

**Snake Hearing Is Connected To the Jawbone** *60-Second Science* - January 24, 2008

Most school kids know that snakes can “see” with their noses. Vipers in particular have these organs on their noggins that allow them to see heat, which helps them find their warm-blooded prey. If that’s not wild enough for you, now physicists from Germany and Kansas say that snakes can hear with their jaws, an idea they present in an upcoming issue of *Physical Review Letters*.

See, snakes don’t have actual ears, at least not on the outside. But they do have fully formed inner ear systems, complete with a cochlea, the fluid-filled bone that harvests sound. But in snakes, the cochlea is connected to...the jawbone. So, if you walk past a snake that’s resting with its head on the ground, the vibrations from your footsteps jiggle the snake’s jaw, which shakes the snake’s cochlea, so the snake can hear you move. In fact, the physicists found that this whole listening-with-your-mouth setup can sense even the tiny vibrations made by scampering rodents or other small prey. And because snakes can unhinge their jaws one side at a time, they may be able to hear in stereo. Which means that tapping on the glass of the rattlesnake exhibit is actually twice as annoying as anyone ever realized.