# The Role of the Teeth — At a Glance

It's about the bite. Prof. Riaz Yar, Specialist in Prosthodontics

## Three Jobs, One System

The teeth exist to do three things: **chew**, **swallow** and **speak**. Assess the muscles and joints first — once they are healthy the bite is repeatable, and only then can these three functions be restored predictably. Judge any dentition, and any plan, against all three.

## The Three Roles — and the Evidence

| ROLE | WHAT THE TEETH DO | WHAT THE LITERATURE SHOWS |
|---|---|---|
| **Chewing (mastication)** | Cut, crush and mix food into a bolus. The posterior units do the work; anterior teeth incise. | In 387 partially dentate adults, fewer than 10 teeth in each jaw and an impaired premolar region were the strongest predictors of low masticatory efficiency and difficulty with hard foods.[1] |
| **Swallowing (deglutition)** | A properly prepared bolus and stable occlusion let the tongue and pharynx complete a safe swallow. | In 3,663 independent adults aged 65+, those with 0–13 teeth had about double the odds of swallowing problems compared with 25–32 teeth (OR 2.04); risk rose as tooth number fell.[2] |
| **Phonetics (speech)** | Provide the contact targets and airflow control for speech — with tongue space and palatal contour, and no tooth contact during phonation. | Natural dentition scored highest for speech intelligibility (about 86%), and fixed prostheses outperformed removable designs — attributed to tongue space and palatal contour.[3] |

## How Much Dentition Is Enough?

| BENCHMARK | WHAT IT MEANS FOR PLANNING |
|---|---|
| **10 teeth per jaw** | Below this, chewing efficiency drops and hard-food complaints rise. Preserving 3–4 premolars matters as much as the count.[1] |
| **Anterior + premolar occlusion** | A shortened dental arch can meet functional demands. Prioritise the strategic anterior and premolar zones rather than reflexively replacing molars.[4] |
| **SDA vs. replacing molars** | 15-year multicentre RCT: no significant difference in oral health-related quality of life between a restored SDA and molar replacement with an RPD.[5] |
| **Bite force gradient** | Complete removable dentures delivered roughly one-tenth of the bite force of natural dentition — improving about 2.4× with a mandibular implant overdenture and 4× with both arches implant-retained.[3] |

## Chairside Translation

Count the occluding pairs, not just the teeth. Ask about hard foods, not just pain. Ask about swallowing and choking in the older patient — it is an oral question as much as a medical one. Listen to the s and f sounds before and after you change anterior teeth. If a function is failing, that is the treatment objective; aesthetics follows function, not the other way round.

**Evidence (via PubMed).** 1. Shao et al. J Dent 2018;75:41–47. https://doi.org/10.1016/j.jdent.2018.05.005 • 2. Okamoto et al. J Am Geriatr Soc 2012;60:849–853. https://doi.org/10.1111/j.1532-5415.2012.03935.x • 3. Gupta et al. J Prosthodont 2026;35:861–869. https://doi.org/10.1111/jopr.70156 • 4. Witter et al. Community Dent Oral Epidemiol 1999;27:249–258. https://doi.org/10.1111/j.1600-0528.1998.tb02018.x • 5. Schierz et al. J Evid Based Dent Pract 2021;21:101622. https://doi.org/10.1016/j.jebdp.2021.101622

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