

Life's not a squeeze for pregnant women

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Despite their changed body size, pregnant women are just as good as other people at judging whether they are able to fit through openings, such as doorways, or not. This is thanks to a process called perceptual-motor recalibration that helps people to adjust their spatial awareness of their environment based on changes in their body's size and abilities, says John Franchak and Karen Adolph of New York University in the US. Their study, published in Springer's journal *Attention, Perception, & Psychophysics*, is the first to report such perceptual recalibration in response to actual growth rather than on the experimentally induced manipulation of body size.

The possibilities to perform certain actions reflect the fit between body and environment, which is generally termed as "affordances." When a body changes relative to the environment, affordances also change. It happens constantly across a person's lifespan as motor abilities, body size and morphology change. Pregnancy or illness, for instance, can cause fluctuations in the size and shape of the body that have consequences for action, but over a shorter period.

The researchers tested the expectation that affordance perception may be hindered during pregnancy. They wondered if pregnant women's judgments are based on their original, pre-pregnancy body dimensions, or if their [perception](#) actually lags behind their growing bodies.

From the first experiment, in which 11 women participated during the course of their pregnancies, the researchers learnt that pregnant women were able to fully adapt to changes in their abilities to squeeze through

doorways. They made errors comparable to non-pregnant adults. As their bellies increased in size, so did their judgments of what doorways were possible to squeeze through in a sideways position.

Because [pregnant women](#) grow gradually and have the benefit of everyday experience to learn about their changing bodies, another experiment was designed in which participants wore a pregnancy pack simulating a pregnancy around nine months. The participants initially grossly misjudged affordance when wearing the pregnancy pack, and overcompensated for the added girth of the prosthesis. However, when they were first allowed to practice and move, they were able to make the necessary changes and adapt. Movement made a more accurate perceptual motor recalibration possible.

"Pregnant women accurately perceived the space needed to accommodate their growing bodies," writes Franchak, who stresses that changes to the body must be considered with respect to a task and an environment, and what is possible to perform or not.

"The experience of weight gain or weight loss likely operates similarly to [pregnancy](#)— experience might be necessary to facilitate recalibration to changes in [body size](#) and compression, in other words, how much the body can be 'squeezed' to fit through a specific opening," adds Adolph.

More information: Franchak, J.M. & Adolph, K.E. (2013). Gut estimates: Pregnant women adapt to changing possibilities for squeezing through doorways, *Attention, Perception, & Psychophysics*, [DOI: 10.3758/s13414-013-0578-y](#)

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