

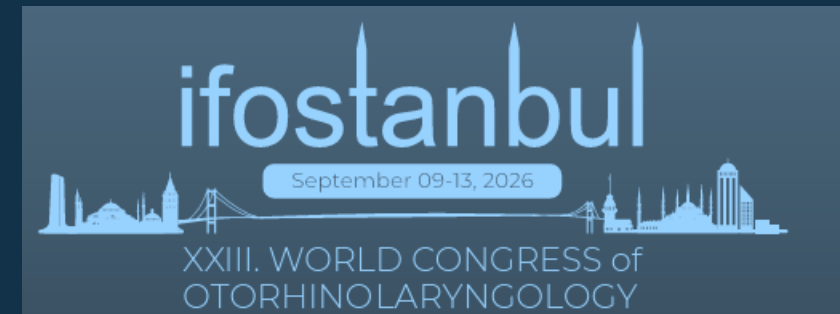
Voice rest or early vocal rehabilitation?

What does evidence suggest?



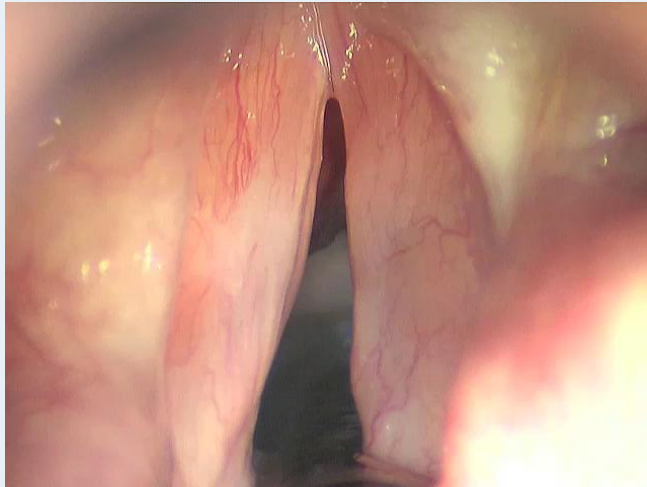
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Tomorrow morning, what should I tell my patient?

42-year-old
teacher



A

Silence
How long?

B

Careful voice use

C

Early controlled exercises

Which one is
actually
supported
by evidence?

Postoperative recommendations vary widely

Practice variation reflects an evidence gap.

NO RESTRICTION

PROLONGED SILENCE



Definitions also vary across studies.

What does the evidence suggest?

BASIC SCIENCE



CLINICAL TRIALS

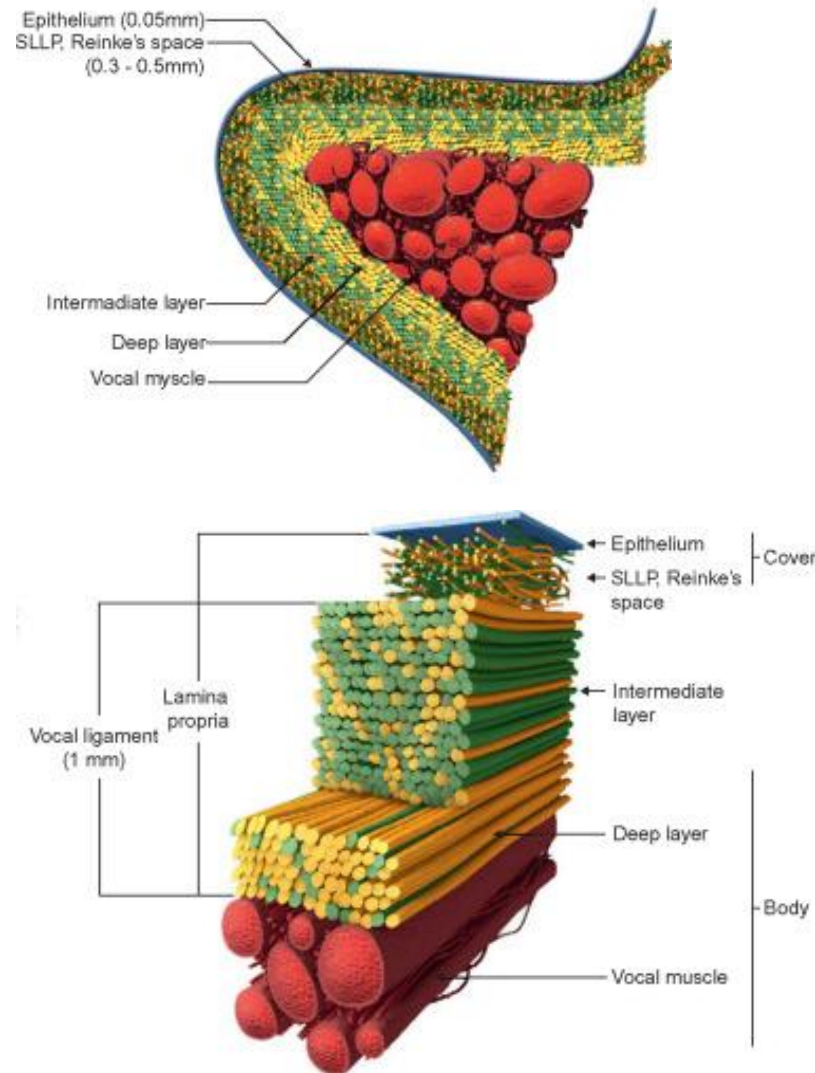


PRACTICE

Does longer silence improve the result?

And if not—what should replace it?

A vocal-fold wound is not just a wound



The surgical endpoint is not simply

WOUND CLOSURE



The surgical endpoint is

**RESTORATION
OF VIBRATION**

What makes vocal-fold healing unique?

SUCCESSFUL HEALING

- Compliant extracellular matrix
- Organized collagen & elastin
- Appropriate HA / GAG content
- Preserved mucosal wave

SCAR

- Collagen accumulation / disorganization
- Altered elastin architecture
- Increased stiffness
- Impaired mucosal wave

Wound healing is dynamic

INFLAMMATION

hours → days

PROLIFERATION

days → weeks

REMODELING

weeks → months

~72 h

Experimental peak of procollagen
I/III expression

**NOT a validated
clinical threshold**

Vibration is a biological signal

Kutty & Webb · 3D fibroblast model



Potentially favorable matrix signals

↑ HAS2 ↑ decorin
↑ fibromodulin ↑ GAG
↓ collagen accumulation

But...

↓ cell number / viability
under the tested vibratory
condition

Neither "vibration = good" nor "vibration = bad"

Mechanical loading may help organize the matrix

Titze et al., 2025 · engineered vocal-fold tissue



Mechanical forces may guide ECM organization.

Mechanistic support — not evidence for a postoperative start day.

The response depends on the dose

BIOLOGICAL RESPONSE

=

frequency

amplitude

duration

GASTON

No clear $\uparrow$ TGF- β 1 / α -SMA

HORTOBAGYI

$\downarrow$ IL-11 / α -SMA
in inflammatory
conditions

BIEHL

Effects change with
amplitude & exposure

“Vibration” is not a single intervention.

Not all wounds are equal

Lan et al., 2026 · rabbit phonomicrosurgery model

SUPERFICIAL INJURY

Experimental optimum:
shorter rest

Best experimental result: 1 day

MID / DEEP LP INJURY

Experimental optimum:
longer rest

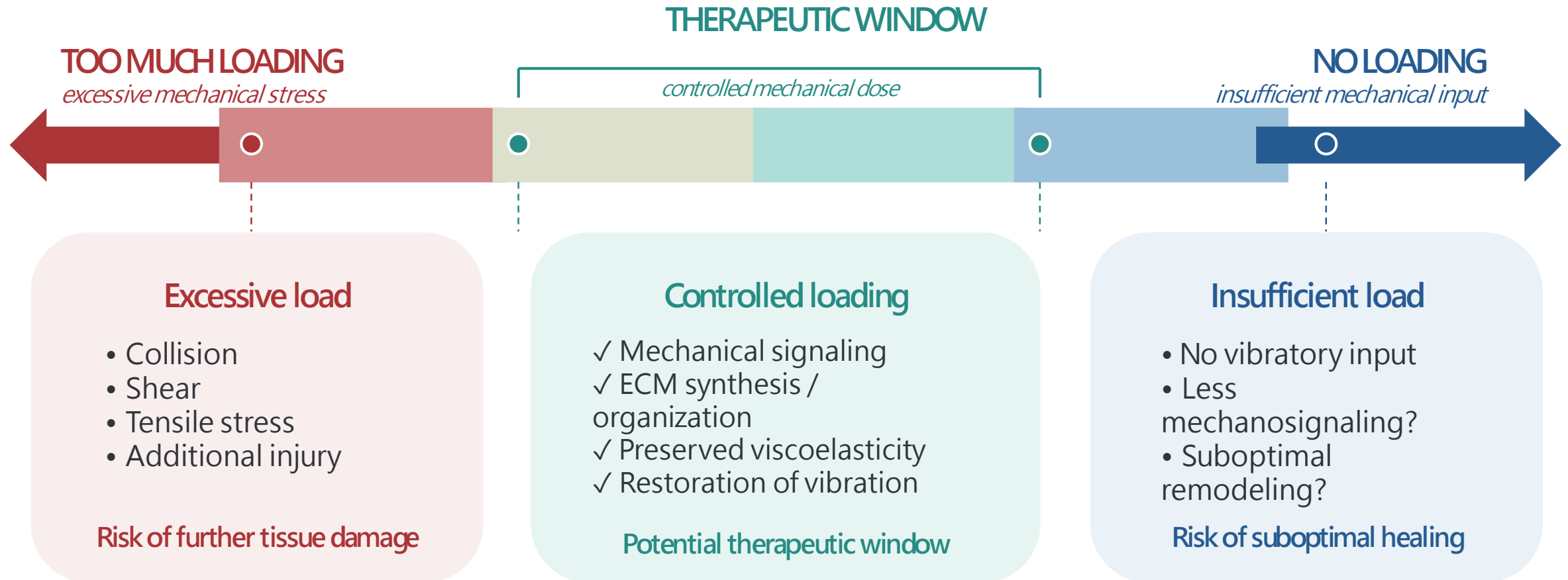
Best experimental result: 3 days

One wound ≠ another wound

Rabbit data: do not translate the numbers directly to humans.

The biological dilemma

Healing needs mechanical input ... but not too much



The goal is the right mechanical dose at the right time.

What does the clinical evidence say?

BASIC SCIENCE



CLINICAL TRIALS



PRACTICE

Does longer silence improve the result?

And if not—what should replace it?

Voice rest: what has actually been tested?

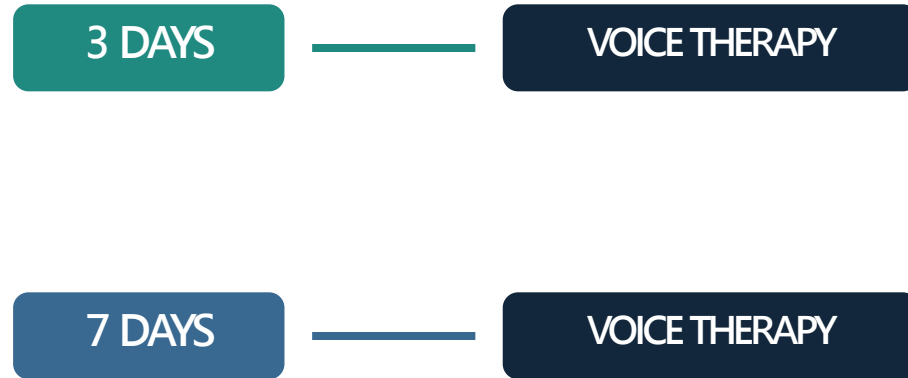
Kiagiadaki	5 vs 10 days
Kaneko	3 vs 7 days
Whitling	absolute vs relative
Dhaliwal	7 days vs limited voice
Raju	2 vs 5 days + therapy
Voloch	3 vs 7 days

THE PROBLEM

- Small samples
- heterogeneous lesions
- Heterogeneous surgery
- Different definitions of 'rest'
- Different outcomes

3 vs 7 days: the pivotal clinical signal

Kaneko et al., 2017 · randomized · n = 31



SIGNAL FAVORING 3 DAYS

- VHI-10 at 1 month
- jitter / shimmer at 1 month
- GRBAS at 1–3 months
- mucosal-wave amplitude up to 6 months

Small, heterogeneous trial.

Important signal — not a definitive dosing trial.

Across trials, longer rest does not win

DHALIWAL 2020

7 d vs limited voice

NO DIFFERENCE

RAJU 2022

2 vs 5 d + tube phonation

SIMILAR OVERALL

VOLOCH 2024

3 vs 7 d

NO DIFFERENCE

LONGER IS NOT BETTER

...within the populations and durations actually studied.

Absolute vs relative rest

Whitling et al., 2018 · n = 20

ABSOLUTE

less phonation

harder to achieve

RELATIVE

more realistic

no robust long-term
disadvantage

Absolute rest ≠ biological silence

Clinical behavior is a continuum — not a binary intervention.

Absolute voice rest' does not exist

King et al., 2021

PRESCRIBED 'ABSOLUTE REST'

Intentional speech ↓ by 98%

WHAT STILL HAPPENS

whispering

coughing

throat clearing

inadvertent phonation

Only 39.5% reported never using their voice.

Higher compliance when sustained by voice therapist.

What do the meta-analyses conclude?

CHI et al.

4 RCTs · 112 patients

SHORT vs LONG REST

No overall advantage of ≥ 7 days

Possible VHI signal favoring shorter rest
in selected subgroups

LAM et al.

9 studies

ABSOLUTE vs NO REST

VHI-10: no significant benefit

MD -0.87
95% CI -2.51 to +0.77

PROLONGED ABSOLUTE VOICE REST HAS NO CONVINCING EVIDENCE BASE

Now: what does the practice observations say?

BASIC SCIENCE



CLINICAL TRIALS



PRACTICE

Does longer silence improve the outcome?

And if not—what should replace it?

Real-world data do not rescue prolonged rest

Björck et al., 2022 · 588 unilateral vocal-fold polyps

SILENCE

FEW WORDS

NORMAL SPEECH

92% satisfied

No significant adjusted association between rest type
and the primary outcome.

Observational $\neq$ causal

Voice therapy is a different question

Recent meta-analysis · 9 RCTs · 730 patients

VHI ↓

jitter ↓

shimmer ↓

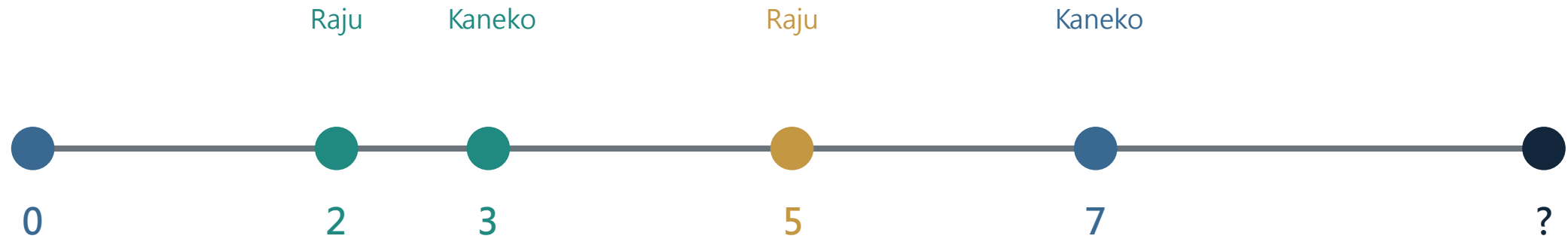
MPT ↑

DSI ↑

Postoperative voice therapy probably helps.

But this does not tell us when to start.

When should therapy start?



Kaneko: signal favoring earlier activation

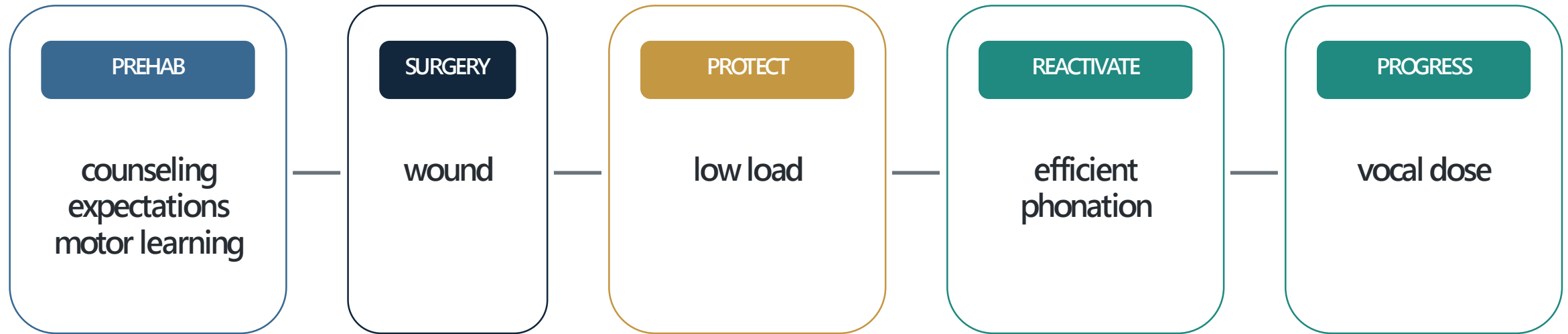
Raju: broadly similar outcomes at day 2 vs day 5

We do not know the optimal starting day.

The evidence supports "earlier voice therapy" than "prolonged rest" more strongly than any specific postoperative day.

Rehabilitation may begin before surgery

Tang 2017 + King 2021



PERIOPERATIVE STRATEGY

Prepare behavior before the wound exists.

Stop thinking in days. Start thinking in load.



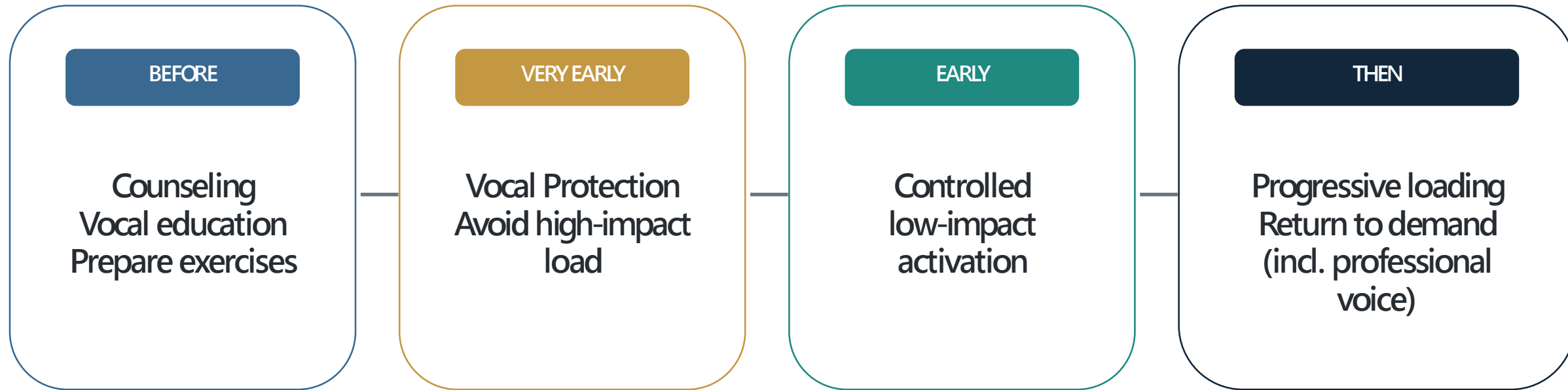
MECHANICAL DOSE



The biologically relevant variable is probably dose—
not days of silence.

A pragmatic evidence-informed strategy

A synthesis — Not a validated standardized protocol



Individualize dose to wound depth · surgical technique · vocal demands

Do not replace one rigid dogma with another.

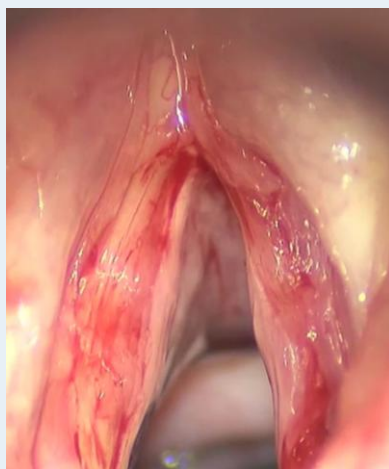
What evidence suggests

- 1 No convincing benefit of prolonged absolute rest.
- 2 Shorter rest does not appear to compromise uncomplicated outcomes.
- 3 Voice therapy helps—optimal start time is unknown.
- 4 Mechanobiology supports controlled loading, not unrestricted loading.

PROTECT BRIEFLY · MOBILIZE CAREFULLY · LOAD PROGRESSIVELY

Back to tomorrow morning...

42-year-old
teacher



What do I say?

Protect your voice during the very early healing phase.

Then restart it gradually, efficiently and under controlled conditions, with your speech pathologist."

NOT prolonged silence

NOT unrestricted voice use

CONTROLLED VOCAL LOADING

THE FUTURE MAY NOT BE PRESCRIBING DAYS OF SILENCE

but prescribing the right mechanical dose
to the right vocal-fold wound.



And we still need trials to define that dose.

Thank you!

32nd
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Union of the European
PHONiatrICIANS

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