

Newborn babies have built-in body awareness ability

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The ability to differentiate your own body from others is a fundamental skill, critical for humans' ability to interact with their environments and the people in them. Now, researchers reporting in *Current Biology* on November 21 provide some of the first evidence that newborn babies enter the world with the essential mechanisms for this kind of body awareness already in place.

In addition to this insight into normal [human development](#), the researchers stress the importance of the new findings for understanding atypical development, too.

"The identification of these mechanisms at birth in the current study sheds light on the typical trajectory of body awareness across development," says Maria Laura Filippetti of Birkbeck College, University of London. "Our findings may also be relevant to the investigation of early predictors of developmental disorders in infants, such as autism, where an impairment in the discrimination of self/other is believed to be present."

Earlier studies in adults showed that the integration of information from different senses is key to [body awareness](#). If an individual watches another person's face being touched as his or her own face is touched in the same way, the perception of self actually shifts to partially incorporate that other face. In the new study, Filippetti and colleagues wanted to go back to the very beginning in investigating that phenomenon by studying newborn babies.

Just as in those earlier adult studies, the researchers presented 20 healthy newborns with a video of another baby's face being touched on the cheek with a soft paintbrush while the newborns' corresponding cheeks were stroked either simultaneously or with a time delay. Of course, the babies couldn't explain what they experienced, but they did show greater interest in looking at the other baby's face when it was stroked synchronously with their own. The babies were less interested when the face was presented to them upside down, making it less relatable to themselves.

The researchers interpret their observations as evidence that babies have the essential ingredients for [body perception](#). When what babies see in relation to their own bodies matches what they feel, they notice just as we adults do. In other words, Filippetti says, newborns are "competent creatures," capable of differentiating themselves from others and of forming a coherent perception of their own bodies.

The findings may help in understanding disorders characterized by a lack of self-awareness, and the researchers call for additional research, particularly in the context of autism.

"For years, research on autism has focused on the impairment in social interactions," Filippetti says. "We believe it will be important for further studies to specifically investigate the perception of the self in this population, as well as the relationship of self to other."

More information: *Current Biology*, Filippetti et al.: "Body perception in newborns." [dx.doi.org/10.1016/j.cub.2013.10.017](https://doi.org/10.1016/j.cub.2013.10.017)

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