



Caroline Bowen

CONTROVERSIAL PRACTICES and Intervention for Children with Speech Sound Disorders

Non-Speech Oral Motor Exercises are used by some Speech-Language Pathologists / Speech and Language Therapists because they believe, despite evidence to the contrary, that these exercises will facilitate speech development, or improve a client's speech intelligibility.

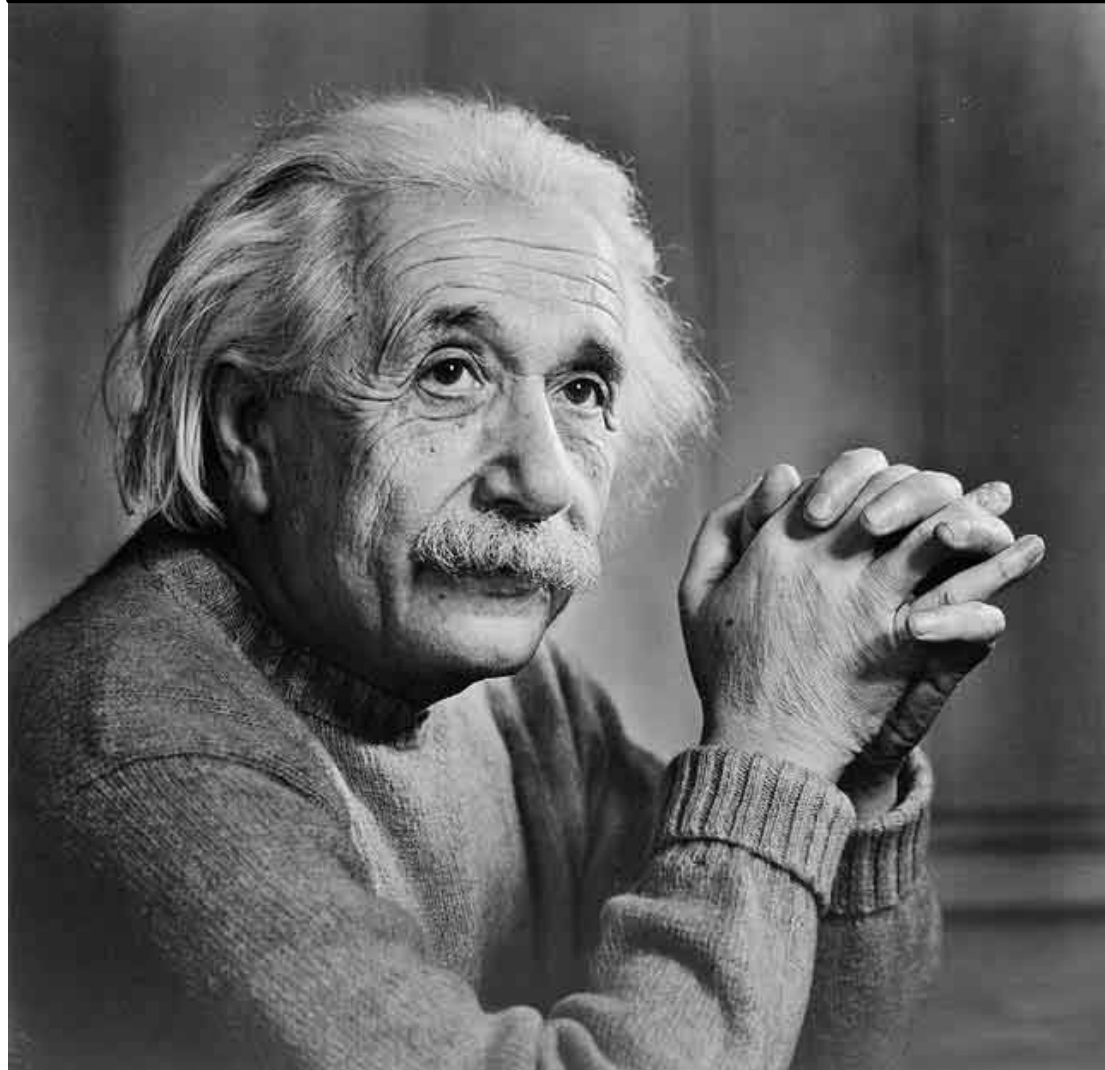
This slide show was downloaded, with the author's permission, from www.speech-language-therapy.com



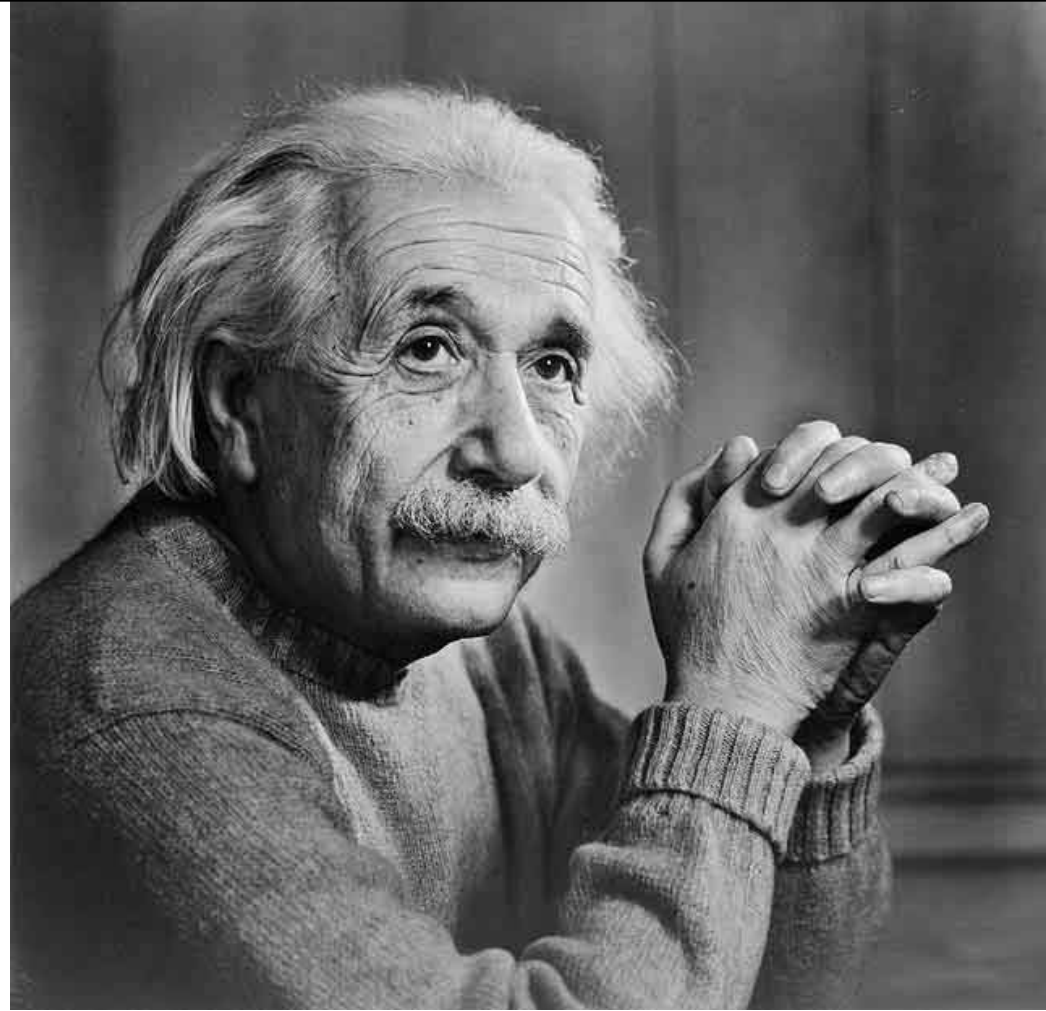
People ask, 'Which method do you use for SSD?'

- There is a range of treatment approaches and a range of commercially available materials and programs for speech sound disorders (SSD).
- Not all treatments are suitable for every child.
- All treatments must be individually tailored.
- In that sense there is no 'best method'.
- A 'good method' is one that is adaptable to changes in the child, and flexible over time, and across settings, and across conditions...

...and is 'scientific'



'I want ___'s therapy to be based on the best science.'



‘Oral-motor exercises are activities that involve sensory stimulation to or actions of the lips, jaw, tongue, soft palate, larynx, and respiratory muscles which are intended to influence the physiologic underpinnings of the oropharyngeal mechanism and thus improve its functions; oral-motor exercises may include active muscle exercise, muscle stretching, passive exercise and sensory stimulation.’

Arvedson, J., Clark, H., Frymark, T., Lazarus, C., Lof, G., McCauley, R., Mullen, R., Schooling, T., & Strand, E. (2007, November). The effectiveness of oral-motor exercises: An evidence-based systematic review. *Paper presented at the annual convention of the American Speech-Language-Hearing Association, Boston.*

Common abbreviations

- OMT
Oral Motor Therapy
- OME
Oral Motor Exercises
- NS-OMT
Non-Speech Oral Motor Therapy
- NS-OME
Non-Speech Oral Motor Exercises
- NSOMTs
Non-Speech Oral Motor Treatments

Other terms

Oro-motor work

Oral placement therapy

What it's not!

Phonemic placement techniques –

- butterfly position
- tongue-up-tongue-down for /l/
- straws to direct airflow for lateral /s/
- the use of bite blocks to achieve 'place'
- etc.

People ask, 'Why don't you use Oral Motor Therapy?'

There is no evidence to support the use of Non-Speech Oral Motor Therapies (NS-OMT), and there is no theory to suggest that the evidence might be forthcoming 'eventually', according to:

A Systematic Review in 2007

Arvedson, Clark, Frymark, Lazarus, Lof, McCauley, Mullen, Schooling & Strand (2007)

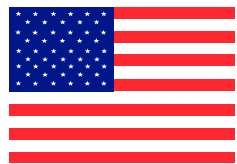
Two Clinical Forums in 2008

1. Language Speech & Hearing Services in Schools
2. Seminars in Speech & Language

For abstracts & articles see: www.speech-language-therapy.com

I don't use them, but 85% of US and 85% of Albertan SLPs use NS-OMEs:

1. to increase articulator strength and coordination
2. to facilitate stimulability for consonants and vowels
3. to improve speech intelligibility



Survey: Lof & Watson, 2008

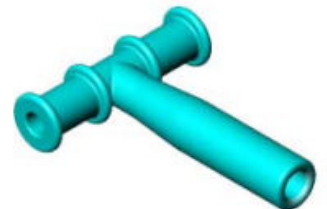
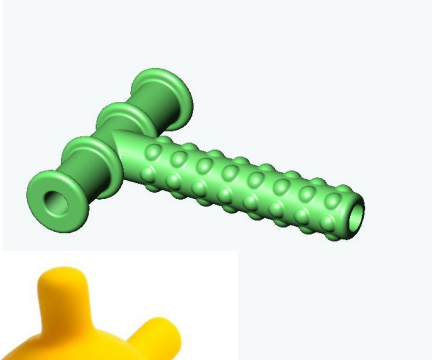


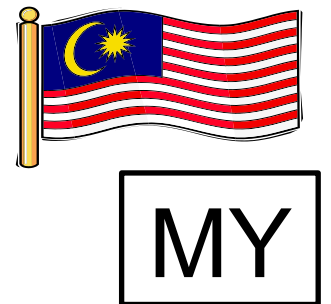
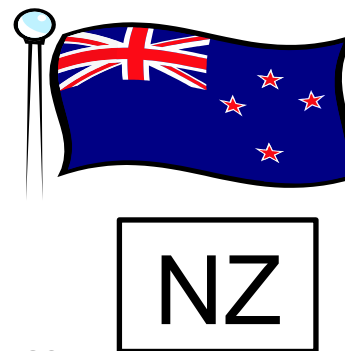
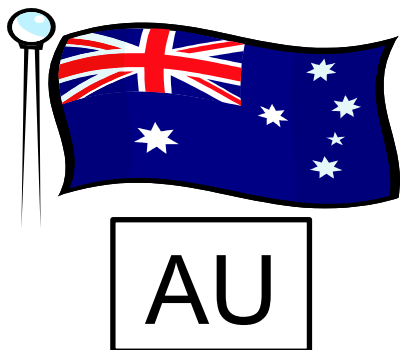
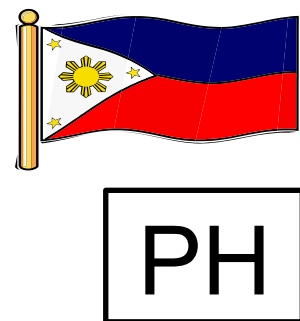
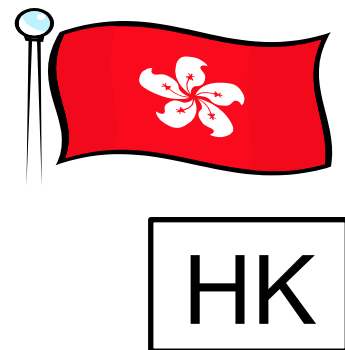
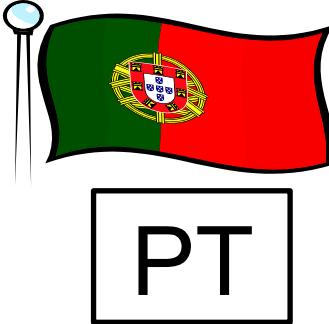
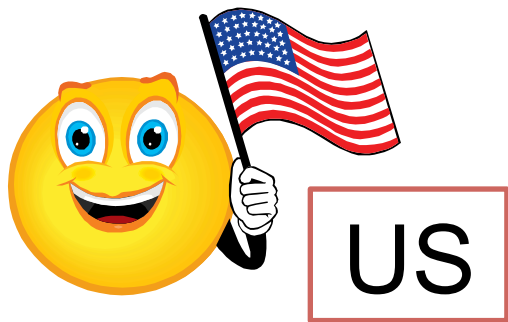
Survey: Hodge, Salonka, & Kollias, 2005

They are used by many SLPs/SLTs around the world in order:

1. To increase the range, accuracy, strength and speed of oral movements.
2. To develop voluntary control of oral movements.
3. To develop awareness of oral structures.
4. To develop motor programs underlying specific features of speech sounds.
5. To stimulate speech & language development
6. To provide a non-threatening way in to therapy for children wary of direct speech work.

So there is
lots and lots of
sucking
chewing
blowing
biting
stretching
tickling and
vibrating
going on
wherever **SLPs/**
SLTs purport to
work on speech.







sucking

chewing

blowing

biting

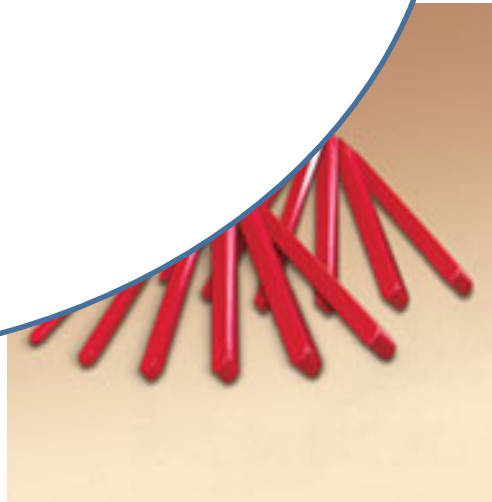
stretching

tickling and

vibrating



Why?



sucking

chewing

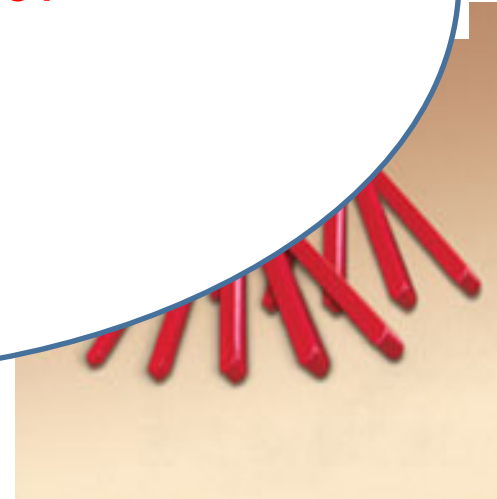
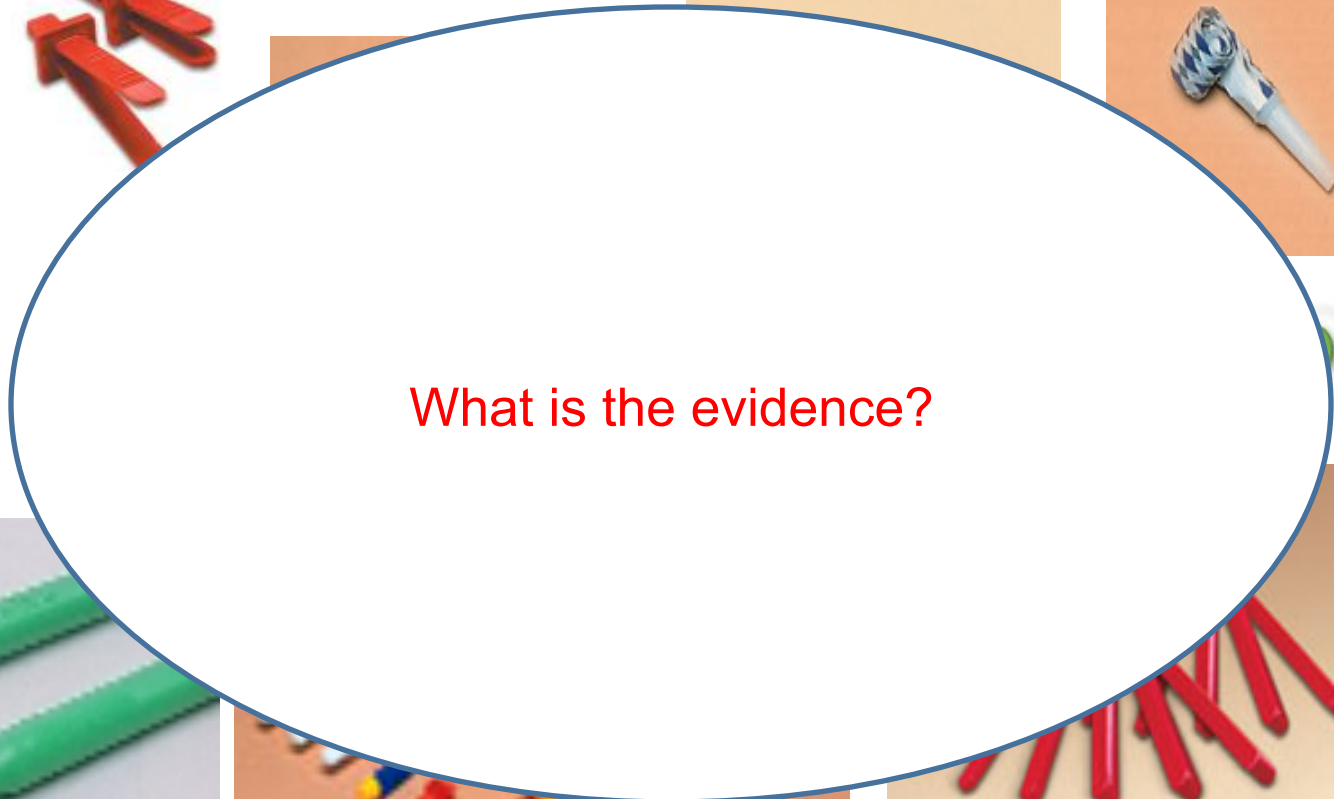
blowing

biting

stretching







tickling and

vibrating

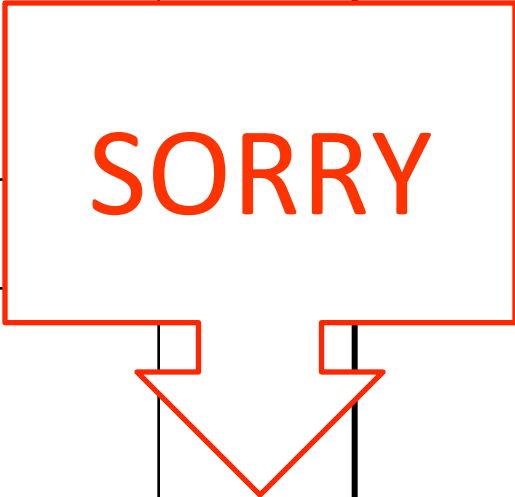


Levels of evidence

ASHA
2004

Level	Description	
Ia	Meta-analysis of >1 RCT	
Ib	Randomised controlled study	
IIa	Controlled study without randomisation	
IIb	Quasi-experimental study	
III	Non-experimental studies: correlational and case studies	
IV	Expert committee report, consensus conference, clinical experience of respected authorities	

Level	Description (ASHA, 2004)	
Ia	Meta-analysis of >1 RCT	
Ib	Randomised controlled study	
IIa	Controlled study without randomisation	
IIb	Quasi-experimental study	
III	Non-experimental studies: correlational and case studies	
IV	Expert committee report, consensus conference, clinical experience of respected authorities.	Not even this much



Seriously, not even this much:



Level	Description (ASHA, 2004)	
Ia	Meta-analytic review of research	
Ib	Randomized controlled trial	
IIa	Controlled trial	
IIb	Quasi-experimental design	
III	Case series	
IV	Expert opinion Expert consensus conference Evidence of respect for individual differences.	Not even this much



sucking

chewing

blowing

biting

stretching

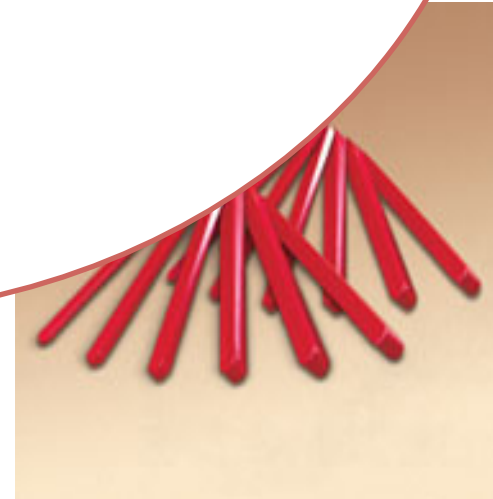
tickling and

vibrating



SHOULD

Oral Motor Therapy work?
Is it theoretically sound?



sucking

chewing

blowing

biting

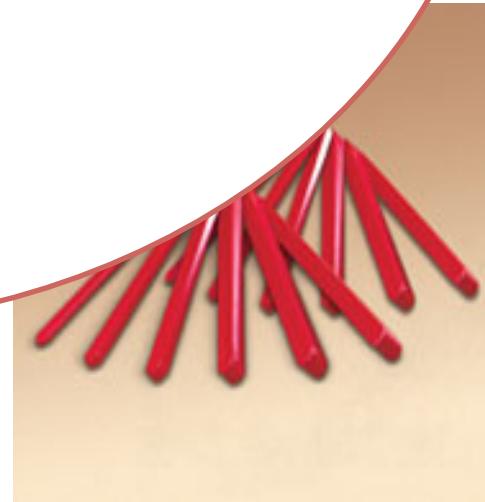
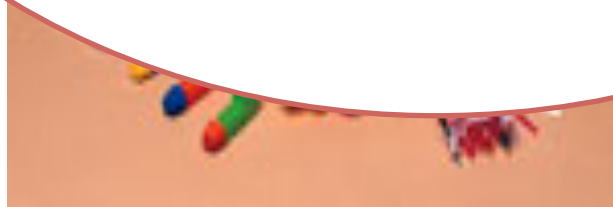
stretching

tickling and

vibrating



no





STRENGTH

We don't need strength
for speech.



STRENGTH

If we did need strength, the exercises would not 'strengthen' because they are not done
(a) frequently enough or
(b) with enough 'repeats' or
(c) against resistance.





TRANSFER

Practicing non-speech
movements won't transfer to
speech movements.





There are differences in nervous system organization for non-speech vs. speech movements.





PRECURSOR TO SPEECH

The small 'broken down' bits that oral motor exercises represent will not automatically integrate into speech behaviours.



We have known for a long time that:

'For training to be effective, there cannot be disintegrating of the muscle movements that need to occur in smooth concert with each other.'
Forrest, 2002



All highly integrated tasks must be taught as a whole, not as isolated parts.
Lof, 2003





WARMING UP THE SPEECH MUSCULATURE

‘Warm up drills’ *may* be beneficial in creating a “fun start” to a therapy session, and keeping a child engaged and interested, but there is no evidence to support their use in terms of speech outcomes, even for ‘oral awareness’ training.



CHILDREN WITH
Down syndrome

CHILDREN WITH
Autism

CHILDREN WHO ARE
Late Talkers

FOUNDATION FOR SPEECH



The evidence indicates that non-speech behaviours are NOT a precursor to later speech learning, so they are not a 'foundation' for speech.

CHILDREN WITH
Developmental Delay

CHILDREN
WITH TBI

CHILDREN
WITH
CLEFTS

Summing up

1. NS-OMEs are widely used and controversial.
2. Research Carefully designed studies must be conducted to evaluate OMTs systematically across target populations, and published in the refereed literature. Such studies must comply with accepted ethical practices, including informed consent.
3. Implications for practice Until such data become available, SLPs are urged to use treatments with stronger scientific support.
4. Take home message To improve an individual's speech, don't do mouth exercises, don't work on non-speech movements, and do work on speech.

References

- ASHA. (2004). *Evidence-Based Practice in Communication Disorders: An Introduction* [Technical Report]. Available from www.asha.org/policy: Retrieved on May 31, 2010 from <http://www.asha.org/docs/html/TR2004-00001-T1.html>
- McCauley R.J., Strand E., Lof G.L., Schooling T. & Frymark, T. (2009, November). Evidence-Based Systematic Review: Effects of Nonspeech Oral Motor Exercises on Speech,, 18, 343-360. *American Journal of Speech-Language Pathology*
- Bowen, C. (2005). What is the evidence for...? Oral motor therapy. *ACQuiring Knowledge in Speech, Language, and Hearing*, 7, 144-147.
- Clark, H. M. (2003). Neuromuscular treatments for speech and swallowing: A tutorial. *American Journal of Speech Language Pathology*, 12(4), 400-415.
- Clark, H. M. (2005, June 14). Clinical decision making and oral motor treatments. *The ASHA Leader*, 10(8), 8-9.

- Forrest, K. (2002). Are oral-motor exercises useful in the treatment of phonological/articulatory disorders? *Seminars in Speech and Language, 23*, 15-25.
- Hodge, M. (2002). Nonspeech oral motor treatment approaches for dysarthria: Perspectives on a controversial clinical practice. *Perspectives on Neurophysiology and Neurogenic Speech and Language Disorders, 12*(4), 22-28.
- Hodge, M. (2009). What can we learn about clinical practice from SLPs' experiences using nonspeech oral motor exercises in children's speech therapy? In C. Bowen, *Children's speech sound disorders*. Oxford: Wiley-Blackwell.
- Hodge, M., Salonka, R., & Kollias, S. (2005, November). Use of nonspeech oral-motor exercises in children's speech therapy. *Poster presented at the annual meeting of the American Speech-Language-Hearing Association, San Diego, CA.*
- Lass, N. J., & Pannbacker, M. (2008). The application of evidence-based practice to oral motor treatment. *Language, Speech, and Hearing Services in Schools, 39*(3), 408-421.

- Lof, G. L. (2003). Oral motor exercises and treatment outcomes. *Perspectives on Language Learning and Education*, 10(1), 7-12.
- Lof, G. L. (2009). The nonspeech-oral motor exercise phenomenon in speech pathology practice. In C. Bowen, *Children's speech sound disorders*. Oxford: Wiley-Blackwell.
- Lof, G. L., & Watson, M. M. (2008). A nationwide survey of non-speech oral motor exercise use: Implications for evidence-based practice. *Language, Speech, and Hearing Services in Schools*, 39(3), 392-407.
- Moore, C, & Ruark, J (1996). Does Speech Emerge from Earlier Appearing Oral Motor Behavior? *Journal of Speech and Hearing Research*. 39, 1034-1047.
- Powell, T. W. (2008a). The use of nonspeech oral motor treatments for developmental speech sound production disorders: Interventions and interactions. *Language, Speech, and Hearing Services in Schools*, 39(3), 374-379.

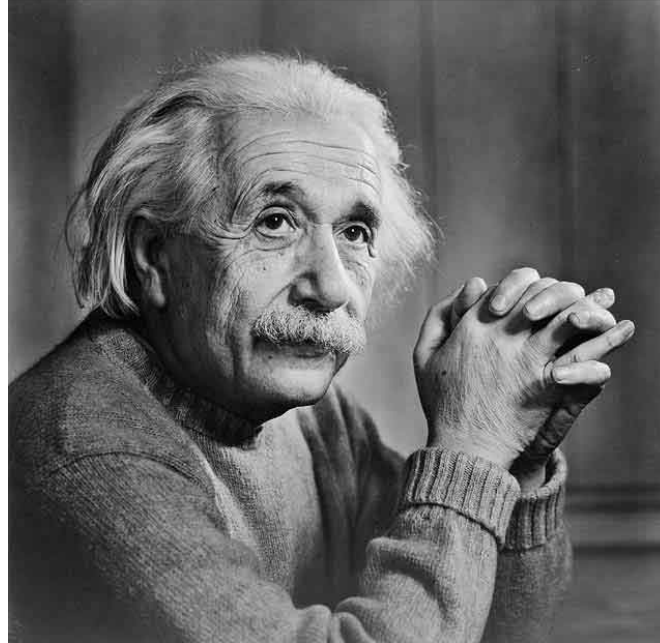
- Powell, T. W. (2008b). An integrated evaluation of nonspeech oral-motor treatments. *Language, Speech, and Hearing Services in Schools, 39*(3), 422-427.
- Powell, T. W. (2009). Non-speech oral motor exercises: An ethical challenge. In C. Bowen, *Children's speech sound disorders*. Oxford: Wiley-Blackwell.
- Ruscello, D. M. (2008). Oral motor treatment issues related to children with developmental speech sound disorders. *Language, Speech, and Hearing Services in Schools, 39*(3), 380-391.
- Williams, P. & Stephens, H. (Eds.). (2004). *Nuffield Centre Dyspraxia Programme*. Windsor, UK: The Miracle Factory.
- Williams, P., Stephens, H., & Connery, V. (2006). What's the evidence for oral motor therapy? A response to Bowen 2005. *ACQuiring Knowledge in Speech, Language and Hearing, Speech Pathology Australia, June, 2006. 8, 2, 89-90.*

- # Cochrane Review

<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD009383/full>

Other controversial practices

and
science



What would you say to a parent who:

- Asked you what you thought of Auditory Integration Training (Sound Therapies, The Listening Program, Tomatis, BioWaves, Samonas, etc.)?
- ‘Discovered’ NutriiVeda via Cherab <http://pursuitofresearch.org/index.htm?>
- Bought NourishLife speak on the Net?

NutriiVeda



An Ayurvedic Solution



Can NutriiVeda help Autism?

Anecdotal reports of surges for those with autism, apraxia and other speech impairments, ADHD, Traumatic Brain Injury, seizure disorders, and global delays in the following areas typically within just a few days on NutriiVeda. [Read more...](#)

www.pursuitofresearch.org

Copyright © 2013 Caroline Bowen
www.speech-language-therapy.com

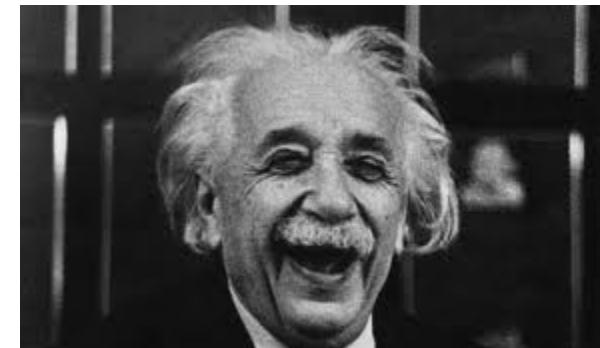


The scientifically proven ingredients in NutriiVeda have been shown to help you:

- 1. Lose fat**
- 2. Maintain normal blood sugar levels**
- 3. Promote greater energy level**
- 4. Rid the body of excess toxins**
- 5. Curb appetite cravings.**

www.buy-nutriiveda.com

Copyright © 2013 Caroline Bowen
www.speech-language-therapy.com



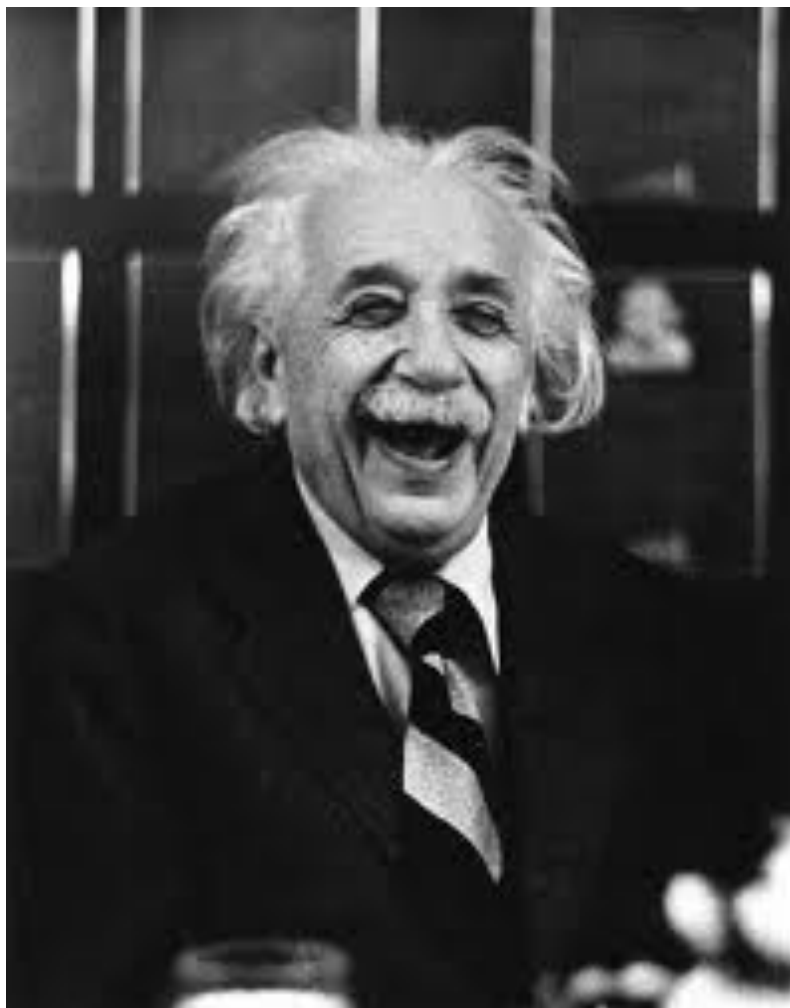
“Eat yourself thin!”

NourishLife SPEAK Pediatrician Formulated!!

www.speechnutrients.com



“Nurture Healthy
Speech Development in
Children With Apraxia”



Copyright © 2013 Caroline Bowen
www.speech-language-therapy.com

We have many theoretically sound, evidence based interventions to choose from when we treat speech sound disorders in children. As Speech-Language Pathologists / Speech and Language Therapists we are uniquely qualified to select appropriate therapies for individual children , and to appreciate and critically evaluate the science that underpins them. Equally, we are in a strong position to say “no” to interventions that lack scientific support, to resist the aggressive marketing associated with many of them, and to accurately and responsibly Inform our clients. Indeed, it is our ethical responsibility to do so.

~ Caroline Bowen



Caroline Bowen

CONTROVERSIAL PRACTICES and Intervention for Children with Speech Sound Disorders