

# People born with a heart defect are at greater risk of mental health problems

June 8 2018, by Liza Morton

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Credit: AI-generated image ([disclaimer](#))

One in every 125 babies is born with a heart condition – but thanks to modern medicine more infants are surviving than ever before. In the developed world, [90% will now live into adulthood, compared with just 20% in the 1940s](#). However, there is no cure for these conditions and the person needs [lifelong medical monitoring](#).

Congenital [heart](#) disease (CHD) doesn't just affect the body – it affects the mind, too. A growing body of evidence shows that people with CHD are more likely to suffer from mental health problems, such as [anxiety](#), [depression](#) and [post-traumatic stress disorder](#).

To date, this psychological impact has been understood as a consequence of the additional stressors that living with a serious lifelong medical condition can bring, such as missed schooling, spending lots of time in hospital (from childhood), and having to undergo frequent surgery. I know from [personal experience](#) how challenging this journey can be.

But a relatively [new understanding](#) about how our bodies regulate feelings of safety, risk and social connection may help to make sense – from a biological perspective – of this increased risk of [mental health problems](#).

## **Flight, fight or freeze**

[Polyvagal theory](#), which draws on the latest developments in neuroscience, psychology and biology, proposes that one of the body's most important jobs is to avoid threats in order to keep us safe. To this end, the body flits between three different "systems", depending on how safe we feel. When all is well, we stay in our social engagement system. This is our most evolved and healthy way of being. In this mode, we feel safe and sociable, and we are best placed to grow, develop, learn, recover and heal.

When we feel under threat, the fight or flight system is activated. The nervous system is called to action and we feel compelled to either fight or run to safety. This is felt as anxiety. However, if we feel like our life is at risk, we switch to our most primitive system by "playing dead". Physiologically, this system is deactivating – we become immobilised, feel numb or dissociate. Afterwards, we may struggle to recall what

happened to us because the parts of our brain that make sense of events and store memories are shut down.

To feel healthy we need to be able to assess and adapt to our environment when we are both safe and unsafe. How well we can do this is partially shaped during our early years. If we experience a lot of trauma when we are growing up, we may be more likely to interpret situations as threatening. This affects how we manage stress. As social animals, it can also influence our relationships, as we need to be in the [social engagement](#) system, most of the time, for [social connection](#).

Since the heart is central to our nervous system, any heart problems [may affect how efficiently our bodies respond to threats](#). This could, in part, explain why people with [congenital heart disease](#) are at greater risk of anxiety, depression and [post-traumatic stress disorder](#). This risk is further increased by exposure to potentially traumatic early life events, such as surgery and being separated from parents due to periods of hospitalisation.

## Feeling safe

This has important implications, from cradle to grave, for people living with a heart condition. This understanding could better inform medical care by focusing on establishing feelings of safety, for example, by promoting the importance of the [parent's presence](#), [touch](#) and [soothing voice](#) to the child while [supporting the psychological health](#) of the child's family.

Teaching medical staff how to manage distress, how to communicate compassionately and the importance of encouraging the presence of loved ones would also be beneficial. This understanding also suggests possible interventions, specifically [touch](#), play and music therapies for children.

For adults, a focus on [safety and emotional regulation](#) may be more beneficial than talk therapy. This seems particularly important for a population who may have grown up during a time when parents were [discouraged from visiting their children in hospital](#) and who may have endured illness and difficult medical experiences without the soothing presence of their parent. People living with this condition might also benefit from mindfulness, meditation and breathing techniques to help them feel safe.

We should also look to improve awareness and understanding about this hidden population – doing so would support social inclusion and feelings of connectedness and safety within wider society.

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