



**RAPID RHINO<sup>◇</sup>**  
**NASASTENT<sup>◇</sup>**

Dissolvable Nasal Dressing

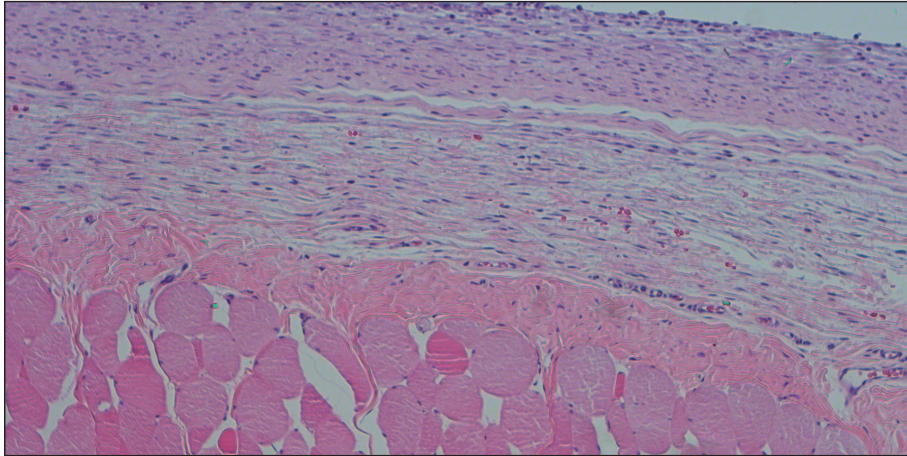
Introducing a structural nasal dressing designed to completely dissolve, not fragment.

Trimnable and resilient for ease of placement, with no special storage conditions required

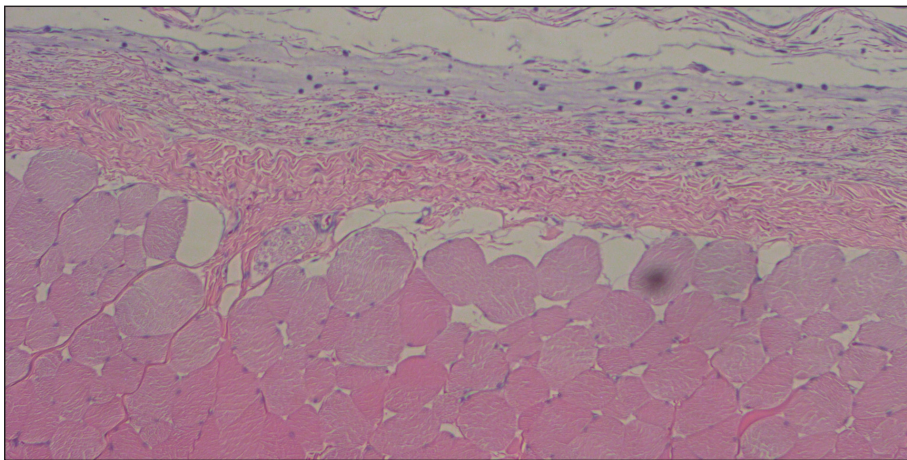


## Why CMC material?

CMC is commonly used in pharmaceuticals and medical devices. Medical devices containing CMC, such as the RAPID RHINO<sup>®</sup> epistaxis dressings, STAMMBERGER SINU-FOAM<sup>®</sup> dressing, and SEPRAFILM bioresorbable membrane have been in clinical use over the last two decades. CMC is also a multipurpose food additive classified by the FDA as 'generally recognized as safe.' (GRAS)<sup>2</sup>

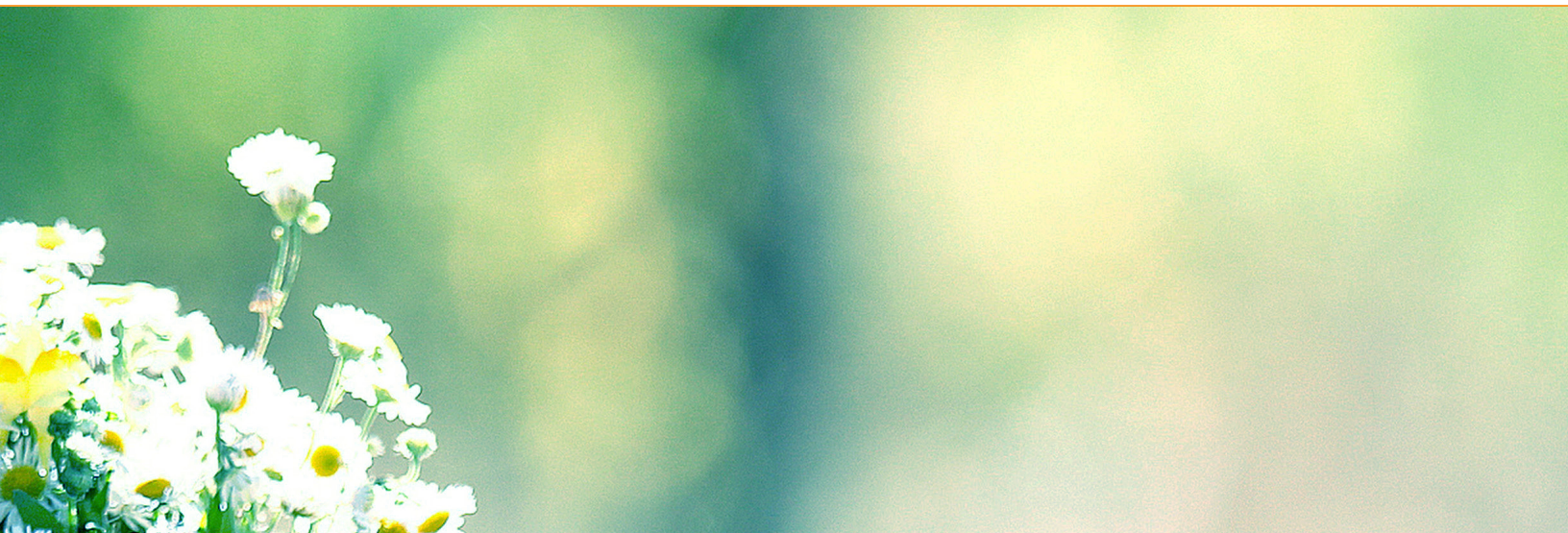


Control consisting of high density polyethylene (HDPE)



NASASTENT nasal dressing implanted in muscle

Representative histology of NASASTENT<sup>®</sup> nasal dressing and HDPE (negative control) after two weeks implantation in rabbit muscle. NASASTENT nasal dressing exhibited no inflammation and irritation to the native tissue as compare to the negative control.

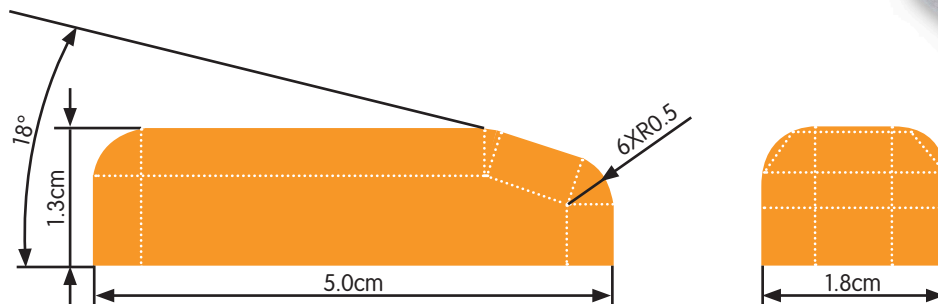


# NASASTENT<sup>◇</sup> nasal dressing

The resiliency of NASASTENT nasal dressing allows for ease of placement that conforms to patient anatomy and remains where placed.

NASASTENT nasal dressing is a dissolvable intranasal splint made from plant-based CarboxyMethyl Cellulose (CMC). As it absorbs nasal fluids, it turns into a hydrocolloidal gel that naturally drains from the nasal cavity.

Capable of absorbing up to 16 times its weight, NASASTENT nasal dressing is designed to be trimmable and resilient for ease of placement while conforming to patient anatomy, minimize bleeding and edema, and prevent post-op adhesions - all with no special storage conditions required.



NASASTENT dressings' tapered edge is designed to facilitate faster and easier placement.



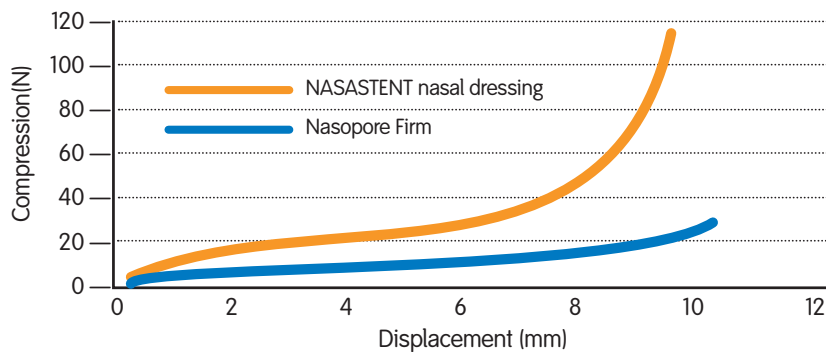
# Resilience comparison of NASASTENT<sup>◇</sup> dressing to Nasopore<sup>®</sup> Firm dressing

During placement into the nasal cavity, NASASTENT nasal dressing quickly springs back to recover its form and has a compressive strength six times higher than Nasopore Firm.<sup>1</sup>

The resilience of NASASTENT nasal dressing allows it to immediately conform to patient anatomy, possess sufficient strength to help control bleeding via the tamponade effect, and can exert sufficient tissue separation force on nasal structures (such as the middle turbinate) to keep them in the desired location.

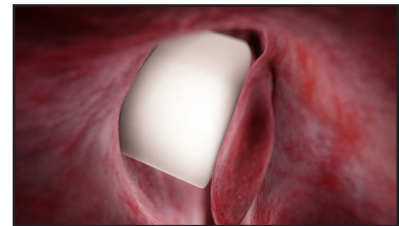
Device	Compressive Strength (kPa)
NASASTENT nasal dressing	114.28 +/- 10.50
Nasopore Firm	17.20 ± 1.70

Resilience of intranasal splints – Dimensional recovery and compressive strength after a compressive loading/off-loading cycle

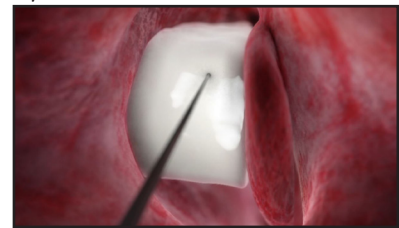


Representative load-displacement profile of NASASTENT nasal dressing and Nasopore Firm during axial compression

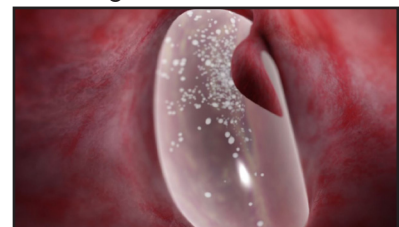
Location



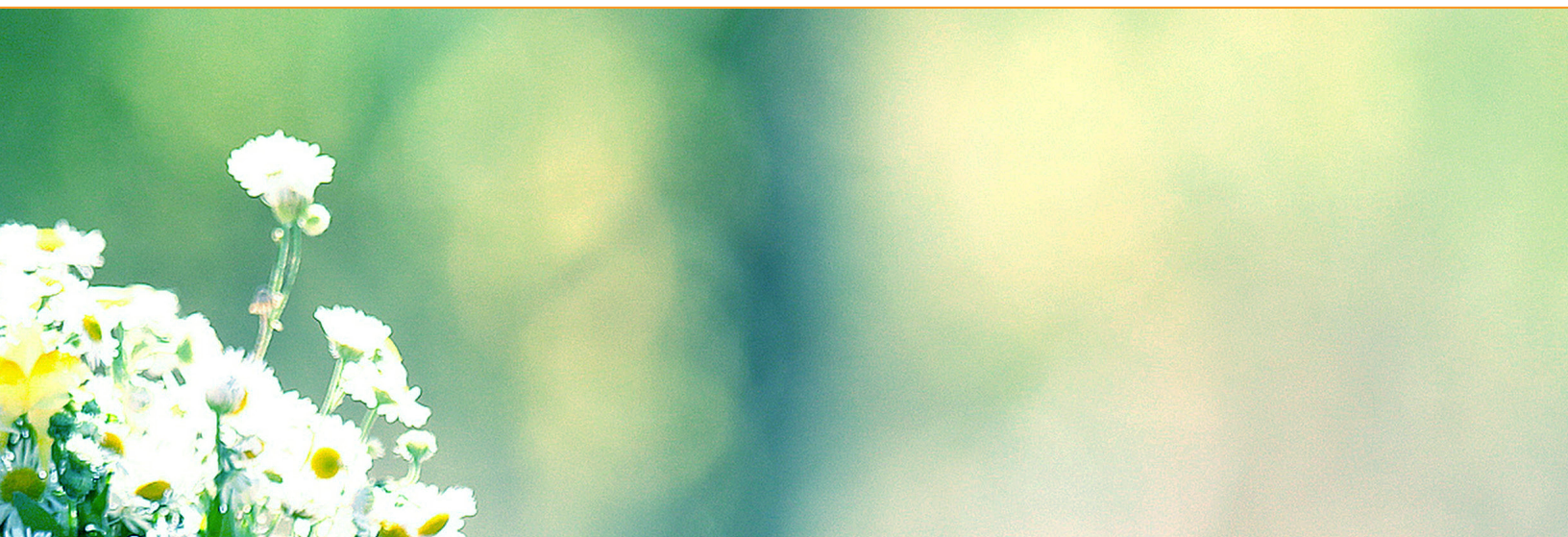
Hydration



Dissolving

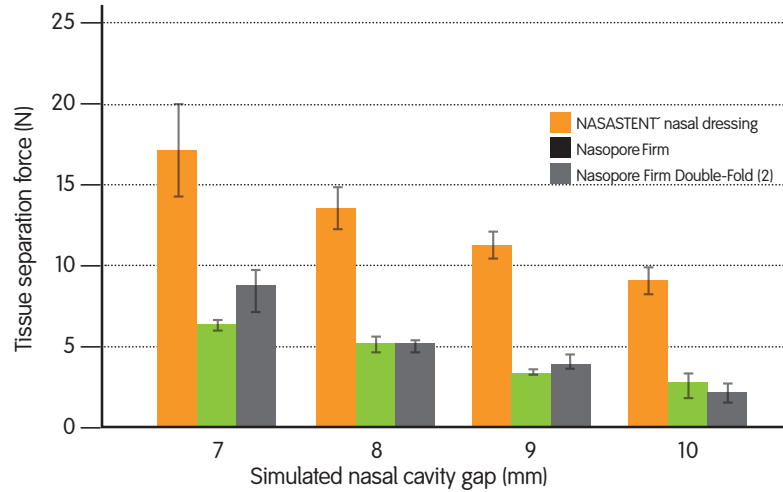


Graphic representation of NASASTENT nasal dressing hydrating and dissolving over time in the nasal cavity

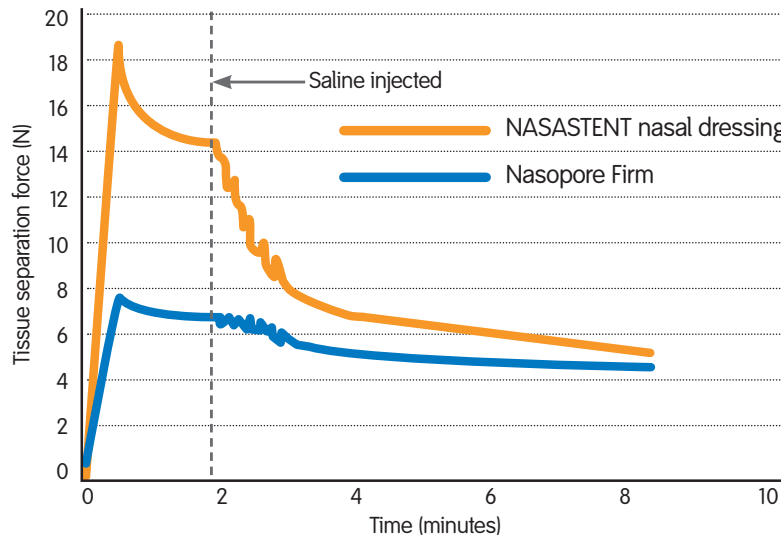


# Turbinate support load

Intranasal splints need to provide sufficient support to tissue compromised by surgery and/or trauma, such as to prevent the lateralization of the middle turbinate.<sup>1</sup>



Tissue Separation Force of NASASTENT<sup>®</sup> nasal dressing and Nasopore Firm after being placed in simulated nasal cavity gaps ranging from 7 to 10mm. NASASTENT nasal dressing provides significantly higher separation forces compared to Nasopore Firm over all nasal cavity gap sizes tested, even when Nasopore<sup>®</sup> Firm nasal dressing has been double-folded before insertion.



Graph is representative response of NASASTENT nasal dressing and Nasopore Firm after saline injection. NASASTENT nasal dressing tissue separation force can be modulated with exposure to saline. Data shown for 8mm simulated nasal cavity.<sup>1</sup>

## References

1. **Betre, Helawe and Delli-Santi, George.** Performance Comparison of Nasal Dressings: Dissolvable NASASTENT<sup>®</sup> vs. Fragmentable Nasopore Firm. Smith & Nephew. August 2014.
2. **Cooper, Monica.** CMC Considerations for 505(b)(2) Applications. FDA/CDER/OPS/ONDQA AAPS Annual Meeting Washington, D.C. October 2011. Retrieved from: <http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?fr=182.1745>
3. **Valentine R, Wormald W, Sindwani R.** Advances in Absorbable Biomaterials and Nasal Packing. Otolaryngology Clin N Am 2009; 42(5):813-828
4. **Cowin A, McIntosh D, Wormald P.** Healing of wounds created in the nasal mucosa following endoscopic sinus surgery can be affected by different nasal packing materials. 2002 August; 10(3):114-117
5. **Cassano M, Longo M, Fiocca-Matthews E, et al.** Endoscopic intraoperative control of epistaxis in nasal surgery. Department of Otorhinolaryngology, University of Foggia. 2010 August; 178-184.
6. **Marks S.** Nasal and Sinus Surgery. 2000; 1: 456-462.
7. **Kastl, KG.** Effect of Carboxymethyl Cellulose nasal packing on wound healing after functional endoscopic sinus surgery. American Journal of Rhinology & Allergy. 2009 January; 23:1
8. **Orlandi RR and Lanza DC.** Is nasal packing necessary following endoscopic sinus surgery? Laryngoscope. 2004; 114:1541-44



## Ordering Information

### NASASTENT<sup>®</sup> Dissolvable Nasal Dressing

Reference #	Description
RR 1000	NASASTENT Dissolvable Nasal Dressing

Supporting healthcare professionals for over 150 years



ArthroCare Corporation  
7000 West William Cannon Drive  
Austin, TX 78735 USA

[www.smith-nephew.com](http://www.smith-nephew.com)

Order Entry: +1 800 343 5717

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