

Sounding younger, feeling better

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Song of youth

Debbie Phyland has a simple theory: if you sound in good shape, you probably are.

"Your quality of life and your voice are intricately related: if people's voices sound good they feel good and vice versa," she says. "If you're upset or angry, your voice reflects that. We know there is a strong emotional connection with the voice and that's been shown in numerous research studies."

It was while listening to a choir that included her grandmother that Ms Phyland, who lectures in speech pathology at La Trobe University, decided to investigate whether voice exercises could affect the strength and tone of the singers. The results revealed how regular singing exercises could improve the voices of elderly men and women.

"Because of my work as a speech pathologist, I was aware many of the exercises we use for voice disorders do help condition the voice and improve its efficiency."

She says the human voice starts to change after the age of 65 and develops a more tremulous, rough sound. But when she reviewed research on the singing voice, she realised there were no studies that had investigated whether regular voice exercise after 65 could help a person sound younger.

She and colleague Dr Jennifer Oates put the idea forward as an honours project for their speech pathology students — and one, Evelyn Tay, decided to take it on. The study involved a volunteer group of 14 women and eight men, all singers in the choir of the Hawthorn University of the Third Age.

"They were all 65 or older with an average age of 73 and the oldest was 83," Ms Phyland says.

The group took part in two weeks of training sessions and three weeks of independent home practice while a control group from the same choir continued choir practice but with no special voice exercises.

"We knew that singing in the choir would exercise their voices a bit but we suspected they weren't doing a specific regime of exercises every day," Ms Phyland says. "So we used a set of exercises they could do four or five times a day for 10 minutes each in a specific regime to stretch both ends of the pitch range and both ends of the loudness range."

During the first session, all the participants performed four short vocal tasks for baseline measurements of breathiness, roughness, strain, acoustic frequency range and what is known as "jitter, shimmer and noise-to-harmonics ratios". They also completed a self-evaluation questionnaire.

The group received one session of face-to-face training, one session of review and then three weeks of independent home practice. At the end of the five weeks, all participants were assessed again along with their perceptions about the effectiveness of the program.

"This is akin to any other exercise or physiology approaches with the ageing population in that if you use it you won't lose it — a bit like walking regularly," Ms Phyland says. "The series of acoustic evaluations of their voices we did before and after was to see the effects of the training and we found statistically significant differences between the experimental and the control groups."

Those taking part in the program told researchers the exercises affected their singing: the sound was more stable, with less wobble and breathiness, as well as being more harmonic and having "a greater sense of musicality about it".

"We could have used a non-singing group with the same program but then we might have concluded it was the act of singing in a choir that improved things," she says. "What we were really interested in was to see whether a series of specific exercises improved vocal function."

"Singing randomly or singing songs will not do the same as a designed workout. It's a bit like jogging regularly: it might be useful but exercising specific muscle groups will make a difference to that part of the body."

Is there a message here for the not-so elderly? Ms Phyland has no doubt that exercising the voice regularly will help keep the voice young and healthy. As she says, Dame Joan Sutherland proved that into old age when she still sounded so young.

"That highlights the fact you need to use your voice as long as you can if you want it to remain healthy and for it to represent how you feel. So many of the people I see sound older than they are because their voices are not in the right condition and that can give them a sense of frailty and a lack of well-being.

"For your own well-being, you should keep up singing with exercises such as humming. The sheer effort humming and strengthening the voice will make you sound much healthier and you will feel better for the effort."

Ms Phyland says that even if a person is in a choir but does not use their voice much between practices, they cannot expect it to be in as top condition as if they went around the house singing or humming.

"It doesn't have to be a set of specific exercises although this research showed how that could improve the voice. But we do know for a non-singer just giving the voice a workout regularly is important for maintaining vocal health and a sense of well-being."

In a paper on the research project they are preparing for publication in an academic journal, Ms Phyland, Dr Oates and Ms Tay say voice exercises may be effective in reversing or lessening negative perceptions and impacts associated with the ageing voice.

