



Modern methods can stop the stutter

Treatment for the speech impediment has come a long way since George VI's day

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IN a scene from the Oscar-winning film *The King's Speech*, Australian speech therapist Lionel Logue guides George VI through breathing exercises with queen consort Elizabeth sitting on his torso, a manoeuvre aimed at strengthening the king's diaphragm. In another, he directs the king through a series of complicated tongue twisters.

The unorthodox methods depicted in the movie were designed to help the monarch overcome a lifelong debilitating speech impediment. While he never rid himself of the stammer completely, the king did manage to rein it in enough to speak publicly, albeit haltingly.

But however impressive that progress might have been, there's no doubt treatment for stuttering has evolved immeasurably since the days when Logue had the king shouting vowel sounds through an open window.

"Logue was working long before the speech pathology profession existed, before any scientific research about how to treat stuttering had been done and before it was even known properly how the vocal cords worked," says Mark Onslow, founder and director of the Australian Stuttering Research Centre at the University of Sydney. It is one of the world's premier research centres, publishing a remarkable 86 per cent of all clinical trials on the subject.

Stuttering is a surprisingly common disorder. Recent research in Melbourne found that one in 10 four-year-olds stutter. As George VI's experience suggests, it usually begins in toddlers, with the median onset at about 20 months. It's much more common in men than women and it runs in families. Although carrying a specific gene doesn't automatically mean an individual will stutter, it does increase the likelihood.

Women can pass on the genes that make a person more prone to stuttering, even when they don't stutter themselves.

In Logue's day stuttering was considered a symptom of an anxiety disorder, one brought on by some sort of traumatic experience or stressful situation. In fact, the opposite is true: stuttering is not caused by anxiety but it can cause sufferers to become anxious. The stuttering will often become much more severe when the person is stressed or anxious. It's a physiological problem, not a psychological one, though untreated stuttering does dramatically raise the risk of developing mental illness later in life.

So what does cause stuttering? According to Onslow, the initial stutter stems from a physical problem with neural speech processing.

"The messages to the brain that deal with speech control somehow don't get through," he explains. The exact mechanism for the impediment is not yet known but work conducted by experts such as Onslow shows it can be fixed. Fortunately, contemporary treatment is simpler than the ineffective methods George VI endured. Case in point: speaking with a mouthful of marbles.

The Lidcombe Program, Onslow's brainchild, is the international gold standard treatment for stammering preschoolers. It relies on parents, working with a speech pathologist, to help a child change their speech patterns.

The treatment involves the parent commenting directly about the child's speech, taking care the feedback is overwhelmingly positive. The parent comments primarily when the child speaks without stuttering and only occasionally when the child stutters. The parent does not comment on the child's speech all the

time, instead choosing specific times during the day in which to give the child feedback.

According to Onslow, it usually takes 13 to 19 visits to a clinic to bid adieu to stuttering.

If the problem is caught early, the Lidcombe Program treatment is extraordinarily effective, with a success rate close to 100 per cent. As Onslow says: "You get children who say they don't even remember stuttering."

Ultimately, the goal is to stop stuttering from starting. To that end Onslow and his colleagues are trialling the Westmead Program, which is based on so-called syllable-timed speech: speaking with minimal differentiation in linguistic stress across syllables.

"If [stuttering is] not controlled during preschool years, it starts to become intractable," says Onslow, noting that if a child still stutters a year after onset of the condition they have only a one in 16 chance of recovering naturally.

Adults who stutter — 1 per cent to 2 per cent of the population — are more difficult to treat, probably because the speech motor system loses plasticity as neural networks become established.

The more severe the stuttering, the less likely the person is to complete higher education. It affects the jobs they choose and their quality of life. Almost two-thirds of adults who come to Onslow's Sydney clinic have social phobia, an anxiety disorder characterised



by extreme, irrational fear of being humiliated in social situations or performances.

The Australian Stuttering Research Centre is testing online treatments to deal with mental health issues commonly experienced by people who stutter.

Many adults can improve their ability to communicate and reduce stuttering by learning to change their speech pattern, stretching out words to control the stammer. It can make a big dif-

ference, though it's unlikely to eliminate the problem.

So how did George VI fare so well? Onslow attributes the king's achievements to plenty of practice and good psychological support, not cutting-edge speech pathology techniques or magical cures. Still, he notes the monarch's speeches remained laborious.

"I doubt very much that the loopy stuff like sitting on his chest helped at all, and it was just the practice and support that

got the king through speeches," Onslow says.

"Anyone who stutters, with lots of practice at reading over and over, and with psychological support, can achieve as much. No rocket science there."

Adults who stutter and also suffer from anxiety are invited to contact the ASRC about clinical trial participation on (02) 9351 9392 or sydney.edu.au/health_sciences/asrc/index.shtml.



Colin Firth as George VI with his speech therapist Lionel Logue (Geoffrey Rush) in *The King's Speech*