EFFECTIVE 9/15/2025

Medical Coverage Policy

Effective Date.....9/15/2025
Next Review Date.....9/15/2026
Coverage Policy Number..... 0579

Cervical Plexus Block

Table of Contents

Related Coverage Resources

INSTRUCTIONS FOR USE

The following Coverage Policy applies to health benefit plans administered by Cigna Companies. Certain Cigna Companies and/or lines of business only provide utilization review services to clients and do not make coverage determinations. References to standard benefit plan language and coverage determinations do not apply to those clients. Coverage Policies are intended to provide guidance in interpreting certain standard benefit plans administered by Cigna Companies. Please note, the terms of a customer's particular benefit plan document [Group Service Agreement, Evidence of Coverage, Certificate of Coverage, Summary Plan Description (SPD) or similar plan document] may differ significantly from the standard benefit plans upon which these Coverage Policies are based. For example, a customer's benefit plan document may contain a specific exclusion related to a topic addressed in a Coverage Policy. In the event of a conflict, a customer's benefit plan document always supersedes the information in the Coverage Policies. In the absence of a controlling federal or state coverage mandate, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of 1) the terms of the applicable benefit plan document in effect on the date of service; 2) any applicable laws/regulations; 3) any relevant collateral source materials including Coverage Policies and; 4) the specific facts of the particular situation. Each coverage request should be reviewed on its own merits. Medical directors are expected to exercise clinical judgment where appropriate and have discretion in making individual coverage determinations. Where coverage for care or services does not depend on specific circumstances, reimbursement will only be provided if a requested service(s) is submitted in accordance with the relevant criteria outlined in the applicable Coverage Policy, including covered diagnosis and/or procedure code(s). Reimbursement is not allowed for services when billed for conditions or diagnoses that are not covered under this Coverage Policy (see "Coding Information" below). When billing, providers must use the most appropriate codes as of the effective date of the submission. Claims submitted

for services that are not accompanied by covered code(s) under the applicable Coverage Policy will be denied as not covered. Coverage Policies relate exclusively to the administration of health benefit plans. Coverage Policies are not recommendations for treatment and should never be used as treatment guidelines. In certain markets, delegated vendor guidelines may be used to support medical necessity and other coverage determinations.

Overview

This Coverage Policy addresses cervical plexus nerve block which is used to provide pre-and post-operative pain relief and anesthesia for procedures involving the neck, shoulder and/or clavicle region.

Coverage Policy

Cervical plexus block is considered medically necessary for procedures involving the neck, shoulder and/or clavicle region, including ANY of the following:

- acromioclavicular dislocations
- anterior cervical discectomy fusion
- carotid endarterectomy
- ear surgery
- lymph node biopsy, dissection, located in the neck region
- open reduction and internal fixation (ORIF) of the clavicle
- shoulder surgery (e.g., rotator cuff repair, arthroplasty)
- superficial neck surgery (e.g., thyroidectomy, parathyroidectomy)
- treatment of clavicle fractures (e.g., open reduction and internal fixation (ORIF) of the clavicle)

Cervical plexus block is considered not medically necessary if the above criteria are not met.

Health Equity Considerations

Health equity is the highest level of health for all people; health inequity is the avoidable difference in health status or distribution of health resources due to the social conditions in which people are born, grow, live, work, and age.

Social determinants of health are the conditions in the environment that affect a wide range of health, functioning, and quality of life outcomes and risks. Examples include safe housing, transportation, and neighborhoods; racism, discrimination and violence; education, job opportunities and income; access to nutritious foods and physical activity opportunities; access to clean air and water; and language and literacy skills.

Significant disparity exists in the use of peripheral nerve blocks (PNBs) for postoperative analgesia in patients of different race-ethnicity. Continued efforts are needed to better understand the causes of disparity and to ensure equitable access to PNBs (Mazzeffi et al., 2022).

General Background

EFFECTIVE 9/15/2025

Regional anesthesia consists of infiltrating a peripheral nerve with an anesthetic agent and blocking transmission to avoid or relieve pain. A nerve block can be used to treat acute pain as in procedural anesthesia as well as provide post-operative analgesia (Weiderhold et al., 2023). It differs from general anesthesia as it does not affect the patient's consciousness level to relieve pain. Advantages over general anesthesia include avoidance of airway manipulation, possible decreased use of opiate medication, significantly lower pain levels after surgery, faster recovery time and earlier participation in physical therapy, if indicated (Folino and Mahboobi, 2023; Weiderhold et al. 2023).

Other advantages to regional anesthesia may include (Folino and Mahboobi, 2023):

- Less blood loss
- Less nausea
- Less drowsiness
- Improved pain control after surgery
- Reduced risk of serious medical complications, such as heart attack or stroke

Side effects from regional anesthesia may include:

- headaches
- trouble urinating
- allergic reactions
- nerve injury, rarely

Cervical plexus nerve block is a type of regional anesthesia used for surgical procedures and nonsurgical pain control of the neck, shoulder and/or clavicle region. Ultrasound guidance and nerve stimulator techniques are typically used to locate the anatomic structures and define the placement of the needle or catheter (Folino and Mahboobi, 2023). The agent is injected directly into or around a nerve or spine to block pain by way of a single injection of local anesthesia or continuously through a catheter, positioned into or near peripheral nerves or neve ganglion (Weiderhold et al., 2023). Peripheral nerve blocks are often performed by anesthesiologists, surgeons, and emergency department physicians (Chang et al. (2023).

There is sufficient evidence in the published, peer reviewed literature to support the clinical usefulness of cervical plexus nerve block to provide regional anesthesia and post-operative surgical pain management for selected conditions.

Cervical Plexus Nerve Block
A cervical plexus nerve block is a type of peripheral anesthesia technique used for emergency department and surgical interventions involving the anterolateral neck, earlobe, clavicle and acromioclavicular joint. This block provides dense anesthesia and analgesia in the distribution of C2 to C4 nerve roots. The technique can be performed using either a landmark-based or ultrasound-guided approach (Hipskind et al., 2024).

In the emergency department, blocks of the cervical plexus may be used for the insertion of internal jugular central venous catheters, treating clavicular fractures, wound repair, and drainage of abscesses involving the earlobe and submandibular areas. The superficial cervical plexus block (CPB), confers ipsilateral anesthesia the posterior tip of the earlobe, the clavicle's lateral extremity, the mandible's medial aspect, and the clavicle's inferior surface.

Superficial CPBs are characterized by their ease of administration and proficiency in conferring anesthesia within the distribution spanning C2 to C4 and are used to provide anesthesia to

procedures such as carotid endarterectomies, lymph node dissection, and plastic surgery. When combined with deep CPB, it may also be used to provide regional anesthesia for oral and maxillofacial surgery (Hipskind et al., 2024).

Literature Review
Wilson L et al. (2023) published a systematic review and meta-analysis comparing pre-or post-operative bilateral superficial cervical plexus block (BSCPB) to control in persons undergoing thyroid surgery. A total of 31 studies and 2,273 patients were included in this analysis. The primary outcome was postoperative opioid consumption. The secondary outcomes were the duration of analgesia (time to request of analgesia), Visual Analogue Scale (VAS) pain scores at 0, 4, 12, and 24 hours, postoperatively, rates of postoperative nausea and vomiting (PONV), postoperative rescue analgesic consumption and intraoperative morphine use. The duration of analgesia was prolonged following BSCPB and post-thyroidectomy opioid consumption was reduced ($p < 0.001$). VAS scores for 24 h (postoperatively), intraoperative morphine use, and rescue analgesia (postoperatively) remained lower in individuals who received BSCPB. There was also a statistically significant reduction in PONV ($p = 0.02$). Data suggest health benefits of BSCPB and reduction in opioid use, PONV and improvement in VAS scores when used for thyroid surgery.

Ozgun et al. (202) examined superficial cervical plexus block (SCPB) as a component of multimodal analgesia after thyroid surgery in a double-blind, randomized study aimed to compare the effects of bilateral SCPB (BSCPB) on postoperative analgesic requirements following thyroid surgery. Sixty patients categorized as American Society of Anesthesiologists (ASA) I-II underwent elective total thyroidectomy under general anesthesia. Patients were randomized to Group 1 (no BSCPB) and Group 2 (after inducing general anesthesia, BSCPB was administered).

Patient-controlled analgesia (PCA) was applied by using tramadol in both groups for postoperative analgesia. Tenoxicam was administered as rescue analgesic to patients in case of numeric rating scale (NRS) >4.

No significant difference was observed in the fentanyl requirements between the groups during anesthesia. The consumption of tramadol for PCA at two, six, 12, and 24 hours postoperatively, NRS scores in the recovery room, and the number of patients who used tenoxicam as a rescue analgesic were significantly lower in Group 2 than in Group 1 except for the first hour after surgery. The NRS scores were lower upon admission to the RR in Group 2 than Group 1, in other assessment times The hemodynamic values were similar between the groups.

The number of patients requiring rescue analgesic was significantly higher in Group 1 than in Group 2 ($p = 0.03$). The number of patients who had a pain score of ≥6 was significantly lower in Group 2 than in Group 1 ($p = 0.02$). Postoperative subcutaneous emphysema was detected around the neck in two patients in Group 2. Emphysema regressed at the end of the 12th hour. There were no other complications related to BSCPB that occurred in the patients.
Data suggests BSCPB when used as a component of multimodal analgesia, can reduce the analgesic requirements following thyroid surgery.

Abelghany et al. (2021) published results of a prospective randomized controlled trial (RCT) assessing the postoperative analgesic consumption and the quality of postoperative analgesia with the use of either ultrasound-guided superficial cervical plexus block alone or in combination with interscalene brachial plexus block in 70 adult patients undergoing internal fixation of fractured clavicle. Study participants were randomly distributed into two groups: superficial cervical plexus block (CPB) group and the combined superficial cervical plexus block and interscalene block (ISB) group. Intraoperative fentanyl and isoflurane consumption, postoperative morphine consumption,

postoperative pain score, duration of postoperative analgesia, incidence of perioperative complications, and the patient's satisfaction were recorded.

There were no significant differences in intraoperative fentanyl and isoflurane consumption, postoperative morphine consumption, postoperative pain score, duration of postoperative analgesia, incidence of perioperative complications, or patient's satisfaction among the patients in the two groups. A significant decrease was noted in the incidence of diaphragmatic hemiparesis with the use of SCP block alone as compared to the use of SCP block and interscalene block (p=0.03). Study limitation includes small study population. Results for SCP were improved for the incidence of diaphragmatic hemiparesis and noninferior for other variables; data suggest it is an acceptable option for ORIF surgery.

Kilbasanli and Kacmaz (2023) reported results of a prospective trial to assess outcomes using interscalene brachial plexus block (ISB) + superficial cervical plexus block compared to general anesthesia (GA) in 70 individuals undergoing rotator cuff surgery. Intraoperative hemodynamics, operative time and postoperative analgesia outcomes were evaluated. The patients were randomized into two groups according to type of anesthesia. Duration of operation, waiting times, intraoperative hemodynamic data, postoperative visual analog scale (VAS) and analgesic requirement, as well as patient and surgeon satisfaction levels, were compared between the two groups.

VAS values at the post-anesthesia care unit were lower in ISB group at two and 24 hours ($p < .05$), but there was no significant difference between VAS values measured at 6th and 12th hours ($p \geq .05$). In the GA group, postoperative morphine and diclofenac consumption was higher, and rescue analgesia was needed earlier ($p < .05$). The hospital stay was shorter ($p < .05$), and surgeon and patient satisfaction were higher in the ISB group ($p < .05$). Study limitations include small participant numbers. Data suggest improved outcomes with ISB + cervical plexus block for an individual undergoing rotator cuff repair surgery.

Kamel et al. (2024) evaluated results of an RCT comparing ultrasound-guided bilateral intermediate cervical plexus block (IC) with ultrasound-guided bilateral cervical erector spinae block (ES) for 58 patients undergoing anterior cervical spine surgery. The nerve blocks were administered prior to general anesthesia. Study design was a double-blind prospective RCT.

The primary outcome was to record the time to the first call for rescue analgesia and the secondary outcomes were to measure the performance time of the technique, the onset of the sensory block, the intraoperative fentanyl consumption, postoperative pain intensity using VAS, the postoperative total nalbuphine consumption, and postoperative complications such as nausea, vomiting, hypotension, and bradycardia.

The performance time was significantly shorter in the IC group compared to the ES group ($p = 0.0001$). Onset of sensory block in the IC group compared to the ES group was decreased ($p = 0.0001$) The average postoperative VAS scores were similar between the two groups at the measured time points ($P \geq 0.05$), except at 8 hours where the IC group showed significantly higher mean VAS scores compared to the ES group ($p = 0.0001$). VAS scores were higher in the ES group compared to the IC group at 12 hours ($p = 0.0001$). The time to first request rescue analgesia was significantly shorter in the IC group compared to the ES group ($p = 0.0001$). Number of patients experiencing postoperative complications such as nausea, vomiting, bradycardia, hypotension, phrenic paresis, and Horner's syndrome was similar between the two groups ($p \geq 0.05$). Data suggest intermediate cervical plexus block does not provide better postoperative regional analgesia compared to the cervical erector spinae block; however,

performance time and onset of sensory block were shorter in the IC group and there was noninferiority in postoperative complications.

Hayes et al. (2012) published results of an RCT designed to evaluate the intra- and postoperative analgesic efficacy of unilateral superficial and deep cervical plexus block for unilateral neck dissection surgery. Twenty-eight individuals were randomly assigned into two groups to receive either saline (control group) or bupivacaine (study group), hemodynamic monitoring. Bispectralindex (BIS) monitor and MAC of isoflurane were recorded. Postoperative VAS scores, operative time and postoperative first time to take analgesic were recorded

Basal values of systolic blood pressure, diastolic blood pressure and heart rate, showed no significant differences between the study group and the control group preoperatively, but their values during hours 1 -3 of surgery, and after recovery showed significant decrease in the study group (p=0.000). Intraoperatively, an additional dose of fentanyl was given to all cases of the control group; no one in the study group required additional doses of fentanyl. Lower intraoperative isoflurane concentration and bispectral index, (p=0.000, 0.000, respectively), No patients developed adverse effects.

Data suggest unilateral superficial and deep cervical plexus block reduces intraoperative anesthetics and postoperative analgesic requirements in patients undergoing unilateral block neck dissection surgery.

Results of an RCT comparing a superficial cervical plexus block (SCB) alone and combined with an ultrasound (US)-guided carotid sheath block (CSB) in 59 individuals undergoing nonemergency carotid endarterectomy (CEA) were published by Kruc et al. (2024). Demographic characteristics were comparable across the cohorts. The primary objective was to explore the length of the sensory block after combining SCB and CSB. Patients randomized into two cohorts. The subject group (n=28) received US-guided CSB + SCB while the control group (n=31) received only an SCB. The sensory block time and its initiation, analgesia and neutrophil-to-lymphocyte ratio (NLR) were recorded before and after the block. The numeric pain rating scale (NPRS) was used to evaluate analgesia every 2 hours for 12 hours post block.

The subject group demonstrated a significantly accelerated onset of sensory block (p = 0.029) and an extended time to first analgesia (p = 0.003). The sensory block was also extended in the Subject group (p = 0.040). On the numeric pain rating scale (NPRS) postoperative pain within the first 12 hours was more recurrent in the control group (p = 0.048). Neutrophil to lymphocyte ratio showed minimal disparity between the groups (p = 0.125). Data suggest combining SCB and US-guided CSB effectively extends postoperative analgesia for CEA surgery.

Medicare Coverage Determinations

	Contractor	Determination Name/Number	Revision Effective Date
NCD		N/A	
LCD	First Coast Options	Peripheral Nerve Blocks L33933	1/18/2019

Note: Please review the current Medicare Policy for the most up-to-date information.
(NCD = National Coverage Determination; LCD = Local Coverage Determination)

Coding Information

EFFECTIVE 9/15/2025

Notes:

1. This list of codes may not be all-inclusive since the American Medical Association (AMA) and Centers for Medicare & Medicaid Services (CMS) code updates may occur more frequently than policy updates.
2. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement.

Considered Medically Necessary when criteria in the applicable policy statements listed above are met when used to report cervical plexus block:

CPT®* Codes	Description
64999	Unlisted procedure, nervous system

***Current Procedural Terminology (CPT®) ©2024 American Medical Association: Chicago, IL.**

Levels of Scientific Evidence*

Level 1. Randomized Controlled Trials (RCT). Randomized, blinded, placebo-controlled, clinical trials and systematic reviews of RCTs and meta-analysis of RCTs,

Level 2. Non-randomized controlled trials (an experimental study, but not an ideal design). Also systematic reviews and meta-analyses of non-randomized controlled trials.

Level 3. Observational studies – e.g. cohort, case-control studies (non-experimental studies). Also systematic reviews and meta-analyses of observational studies.

Level 4. Descriptive studies, case reports, case series, panel studies (non-experimental studies), and retrospective analyses of any kind. Also systematic reviews and meta-analyses of retrospective studies.

Level 5. Professional/organizational recommendations when based upon a valid evidence-based assessment of the available literature.

*Levels of Evidence Table adapted from the Centre for Evidence Based Medicine, University of Oxford, March 2009 (https://www.cebm.net/2009/06/oxford-centre-evidence-based-medicine-levels-evidence-march-2009/)

References

1. Abdelghany MS, Ahmed SA, Afandy ME. Superficial cervical plexus block alone or combined with interscalene brachial plexus block in surgery for clavicle fractures: a randomized clinical trial. Minerva Anestesiol. 2021 May;87(5):523-532. doi: 10.23736/S0375-9393.21.14865-5. Epub 2021 Feb 16.

2. Chang A, Dua A, Singh K, et al. Peripheral Nerve Blocks. [Updated 2023 Jul 6]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK459210/Folino TB, Mahboobi SK. Regional Anesthetic Blocks. [Updated 2023 Jan 29]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK563238/

3. Folino TB, Mahboobi SK. Regional Anesthetic Blocks. [Updated 2023 Jan 29]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK563238/

4. Hayes, S. M. S., El-Bendary, H. M., Ramzy, E. A., Abd El-Fattah, A. M., & Rizk, E. M. A. E. A. (2012). Efficacy of unilateral combined (superficial and deep) cervical plexus block as a preemptive analgesia for unilateral neck dissection surgery. Egyptian Journal of Anaesthesia, 28(4), 275–279. https://doi.org/10.1016/j.egja.2012.07.003

5. Kamel AAF, Fahmy AM, Fathi HM, Elmesallamy WAEA, Khalifa OYA. Regional analgesia using ultrasound-guided intermediate cervical plexus block versus cervical erector spinae block for anterior cervical spine surgery: a randomized trial. BMC Anesthesiol. 2024 Apr 22;24(1):153. doi: 10.1186/s12871-024-02533-6.

6. Kilbasanli S, Kaçmaz M. General anesthesia versus combined interscalene nerve/superficial cervical plexus block in arthroscopic rotator cuff repair: A randomized prospective control trial. Medicine (Baltimore). 2023 Oct 20;102(42):e35522. doi: 10.1097/MD.0000000000035522.

7. Kruc A, Lijovic L, Skrtic M, Pazur I, Perisa N, Radocaj T. Enhancing postoperative analgesia in carotid endarterectomy patients: The potential of ultrasound-guided carotid sheath block combined with superficial cervical plexus block: A randomised trial. Indian J Anaesth. 2024 Sep;68(9):801-808. doi: 10.4103/ija.ija_834_23. Epub 2024 Aug 16.

8. Liu Z, Bi C, Li X, Song R. The efficacy and safety of opioid-free anesthesia combined with ultrasound-guided intermediate cervical plexus block vs. opioid-based anesthesia in thyroid surgery-a randomized controlled trial. J Anesth. 2023 Dec;37(6):914-922. doi: 10.1007/s00540-023-03254-9. Epub 2023 Sep 23.

9. Mazzeffi, Michael A. MD, MPH, MSc*; Keneally, Ryan MD*; Teal, Christine MD†; Douglas, Rundell MPH‡; Starks, Vanessa MD*; Chow, Jonathan MD*; Porter, Steven B. MD§. Racial Disparities in the Use of Peripheral Nerve Blocks for Postoperative Analgesia After Total Mastectomy: A Retrospective Cohort Study. Anesthesia & Analgesia 135(1):p 170-177, July 2022.

10. Ozgun M, Hosten T, Solak M. Effect of bilateral superficial cervical plexus block on postoperative analgesic consumption in patients undergoing thyroid surgery. Cureus. 2022 Jan 13;14(1):e21212. doi: 10.7759/cureus.21212.

11. Stoneham MD, Stamou D, Mason J. Regional anaesthesia for carotid endarterectomy. Br J Anaesth. 2015 Mar;114(3):372-83. doi: 10.1093/bja/aeu304. Epub 2014 Aug 30.

12. Wiederhold BD, Garmon EH, Peterson E, et al. Nerve block anesthesia. [Updated 2023 Apr 29]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK431109/

13. Wilson L, Malhotra R, Mayhew D, Banerjee A. The analgesic effects of bilateral superficial cervical plexus block in thyroid surgery: A systematic review and meta-analysis. Indian J Anaesth. 2023 Jul;67(7):579-589. doi: 10.4103/ija.ija_806_22. Epub 2023 Jul 14.

Revision Details

Type of Revision	Summary of Changes	Date

EFFECTIVE 9/15/2025

New	Medical policy for cervical plexus block	9/15/2025