

Routine scaling



The evidence summary is based on the original summary published in the **BDJ**⁽¹⁾ (May 2010). It summarises research that explores if 'routine' scaling has any beneficial effects or if it is a waste of time. It does not include detailed descriptions of the studies cited nor does it include information that was not presented in the literature.

The **Curious about** website encourages dental professionals to raise issues where a review of the available evidence would provide a useful resource for other dental professionals. Where there is a lack of evidence, the topic is considered for research and an award is made available.

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Key finding

- No conclusions on the beneficial or adverse effects of routine scaling and polishing for periodontal health can be reached.

Review question

This evidence summary was prepared in response to the following question: Does 'routine' scaling have any beneficial effects, or is it a waste of time?

Key terms

Scaling:

Removal of plaque, calculus, debris and staining from crown and root surfaces.

Polish:

Mechanical removal of residual extrinsic stains and deposits.

Routine:

Either providing an intervention at regular intervals to patients or as a matter of routine (ie regardless of assessed need for treatment or prevention).

Effectiveness:

Measurable sustained benefits in periodontal or overall oral health.

Cost-effectiveness:

Costs to patient and practitioner compared with benefits arising from treatment received.

The case for action

General dental practitioners routinely recommend 'scale and polish' to their patients⁽²⁾ to complement the patient's own oral care regime and as a professional prophylactic measure against periodontal diseases.

⁽³⁾ Gingivitis is the most common periodontal disease though it is reversible in some cases it is a precursor to periodontitis.^(4,3)

In 2008/9 scale and polish was the most common adult clinical dental treatment in England being included in almost three million courses of treatment.⁽⁵⁾ The procedure is considered beneficial by some dentists and patients and has become linked to routine dental check-ups even for patients at low risk of developing periodontal disease.^(6,7) There is a debate regarding the clinical effectiveness of scale and polish⁽⁸⁾ with suggestions that more than half the simple scale and polish treatments prescribed may be unnecessary and not lead to any health gain.⁽⁹⁾

The evidence

One systematic review⁽⁴⁾ and one subsequent parallel randomised controlled clinical trial were found addressing the question.⁽²⁾ They reached no conclusions regarding the beneficial and adverse effects of routine scaling and polishing for periodontal health or the effects of this intervention at different time intervals. A summary of the findings is given below.

Comparison between scale and polish and no scale and polish⁽⁴⁾

Two split-mouth studies covered this question. One concluded that scale and polish has a significant benefit after demonstrating significant differences in calculus and gingivitis and the other concluded that scale and polish is not of benefit after seeing no significant differences in plaque, gingivitis or attachment loss.

Comparison between scale and polish at a fixed interval versus scale and polish in response to the signs and/or symptoms of periodontal disease⁽⁴⁾

No significant differences were seen between the treatment and control groups in either of the two studies covering this question.

Comparisons between routine scale and polish provided at different time intervals^(2,4)

Some significant favouring of frequent (e.g. two week and three month intervals) scaling and polishing over six or 12 month intervals was seen. Common outcomes for these studies were plaque, gingivitis with pocket depth, attachment change and gingivitis also being measures. A more recent parallel randomised clinical controlled trial did not identify any differences in gingival bleeding in healthy adults receiving scale and polish at six, 12 or 24-month intervals.⁽²⁾

Comparison between scale and polish with or without oral hygiene instruction (OHI) at a fixed interval⁽⁴⁾

No conclusion could be reached on the relative effectiveness of scale and polish treatments delivered with and without OHI. Calculus, gingivitis and plaque were outcomes measures for this study.

Comparison between scale and polish provided by dentists or professionals complementary to dentistry⁽⁴⁾

No studies were found for this question.

Methods

Search strategy

Ovid MEDLINE was searched using the search terms dental scaling, routine, treatment outcome, effectiveness, and pros or cons. A relevant, relatively recent and high quality systematic review was located and relevant studies subsequently were sought. Three of the four search strategies used in the Cochrane review were repeated for the period 2007-March 2010.

- Cochrane Oral Health Group Trials Register,
- Cochrane Central Register of Controlled Trials
- MEDLINE (OVID).

Searches were originally carried out in March 2010 with MEDLINE (OVID) and the Cochrane Trials register searched in May 2013 for more recent information.

The Cochrane Collaboration updated their *Routine scale and polish for periodontal health in adults*⁽¹⁰⁾ review in 2013. The update covers new searches for studies and a content update. No change was made to the conclusions of the review.

Searches were repeated in February 2015.

Results

One Cochrane review and one clinical trial were located.

References

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