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Age effects of pitch-shifted auditory feedback on reflexive and volitional voice F0 control

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Research on voice fundamental frequency (F0) control suggests that when making a voluntary vocal response to a pitch change in voice auditory feedback, the pitch-shift reflex typically occurs before the volitional response is initiated. The current study examined the effects of aging on reflexive and volitional voice F0 responses to pitch-shifted auditory feedback. Thirty participants (age range 19 to 78 years) repeatedly sustained an /u/ vocalization at a steady pitch and loudness while listening to their voice fed back over headphones. Once per vocalization, feedback pitch was randomly shifted upward or downward for 100 milliseconds and 20 or 100 cents. In the Sustain condition, participants attempted to ignore the pitch change in auditory feedback voice. In the Follow condition, participants immediately changed their pitch in the same direction as the auditory pitch shift they heard. Preliminary results from thirteen participants indicate that there appears to be no effect of aging on the first F0 responses for both magnitude and latency. Voluntary voice F0 changes were delayed in older participants compared to younger participants as expected due to age-related general slowing. Results broaden our understanding of typical reflexive and volitional voice control capabilities across the age span.