



PROMOTING WELL-BEING

Toxic stress

Toxic stress in childhood occurs when children face severe, prolonged or repeated adverse events without the support of a caregiver to help them develop a normal stress response.

Educational, behavioural and health development can all be endangered by the repeated or extreme activation of stress response systems in the body and brain.

When threatened, our bodies respond by increasing heart rate, blood pressure and stress hormones such as cortisol. When a young child's stress response systems are activated within an environment of supportive relationships, these responses are significantly reduced, allowing healthy stress response systems to develop. However, if the stress response is extreme and recurring, and positive adult relationships are unavailable, the result can be lifelong damage to brain architecture and other organ systems.

Responding to stress

There are three kinds of responses to stress: positive, tolerable and toxic.

Positive stress response is a normal part of healthy development. It may create brief increases in heart rate and mild elevations in hormone levels in situations such as the first day at nursery or getting an immunisation.

Tolerable stress response is the result of more severe, longer-lasting difficulties, such as a bereavement or frightening injury. As long as the response is time-limited and supported by positive adult relationships which help the child adapt, the brain and other organs can recover without any damaging effects.

Toxic stress response can occur when a child experiences strong, frequent or prolonged adversity, such as physical or emotional abuse, chronic neglect, economic hardship or exposure to violence, without adequate adult support. This prolonged activation of stress response systems can disrupt development and increase the risk of stress-related disease and cognitive impairment well into adulthood.

→ Adapted from guidance by the Center for the Developing Child at Harvard University, <https://developingchild.harvard.edu>

Poor form?



Dr Ronny Cheung, author of *International Comparisons of Health and Wellbeing*, talks to **Meredith Jones Russell** about the UK's health outcomes for babies and young children

International Comparisons of Health and Wellbeing – a 2018 report for the Royal College of Paediatrics and Child Health (RCPCH) and the Nuffield Trust – assessed 14 OECD countries, including the UK. It found UK outcomes had improved across nine of 16 child health areas in the past decade, including reductions in the rate of infant deaths.

Are we doing well overall internationally?

There are things we do pretty well, but there are not many areas in which we are world-leaders. There are some areas we do extremely poorly in. Despite all the issues with the MMR vaccine in the 1990s, immunisation rates had been steadily improving, but have started slipping in the past couple of years.

Our breastfeeding rates are among the lowest in the world and we have considerably more overweight or obese children than the average for developed countries.

What has gone wrong?

The timing is not coincidental. There was welcome recognition five to ten years ago that investment in early years health was really

important. In 2010, there was a big fanfare about increasing the numbers of health visitors and strengthening midwifery services, but now very quietly they have just been cut and cut away. The loss of public health services, starting about five years ago, has correlated directly with things getting worse. So, things are not too rosy.

Which issue is of most concern at the moment?

Our child mortality rates used to be among the best in Europe, but they rose in the past two years for the first time since at least the mid-1980s. Rises in infant mortality rates simply do not happen in developed countries, so this is a huge alarm bell for our society.

What does it mean?

Infant mortality tells us about the health of babies but is also inextricably linked to the health of mothers. It asks us what we are doing for their nutritional status and how we are supporting them to look after themselves both physically and mentally, pre-, peri- and post-natally.

This is dependent on strong public health provision, and this is where health literacy and education



Infant mortality is rising in babies born to poorer mothers in the UK

are so important. We have to ensure women giving birth can afford to get proper nutrition and access healthy lifestyles.

How can we do that?

It all comes down to societal issues of austerity and poverty. Take any health issue and the gap between rich and poor is tangible. Ten years ago, a baby born to a mother in the lowest socio-economic class was 60 per cent more likely to die in its first year than one born to a mother in the highest. Now it is 100 per cent. The problem is getting worse as society gets more unequal.

Will children's services improve under the Government's Long Term Plan for the NHS?

It's great there is a special section on children. I think the *Five Year Forward View* in 2014 only mentioned the word 'children' about five times. Young people were not on the agenda at all. So, this is a huge step in the right direction. In general, the message is a good one; recognising mental health as a big area to focus on and improving early years investment in maternal care and post-natal health, reducing premature births and low birth weight and improving mental and physical health at delivery.

It is very good on immediate care and good to have a focus on issues such as asthma and diabetes, which affect a number of children.

So, will it be a success?

There is not quite as much clarity on how the funding will be divvied up. Children's services often just get what is left behind, while the big beasts such as cancer and cardiovascular services gobble up all the resources.

Furthermore, the plans require a workforce that just isn't there. We don't have the staff for specialist nursing and neonatal intensive care. We don't have child psychologists just waiting around ready to walk into post. We have to recruit and retain staff, and with the best will in the world this will take time.

Those are my key caveats. Plus, so much of children's health is not just about healthcare but investment in green spaces, education and tackling poverty, and all these fall outside the NHS Plan. We can't lose focus on them; they are actually more important than a healthcare plan.

Are we facing a crisis in children's mental health?

It's difficult to say whether there has been a true increase or whether we're just better at picking it up. The truth is probably somewhere in between. We have always known mental health problems affect young people, with 25 per cent of them starting before the age of 14. The real crisis doesn't come down to prevalence but a reduction in services.

Lower-level issues such as mild anxiety could be helped by talking sessions with a psychologist in clinics. I have people referred to me for a second opinion on things like mood disorders because they need support to be able to access any onward services. Five or ten years ago they would have gone into available mental health services, but now they are spilling out into my medical clinics and A&E.

More serious problems require admission to an inpatient unit, but we are losing these units and young people are having to travel sometimes hundreds of miles to access them because there simply aren't enough beds.

So, are you pessimistic about child health overall?

The bigger picture is about poverty and inequality. Some public health cuts have affected young people disproportionately. But there are things we can do. We need investment and a broader lens on the causes of ill-health. It is all amenable to change if we choose to try.

How can the situation be changed?

Two things: a greater political focus on the underlying causes of poor health – poverty and inequality; and undoing the disinvestment in early years public health. In the Netherlands, in the past ten years, there has been a comprehensive plan put in place targeting infant mortality. Their rates were already better than ours, but they wanted to put it top of the political agenda.

They succeeded, and their breastfeeding rates increased as well. So, it is possible. Yes, it needed investment, but they didn't shy away from that. There is a moral imperative to get this right, and the economic benefit will come later. ■

Ronny Cheung is an NHS paediatrician and visiting fellow at the Nuffield Trust.

→ MORE INFORMATION

- www.nurseryworld.co.uk/nursery-world/news/1163864/child-health-and-wellbeing-in-uk-falling-behind-other-oecd-nations
- www.nuffieldtrust.org.uk/files/2018-03/1521031084_child-health-international-comparisons-report-web.pdf

GROW YOUR OWN... TOMATOES



Growing your own tomatoes is simple, and just a few plants will reward you with plenty of delicious tomatoes in the summer. There are all sizes and types to try, from cherry to stripy to beefsteak.

Tomatoes are easy to grow from seed. You can sow seed from late March if you are growing the plants outdoors, or late February in a greenhouse.

- Fill the pot almost to the top with seed compost, level the compost and place the seeds on the surface, then cover.
- Place on a warm, sunny windowsill and cover with a polythene bag. Tomatoes need at least 18°C to germinate.
- Transplant into 5-9cm pots once two leaves have formed.
- Wait until the risk of frost has passed in your area (late May to mid-June), when the roots of the tomatoes have filled the pots and the first flowers have formed, before planting outside in the ground, or in pots or growbags.
- Vine or cordon tomatoes will need to be supported by being tied to stakes or canes pushed firmly in the ground. Make sure you put toppers on canes to protect from eye injuries.
- When they are about 2.5cm long, remove the side shoots regularly. Side shoots grow where the base of the leaf joins the main stem. Bush or hanging-basket tomatoes do not need to have side shoots removed.
- Tomatoes need watering on a regular basis. Feed every 14 days with a balanced liquid fertiliser suitable for tomatoes.
- Start picking when the fruit is ripe and fully coloured.

Adapted from Royal Horticultural Society advice, www.rhs.org.uk

Children's health is not just about healthcare but about investment in green spaces, education and tackling poverty