Supplementary Figure 1: *Slow noise-induced degeneration of spiral ganglion cells.*

These light micrographs of osmium-stained plastic sections are from the 32 kHz place in noise-exposed ears, either 2 wks (a) or 2 yrs (b) post exposure. With the DIC optics used, only a fraction of the 40 µm section depth is imaged at one focal plane. Thus, during cell counting, the focus was rolled to capture all the cells in the 90 µm x 60 µm x 40 µm cube of which this is one optical slice (see Methods).

Supplementary Figure 2: *Stereocilia bundles are normal in noise-exposed ears, even when temporary threshold shifts are maximal.* These confocal images of phalloidin-stained outer hair cells are from the 16 kHz place in a control ear (a) and an exposed ear (b) fixed 24 hrs post-exposure. The bundles on first-row outer hair cells (OHC 1) are partially obscured by phalloidin staining of the actin in the cuticular plate.