Rapid Syllable Transition Treatment Information for Parents

What is the Rapid Syllable Transition treatment (ReST)?
ReST is an evidence-based treatment for treating children with childhood apraxia of speech or ataxic dysarthria. Both disorders are motor speech disorders, where children know what they want to say but cannot plan in their heads the movements required for clear speech.

The ReST treatment uses nonsense words – words that sound and read like real words, but do not have any meaning. This allows children to concentrate on their movements, lessens the need for working on old words which already have errors and allows clinicians to make words specifically for each child's needs. The nonsense words are designed to help children coordinate movements across syllables in long words (and phrases). Examples are: "tegooner" with weak-strong-weak beats and "fargebee" with strong-weak-strong beats. Children will learn how to say the correct sounds, with the correct beats (speech rhythm/stress/prosody) and to say the words smoothly (to join all the sounds together fluently) - all at the same time.

ReST is also different to other programs as it helps children *learn* new speech movements. Children gain support and assistance to say the new nonsense words correctly at the start of the session, however once they can do it they spend the majority of the session in a practice phase (or speed round) in which they say each word once and are given right/ wrong feedback. This helps the child learn to make these movements rapidly in real speech and will help them transfer their skills to real words.

Does the ReST program work?
To date there are more than 6 treatment studies published in scientific journals where experts have reviewed the findings. Speech pathologists need to administer the treatment for the therapy to work. All studies have shown significant and large improvements in the children's ability to say the nonsense words correctly but also moderate-large improvements in saying their everyday real words better following the program!

A randomized control trial with has shown it works for children aged 4-12 years (Murray, McCabe, & Ballard, 2015). It works best in an intensive block, so either 4 days a week for 3 weeks (Murray et al., 2015) or 2 days a week for 6 weeks (Thomas, McCabe, & Ballard, 2014). It can also work in telepractice (e.g. over Skype or FaceTime) (Thomas, McCabe, Ballard, & Lincoln, 2016). In the research, therapy has not involved home practice as it is difficult for caregivers to take on the role as clinician and to identify whether the child produced the nonsense word correctly. For this reason, it is uncommon for home practice to be provided.

What happens in a treatment block?
A therapy block is 12 sessions, delivered either 4 days a week for 3 weeks or 2 days a week for 6 weeks. Each treatment session is 45-60 minutes long.

The structure of each therapy session is the same. Your child will come into the room and may be given a visual timetable showing the tasks they need to complete in the session. They start with learning how to say the nonsense words. During this part of the session, called training, the clinician will help them to say the words, offering feedback about what to change or what specifically was done well. Once your child gets 5 correct productions correct, they will be given a 2 minute break to play. The remainder of the session is made up of practice blocks and 2 minute breaks. There are usually 5 blocks of practice in each session (so your child will say 100 words in a session!) with 2 minute timed breaks between each practice block.

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In each practice block your child will say 20 nonsense words, having one attempt at each. The clinician will provide right/wrong feedback (e.g. yes/no, yay!/not that time) to your child after a 3 second delay. The clinician will give your child feedback on some but not all of the words in each block. This is where your child *learns* how to say words with correct sounds, beats (prosody) and smoothness (sounds joined and fluent) all at the same time and with decreasing help from the clinician.

It is typical for children:

- To get more wrong in initial sessions. The nonsense words are selected to be challenging for the child, and it's OK for the child to take many sessions to learn to say the words.
- To get some parts of the word correct (e.g. sounds) and other parts incorrect (e.g. beats and smoothness). Sometimes they will focus on one part and make a mistake on a part they could previously do. This is a normal part of learning a new motor speech skill and during the block of treatment they will practice being able to get all of the parts of a word right at the same time. This could be frustrating for you and the child at times, but this is part of the journey to change their everyday speech.

Will ReST work for my child?

ReST is shown to work for children aged 4-13 years with mild to severe childhood apraxia of speech and older children with milder ataxic dysarthria where the focus is on beats or speech rhythm. Please discuss with your speech pathologist if your child would be suitable. An assessment would be required to determine if your child has childhood apraxia of speech or ataxic dysarthria and if so, if this or other another type of therapy would be best suited to your child's needs at the time.

For more information and to discuss whether this treatment is right for your child, please contact a speech pathologist close to you and feel free to share this handout, the ReST Readiness Checklist and our website sydney.edu.au/health-sciences/ReST

References:

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Murray, E., McCabe, P., & Ballard, K. J. (2015). A Randomized Controlled Trial for children with Childhood Apraxia of Speech comparing Rapid Syllable Transition Treatment and the Nuffield Dyspraxia Programme (3rd edition). *Journal of Speech, Language, and Hearing Research*. doi:10.1044/2015_JSLHR-S-13-0179

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