Radiofrequency Ablation for Nasal Valve Collapse

Clinical Policy ID: CCP.1539

Recent review date: 6/2026

Next review date: 10/2027

Policy contains: Nasal blockage; nasal valve collapse; nasal obstruction; radiofrequency ablation; temperature-controlled radiofrequency devices.

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Coverage policy

Radiofrequency ablation is clinically proven and, therefore, may be medically necessary to stabilize the nasal valve in members diagnosed with nasal valve dysfunction (Academy of Otolaryngology — Head and Neck Surgery, 2026).

Limitations

Radiofrequency ablation to stabilize the nasal valve for cosmetic reasons is not medically necessary.

Alternative covered services

- Cartilage grafting
- Open surgical repair
- Suture suspension techniques
- Implants

Background

Nasal obstruction, also known as nasal congestion or blockage, is a common condition that affects many people in the United States. It can be caused by various factors, including anatomical issues like septal deviation, inferior

turbinate hypertrophy, nasal valve collapse, and conditions like allergies and viral infections. A study involving patients with sinonasal complaints (n = 1,906) found that the prevalence of nasal valve collapse was 67%, septal deviation was 76%, and inferior turbinate hypertrophy was 72% (Clark, 2018).

Nasal obstruction can significantly impact a person's quality of life, leading to symptoms such as difficulty breathing, persistent nasal congestion, and disrupted sleep patterns. It can also be associated with sleep-disordered breathing, including conditions like sleep apnea. Treatment options for nasal obstruction range from home remedies and medications to surgical interventions, depending on the severity and cause of the obstruction (García-Chabur, 2023).

Common surgical approaches, known as rhinoplasty techniques, aim to address nasal valve compromise. These involve placing grafts or splints to widen and open the cross-sectional nasal valve area to improve airflow dynamics. Functional rhinoplasty approaches attempt to decrease nasal airway resistance and improve nasal breathing capacity by structurally modifying the nasal valve region (Hohman, 2024).

Temperature-controlled radiofrequency devices offer an alternative treatment option for nasal obstruction, particularly for conditions like nasal valve collapse. The treatment works by delivering controlled energy to the nasal valve area, which heats the tissue in a controlled manner. This process aims to cause tissue remodeling and tightening, thereby reducing the symptoms of nasal obstruction (Silvers, 2021).

Radiofrequency ablation is viewed as a minimally invasive approach to heat the nasal submucosa while protecting the overlying mucous layers. The controlled damage elicits healing responses such as fibrosis and volume reduction capable of remodeling the tissues triggering the obstructive symptoms. Compared to more invasive interventions, radiofrequency ablation offers simpler and less disruptive correction of obstructed airways through its outpatient application under local anesthesia (Neiderman, 2023).

Findings

Guidelines

The American Academy of Otolaryngology — Head and Neck Surgery issued a position statement listing radiofrequency treatment as one of several potential office-based treatments that can be used to stabilize the nasal valve for symptom relief and quality-of-life improvement in patients diagnosed with nasal valve dysfunction. These treatments are not considered to be experimental. However, the statement goes on to say that, for patients requiring anatomic widening and definitive stabilization, surgical treatment is needed to optimize outcomes (American Academy of Otolaryngology — Head and Neck Surgery, 2026).

Evidence review

Data from a large, multisite database study found that use of minimally invasive interventions, including nasal radiofrequency remodeling, for treating nasal obstruction is increasing due to benefits of shorter recovery times and reduced perioperative risks. Patients who underwent nasal radiofrequency remodeling (n = 485) were more likely to receive local anesthesia, be older, and have a diagnosis of hearing loss, and were less likely to have a diagnosis of hypertension or chronic lung disease, compared to those who underwent the procedure under general anesthesia (Lorenz, 2025).

The best available evidence for temperature-controlled radiofrequency ablation to repair nasal valve collapse consists of one randomized, sham-controlled trial and several small before-after studies with some long-term follow-up data. The procedure is safe and efficacious when performed under local or general anesthesia. Efficacy was measured by mean changes in the Nasal Obstruction Symptom Evaluation score from baseline, which is a validated instrument used to quantify patients' subjective symptoms related to nasal obstruction and its impact on disease-specific quality of life. Efficacy was maintained up to 24 months after treatment, and up to 36 months

after treatment in a subset of patients. Investigators call for larger scale studies to confirm these promising results.

There are several limitations to the evidence base that prevent drawing firm conclusions on efficacy. Chief among them are lack of blinding among the analysts and small sample sizes. Studies often lacked clinically objective measurements for nasal airflow, such as rhinomanometry, acoustic rhinometry, and peak nasal inspiratory flow. Finally, some participants had no restriction in nasal medication usage as an enrollment criterion.

A systematic review and meta-analysis of eight studies (n = 451) evaluated the efficacy of temperature-controlled radiofrequency treatment for nasal valve collapse causing nasal obstruction. There was a statistically significant improvement in quality of life posttreatment, as measured by mean changes in Nasal Obstruction Symptom Evaluation (41.75 points at one month to 56.35 points at 24 months across the studies, $P = .0107$). The rates of clinically improved states and positive responses in quality of life after treatment ranged from 78% at one month to 86% at 24 months ($P = .3661$). Responder rates (defined as ≥ 20% decrease in Nasal Obstruction Symptom Evaluation scores or ≥ one severity level improvement) improved from 87% to 98% from three to 24 months. The sham control group showed less improvement in scores and responder rates. Additional randomized controlled trials are still warranted to confirm treatment efficacy (Kang, 2024).

In another evidence synthesis of one randomized controlled trial and four before-after studies (n = 218), a meta-analysis found a significant improvement in the mean Nasal Obstruction Symptom Evaluation score from 76.16 pretreatment to 31.2 at three months posttreatment (mean difference = 46.13 points, $P < .05$). In the only randomized, sham-controlled trial (Silvers, 2021), the radiofrequency treatment group improved significantly more than sham control on the Nasal Obstruction Symptom Evaluation score at three months (mean difference from baseline 34.4 vs 62.0, $P < .05$). Minor adverse events like nasal congestion and pain occurred in a small number of patients and resolved (Casale, 2023).

Long-term posttreatment data from the Silvers' randomized controlled trial have been reported. At 12 months posttreatment, participants treated with temperature-controlled radiofrequency continued to show a significant improvement in nasal obstruction symptoms compared to sham controls. The responder rate (defined as ≥ 20% improvement on the Nasal Obstruction Symptom Evaluation score or ≥1 severity level improvement) was 89.8% at 12 months, and the mean Nasal Obstruction Symptom Evaluation score changed by -44.9 points from baseline. There were no device-related serious adverse events (Han, 2022). At three years posttreatment, treatment effects were sustained in a subset of 54 participants. Most participants also reported significant improvements in sleep posttreatment (Han, 2025).

Yao (2025) reported 36-month posttreatment data in 66 participants in a prospective, multicenter, single-arm study. Compared to baseline, there was a 52.6% decrease in the Nasal Obstruction Symptom Evaluation score at 36 months (mean change -45.3, 95% confidence interval -52.3 to -38.3, $P < .001$), and 83.3% of the participants met the predefined criteria for treatment response at 36 months. No device or procedure-related adverse events or serious adverse events were reported in the interval between 24 and 36 months.

In 2025, no new relevant literature was found. No policy changes were made.

In 2026, we updated the literature and revised coverage to medically necessary based on a revised position statement by the Academy of Otolaryngology — Head and Neck Surgery (2026).

References

On May 18, 2026, we searched PubMed and the databases of the Cochrane Library, the U.K. National Health Services Centre for Reviews and Dissemination, the Agency for Healthcare Research and Quality, and the Centers for Medicare & Medicaid Services. Search terms were ("radiofrequency therapy" (MeSH), "nasal obstruction" (MeSH), "nasal valve collapse," "radiofrequency ablation," and "radio frequency ablation." We

included the best available evidence according to established evidence hierarchies (typically systematic reviews, meta-analyses, and full economic analyses, where available) and professional guidelines based on such evidence and clinical expertise.

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Policy updates

2/2024: initial review date and clinical policy effective date: 3/2024

4/2025: Policy references updated.

4/2026: Policy references updated.

6/2026: Policy references updated. Coverage changed to medically necessary.

Related codes

Below are the most commonly submitted codes for the service(s)/item(s) subject to this policy CCP.1539. This is not an exhaustive list of codes. Providers are expected to consult the appropriate coding manuals and bill accordingly.

Code	Code description
30469	Repair of nasal valve collapse with low energy, temperature-controlled (i.e., radiofrequency) subcutaneous/submucosal remodeling