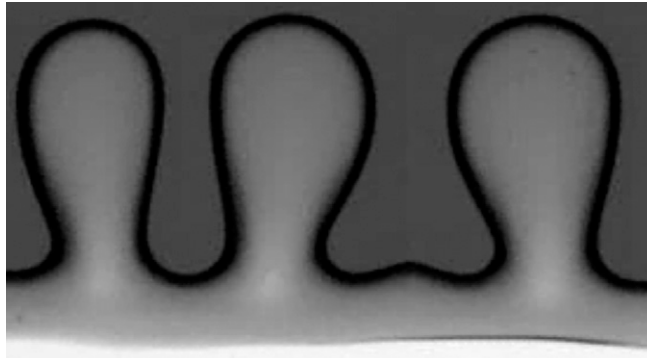


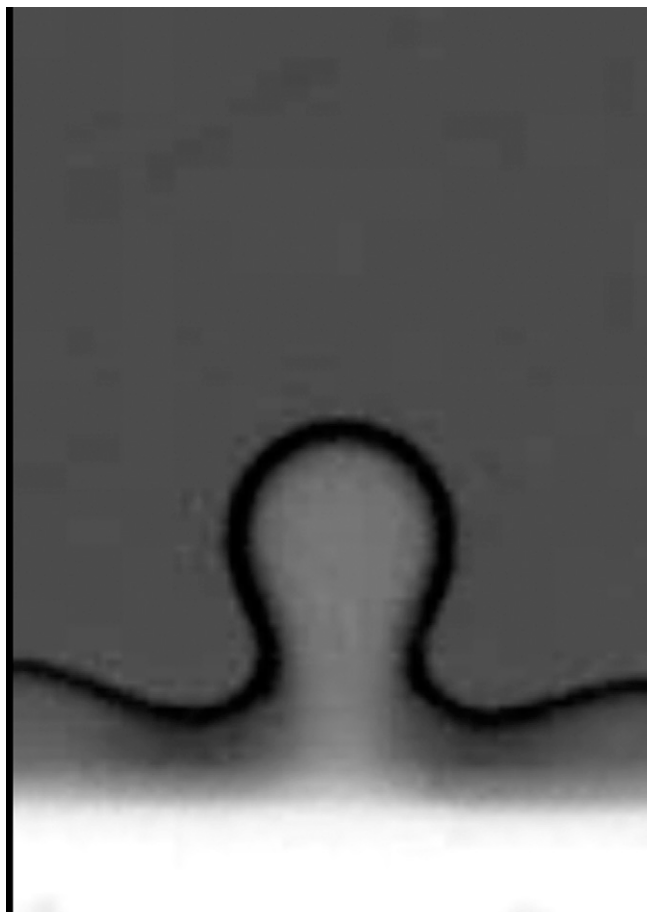
Supporting Information

Biggins et al. 10.1073/pnas.1302269110



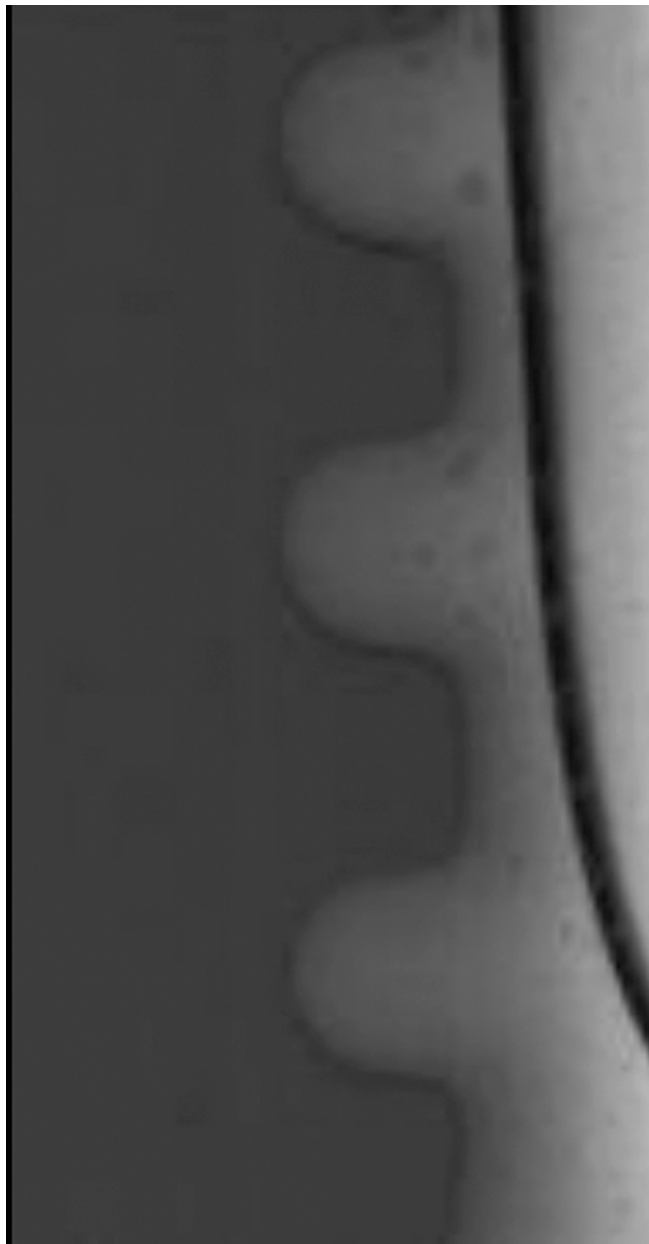
Movie S1. Typical experiment for a gap $a = 3.05$ mm, showing a sinusoidal destabilization just before the sudden nucleation of a finger. Dimension of slab: 29×20 mm. The movie is slowed down by a factor of 20.

[Movie S1](#)



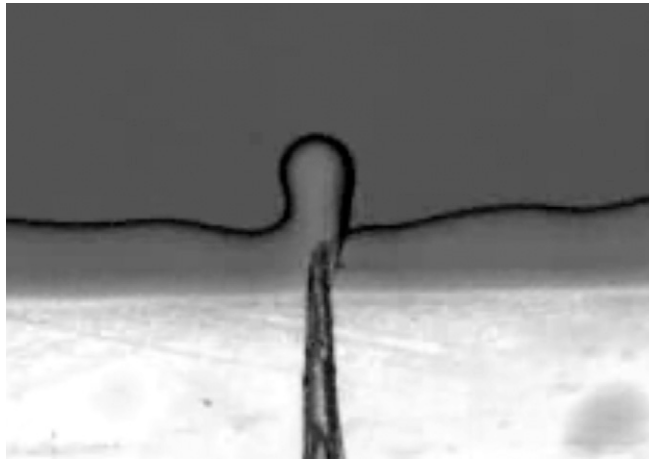
Movie S2. Movie showing the reversibility of the instability and its hysteretic character. The transient domain is relatively small compared to the size of a finger. Gap $a = 3.04$ mm. Dimension of slab: 13×19 mm. Real speed.

[Movie S2](#)



Movie S3. Movie showing that identical fingering occurs even when the air–elastomer interface is replaced by an air–oil interface. The change in interfacial tension does not change either the onset of the instability or its wavelength, suggesting that the effects of interfacial tension are unimportant at leading order in determining this phenomenon.

[Movie S3](#)



Movie S4. Movie showing the possibility to nucleate a finger wherever along the front in the hysteretic region, when the two plates have been separated by a distance $\Delta z = 0.36$ mm. The needle used to poke the gel is made of hydrophobic plastic. Gap $a = 3.04$ mm. Dimension of slab: 27×19 mm. Real speed.

[Movie S4](#)

Other Supporting Information Files

[SI Appendix \(PDF\)](#)