



# Motor learning for articulation

Regardless of which articulation therapy approach you use, try to teach according to the principles of motor learning. Following the principles of motor learning may decrease accuracy during sessions, but will likely improve long-term outcomes.

## How to apply motor learning principles to articulation therapy for dysarthria

### Be specific

- Spend time on the skill you want to improve: talking to communicate.
- Try to select phrases and sentences that are meaningful to your patient.
- Exception: If your patient is struggling with propositional speech, you may focus on single words, syllables, sounds, or even other subsystems of speech production.

### Lots of practice

- Drill, drill, drill!
- Do as many trials as you can in each therapy session (if doing variable practice).
- Encourage home practice spread over the course of the day and week (distributed practice).
- Exception: If your patient is struggling and you're doing blocked or constant practice, then practice for a shorter amount of time.

### Use variable practice

- Variable practice: Changing up the movement patterns from trial to trial.
- Constant practice: Repeating the same target over and over.
- Exception: If your patient is struggling, you can start off repeating the same target, but switch to variable practice as soon as they show success.

## Practice whole (complex) movements rather than simple movements

- Practicing whole phrases or sentences is preferred over practicing sounds, syllables, or even single words.
- Exception: If your patient is struggling, break the utterance down and use forward or backward chaining to build up an acceptable production. Then repeat the utterance a few times, and then move into variable practice.

## Encourage an external focus of attention

- Ask your patient to focus on how their speech sounds or on some visual feedback of their speech.
- Exception: If your patient is struggling, switch to an internal focus of attention. You can give direct instruction on how to move the articulators, ask them to imitate your model, or even use a mirror. Once they show some success, move back to an external focus of attention.

## Give delayed, summary feedback about the results of their action

- Pause a few seconds before offering feedback.
- Make your feedback specific to what you're trying to change.
- Give feedback every so often, for example once every five trials.
- Exception: At the very earliest stages of learning, you may give frequent and immediate specific feedback. This will enhance short-term performance, but will hinder long-term learning. Use sparingly!

## Learn more:

- <https://eatspeakthink.com/motor-learning-articulation-focus-feedback/>
- <https://eatspeakthink.com/articulation-therapy-dysarthria-1/>