Speech Sound Disorders 101

PART 5

Caroline Bowen

Controversial non-evidence based Practices
Readings


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.
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.
- 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.’

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 / ‘TalkTools’
What it’s not!

Phonemic placement techniques –
• butterfly position
• tongue-up-tongue-down for /l/
• straws to direct airflow for lateral /s/
• use of bite blocks to achieve ‘place’
• etc.
People ask, 'Why don’t you use Oral Motor Therapy?'

There is no evidence to support their use of, and there is no theory to suggest that the evidence might be forthcoming ‘eventually’, according to:

**Systematic Reviews in 2007 and 2015**


**Two Clinical Forums in 2008**

1. Language Speech & Hearing Services in Schools
2. Seminars in Speech & Language
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
3. to improve intelligibility

Lof & Watson, 2008
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
crunching
blowing
biting
stretching
tickling and
vibrating

What is the evidence?
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sucking
crunching
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.
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.
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.
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 Down syndrome

CHILDREN WITH Autism

CHILDREN WHO ARE Late Talkers

CHILDREN WITH Developmental Delay

CHILDREN WITH Autism

CHILDREN WITH TBI

CHILDREN WITH CLEFTS
Other controversial practices and science
How would you advise a parent regarding:

- Auditory Integration Training (Sound Therapies, The Listening Program, Tomatis, BioWaves, Samonas, etc.)?
- NutriiVeda?
- NourishLife speak, or “SPEAK”?
- “Apraxia Diet”? 
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
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


**Cochrane Review (open access)**

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