Genes influence age-related hearing loss

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A new Brandeis University study of twins shows that genes play a significant role in the level of hearing loss that often appears in late middle age. The research, in the *Journal of Gerontology: Medical Sciences*, examined genetic and environmental factors affecting hearing loss in the frequency range of speech recognition.

“This research confirms the importance of genetic factors in age-associated hearing loss, and the need for vulnerable individuals and their families to take extra care to prevent further hearing damage,” said lead author Brandeis neuroscientist Arthur Wingfield.

The research suggests that middle-aged and older people with a genetic vulnerability to hearing loss should be particularly careful about environmental risk factors such as harmful noise and medications whose side-effects could be detrimental to hearing.

The study examined 179 identical and 150 fraternal male twin pairs, ranging in age from 52 to 60 years, as part of the Viet Nam Era Twin Study of Aging (VETSA). About two-thirds of the hearing loss in the individual subjects’ better ears could be accounted for by genetic factors. In the subjects’ poorer ears, about one-half of the hearing loss was due to genes, the study concluded.

Wingfield, an expert on the relationship between memory performance and hearing loss in older adults, said that even mild hearing loss can indirectly lead to declines in cognitive performance because intellectual energy normally reserved for higher-level comprehension must be

directed toward perceptual effort for accurately hearing speech.

Hearing loss is the third most common chronic disability among older adults after arthritis and hypertension.

Source: Brandeis University