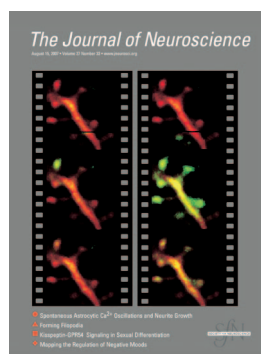


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Cover legend: Each panel shows the fluorescence collected from a spiny stretch of dendrite of a striatal medium spiny neuron after stimulation with two-photon laser uncaging of glutamate. Fluorescence was collected by two-photon laser-scanning microscopy and shows the morphology of the cell (red) and areas of increased intracellular calcium (green). In the movie strip on the left, a single spine in the upper left was stimulated, and the resulting calcium transient is limited to the activated spine head. In the strip on the right, five spines were stimulated at an interstimulus interval of 2 ms, resulting in large calcium increases throughout the imaged region. The green bar in the first frame of the image on the right is an artifact caused by the uncaged pulses. The interframe interval is 256 ms. The first frame is taken before stimulation. For more information, see the article by Carter et al. in this issue (pages 8967–8977).

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