



**Creep, Crawl,
Walk, Run**





Stages of Developmental Brain Growth

The four natural brain growth stages—creeping, crawling, walking, and running—are key determinants and critical for the development of every child, whether typically developing or brain-injured.

To optimize brain growth at any developmental stage, from crawling to running, focus your family's activities and engagement with your child (whether typical or with Down syndrome) around these four key developmental areas. If any stages have been overlooked, revisit and incorporate as many activities from those stages as possible, adapting them to fit your child's current interest level. Efforts in these four areas will yield significant benefits.

Create a weekly routine and incorporate repetitive activities into your daily schedule; increase the frequency **and quantity** throughout the day. Each week, introduce a new activity while discontinuing another, rotating them on a weekly basis. Consistency and repetition are essential.
essential!

Cherish these special moments with your child; they will value this significant and meaningful interaction with you. Celebrate every one of their achievements during each activity.

The first seven years of life are among the most crucial and rewarding phases of a child's development, as this is when significant brain growth occurs. If your child is over seven, continue to engage in these activities as much as possible. While growth will still happen, it won't be as rapid. We wished we had this information when our son was born, as he only started at five years old. Every effort you invest will be worthwhile, regardless of when you begin. An additional benefit is that the whole family can participate, creating a fun experience where everyone takes on the role of therapist.

Developmental Activities and Brain Growth Benefits

CREEPING: Brain Benefits and Activities

Brain Function: Engages the brainstem and midbrain for motor control, sensory processing, and coordination

Activities and Benefits:

1. Obstacle Courses

- **Benefit:** Encourages children to creep around objects, promoting problem-solving skills and spatial awareness.
- **Details:** Planning movements and gauging distances foster cognitive development.

2. Follow the Leader

- **Benefit:** Reinforces social interaction, imitational learning, and bonding.
- **Details:** Cross-pattern movement is essential for brain connectivity.

3. Treasure Hunt

- **Benefit:** Enhances attention span and motivation.
- **Details:** Creeping towards targets strengthens neural pathways associated with coordination and motor skills.

4. Tunnel Play

- **Benefit:** Develops spatial awareness and body coordination.
- **Details:** Mastering movement within confined spaces aids in spatial awareness.

5. Music and Movement

- **Benefit:** Develops rhythm and timing.
- **Details:** Engages auditory processing while promoting motor integration.

6. Mirror Play

- **Benefit:** Promotes visual feedback and self-awareness.
- **Details:** Visual reinforcement helps refine motor skills and coordination.

7. Sensory Pathways

- **Benefit:** Provides tactile stimulation and enhances sensory processing.
- **Details:** Encourages sensory exploration with varied textures.

CRAWLING: Brain Benefits and Activities

Brain Function: Supports midbrain development, crucial for reading, language development, and self-expression.

Activities and Benefits:

NOTE: Discourage Bear Walking-most Down Kids skip Crawling on hands and knees, causing real speech and language development challenges.

1. Cushion Maze

- **Benefit:** Enhances problem-solving skills, spatial awareness, and gross motor coordination.
- **Details:** Arrange cushions and pillows to create a maze on the floor. Guide the child to crawl through it, encouraging them to find a path from start to finish.

2. Toy Push-and-Pull

- **Benefit:** Builds upper body strength and coordination and encourages exploration.
- **Details:** Use sturdy toys that the child can push or pull across the floor, promoting movement and muscle development.

3. Tunnel Crawling

- **Benefit:** Improves spatial orientation and strength and encourages imaginative play.
- **Details:** Set up a play tunnel or use household items to create a tunnel. Encourage the child to crawl through, promoting exploration and physical activity.

4. Reach-and-Grab Games

- **Benefit:** Enhances fine motor skills, hand-eye coordination, and perseverance.
- **Details:** Place toys just out of the child's reach to encourage them to crawl and grab them, improving their reach and coordination.

5. Textured Pathways

- **Benefit:** Stimulates sensory perception and improves balance and coordination.
- **Details:** Create pathways using textured materials like mats, rugs, or towels. Encourage the child to crawl on these surfaces, stimulating their senses.

6. **Chase or Follow Games**

- **Benefit:** Promotes social interaction, agility, and cardiovascular fitness.
- **Details:** Engage in a playful chase or lead the child in following you around the room, encouraging movement and interaction.

7. **Ball Rolling**

- **Benefit:** Encourages coordination, timing, and motor planning.
- **Details:** Roll a ball to the child and have them crawl to retrieve and return it, enhancing their coordination and sense of timing.

8. **Under the Bridge**

- **Benefit:** Improves flexibility, spatial awareness, and physical strength.
- **Details:** Create a 'bridge' using furniture or your legs, and have the child crawl under it, promoting flexibility and spatial understanding.

9. **Sensory Bins**

- **Benefit:** Engages different senses, improves fine motor skills, and encourages curiosity.
- **Details:** Fill bins with various small objects like beans, rice, or sand and hide toys inside. Encourage the child to crawl to the bin and explore its contents.

10. **Crawling Through Hoops**

- **Benefit:** Enhances coordination, balance, and spatial reasoning.
- **Details:** Place hoops on the ground and have the child crawl through them, fostering coordination and spatial perception.

11. **Follow the Light**

- **Benefit:** Stimulates visual tracking, coordination, and attention span.
- **Details:** Use a flashlight or laser pointer to create a light trail and encourage the child to crawl and follow the light.

12. **Crawling Relay**

- **Benefit:** Boosts teamwork, speed, and physical endurance.
- **Details:** Set up a relay course and have children take turns crawling through it, promoting teamwork and physical exertion.

13. **Stuffed Animal Rescue**

- **Benefit:** Encourages imaginative play, problem-solving, and physical strength.
- **Details:** Place stuffed animals around the room and encourage the child to 'rescue' them by crawling to each one and bringing them back.

14. **Bubble Chasing**

- **Benefit:** Improves visual tracking, coordination, and overall physical activity.
- **Details:** Blow bubbles and encourage the child to crawl and pop them, enhancing their sensory and motor skills.

WALKING: Brain Benefits and Activities

Brain Function: It engages the cortex for advanced motor planning, balance, and complex movements. It supports various benefits, such as relieving stress, improving mood, boosting self-esteem, and promoting independence and confidence.

Activities and Benefits:

1. **Push Toys**

- **Benefit:** Supports balance and muscle development.
- **Details:** Encourages coordination and strength.

2. **Pull Toys**

- **Benefit:** Enhances coordination and motor planning.
- **Details:** Boosts bilateral coordination and spatial understanding.

3. **Pushing Strollers or Wagons**

- **Benefit:** Strengthens leg and core muscles.
- **Details:** Helps new walkers gain stability and self-confidence.

4. **Holding Hands While Walking**

- **Benefit:** Provides emotional security and physical stability.
- **Details:** Encourages social bonding and eases the transition to independent walking.

5. **Navigating Around Furniture**

- **Benefit:** Develops spatial awareness and problem-solving.
- **Details:** Improves maneuvering skills.

6. **Walking on Different Terrains**

- **Benefit:** Enhances proprioception and balance.
- **Details:** Improves coordination and sensory integration.

7. **Nature Walks**

- **Benefit:** Encourages exploration and observation skills.
- **Details:** Fosters curiosity and environmental awareness.

8. Obstacle Courses

- **Benefit:** Boosts motor planning and problem-solving.
- **Details:** Enhances agility and spatial awareness.

9. Balance Beams

- **Benefit:** Develops balance and focus.
- **Details:** Strengthens core muscles and concentration.

10. Walking to Rhythms or Music

- **Benefit:** Improves auditory processing and rhythm synchronization.
- **Details:** Enhances temporal awareness and auditory-motor integration.

11. Follow the Leader

- **Benefit:** Strengthens imitation skills and social interaction.
- **Details:** Helps practice walking variability and direction-following.

12. Simon Says

- **Benefit:** Improves listening skills and impulse control.
- **Details:** Enhances cognitive function and discipline.

13. Relay Races

- **Benefit:** Promotes speed, agility, teamwork, and cooperative play.
- **Details:** Fosters physical stamina and social skills.

14. Animal Walks

- **Benefit:** Encourages creative movement and flexibility.
- **Details:** Strengthens different muscle groups and enhances imagination.

15. Treasure Hunts

- a. **Benefit:** Stimulates problem-solving and memory skills.
- b. **Details:** Improves both physical and mental development.

RUNNING: Brain Benefits and Activities

Brain Function: Utilizes the prefrontal cortex for planning, anticipating, and executing complex physical tasks. It supports cardiovascular fitness, bone strength, and emotional regulation and encourages peer interaction and cooperation.

Activities and Benefits:

1. Tag

- **Benefit:** Encourages social cooperation and quick decision-making.
- **Details:** Simple tag games with peers or family.

2. Chase Games

- **Benefit:** Promotes physical fitness and enhances reflexes.
- **Details:** Engage in gentle chase games in a safe space.

3. Sports Activities

- **Benefit:** Enhances team-building skills and fitness levels.
- **Details:** Age-appropriate games like soccer or relay races.

4. Playground Activities

- **Benefit:** Improves motor skills, agility, and social interaction.
- **Details:** Use playground equipment that requires running.

5. Outdoor Exploration

- **Ball Play Benefit:** Fosters independence and environmental awareness.
- **Details:** Runs in the park or garden.

6. Playing Ball

- **Benefit:** **Develop hand-eye coordination and anticipatory skills.**
- **Details:** Includes different ball games involving running.

7. Nature Walks

- **Benefit:** Encourages mindfulness and connection with nature.
- **Details:** Go on short walks where the child can run freely.

8. Dance Time

- **Benefit:** **Boosts creativity, rhythm perception, and physical coordination.**
- **Details:** **Play music and encourage free dance movements.**

9. Dance Sessions

- **Benefit:** Enhances emotional expression and gross motor skills.
- **Details:** Hold mini dance parties for dancing and running to music.

ACTIONABLE STEPS FOR PARENTS

You will thank yourself for years to come:

1. Develop a daily routine and maintain it throughout the week:

- Incorporate as many activities as possible into your child's routine, from feeding to awake time to activity/playtime and nap time (e.g., obstacle course upon rising, follow the leader to the bathtub, musical activities, and mirror play after dressing). Gradually increase the duration of each activity by a few minutes each time.
- Aim to increase both frequency and duration. Next week, add a new activity and replace an old one. Children thrive on routine.
- Write down your weekly plan and journal any progress at the end of each day/week. Focus on progress, not perfection.
- This routine will help make your day smoother and provide a sense of accomplishment for making the most of each day. It will also allow other family members to participate in specific activities, ensuring they feel involved in your child's developmental progress, rather than feeling like all your time is spent with your special needs child.
- Stay committed! You will be thankful for your dedication in the long run.

2. Schedule A Get Acquainted Call 423-779-4733

I look forward to meeting you, learning about your family and child, and hearing how you're incorporating these activities into your family's life. I'm here to support you and help you get started with Regenerative Whole Foods.

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