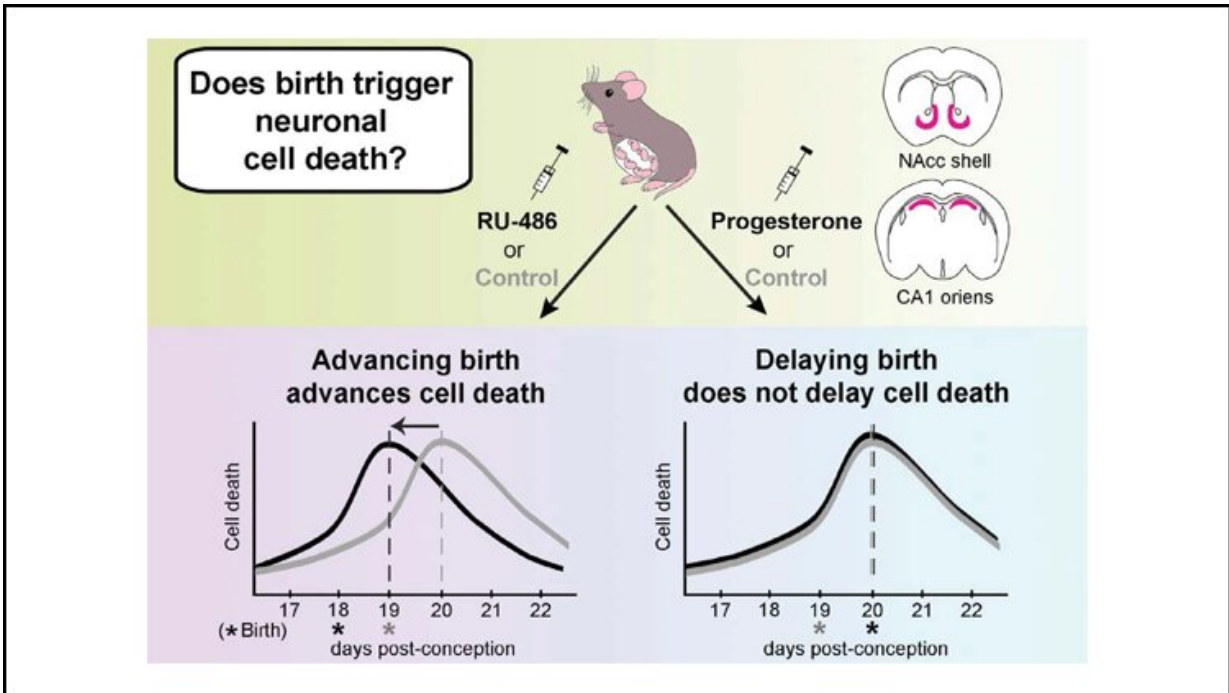


# Birth timing may affect brain development

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Advancing birth triggers cell death, but delaying birth does not affect timing of cell death. Credit: Castillo-Ruiz et al., *eNeuro* 2020

Moving birth a day early triggers an early start to widespread neuron death, according to new research in mice published in *eNeuro*.

Right before and after birth, about half of the neurons in the developing brain die. Scientists have known about this normal process for half a century, but no one knows what controls it. Is it an external signal like

birth, or an innate developmental mechanism?

Castillo-Ruiz *et al.* induced labor a day early or pushed birth a day late in mice—still within the healthy time frame- and monitored how the change affected neuron death. By focusing on [brain regions](#) that experience extreme [cell death](#) soon after birth, the researchers could detect the effects of small changes in birth timing.

Early birth prompted cell death to start a day early but delaying birth did not alter when cell [death](#) occurred. This indicates that a developmental process takes over when [birth](#) is delayed. The results raise questions about the consequences for subsequent brain development when women opt to induce labor early.

**More information:** Does Birth Trigger Cell Death in the Developing Brain? *eNeuro* [DOI: 10.1523/ENEURO.0517-19.2020](https://doi.org/10.1523/ENEURO.0517-19.2020)

Provided by Society for Neuroscience

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