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Hypnosis for Dental Anxiety and Pain Management: A Narrative Review

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Take-home message Across 15 studies (2002–2025), hypnosis was consistently associated with less dental anxiety, less perceived pain and better patient cooperation, in questionnaires, physiological measures and brain imaging. A safe, low-cost complement to anaesthesia and sedation, whose effect depends on the patient's hypnotisability and the clinician's training.

INTRODUCTION

Anxiety and pain remain major challenges in dental care: they worsen the patient's experience, reduce adherence and feed avoidance. Local anaesthesia and sedation are the mainstay of control, but have limitations.

Hypnosis : a state of focused attention and heightened suggestibility : may modulate both the psychological and the physiological components of the dental experience.

AIM

To analyse the scientific evidence on the effectiveness of hypnosis for managing anxiety and pain in adult dental patients.

METHODS

- **Design.** Narrative literature review (Ferrari, 2015) with a transparent selection process.
- **Sources.** PubMed and Scopus ("Hypnosis") AND ("Dental Anxiety" OR "Dental Pain" OR "Dentistry").
- **Eligibility.** 2001–2026; English, Portuguese or French; adult patients; full text available; original studies with a defined design.
- **Synthesis.** Thematic narrative synthesis of design, sample, setting, intervention, instruments and outcomes.

LITERATURE SELECTION

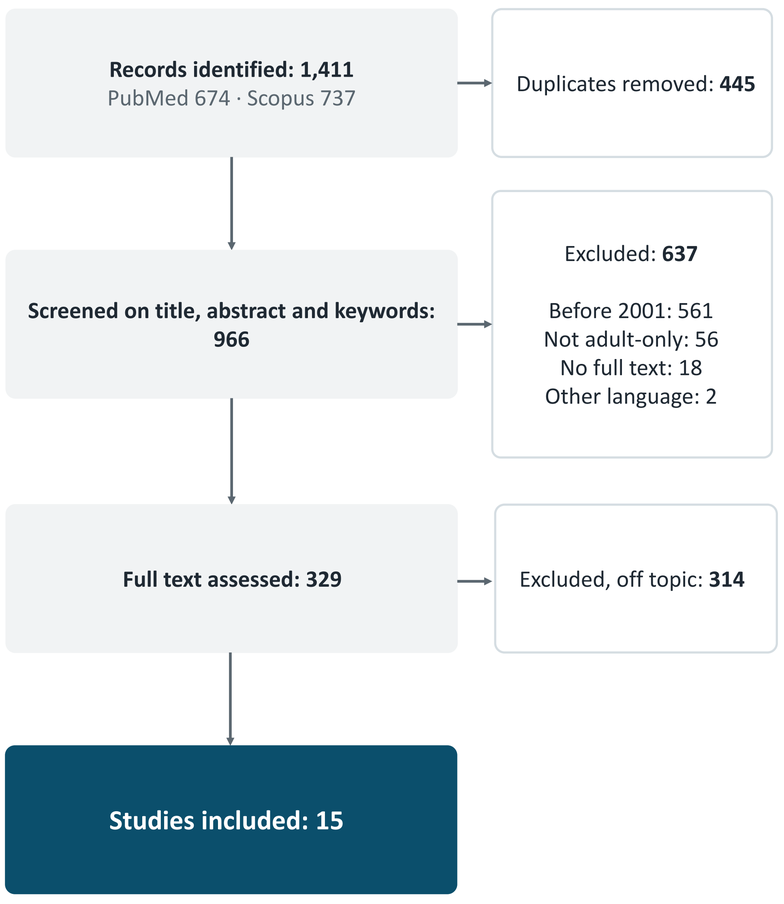

Figure 1. Flow of records through the review (PubMed and Scopus).

HOW HYPNOSIS WAS DELIVERED

- **Clinician-led.** Brief scripted inductions (7–20 min): relaxation, deepening, pleasant-place imagery, dissociation, post-hypnotic suggestions.
- **Audio recordings.** Standardised suggestions, often with music, before and during the procedure.
- **Self-hypnosis.** Patient-induced trance; also combined with guided sessions and home practice.

THE 15 STUDIES AT A GLANCE

Published 2002–2025, about one study per year.

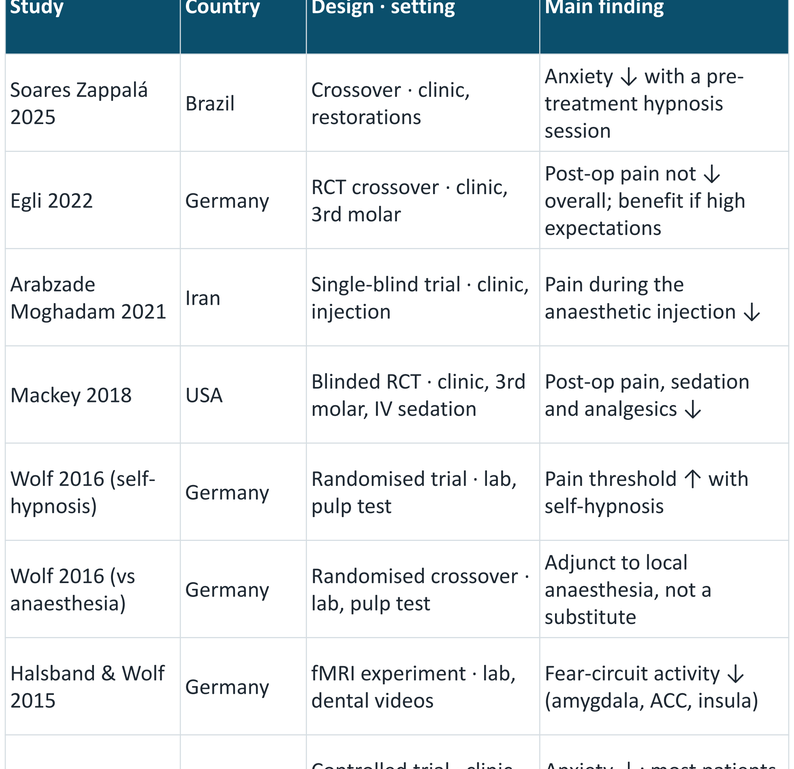

Figure 2. Characteristics of the included studies (n = 15).

SUMMARY OF THE INCLUDED STUDIES

Study	Country	Design · setting	Main finding
Soares Zappalá 2025	Brazil	Crossover · clinic, restorations	Anxiety ↓ with a pre-treatment hypnosis session
Egli 2022	Germany	RCT crossover · clinic, 3rd molar	Post-op pain not ↓ overall; benefit if high expectations
Arabzade Moghadam 2021	Iran	Single-blind trial · clinic, injection	Pain during the anaesthetic injection ↓
Mackey 2018	USA	Blinded RCT · clinic, 3rd molar, IV sedation	Post-op pain, sedation and analgesics ↓
Wolf 2016 (self-hypnosis)	Germany	Randomised trial · lab, pulp test	Pain threshold ↑ with self-hypnosis
Wolf 2016 (vs anaesthesia)	Germany	Randomised crossover · lab, pulp test	Adjunct to local anaesthesia, not a substitute
Halsband & Wolf 2015	Germany	fMRI experiment · lab, dental videos	Fear-circuit activity ↓ (amygdala, ACC, insula)
Glaesmer 2015	Germany	Controlled trial · clinic, tooth removal	Anxiety ↓; most patients would use it again
Eitner 2011	Germany	Prospective comparative · clinic, implants	Anxiety, diastolic BP and heart rate ↓
Facco 2011	Italy	Experiment · lab, pulp test	Pain threshold ↑; partial or total analgesia
Mackey 2010	USA	Blinded RCT · clinic, 3rd molar, IV sedation	Post-op pain, narcotics and propofol ↓
DiClementi 2007	USA	Two pilot experiments · lab, video	Benefit greater in highly hypnotisable patients
Heckmann 2006	Germany	Prospective comparative · clinic, oral surgery	Anxiety ↓, vitals improved — comparable to sedation
Hermes 2005	Germany	Controlled trial · clinic, maxillofacial surgery	Anxiety ↓, comfort ↑; no substitute for sedation
Moore 2002	Denmark	3-year cohort · dental-phobia clinic	Regular attendance kept; anxiety ↓, trust ↑

Table 1. Design, setting and main result of each included study. ↓ decrease, ↑ increase; ACC = anterior cingulate cortex.

FINDINGS

Anxiety

Lower dental anxiety with hypnosis on validated scales and on stress physiology (respiratory rate, blood pressure, autonomic response). fMRI shows reduced activity in the amygdala, anterior cingulate cortex, insula and hippocampus. Response depends on hypnotisability.

Pain

Higher pain threshold, lower perceived pain and less analgesic or sedative use in most studies, including during the anaesthetic injection. Some trials found no significant difference, expectations modulate the effect.

Cooperation and physiology

More relaxed, cooperative patients with less motor reactivity and more stable cardiovascular parameters; high satisfaction, most would use it again.

Lasting effects

The raised pain threshold partly persists after the session; better long-term attendance in phobic patients, but follow-up is rare.

CLINICAL IMPLICATIONS

- A safe, non-invasive complement, not a replacement, to local anaesthesia and sedation.
- Useful in simple restorative or periodontal care; an adjunct in invasive procedures, where it may reduce drug doses.
- Brief inductions or audio recordings keep it simple and inexpensive; effectiveness depends on clinician training. Guided imagery and distraction are accessible alternatives.

LIMITATIONS

- Heterogeneous designs, protocols and outcome measures; small samples, often young healthy volunteers; several older studies.
- Large inter-individual variability (hypnotisability, expectations) and almost no long-term follow-up.
- Narrative design: two databases, language restrictions, some subjectivity in the synthesis.

CONCLUSIONS

Across 15 studies, hypnosis is associated with lower dental anxiety, lower perceived pain and better cooperation, in both subjective and physiological measures. Effects vary between studies and individuals: more rigorous, standardised trials with larger samples and long-term follow-up are needed to confirm its place in dental practice.