



Swallowing therapy with
measurable results.

THE IOPI® SYSTEM Iowa Oral Performance Instrument

1. The IOPI® *objectively* measures tongue strength, so you *know* if a patient's tongue is weak. Pushing on a patient's tongue with a tongue depressor to evaluate tongue strength just results in an educated *guess*.¹
2. The IOPI® has been *validated in many scientific studies* (see references), and *normal standards exist for tongue elevation strength*.
3. Knowing a patient's tongue strength is clinically useful for several reasons:
 - **DECIDING** whether tongue weakness is involved in oral stage swallowing problems and/or dysarthria:
 - > If the tongue is weak, you can start tongue strengthening therapy.
 - > If the tongue strength is normal, you can eliminate weakness as a cause of the swallowing or speaking problems, and thus concentrate on other more useful therapies.
 - **DOCUMENTING** that a patient's tongue is weak, and therefore that strengthening exercises are justified. This may be important to administrators who are concerned with the cost of delivering such therapy.
 - **ASSESSING** the results of tongue strengthening therapy over time:
 - > If tongue strength *doesn't* increase over time, then perhaps the patient is not really doing her exercises, or not doing them forcefully enough.
 - > If the tongue strength *does* increase, even a little bit, it can be "rewarding" for the patient to see concrete evidence that she is becoming stronger.
 - **EXERCISING** the patient's tongue. Performing tongue exercise using an IOPI® can give the patient very specific "targets" to achieve with their efforts, and give them immediate feedback about improvement.
4. Several diseases and conditions may lead to significant tongue weakness:
 - A significant number of *stroke patients* have swallowing problems that are associated with tongue weakness. A study by Robbins et al demonstrates that they are helped by IOPI® tongue exercises.²
 - Some *elderly persons* lose enough tongue strength that they develop swallowing problems.
 - Some *Parkinson Disease patients* lose enough tongue strength that their swallowing is affected as well as their speech.
 - Many *head and neck cancer patients* lose tongue strength as a result of surgery or radiation.
5. The IOPI® has potential for other clinical uses:
 - **LIP STRENGTH** may be accurately measured with the IOPI®.
 - > Differences in lip strength on the two sides may *reveal neurological problems* of the brain or peripheral nerves.
 - > *Food containment problems*, as frequently seen in *Traumatic Brain Injury (TBI)* patients, can result from lip weakness. Lip exercises using the IOPI® can help this condition.
 - The IOPI® can be used to obtain a *quantitative measure of tongue fatigability*, which may be a factor for people whose tongue strength is within the low normal range.
 - The IOPI® may be used to have patients *practice controlled movements of the tongue*. Yeats et al. have suggested that the training of controlled movements of the tongue in the swallowing patients they studied significantly contributed to improvements in these patients.³

IOPI PART NUMBERS:

- PN 1-2300 IOPI System (Iowa Oral Performance Instrument)
- PN 5-6010 Box of Tongue Bulbs, IOPI Accessory
- PN 5-0001 Connecting Tube, IOPI Accessory
- PN 5-0101 Accuracy Check Syringe, IOPI Accessory



www.IOPImedical.com



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THE IOPI[®] SYSTEM Reference List

Selected studies of tongue strength and endurance in normal subjects, and, in some cases, patients with swallowing problems or other disease states. The listing is chronological, with newer studies first. See www.IOPImedical.com for a more complete list of references.

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2 Robbins J, Kays SA, Gangnon RE, Hind JA, Hewitt AL, Gentry LR, and Taylor AJ (2007). The effects of lingual exercise in stroke patients with dysphagia. *Arch. Phys. Med. Rehabil.*, 88:150-158.

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