



Why the first 1001 days are critical

The first 1001 days take a new child from conception to her second birthday. Throughout that period of foetal development, infancy and toddlerhood the brain is growing and developing.

(Sheridan & Nelson 2009) Those first 1001 days are critical not only because optimal brain development throughout them gives a baby the best possible start in life but also because she or he cannot have a good start in life without it.

Most people have always assumed that how a baby's brain develops and forms the connections and interconnections that make it "work" depends on physical maturation and the genes passed on by the parents. But recent international research findings - hard to take in, even hard to believe because they are counter-intuitive - have established that brain development also depends on interactions between genes and the environment. (Szyf 2009)

An infant's first environment is the womb. Developing fetuses and their brains receive complex biological signals from the mother; signals which can be affected not only by her diet and lifestyle but also by her emotional state. For example, extreme maternal stress can affect the function of the placenta in such a way that it allows more of the stress hormone, Cortisol, to reach the fetus and influence the way the brain is developing and perhaps the epigenetic makeup which dictates which genes are turned on or off, when and by how much. (Talge et al 2007) Such infants have a lifelong extra risk of a range of problems from being anxious or depressed themselves, to being slow learners, having difficulties such as ADHD and even having some physical problems such as asthma. (O'Connor et al 2005)

When a baby is born his environment is still almost entirely his mother (or whoever stands in for her as his "primary caregiver") and his relationship with her. His brain is still an unfinished project and it is a project that can only be optimally completed by the social and emotional relationships within which attachment grows. Parents or people who stand in for parents actually Build Babies Brains. (Balbernie 2001)

There is much building to be done (Tau 2010). At least three quarters of a new-born's upper brain – the cerebral cortex whose great size and complexity comprises everything that makes him human—grows and develops its interconnections after birth, amazingly rapidly during the first year and only a little more slowly in the second. With that left hand "cognitive" part of his brain still in the future, a baby does not think or learn: he reacts with his right brain (and his newly-separated body) experiencing deep primitive feelings: hunger, fear, anger, excitement and joy.

The baby himself does not have the brain capacity to "regulate" the intensity of those feelings so he relies on his mother (or "primary attachment figure"), to lend her brain to preventing them overwhelming him: feeding or reassuring him before hunger or fear reaches panic-levels; noticing his feelings and intervening to calm and balance him.

A mother can do that because she is tuned-in to the baby. He's always somewhere in her mind whatever else she is doing. (Schoore 2013) When people talk of mothers responding to babies "right brain to right brain" they mean that she responds to him without conscious thought. When he cries she does not need to use her developed adult left brain to think about what she's heard; decide what it means and plan what she's going to do about it. She simply responds, finding herself away from the TV and halfway up the stairs before she becomes aware of having heard a cry.

More and more research is demonstrating the long-term importance of the early social and emotional experiences that build baby brains (Belsky & de Haan 2011). In these first two years the mother, the father or whoever is the child's primary attachment figure is his environment and any interruption of the attunement between them is stressful. Only repairing the attunement ("making up with mum" as a five year old might call it) turns the stress-reactions off again.

When researchers compare children of any age on any aspect of development –language, say, or persistence in learning, resilience when things go wrong, or sociable play with other children- the tuned-in-ness and responsiveness of their mothers or principal attachment figures in these first years explains more of the difference between high and low achieving children than anything else, more even than differences in socio-economic circumstances.

If a baby doesn't have a loving special adult – being cared for perhaps in an institution, or receiving minimal, inconsistent or inappropriate adult attention - the structure and chemistry of his brain will probably adapt defensively. (Nelson 2014) He may develop extra strong fear and anger reactions, or intense attack and defence impulses in that deep primitive right brain. He may become hyper vigilant, his brain suffused with Cortisol which floods his body until or unless someone turns it off by comforting him.

Repeated episodes of acute stress when nobody regulates his feelings can damage his capacity to learn, possibly forever, and permanently affect his response system so that it becomes hyper-sensitive. Such an individual over-reacts to minor stress with major fear and anxiety, not only as a baby but as a child, an adolescent and an adult too. We all know such hypersensitive people.

People who lack nurture from one or more caring adults in the first 1001 days of their lives achieve less in education and in the world of work; are more likely to behave anti-socially, and are less healthy, physically as well as mentally, than individuals who were given a better start. Furthermore, the harm done to them is likely to be perpetuated in an inter-generational cycle when they have children of their own (Champagne 2015). Love and nurture by caring adults is hard wired into the brains of children even before they are born. That is why the first 1001 days are critical.

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