children face challenges related to their brain development, leading to what are known as neurodevelopmental disorders. Understanding these conditions is crucial for providing the right support and interventions.

Common Neurodevelopmental Issues

What are neurodevelopmental disorders?

Neurodevelopmental disorders are conditions that affect the development of the brain, impacting learning, behaviour, communication, or motor skills. These disorders typically manifest in early childhood and can persist throughout an individual's life.

Here are some of the more prevalent neurodevelopmental disorders:

- **Autism spectrum disorder (ASD):** ASD affects communication, social interaction, and behaviour. Individuals with ASD may have repetitive behaviours, restricted interests, and differences in sensory processing.
- **Attention-deficit/hyperactivity disorder (ADHD):** ADHD is characterised by significant and persistent problems with inattention, hyperactivity, and impulsivity. Children with ADHD may struggle with focusing, staying seated, or controlling their impulses.
- **Intellectual disability (ID):** Individuals with ID have significant challenges in intellectual functioning and adaptive behaviour, affecting learning, problem-solving and daily living skills.
- **Specific learning disorders (SLD):** SLDs affect specific academic skills, such as reading (dyslexia), writing (dysgraphia), or math (dyscalculia).
- **Communication disorders:** These disorders affect the ability to understand or express language – these can include speech sound disorders, language disorders, and social communication disorders.
- **Motor disorders:** These disorders affect motor skills, such as coordination, balance and fine motor skills. Examples include Developmental Coordination Disorder and Tourette Syndrome.

Prevalence

About 1 in 127 persons worldwide has Autism Spectrum Disorder (ASD) in 2021.

Reference: World Health Organization. (2025, September 17). Autism. World Health Organization. https://www.who.int/news-room/fact-sheets/detail/autism-spectrum-disorders

Therapies and interventions

Early intervention is key to supporting a child's potential. A range of therapies and interventions can help children with neurodevelopmental disorders:

- **Speech therapy:** Speech-language therapists help children with communication disorders improve their speech, language and social communication skills.
- **Occupational therapy (OT):** This aims to help children strengthen their fine motor skills and sensory processing capacities and improve daily living skills.
- **Physical therapy (PT):** PT focuses on improving gross motor skills, coordination, strength, and balance.
- **Educational interventions:** Special education programmes and individualised education plans (IEPs) can provide tailored support in the classroom.
- **Medication:** In some disorders such as ADHD, medication may be prescribed to manage symptoms.
- **Social skills training:** This focuses on helping children develop practical skills, such as initiating conversations, understanding social cues, and managing conflicts.

Did you know?

Children with specific learning disorders (SLD), especially those with emotional/behavioural difficulties are more likely to experience anxiety and depression. Hence, providing emotional support is just as important as academic support.

Guide and support for parents

Raising a child with a neurodevelopmental disorder can be very challenging, but you are not alone. Here are some tips for parents:

- **Seek professional help:** Consult with a paediatrician, psychologist, or developmental specialist for accurate diagnosis and treatment.
- **Educate yourself:** Learn as much as you can about your child's specific disorder.
- **Early intervention:** Start therapies and interventions as early as possible.
- **Create a supportive environment:** Provide a structured and predictable environment at home to help children feel secure.
- **Build a support network:** Connect with other parents, support groups and community resources.
- **Advocate for your child:** Become your child's advocate in school and in the community.
- **Practice self-care:** Take care of your own emotional and mental well-being.
- **Celebrate small victories:** Acknowledge and celebrate your child's progress, no matter how small.
- **Be patient and understanding:** Remember that progress takes time and every child develops at their own pace.
- **Find respite care:** Utilise respite care services to give yourself breaks and time to recharge.

Finding resources

Raising a child with a neurodevelopmental disorder requires patience, knowledge, understanding and a strong support system. Seek support from these resources:

- Local hospitals and clinics with Developmental Paediatricians
- National organisations dedicated to specific disorders
- Local support groups and parent networks
- School district departments and special education resources