

five to thrive

The things we do for each other
that build and maintain healthy brains



why people need people

notes / useful information

about this guide

More than 90% of what we know about the human brain has been discovered in the last twenty years – research in neuroscience is transforming how we think about human beings.

One of the key findings is that people need people. We humans have a very long childhood because we have such a big and complex brain to build. Children and young people depend upon adults to nurture them. Emotional nurture is as important in developing the brain as good food is in developing the body. It is relationships with adults that build the brains of children and young people.

***Five to Thrive** is a way of sharing the insights of research so that people who live and work with children and young people can understand the part they play in brain development. We have produced this guide to help adults to understand how the things that we do every day can help build the brains of our children and young people.*

***Five to Thrive** also describes the way in which human connectedness all through our lives keeps our brains working well. Young humans need connected relationships to **build** healthy brains, and all humans need connected relationships to **maintain** healthy brains. So this guide can also be used to suggest ways in which adults who live and work with children and young people can help each other. People need people all their lives.*



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The brain is amazing...

The brain is not like any other part of the body. Nearly all the cells of the brain are in place when we are born – between eighty and a hundred billion of them. But they are not yet working. The brain grows when connections are made between the cells in response to what is happening to us. These connections are forming and changing all the time, all through our lives. What happens to us shapes our brains.

Everything that lives consumes food and converts it into energy for all the activities of living. The human mind can be regarded as a process for managing the flow of energy and information that makes up a human life. This flow of energy happens between people as we relate to one another, and inside each individual as we think and feel and act.

The brain makes it possible for every cell in our bodies to be part of this flow of energy and information. From the tips of our toes and fingers, to the top of our heads and back again, the nervous system feeds the brain with information about what is happening. This information builds and strengthens connections in the brain, and these brain connections enable us to process and make sense of our experience. The mind builds the brain and the brain embodies the mind.

Research shows that the brain is a social organ. The information it most needs from the nervous system in order to work is information it gets from the nervous systems of other people.

Only a small part of our brain-and-nervous-system is conscious. Most of what happens to us is filtered out before it reaches our conscious mind – being conscious of everything that is happening would overwhelm us. But all the incoming information is food for the brain. So every human relationship shapes the brain of each person involved. Loving relationships provide great nourishment for the brain.



what are the challenges?

Life stages

The brain grows more quickly in the first three years of our lives than at any other time, setting down patterns for the way our brains function. These patterns are based on our relationships with the key adults who cared for us when we were babies. If we live with stress instead of safety in that early period, this is a challenge for the growing brain.

During adolescence the brain changes dramatically. Patterns formed during the early years make us dependent on our key adults to make sure our brains function well, and in adolescence these patterns re-shape, so that we begin to turn to our peers instead of our parents to support our brain function. If toxic stress has affected our growing brain in childhood, adolescence can be a very challenging period.

As we enter old age, the brain begins to change again, and we need the attention of people who respond to us to support the function of our brain-and-nervous-system. Without such loving relationships the last years of life can be very challenging for the brain.





Toxic stress

The brain needs the nervous system to be in a state of balance. As babies, we develop the ability to keep this balance through being looked after by people whose own nervous systems are well-balanced. At any stage of life, stress that we can't regulate causes harm to the brain. Toxic stress destroys the fixed patterns that help us to feel safe and to make sense of our world. Instead we are left with strong brain connections based on fear.

When we have lived through toxic stress (trauma) we need help and support from other people to recover our best brain function.

Patterned responses

Brain connections form when we have experiences that are repeated over and over again. Those connections become fixed for us – the brain looks for patterns that it recognises, and then re-uses those connections. We have a tendency to feel and think and behave in fixed patterns, to relate to people in fixed ways, and to expect the world to be as it has always been.

Brain connections also form as a result of the shock to the system produced by toxic stress. Until we recover from such experiences we feel that we are in danger, we think that other people are dangerous to us, and we lose the ability to manage our own behaviour.

what helps?

At any age and any stage of our lives having relationships with people who connect with us – providing us with the healthy nourishment our brains need – can help us to develop and maintain healthy brain function.

New connections in the brain form slowly and at first are less strong than those produced by repeated experiences in childhood, or by the shock of toxic stress which can occur at any age. It takes time and patience to build new patterns.

In our daily lives we are all constantly interacting with others, talking to them, enjoying their company, responding to their mood as they respond to ours. Much of this happens without us thinking about it.

Whenever we connect with other people our brains change. When these connections with others are respectful and loving they build powerful positive connections in the brains of each of the people involved. And when loving connectedness is repeated over and over again it builds strong patterns in the brain, so that we are able to function at our best.

Just as your body grows and functions better when you give it good food, so your brain grows better when you do five simple things that feed the brain:

Respond • **Engage** • **Relax** • **Play** • **Talk**



These are our daily 'five to thrive' – the building blocks for a healthy brain. **Five to Thrive** is a natural sequence of activities that ensures that we connect with other people so that each of the connected social brains can form strong connections and work as well as possible.

This sequence can happen very quickly – blink and you might miss it – but it is important that each part of the sequence happens. All the building blocks need to be in place and in the right order.

A healthy brain enables us to function at our best physically, emotionally and socially as well as being essential for thinking and for learning. Every day brings many opportunities to give children and young people the emotional nurture they need to develop healthy brains. Emotional nurture (**Five to Thrive**) feeds the brain, just as physical nurture (Five a Day) feeds the body.



Our brains work better when people respond to us...

From the moment we were born we needed other people. If they hadn't made sure we were looked after we would not have survived. We couldn't do much when we were babies, but everything we did, the sounds and the movements we made, were aimed at connecting us with the people who would look after us. We were asking them to respond to us so that we could live.

All our lives our brains work best when we have other people around us who give us loving attention and respond to us. The experience of being ignored unsettles the nervous system. The stress system becomes active, making us feel anxious or angry, and if that gets no response the calming system activates, switching us off so that we stop feeling anything.

But the experience of loving attention settles the nervous system, so that we can be in a balanced state and our brains can grow stronger through sharing energy and information with other people.





some suggestions

- Try to become more aware of your own responsiveness – notice what happens inside you when a child or young person needs you to respond.
- Wait-and-see – giving attention and interest without interfering – can be a powerful response to help children and young people develop their own ability to settle themselves and solve problems.
- If you let children and young people know when they have been responsive to someone else it helps them to become more aware of the two-way process described by **Five to Thrive**.

remember

- Responsiveness comes from being able to hold another person in mind so that we notice how they are feeling and what they might need from us.
- When we respond to another person our whole brain-and-nervous-system switches on so that we can connect to them.
- Only a small part of our brain-and-nervous-system is in our conscious awareness. Becoming more aware makes us better brain builders.
- Being responded to feeds the brain, responding to others exercises the brain; both are needed for healthy brain development and both build resilience.



respond

Our brains work better when people engage with us...

Babies and children need cuddles and other loving touch for their healthy development; later in life, we continue to need positive engagement with people who matter to us. When you are close to another person who matters to you, your body begins to work in tune with theirs. When they feel excited or stressed their heart beats faster and so does yours. When they feel calm or happy their heart beats slower, and so does yours. Our nervous systems send and receive all sorts of signals – electrical and chemical changes, as well as all the information provided by our five senses.

Being disengaged makes us feel unsafe, and can lead to toxic stress. Even if people respond to us, if they don't also engage with us so that our nervous systems match it unsettles us. It makes us feel anxious or angry, or it switches us off.

But loving engagement with people who matter to us helps us to feel safe, and builds strong connections in our brains for being able to manage our own feelings. Feeling safe with other people fills the body with special chemicals that strengthen the brain.

some suggestions

- Notice all the ways you engage with other people when you want to make a connection with them – try to become more aware of your own brain-and-nervous-system activity.
- Different people have different reactions to physical closeness and touch – try different ways of making a connection, such as walking together, or finding something that you can both give attention to together, or just being in the same space while doing different activities.
- Engaging with other people means picking up how they are feeling – this can be uncomfortable when we are with children and young people whose feelings can be very powerful. It's important to remember that these are not your strong feelings, they are the feelings of the child or young person – you are helping them to get their brain working to sort out and manage these feelings.
- The more you become able to engage with other people, the more important it is to have your own safe people who engage with you – building resilience is a social activity!

remember

- Engaging with another person means that our nervous system mirrors what is happening in their nervous system.
- We can only be consciously aware of a small proportion of what is happening in our own brain-and-nervous-system – engaging with other people usually happens without being aware of it.
- There are many ways to engage with other people so that our nervous systems mirror each other – touch rituals such as a hug or a handshake, sharing food or drink, or just being aware of the other person as a human being who matters to us.





cuddle

Our brains work better when people relax with us...

When we are stressed our bodies are full of chemicals that make us active so that we can deal with whatever is challenging us. These chemicals can be bad for the brain if we can't get the stress under control. In adults the nervous system can usually balance itself – a lifetime of experience builds a strong brain. But in humans the brain is a social organ, and we can always balance our nervous system more effectively if we are with another person with a working brain-and-nervous-system who is able to manage their feelings.

So when we feel stressed, other people can help us. Our bodies work best when in tune with other people. When we are stressed, we need others to calm down!

When we relax our heartbeat slows down, our breathing slows down, our blood pressure drops, and our muscles relax. We then feel calm and comfortable. When we are stressed, another person's heartbeat slowing down, breathing slowing down, blood pressure dropping, and muscles relaxing helps us to do the same. That calm relaxed feeling fills our bodies with chemicals that help our brain to work well.

Remember that this is a two-way process. When we help others to settle their nervous system, we settle our own – which makes our brain work better. When you are feeling stressed, other people can help you to settle.





some suggestions

- Notice what you do that settles your nervous system and makes it possible for you to meet the needs of other people – posture, breathing, small movements to ease tension in muscles, and so on, help us to relax.
- Experiment with different ways of relaxing yourself to help others to settle their own nervous system and get their brains working. What happens for you? What happens for the other person?
- Notice people who are good at making a connection with children and young people, and see if you can identify how they respond, engage and relax themselves to help the other person to settle their nervous system.

remember

- **Five to Thrive** is a sequence of activities that can happen in the blink of an eye – so relaxing yourself doesn't mean heading for the spa every time a child or young person needs to connect with an adult!
- Our nervous system has an arousal function which focuses our energy on the world around us, and a calming function which focuses energy on keeping our body working well – our brain works best when our nervous system is in balance between these two functions.
- Children and young people are less able than adults to keep their own brain-and-nervous-system in balance – they need adults to help them to self-regulate.

relax

Our brains work better when people are playful with us...

Loving connectedness to other people settles the nervous system and then activates the brain so that it can work and grow strong. Playfulness is all the positive non-verbal communication that lets the social and emotional parts of our brain know that this connectedness is happening.

Before we can consciously recognise any experience our brain-and-nervous-system has already sorted out how that experience feels to us, and what it means to us socially. This unconscious processing is evident to other people through non-verbal communication.

When we connect to another person, the expression on their face, their posture and their movements, the tone of their voice all send signals directly to our social brain. If these unconscious signals give us negative messages this unsettles our nervous system, and the social part of our brain either becomes overactive – trying to sort out what is happening – or switches off.

But when the connection to another person is positive and loving, their social brain processes this information and causes them to produce positive non-verbal signals which switch on our social brain. Playfulness activates the brain to be ready to think and to build strong connections.





some suggestions

- Try to become more aware of all the non-verbal ways you communicate with other people that helps them to switch on to connect with you – facial expressions, gestures, tone of voice.
- Spend some time just noticing how different children and young people react to the different adults around them, and think about the effect of the non-verbal communication that the children pick up from the adults.
- Experiment with new ways of being playful when communicating your feelings to others – smiling, using different tones of voice, gentle humour, and so on. What happens for you when you try new ways of expressing yourself non-verbally? What happens for them?

remember

- Playfulness is non-verbal communication between people. It is a sign that the brain is processing information arriving from the nervous system. Playfulness helps the other person's brain to switch on and start working.
- Children and young people are much more affected by **how** we communicate with them than they are by **what** we are communicating – playfulness lets them know that we are connecting with them and activates their brains.
- Playfulness may be no more than a quick smile, or a gesture, or shared eye contact. At other times extended periods of playfulness strengthen the brain-and-nervous-system.



play

Our brains work better when people talk to us...

With our nervous system settled and connected to another person, and our social brain turned on so that we can process everything that is happening, talking switches on our conscious thinking brain.

Verbal communication – listening, talking, signing (and singing!) – activates the brain, building and strengthening connections that make it possible to make sense of all our experience. Connecting with others enables us to translate our experience into a meaningful story. We become who we are as we create the story of our lives.

Words are very powerful. Long before a baby can speak, the words they hear are shaping the brain. When adults talk to, or about, children they plant seeds that may go on growing all our lives. And all our lives, words can wound and words can heal.

When we hear negative words used about ourselves, or about people we love, we develop negative beliefs. We feel unworthy, and unlovable. But when we hear heartfelt loving words, that helps us to develop a strong sense of worth and identity. The words we hear shape our thoughts, changing the way we can feel and behave.





some suggestions

- Try to become more aware of the words that you use when you are with children and young people, and notice the impact your words have on them.
- Experiment with using different words, or using words differently, when you have formed a connection with another person. What happens for you when you try new ways of expressing yourself verbally? What happens for them?
- Notice people who are good at communicating with children and young people, and see if you can identify how they use language.
- Songs, poetry, word games, jokes and riddles can all be new and interesting ways of communicating and helping children and young people to form new connections in the brain.

remember

- Words powerfully shape the human brain. The small part of our brain-and-nervous-system that is conscious makes sense of our lives by translating our experience into words.
- From the very beginning of life the words we hear create our identity. Verbal abuse or criticism prevent children from developing self-esteem. Honest appreciation and reassurance of being loved and valued build strong patterns for self-worth and resilience.



talk

Useful information

Below is a selection of organisations, weblinks, and other references that may be helpful to you. Some are available free online; books and DVDs may be available via the library service. Please note that the list is not exhaustive, but should provide a useful starting point.

Organisations

The Center on the Developing Child – The Center on the Developing Child based at Harvard University conducts research and produces science-based knowledge to help achieve better outcomes for children facing adversity

<http://developingchild.harvard.edu/>

The Child Trauma Academy – A substantial, knowledgeable and generous source of information based on the work of Dr Bruce Perry in Houston, Texas

<http://childtrauma.org/>

Early Intervention Foundation – A charity and a ‘What Works Centre’ set up to be the ‘go-to’ organisation for evidence and advice on Early Intervention in the UK

<http://www.eif.org.uk/>

The Wave Trust – A UK Charity working to end child abuse everywhere

<http://www.wavetrust.org/>

Young Minds – A UK charity devoted to promoting child and adolescent mental health. Lots of interesting material

<http://www.youngminds.org.uk/>

Online resources

<http://www.centreforum.org/assets/pubs/parenting-matters.pdf> – A useful introduction to the research on early brain development, with suggestions for government and service providers (Chris Paterson, Centreforum, 2011)

<http://www.suttontrust.com/our-work/research/item/baby-bonds> – This report reviews international studies of attachment to uncover the effect emotional bonds with parents have on a baby’s future outcomes

<http://www.c4eo.org.uk/themes/earlyyears/vlpdetails.aspx?lpeid=461> – C4EO’s page highlighting Hertfordshire’s ‘My Baby’s Brain’ project as a best-practice example

Books

The Developing Mind: How relationships and the brain interact to shape who we are –

An examination of the ways interpersonal experiences forge key connections in our brains (Daniel Siegel, 2012)

The Neuroscience of Human Relationships: Attachment and the developing social brain –

An exploration of the brain as a social organ and how it develops in response to our relationships (Louis Cozolino, 2006)

The Polyvagal Theory: Neurophysiological foundations of emotions, attachment, communication, self-regulation –

An explanation of the behavioural neurobiology of emotions, social behaviour and other basic human experiences (Stephen W. Porges, 2011)

Blame My Brain: The amazing teenage brain revealed – A readable introduction to the science behind teenage behaviours (Nicola Morgan, 2007)

What Every Parent Needs To Know – An accessible and comprehensive guide to child development and psychology (Margot Sunderland, 2007)

Your Baby and Child – Another great introduction to brain development for parents (Penelope Leach, 2010)

Affect Regulation and the Origin of the Self – The hard science behind the process of attunement (Allan Schore, 1999)

Attachment Across the Lifecourse: A brief introduction – An important book from one of the most influential thinkers on attachment in the UK, giving vital insight into the lifetime impact of early experience (David Howe, 2011)

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