

How do babies learn to be wary of heights?

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Infants develop a fear of heights as a result of their experiences moving around their environments, according to new research published in *Psychological Science*, a journal of the Association for Psychological Science.

Learning to avoid cliffs, ledges, and other precipitous hazards is essential to survival and yet human [infants](#) don't show an early wariness of heights.

As soon as [human babies](#) begin to crawl and scoot, they enter a phase during which they'll go over the edge of a bed, a changing table, or even the top of a staircase. In fact, research shows that when infants are placed near a virtual drop-off—a glass-covered table that reveals the floor beneath—they seem to be enthralled by the drop-off, not fearful of it.

It's not until later in infancy, at around 9 months, that infants show fear and avoidance of such drop-offs. And research suggests that infants' experiences with falls don't account for the shift, nor does the development of depth perception.

Psychological scientists Audun Dahl, Joseph Campos, David Anderson, and Ichiro Uchiyama of the University of California, Berkeley, and Doshisha University, Kyoto, wondered whether locomotor experience might be the key to developing a wariness of heights.

The researchers randomly assigned some babies to receive training in

using a powered baby go-cart, providing them with locomotor experience, while other babies received no such training. Critically, none of the babies had begun to crawl.

The data revealed that infants who used the baby go-cart showed tell-tale increases in [heart rate](#) when confronted with the virtual drop-off, indicating that they were fearful; infants in the control condition did not show such increases.

What about locomotor experience brings about the wariness? The data showed that, as they gain locomotor experience, infants come to rely more on visual information about how their movement is controlled relative to the environment. At the edge of a drop-off, much of this information is lost, thereby making the locomoting infants (and adults) wary.

"These new findings indicate that infants do not follow a maturational script, but depend on quite specific experiences to bring about a developmental change," note the researchers.

As such, infants who are delayed in locomotor experience—whether for neurological, cultural, or medical reasons—are likely to be delayed in showing avoidance of heights.

Since the avoidance of heights ultimately helps to keep us alive, why doesn't it kick in sooner?

The researchers surmise that a period of fearlessness may encourage infants to explore their environment, helping them develop movement strategies and learn how to adapt to terrain.

"Paradoxically, a tendency to explore risky situations may be one of the driving forces behind skills development," the researchers write.

Provided by Association for Psychological Science

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