

Infant and Early Childhood Mental Health (IECMH) Guide for Professionals: Brain development

Here's what we know about brain development:

- “Early experiences matter...” A child's genes, environment, experiences and relationships all work together to shape the architecture of the brain.
- Brain development begins in pregnancy and undergoes its most rapid and critical period of growth during the first 2000 days.
 - Latest research shows that more than 1 million new neural connections are made each second.
 - Brain development in the first 2000 days is highly vulnerable to the effects of toxic stress. Toxic stress is defined as ongoing stress that occurs in the absence of a responsive caring adult. It can have an impact on learning, behavior and both physical and mental health.
 - Social, emotional, physical and cognitive capacities including executive functioning continues to develop throughout childhood and into early adulthood.

Within your professional role and considering the social determinants of health, how do you:

- Explore if the parent or caregiver is sensitive and responsive to the child's cues, feelings and needs.
- Explore opportunities for the child, parent and caregiver to connect through positive interactions such as playing, talking and singing.
- Share with the parent or caregiver screen time guidelines and the impact screen time may have on brain development and the formation of secure attachments. The Canadian Pediatric Society's Screen time and young children guidelines (June 2017) are:
 - For children under 2 years old, screen time is not recommended.
 - For children 2 to 5 years old, limit routine or regular screen time to less than 1 hour per day. Important to note that studies show that the less time is better. There is no evidence that shows recreational screen time improves early child development.
- Discuss how the parent or caregiver is coping and their support system.
- Explore opportunities for connecting to informal and formal supports (community, neighbourhood, resources, groups).
- Support the parent or caregiver to have realistic, age appropriate expectations for their child.
- Administer an appropriate screening tool to ensure that the child is meeting their expected developmental milestones and refer if applicable.

Where can you find more information?

- Parenting in Ottawa
- Centre of Excellence for Early Childhood Development: Brain
- Harvard University, Center on the Developing Child: Key Concepts; Brain Architecture; Serve and Return; Toxic Stress; Executive Function and Self Regulation
- Best Start: Healthy Baby, Healthy Brain
- Infant Mental Health Promotion: Comfort, Play and Teach
- City of Hamilton: Parenting with LOVE - Brain Development
- Public Health Agency of Canada: Social Determinants of Health
- Parent Resource Centre
- 211 Ontario

References

- Harvard University, Center on the Developing Child: Key Concepts, Brain Architecture
- Fraser Mustard Institute for Human Development
- Harvard University, Center on the Developing Child: Five Numbers to Remember about Early Childhood Development
- Harvard University, Center on the Developing Child: Toxic Stress Derails Healthy Development
- Make No Little Plans: Ontario's Public Health Sector Strategic Plan