Surgical and Partial Extractions of Erupted Teeth and Removal of Retained Roots

Policy Number: DCP005.13
Effective Date: November 1, 2025

➲ Instructions for Use

Table of Contents **Page**

Related Dental Policy

- Surgical Extraction of Impacted Teeth
- Dental Implant Placement and Treatment of Peri-Implant Defects/Disease

Coverage Rationale

Surgical Extraction of an Erupted Tooth

Surgical Extraction of an Erupted Tooth is indicated for any of the following:

- The fracture of a tooth or roots during a non-surgical extraction procedure
- Erupted teeth with unusual root morphology (dilacerations, cementosis)
- Erupted teeth with developmental abnormalities that would make non-surgical extraction unsafe or cause harm
- When fused to an adjacent tooth
- In the presence of periapical lesions
- For maxillary posterior teeth whose roots extend into the maxillary sinus
- When tooth has been crowned or been treated endodontically

Surgical Removal of Residual Tooth Roots

Surgical Removal of Residual Tooth Roots is indicated when tooth roots or fragments of tooth roots remain in the bone following a previous incomplete tooth extraction.

Partial Extraction for Immediate Implant Placement (i.e., Socket Shield Technique)

Partial Extraction for Immediate Implant Placement is not indicated due to insufficient evidence of efficacy.

Definitions

Partial Extraction for Immediate Implant Placement: A technique in which the buccal two-thirds of the root in the socket is preserved vertically. (Kumar, 2018)

Surgical Extraction of an Erupted Tooth: A tooth requiring removal of bone and/or sectioning of tooth, including elevation of mucoperiosteal flap if indicated. Includes related cutting of gingiva and bone, removal of tooth structure, minor smoothing of socket bone and closure. (ADA)

Surgical Removal of Residual Tooth Roots: The Surgical Removal of Residual Tooth Roots (cutting procedure) includes cutting of soft tissue and bone, removal of tooth structure and closure. (ADA)

Applicable Codes

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this guideline does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by the member specific benefit plan document and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other Policies and Guidelines may apply.

CDT Code	Description
D7210	Extraction, erupted tooth requiring removal of bone and/or sectioning of tooth, and including elevation of mucoperiosteal flap if indicated
D7250	Removal of residual tooth roots (cutting procedure)
D7252	Partial extraction for immediate implant placement

CDT® is a registered trademark of the American Dental Association

Description of Services

Surgical extraction is the removal of a tooth that presents clinically with a condition that does not safely or adequately allow access using a non-surgical approach. Surgical extractions require an incision, elevation, and bone removal. It may be an entire tooth, or any part of a tooth, including retained roots.

The Socket Shield technique, also known as partial extraction therapy, root membrane technique, and partial root retention, was introduced in 2010 and is technique in which the buccal two-thirds of the root in the socket is preserved vertically allowing the periodontium, bundle bone, and the buccal bone to remain intact. This is thought to improve the esthetics in the maxillary anterior area, and contouring of implant rehabilitation by way of preventing the loss of the aforementioned structures (Kumar, 2018).

Pursuant to CA AB2585: While not common in dentistry, nonpharmacological pain management strategies should be encouraged if appropriate.

Clinical Evidence

Socket Shield Technique (SST)

SST is an innovative approach in implant dentistry designed to preserve the buccal bone plate and soft tissue aesthetics during implant placement. The current literature is insufficient in quantity and quality to establish the efficacy of this procedure.

In a 2025 systematic review and meta-analysis, Altalhi et al. evaluated the efficacy, survival outcomes and limitations of the SST when performed for implant placement. Eleven studies met the inclusion criteria and were assessed. The main findings showed that while SST preserves buccal bone and soft tissue surrounding an implant, as well as improved esthetics, there is a lack of long-term outcome data. Furthermore, studies lacked standardized protocols, and patient selection criteria. Survival outcomes were comparable to standard implant placement techniques without utilizing SST. Further standardized research with larger numbers of participants with long-term outcome measurements and reporting of complication rates is needed before this can be routinely implemented. Conditions such as systemic health, smoking status and conditions or habits that can impact healing also need to be included. This technique also requires a high level of surgical skill, and standardized patient selection criteria is essential.

In a 2023 systematic review, Oliva et al. evaluated the efficacy of the socket shield technique (SST) for reducing buccal bone resorption. Seventeen articles (randomized controlled clinical studies, prospective cohort studies, and retrospective case series) comprised of 656 implants placed using the SST compared with standard placement techniques were included. The mean follow up was 18 months. Outcomes assessed included the implant survival rate with SST, type and frequency of complications, and the long-term prognosis for the stabilization of buccal soft and hard tissues. The results showed that implant survival rate was 98.6% which is in line with standard implant placement techniques. Seventy- six percent of implant failures could be attributed to internal or external exposure due to surgical technique or infection. Marginal bone loss (MBL) was less and pink esthetic score (PES) higher in implants placed using SST. Two randomized controlled trials showed significantly less horizontal bone loss for implants placed with SST. The authors concluded that the results are encouraging, and further long-term research is needed to establish clinical efficacy and safety before the SST can be recommended for routine clinical implementation.

Ogawa et al. (2022) performed a systematic review on the effectiveness of the SST in dental implant placement. Twenty studies were included, (one randomized controlled trial, two cohort studies, 14 clinical human case reports, and three retrospective case series) comprised of 274 patients that were treated with the SST and immediate implant placement. The implant placement in the majority of the included studies were placed in the maxillary anterior region, but there were other areas as well. Follow up ranged from 3- 60 months. The results showed that the treatment was successful in 248 of the implants placed, without complications or adverse events during follow-up time reported. Complications and adverse events rate was 9.5% and included internal and external shield exposure, failure of osseointegration, shield mobility and infection. The authors concluded that the SST for implant placement is effective in preserving bone with a good esthetic outcome and low complication rates. This review is limited by the majority of studies being case series and only one randomized controlled trial and all but one had follow up of less than a year. Further high-quality research with large patient populations and longer follow up are required.

Santhanakrishnan et al. (2021, included in Olivia et al., 2023, and Altahali et al., 2025 above) conducted a randomized controlled trial to evaluate the radiographic and esthetic outcomes of immediate implant placement (IIP) with SST, IIP without SST and socket preservation, and delayed implant placement (DIP) with socket preservation in the maxillary esthetic region. A total of 75 implants were placed in participants with intact facial bone, facial bone thickness of ≤ 2 mm and without any soft tissue defects, with 25 each receiving SST, IIP and DIP. All participants underwent cone beam computed tomography (CBCT) to assess the variations in thickness of crestal aspect of facial/buccal/labial alveolar bone. Pink esthetic scores (PES) and patient-related outcome measures (PROMS) were assessed using visual analog scale (VAS) for pain and esthetic satisfaction following implant placement and at six months. The CBCT analysis results at six months showed that the SST group demonstrated significantly greater values of CBCT assessed bone at 6 months, while the PES showed no statistically significant differences between the groups. VAS scores for esthetics and pain showed no statistically significant difference. However, patients in the SST group showed better trend with regard to esthetic satisfaction, with 84% of scores 9 and 10 when compared to IIP group (64%) and the DIP group (52%). The authors concluded that SST results in greater preserved bone, and increased PROMs at six month follow up. This trial is limited by a short follow up period and lack of objective reported outcomes. Additional research is needed to validate these findings.

Tiwari et al. (2020) conducted a study to compare the efficacy of immediate implant placement after extraction without socket-shield technique and with socket-shield technique in the esthetic region. Sixteen patients with unsalvageable maxillary anterior teeth with labial bone thickness of less than 2 mm as shown on preoperative cone beam computed tomography (CBCT) were chosen for the study and randomly assigned one of two groups. Group A patients has implant placement using the SST, and Group B patients had immediate implant placement without SST. The labial bone thickness was analyzed along its entire length through CBCT scan at follow-up intervals of 1,4 8 and 12 months. The results showed there was consistent stabilization of bone loss in Group A throughout the 12 month follow up period, and Group B showed stabilization until month 8, when it showed progression. that was not statistically significant. The authors concluded that further research is needed to demonstrate the efficacy of the SST.

References

Altalhi AM, AlHajji HH, Alharbi SK, et al. Socket shield technique in implant dentistry: a systematic review and meta-analysis of survival, aesthetic outcomes, and complications. Cureus. 2025 Jun 1;17(6):e85176.

American Dental Association (ADA), CDT Code Book, 2025.

American Dental Association (ADA) Glossary of Dental Clinical and Administrative Terms.

Blaschke C, Schwass DR. The socket-shield technique: a critical literature review. Int J Implant Dent. 2020 Sep 7;6(1):52.

Fragiskos, F. Oral Surgery, 1st ed. Berlin: Springer c2007. Chapter 6, Extraction of Root Tips; p114.

Kumar PR, Kher U. Shield the socket: Procedure, case report and classification. J Indian Soc Periodontol. 2018 May-Jun;22(3):266-272.

Ogawa T, Sitalaksmi RM, Miyashita M, et al. Effectiveness of the socket shield technique in dental implant: A systematic review. J Prosthodont Res. 2022 Jan 11;66(1):12-18.

Oliva S, Capogreco M, Murmura G, et al. The socket shield technique and its complications, implant survival rate, and clinical outcomes: a systematic review. J Periodontal Implant Sci. 2023 Apr;53(2):99-109.

Santhanakrishnan M, Subramanian V, Ramesh N, et al. Radiographic and esthetic evaluation following immediate implant placement with or without socket shield and delayed implant placement following socket preservation in the maxillary esthetic region - a randomized controlled clinical trial. Clin Cosmet Investig Dent. 2021 Nov 19;13:479-494.

Tiwari S, Bedi RS, Wadhwani P, et a;. Comparison of immediate implant placement following extraction with and without socket-shield technique in esthetic region. J Maxillofac Oral Surg. 2020 Dec;19(4):552-560.

Policy History/Revision Information

Date	Summary of Changes
11/01/2025	**Supporting Information** • Updated *Description of Services*, *Clinical Evidence*, and *References* sections to reflect the most current information • Archived previous policy version DCP005.12

Instructions for Use

This Dental Clinical Policy provides assistance in interpreting UnitedHealthcare standard and Medicare Advantage dental plans. When deciding coverage, the member specific benefit plan document must be referenced as the terms of the member specific benefit plan may differ from the standard dental plan. In the event of a conflict, the member specific benefit plan document governs. Before using this guideline, please check the member specific benefit plan document and any applicable federal or state mandates. UnitedHealthcare reserves the right to modify its Policies and Guidelines as necessary. This Dental Coverage Guideline is provided for informational purposes. It does not constitute medical advice.