

**Understanding and responding to trauma**

**Early Years Day 1**



Australian Childhood Foundation **SMART** PRACTICE Early Years

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The Australian Childhood Foundation acknowledges Aboriginal and Torres Strait Islander peoples as the traditional custodians and owners of the land and waters across Australia.

We pay our respects to their Elders past and present and to the children who are their leaders of tomorrow. We acknowledge their history and living culture and the many thousands of years in which they have raised their children to be safe and strong.



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**Introductions**



HPH 10/10/16 02/01/17 ACZ

- Name
- Role

*What are you passionate about in the work you are doing, with children who have experienced trauma?*

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### We acknowledge you and what you bring...

- Knowledge
- Practice skills
- Experience
- Passion
- Compassion
- A desire to bring about change



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### Outline of our day



Part 1: 9.00am - 11.00am  
 Morning Tea: 11.00am – 11.15am



Part 2: 11.15am – 12.45pm  
 Lunch Break: 12.45pm – 1.15pm



Part 3: 1.15pm – 3.15pm  
 Wrap Up & Evaluations 3.15pm  
 Finish: 3.30pm

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### Session outline

- **examine** brain development in children
- **define** complex abuse related trauma
- **understand** the impact of trauma on children's development and functioning
- **develop** strategies for working with traumatised children
- **discuss** whole service approaches to supporting traumatised children

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### Key learning outcomes – success criteria

- **develop** an enhanced understanding of complex abuse related trauma, with a particular focus on its effects on brain functioning.
- **apply** a framework for responding to children who have been impacted by trauma
- **build** on practice skills and interventions which promote recovery for children in education settings.



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### Learning together



Your emotional safety is paramount  
 Our learning is about shared wisdom  
 Curiosity and learning build our brains

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### Safety and relationships are key

It is important to remember that safety – feeling and being safe and having safe, connected and attuned relationships are key to supporting a child or young person who has experienced trauma.

Image source: ©2011 ACF

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### Stress

- POSITIVE** Brief increases in heart rate, mild elevations in stress hormone levels.
- TOLERABLE** Serious, temporary stress responses, buffered by supportive relationships.
- TOXIC** Prolonged activation of stress response systems in the absence of protective relationships.

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### Experiences of trauma and the impacts

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**T**rauma is not what happens **t**o you,  
but what happens **i**nside you.  
(Gabor Mate 2018)





Image source: ©2021 ACF

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**The growing brain...**  
How much does a baby's brain weigh?





Image source: ©2012 www.shutterstock.com

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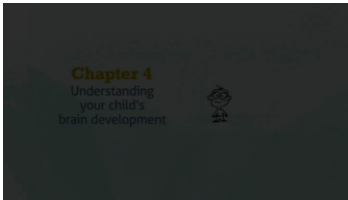
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**Brain development**



**Chapter 4**  
Understanding  
your child's  
brain development

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### Bottom-up brain development

- Cortex
- Limbic Lobe
  - ✓ Amygdala
  - ✓ Hippocampus
  - ✓ Diencephalon
- Cerebellum
- Brain Stem

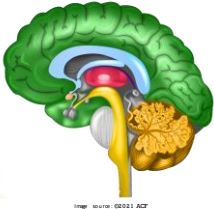



Image source: ©2011 ACF

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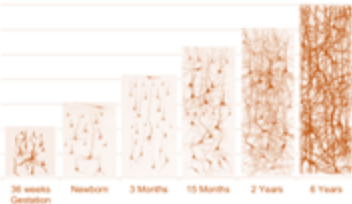
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### Neural Circuit Formation in the Early Years



36 weeks Gestation    Newborn    3 Months    15 Months    2 Years    6 Years

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### Neuronal connections

- The neural system has the ability for one neuron to communicate with up to 10,000 other neurons
- The newborn brain has approximately 100 billion neurons

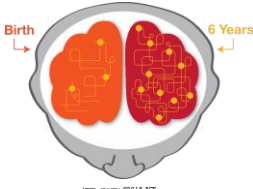



Image source: ©2018 ACF

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Three Core Concepts in Early Development

# Experiences Build Brain Architecture

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## Strengthening neuronal connections

Every child needs:

**S** Safety  
**O** Opportunities  
**C** Connection  
**K** Kindness  
**S** Support





Image: SHUTTER | 60021 ACF

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## Brainstem – survival centre

- basic life functions
- first part of our brain to develop & the most developed brain part at birth
- responsible for regulation of our
  - heart rate
  - breathing
  - sucking, swallowing chewing reflexes
  - temperature control
  - blood pressure
  - circadian (sleep) cycle
  - involuntary reflexes





Image: SHUTTER | 60021 ACF

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**The brainstem under stress and trauma**

- may experience fast or slower heart rate
- shortness of breath or breathing difficulties
- sleep disturbances and unsettledness
- sucking and swallowing and digestion difficulties
- may feel hot or cold or not notice changes in temperature

**What do you notice?**



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**Strategies for transforming – brain stem**

- safe containment and deep pressure
- rhythm, rhyme and repetition for regulation
- sensory input and soothing
- predictability and consistency

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**Growing and regulating the brainstem**

Provide activities which are rhythmic and synchronous with others, as well as containing:

- rhythmic sounds - stories, songs, rhymes & music
- rhythmic movement & touch
- safe containment
- sensory soothing



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**Cerebellum – body and balance centre**

- helps us with our posture and balance
- helps us with our coordination and to control our movements
- helps us to know where our body is in space
- helps us with our voluntary movements such as walking and writing





Image source: ©2011 ACF

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**The cerebellum under stress and trauma**

- lack of coordination and balance
- difficulty in maintaining posture
- difficulty in undertaking tasks that require balance
- lack of awareness of their body in space
- difficulty with voluntary movement tasks – walking or writing





Image source: ©2011 ACF

**What do you notice?**

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**Strategies for transforming – cerebellum**

- movement and balance
- spatial awareness activities
- rhythm, rhyme and repetition
- physical activities using fine and gross motor skills



Image source: ©2011 ACF

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### Growing and regulating the cerebellum

Provide activities which have support and balance, develop gross and fine motor skill elements and are synchronous with others

- balancing activities
- stretching – aligning the spine activities
- spine/lumbar support
- throwing and catching objects
- writing, drawing, colouring, making




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### Limbic system - emotion and memory centre

- develops mainly after birth
- helps us attach an emotion to an experience or memory
- particularly involved with the emotions
- heavily involved in attachment processes
- two important brain parts – the amygdala and the hippocampus are in this part of the brain
- the diencephalon also sits within the limbic system




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### The limbic system under stress and trauma

- survival mode activated; fight, flight or active freeze
- release of hormones; cortisol and adrenaline



What do you notice?

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### Strategies for transforming – limbic system

- build emotional literacy and awareness
- support safe expression of emotions
- provide co-regulation
- assist with memory storage; write or draw a diary of my day



Image source: ©2011 ACF

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### Growing and regulating the limbic system

Provide opportunities for emotional expression and support through co-regulation. Physical and calming activities can also support the limbic system.

- feeling faces
- acknowledge and validate all feelings
- meditation and mindfulness
- music; listening to or playing an instrument
- yoga or walking



Image source: ©2011 ACF

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### Amygdala

Has three roles:

- alarm centre - the 'smoke detector' of the brain
- memory centre - processes & stores
- emotion centre – helps with emotional understanding and regulation



Image source: ©2011 ACF

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**Sensory information response sequence**

Three Core Concepts in Early Development

**3** Toxic Stress Derails Healthy Development

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**The amygdala under stress and trauma**

- can be over active or under active
- can evoke reminders and flashbacks of the trauma (awakenings)
- may have difficulty in emotional regulation
- may have difficulty in reading facial expressions

**What do you notice?**

Image source: ©2011 ACF

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**Strategies for transforming - amygdala**

- reflect back children's emotions
- reassure and calm
- remain present
- minimise triggers – loud noise, bright light, strong smells
- use simple language

**SMART PRACTICE** focus: Responsive, Attuned and Connecting

Image source: ©2011 ACF

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### Growing and regulating the amygdala

Provide activities that support emotional and social connection

- calm, sensory supportive environments
- support the child, reassure
- stay present – provides safety



Image: Shutterstock/123RF

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### Hippocampus

- explicit memory centre - matures between 2-3yrs of age
- provides context to memories
- provides consolidation of information from short term memory to long term memory



Image: Shutterstock/123RF

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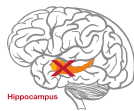
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### The hippocampus under stress and trauma

- doesn't function properly - it feels as if the trauma hasn't ended.
- reduction of hippocampal volume up to 25% as a result of high levels of cortisol
- working memory, retention and recall (retrieval) capacity is severely impacted



Hippocampus

Image: Shutterstock/123RF

What do you notice?

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### Strategies for transforming - hippocampus

- repetition
- visual reminders
- simple instructions
- connect and regulate



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### Growing and regulating the hippocampus

Provide activities that support memory retention and recall and review and repetition

- practice activities and learning skills over and over
- reinforce learning through repetition
- provide playful opportunities to learn
- use visuals to assist



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### Diencephalon – sensory centre of the brain

- takes in sensory information, processes it and supports the development of a plan of action
- takes in the 5 external environment senses and the 3 internal senses
- takes information from the environment to enable us to respond to the environment



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**Sensory activities**

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**Cortex – thinking centre**

- the largest part of the brain
- associated with higher brain function such as thought and action
- examples of functions:
  - reasoning
  - logic
  - judgement
  - voluntary movement



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**Cortical areas under stress and trauma**

Unable to:

- use foresight and anticipation, focus or sustain attention
- plan, organise or prioritise or make decisions well
- reflect or have self-awareness
- be enthusiastic, motivated or persist with activities
- use impulse control



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**Strategies for transforming - cortex**

- problem solving activities
- support decision making
- support children's agency
- scaffold learning and tasks
- support curiosity



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**Growing and regulating the cortical areas**

Provide activities that connect the cortical areas, through choice, problem solving, planning and voluntary movement

- Play thinking and choice games
- Map out and plan activities together
- Break down problems to work through
- Allow choice and options -
- Use voluntary movement activities



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**Left and Right Hemispheres and the Corpus Callosum**

- The left hemisphere is in charge of the right side of the body and is more verbal, analytical, and orderly than the right brain
- The right hemisphere is in charge of the left side of the body and is more visual and intuitive
- The corpus callosum connects the two hemispheres
- Both sides need to be communicating with each other to have an integrated brain

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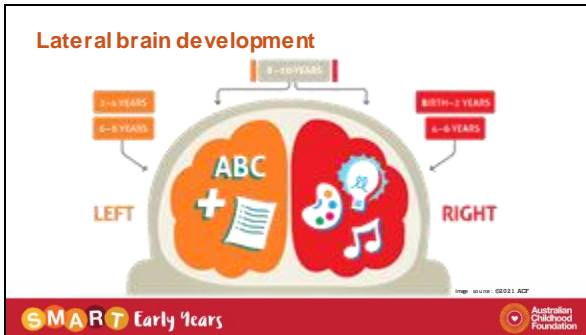
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### Hemispheres under stress and trauma

- may not be able to speak or articulate
- will be tuned into the tone of voice, not the content
- difficulties with understanding and knowing feelings and articulating them
- difficulties with tuning into, understanding and responding to social cues in communication
- will be acutely aware of facial expressions, posture, gestures, intensity of movements and eye contact and searching for signs of disapproval, rejection & danger

**What do you notice?**

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### Growing and regulating the hemispheres

Provide opportunities for specific left and right hemisphere activities. Be aware of your voice tone, modulation and intonation, also facial expressions and gestures.

- support relational experiences
- use age appropriate language
- be curious about feelings
- engage in physical activities including games

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### Attachment and the right brain

- Neuroimaging studies show areas of the right hemisphere lighting up in the brains of parents & infants during non-verbal interactions. (Schoe, 2003)
- A secure attachment relationship facilitates right brain development and promotes efficient affect regulation.



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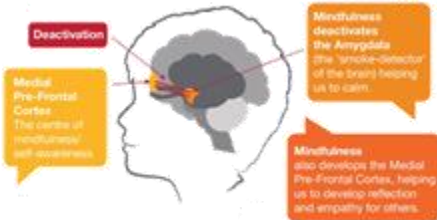
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### Mindfulness



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### Stop...Pause...Play...



- Stop**
  - Stop what you are doing.
  - Make sure your feet are placed firmly on the ground.
- Pause**
  - Focus on your breath.
  - Breathe in slowly, right down into your belly, then exhale completely.
  - Take 5 more slow breaths, being aware of each breath in and each breath out.
  - Smile and enjoy standing like this for a moment. Feel your body relax.
  - Reflect. Ask yourself "what do I need?" and "what does my child need?"
- Play**  
Respond to your child with new understanding.

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**The importance of connection and play as a reparative activity**

“ Play is a neural exercise and I have never met a child who is able to resist being part of this type of exercise ”  
Theresa Kestley



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**What do you notice about the way this father attunes to his daughter?**

**What does he do and not do?**

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**Neuroplasticity**



<http://highexistence.com/its-all-in-your-head-how-to-take-advantage-of-neuroplasticity/>

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**Stand in my shoes - understand me from the inside out**

I will often have a constant sense of being both unsafe and unworthy of protection

I need constant reinforcement from you through words and actions that I am physically and emotionally safe

I need to be kept close

I need you to help me understand and experience joy and build hope

I need you to help me manage my many sources of fear, empower & consult me

I need you to be attuned to my pain and distress and respond by validating my thoughts, feelings, needs and behaviours and never minimise my experience

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Checkout  
Feedback  
Keep in touch  
SMART Learning Pathway  
ACF & SMART Resources  
References

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**Check out**

What are you taking back to your classroom or centre tomorrow?

- Strategy?
- Activity?
- New perspective?



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**Feedback**



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**Keep in touch with ACF and DfE**

Parenting and Early Years Team, ACF

- [parenting@childhood.org.au](mailto:parenting@childhood.org.au)

Karen Perry, Policy Officer, Child Protection and Trauma-informed practice, DfE

- [Education.SMART@sa.gov.au](mailto:Education.SMART@sa.gov.au)

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**SMART Learning Pathway**

- SMART Online Training – register through Plink – self-paced
- SMART – 2-hour training – facilitated by a local SMART Trainer
- SMART PRACTICE – Day 1 – (includes specialist packages ie Early Years, Refugees, Adolescents, Working with Aboriginal communities)
- SMART PRACTICE – Day 2
- SMART Train the Trainer program – 2 days



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### ACF & SMART Resources

- SMART training – register through PLINK
  - Discussion papers – available on TLC Teams page
  - Prosody Blog
- <https://professionals.childhood.org.au/professional-community-network/>
- Other ACF Training
- <https://professionals.childhood.org.au/training-development/course-list/>

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