

Woman can literally feel the noise

May 30 2011, by Deborah Braconnier



(Medical Xpress) -- A case of a 36-year-old woman who began to literally 'feel' noise about a year and a half after suffering a stroke sparked a new research project by neuroscientist Tony Ro from the City College of New York and the Graduate Center of the City University. Research and imagery of the brain revealed that a link had grown between the woman's auditory region and the somatosensory region, essentially connecting her hearing to her touch sensation.

Ro and his team presented the findings at the Acoustical Society of America's meeting on May 25. They pointed out that both [hearing](#) and touch rely on vibrations and that this connection may be found in the rest of us as well.

Another researcher and neuroscientist Elizabeth Courtenay Wilson from Beth Israel Deaconess Medical Center in Boston agrees that there is a strong connection between the two. Her team believes that the ear evolved from skin in order to create a more finely tuned [frequency](#) analysis. She earned her PhD from MIT with a study on whether vibrations could help hearing aid performance. Her studies showed that individuals with normal hearing were better able to detect a weak sound when it was accompanied by a weak vibration to the skin.

Ro himself published another paper in *Experimental Brain Research* in 2009 focusing on what he calls the mosquito effect. Those pesky little bugs sound frequency makes our skin prickle and he believes that in order for this to work the frequency of sound must match the frequency of the vibrations we feel.

Functional MRI scans of the brain have revealed that the auditory region of the brain can become activated by a touch. It is believed by some researchers that areas of the [brain](#) that are designed to understand frequency may be responsible for this wire crossing, though they are not yet sure exactly where the two senses come together.

More information: Sound enhances touch perception, Tony Ro et al., *Experimental Brain Research* Volume 195, Number 1, 135-143, [DOI: 10.1007/s00221-009-1759-8](#)

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