

# Resilient Voices

*Practical Voice Techniques for MS Care*

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*A practical guide to understanding voice dysfunction in MS and the evidence-based exercises that help restore strength, clarity, and confidence in everyday communication.*

*There is evidence that about 40–50% of people with Multiple Sclerosis experience speech or voice problems at some point. These changes occur when MS lesions affect the parts of the brain that coordinate the muscles used for speaking. Although this symptom is discussed less often than other MS symptoms, it is still important to recognize and address it.*

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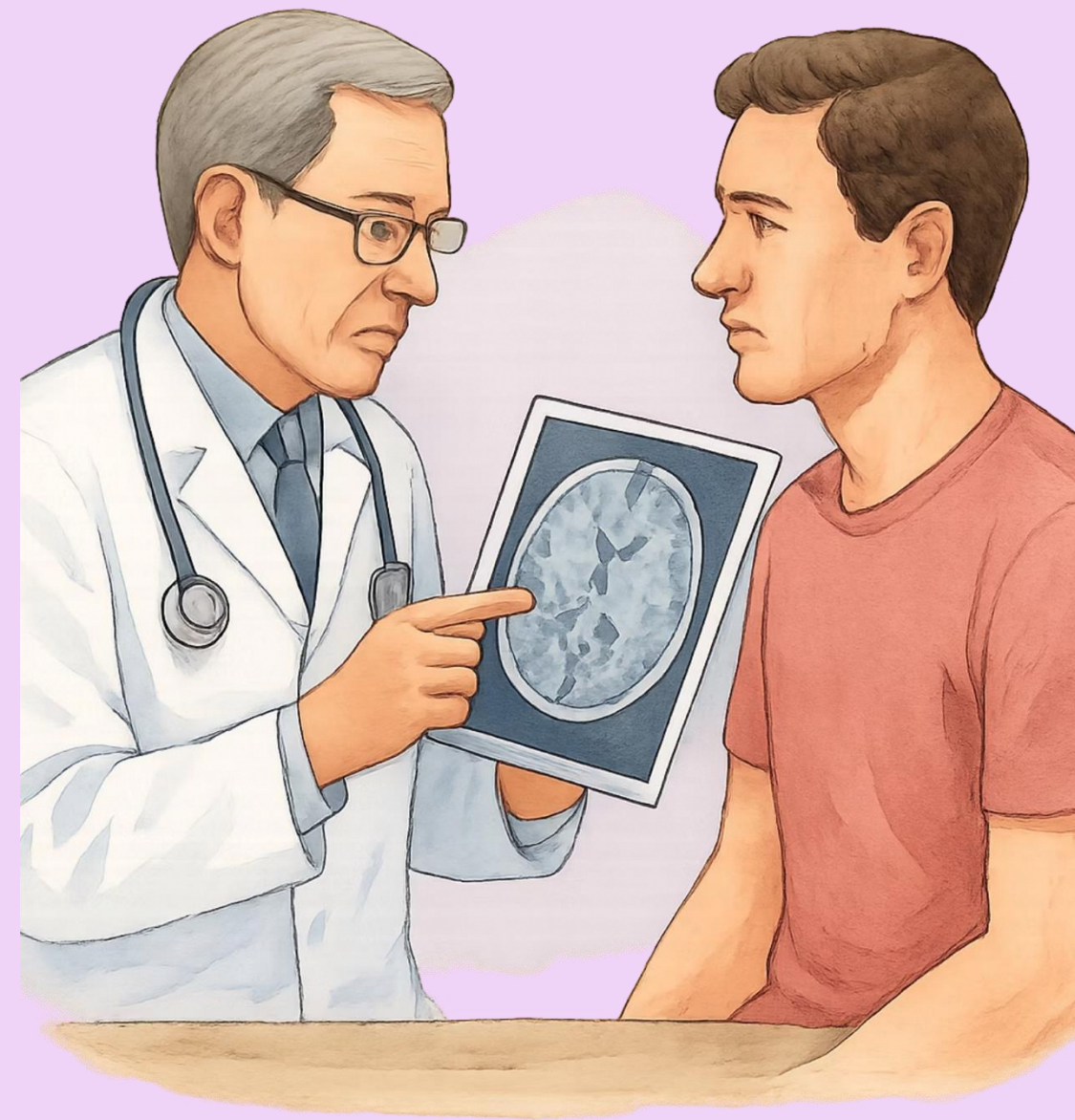
# Voice Symptoms in MS

## Voice Dysfunction

*Patients may experience **hoarseness** and poor control of both **volume** and **pitch** — making it difficult to be heard or understood in conversation.*

## Scanning Speech

*The hallmark speech pattern in MS is "**scanning speech**" — each syllable is produced slowly and hesitantly, with an evident pause after every syllable, disrupting natural rhythm and flow.*



# Neurological Voice Disorders

*Voice problems in MS arise from **abnormal control, coordination, or strength** of the voice box muscles due to underlying neurological disease. MS joins a group of conditions — including **stroke, Parkinson's disease, myasthenia gravis, and ALS** — that can all cause neurogenic voice disorders.*

# Goals of Voice Therapy Exercises in MS



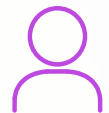
## Strengthen Muscles

*Exercises targeting lips, tongue, and throat muscles to improve articulation.*



## Breath Management

*Techniques for increasing breath control to maintain volume and produce longer sentences. (conscious breathing)*



## Relaxation

*Techniques to reduce fatigue-related strain on the voice.*



## Communication Strategies

*Training on pacing and over-articulation to improve clarity and intelligibility.*



# Supporting Voice Health

*For individuals with a **weak or fatigued voice**, therapy focuses on vocal exercises, posture correction, and safe voice-use techniques. The goal is to **reduce strain while increasing volume** — building sustainable habits that protect the voice over time.*

EXERCISE 1

# Diaphragmatic Breathing

*Goal: Build steady breath support for speech.*

## How To Do It

1. *Sit or lie down comfortably*
2. *Place one hand on chest, one on belly*
3. *Inhale through nose — belly rises, chest stays still*
4. *Exhale slowly through mouth*

## Practice Target

*5–10 breaths × 2–3 sets*

*This is the foundation of all voice exercises — master this first.*

EXERCISE 2

# Sustained Phonation — "Ah" Hold

*Goal: Improve voice strength and stability. Take a deep breath and say a steady "aaaaah" — keeping volume consistent without fading or shaking. Build gradually toward a **target of 10-15 seconds**. This exercise directly trains vocal fold endurance.*



EXERCISE 3

# Loud Voice Drill — "Think Loud"

*Goal: Increase vocal intensity. This is the basis of the Lee Silverman Voice Treatment (LSVT LOUD) protocol.*

## Say Aloud

*"Hey!" · "Hello!" · "I'm here!"*

## Mental Image

*Imagine speaking across a large room to someone far away.*

## Key Emphasis

*Loud and clear — **not** shouting or straining.*

## EXERCISE 4

# Pitch Glides — "Sirens"

## Goal

*Improve vocal fold flexibility and expand pitch range.*

## How To Do It

1. *Start low: "oooo"*
2. *Glide smoothly up to high pitch*
3. *Glide back down to low*

*Repeat: 5–10 times per session.*

## Why It Matters

*MS can reduce the fine motor control needed for pitch variation. Siren exercises gently stretch and mobilize the vocal folds, restoring natural expressiveness to speech.*

EXERCISE 5

# Straw Phonation (SOVT Exercise)

*Goal: Reduce vocal strain and improve resonance. Hum or phonate through a straw — either into the air or into a cup of water to create bubbles. This **semi-occluded vocal tract (SOVT)** technique works by **balancing vocal fold pressure efficiently**, making it one of the gentlest yet most effective voice exercises available.*



EXERCISES 6 & 7

# Overarticulation & Pacing

## Overarticulation + Reading Aloud

*Goal: Improve clarity and intelligibility.*

- *Read a paragraph slowly*
- *Exaggerate mouth movements*
- *Emphasize consonants: **t, k, p***

## Pacing with Pauses

*Goal: Control speech rate and reduce slurring.*

- *Say one phrase per breath*
- *Example: "I / am / going / home"*
- *Pause between words or syllables as needed*



#### EXERCISE 8

## "Ma, Me, Mi" Exercises

### Purpose

- *Improve vocal loudness and clarity*
- *Strengthen articulation (lips and jaw movement)*
- *Support breath control during speech*
- *Encourage speaking with intentional effort*

### Steps

1. *Take a deep breath*
2. *Say: "MA – ME – MI" clearly*
3. *Use a strong, intentional voice (not soft)*
4. *Keep volume steady and speech well-articulated*
5. *Repeat multiple times with consistent effort*

# Daily Routine: Simple Practice Plan

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Diaphragmatic Breathing

*2–3 minutes to activate breath support.*

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Sustained "Ah"

*5 repetitions, building toward 10–15 seconds each.*

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Loud Phrases

*10 repetitions of "Hey!", "Hello!", "I'm here!"*

04

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Straw Phonation

*2–3 minutes of gentle humming through a straw.*

05

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Reading Aloud + Functional Speech

*5 minutes each — overarticulate and apply real-life scenarios.*

# Easy Voice Activation for Low-Energy Days

*On days when energy is limited, a 1–2 minute warm-up is enough. Think **light activation, not training**.*

## Sustained Phonation

*Soft "ahhh" at comfortable volume — 3–5 repetitions. **Stop before any strain or breathiness increases.***

## Straw Phonation

*Gentle humming through a straw for 30–60 seconds. This should feel **easier than speaking**. Stop immediately if effort increases.*



# What MS Does on Fatigue Days

*MS can significantly reduce the neurological resources available for speech. On high-fatigue days, the following systems are impaired:*

## **Respiratory Coordination**

*Reduced ability to synchronize breath with speech output.*

## **Vocal Fold Timing**

*Delayed or inconsistent onset of phonation.*

## **Speech Motor Endurance**

*Faster fatigue of the muscles involved in articulation and voicing.*

# Key Rules for Fatigue Days

## ✗ Avoid

- *Pushing for loudness or long phonation*
- *Long reading passages*
- *Rapid repetition drills*

## ✓ Do Instead

- *Keep effort at  $\leq 3/10$*
- *Stop early rather than "finish the set"*
- *Prioritize **consistency over intensity***

⚠ *On fatigue days, less is more. A short, gentle session protects the voice and maintains the habit without causing setbacks.*

# Exercise Overview at a Glance

<i>Exercise</i>	<i>Goal</i>	<i>Key Detail</i>
<i>Diaphragmatic Breathing</i>	<i>Steady breath support</i>	<i>5–10 breaths × 2–3 sets</i>
<i>Sustained Phonation</i>	<i>Voice strength &amp; stability</i>	<i>Target 10–15 seconds</i>
<i>Loud Voice Drill</i>	<i>Increase vocal intensity</i>	<i>Loud, clear — not shouting</i>
<i>Pitch Glides</i>	<i>Vocal fold flexibility</i>	<i>5–10 glides low → high → low</i>
<i>Straw Phonation</i>	<i>Reduce strain, improve resonance</i>	<i>30–60 sec, into air or water</i>
<i>Overarticulation</i>	<i>Clarity &amp; intelligibility</i>	<i>Exaggerate consonants</i>
<i>Pacing with Pauses</i>	<i>Control rate, reduce slurring</i>	<i>One phrase per breath</i>
<i>Functional Speech</i>	<i>Real-life transfer</i>	<i>Phone, ordering, narrating</i>

# When to Work with a Speech-Language Pathologist

*While self-directed practice is valuable, a Speech-Language Pathologist (SLP) can provide personalized assessment and guidance. Consider professional support if:*

- *Voice symptoms are worsening or significantly impacting daily communication*
- *You are unsure whether exercises are being performed correctly or safely*
- *You want access to structured programs like **LSVT LOUD** for MS*
- *Swallowing difficulties accompany voice or speech changes*



# Key Takeaways



## Symptoms Are Manageable

*Hoarseness, scanning speech, and volume loss respond well to targeted therapy.*



## 8 Core Exercises

*From breathing to functional speech — each targets a specific aspect of voice and communication.*



## Daily Routine Works

*A simple ~20-minute daily plan covers breathing, phonation, loudness, and real-life practice.*



## Adapt on Fatigue Days

*Keep effort  $\leq 3/10$ , skip drills, and prioritize consistency over intensity.*

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