3M | Prevena Restor™
Postoperative Recovery

# Rethink recovery in orthopedic surgery.

Gain the confidence and control to help patients achieve the best possible outcomes.

# Recognizing the risks of orthopedic surgery.

You have complete confidence in the OR. But after discharge, countless recovery challenges can impact both short- and long-term outcomes. Complications like swelling, dehiscence and infections can jeopardize patient mobilization and even lead to reoperations.

**Orthopedic surgery generally has a**

**5%** mean rate of complications.[1]

**Procedures with the highest reported complication rates:**

**24–27%**
Lower extremity fractures

**8–12%**
Revision hip and knee arthroplasty

**7–11%**
Spinal lumbar surgery

**5.4%**

**30-day readmission rate.[2]**

**How can you help ensure your hard work is protected, and your patient is on the path to recovery?**

**You need a tool that can help control recovery once your patients leave your care.**

# Rethink recovery with 3M™ Prevena Restor™ Therapy.

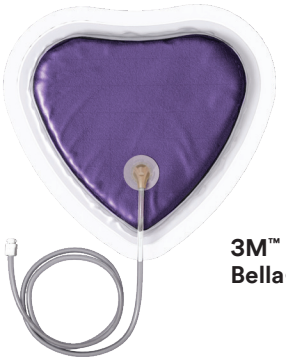
## Provide protection and reduce edema by managing the incision and surrounding soft tissue with Prevena Restor Therapy.

Provides 14 days of continuous -125 mmHg negative pressure therapy with expanded coverage for the incision and surrounding soft tissue.

Prevena Restor Therapy offers patients comprehensive protection with dressings designed for a variety of anatomical locations. Each dressing, combined with negative pressure, provides stabilization to the surgical site and creates a strong barrier to external contaminants, helping to reduce the risk of complications.[3–5]

## 3M™ Prevena Restor™ Dressings

3M™ Prevena Restor™ Arthro•Form™ Dressing



3M™ Prevena Restor™ Bella•Form™ Dressing

## Prevena Restor Therapy can be applied to a variety of anatomical locations, including:

Ankle

Knee

Hip

Elbow

Shoulder

**Now, you can extend your control after discharge, support patient compliance with rehab protocols, and set the stage for an optimized recovery.**

# Optimize care with 3M™ Prevena Restor™ Therapy.

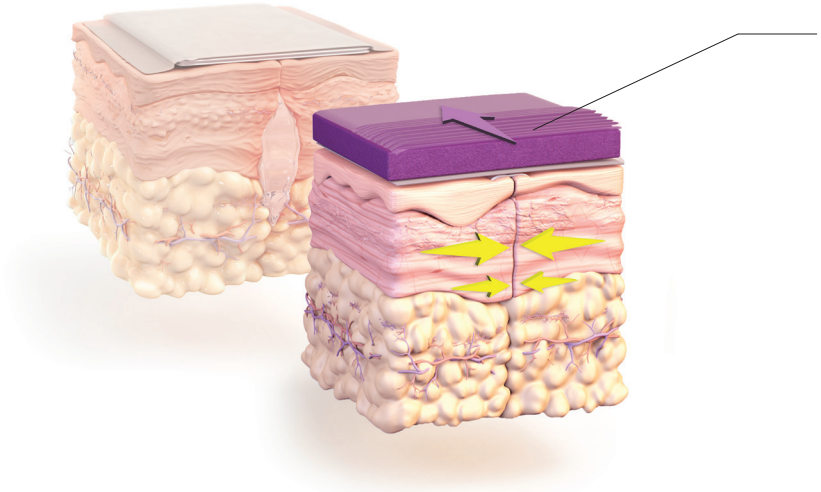
### Extended Therapy Time
Up to 14 days of therapy.

### Expanded Coverage Area*
Larger dressing delivers therapy to the incision *and* surrounding soft tissue envelope.

### Precision Design
Seamlessly conforms to the patient.

### Easy to Apply
Simply peel and place the form-fitting dressing.

## Prevena Restor Therapy is built on the proven technology of the original 3M™ Prevena™ Therapy.



**Prevena Therapy science and mechanism of action.**

- Delivers continuous negative pressure therapy (-125 mmHg) to the incision site (up to 7 days)
- Helps hold incision edges together[6]
- Removes fluid and infectious materials[7]
- Creates a barrier to external contaminants[3]
- Reduces edema[8]

**3M™ Prevena Restor™ Incision Management System indication statement.**

The 3M™ Prevena Restor™ Incision Management System is intended to manage the environment of closed surgical incisions and surrounding intact skin in patients at risk for developing post-operative complications, such as infection, by maintaining a closed environment via the application of a negative pressure wound therapy system to the incision. The 3M™ Prevena™ Dressing skin interface layer with silver reduces microbial colonization in the fabric.

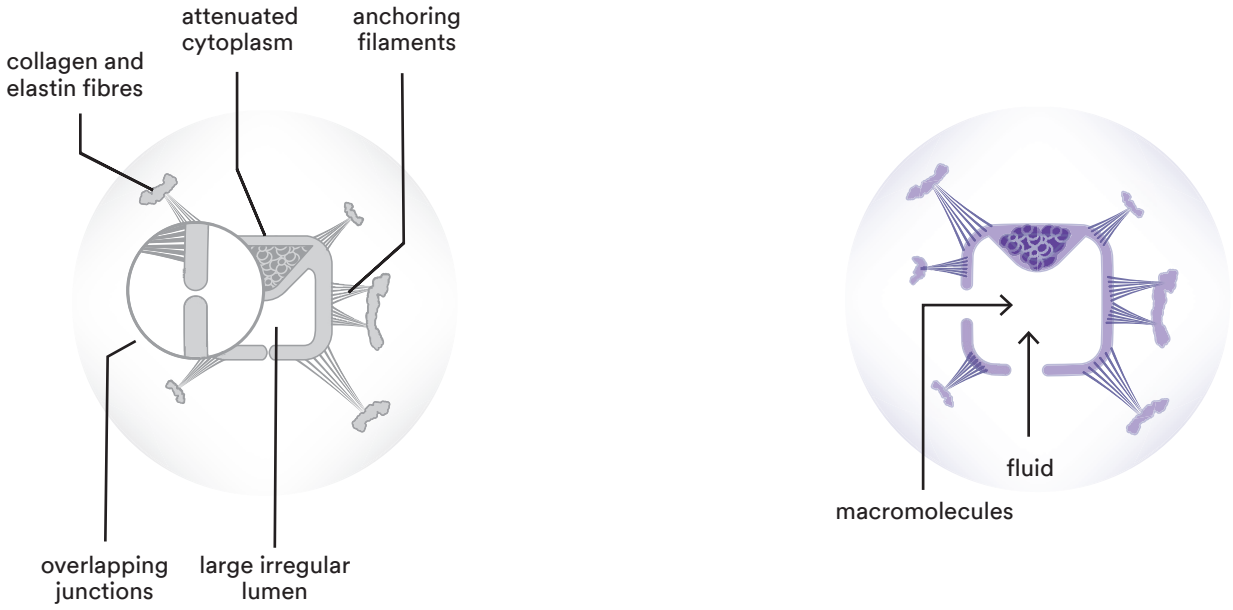
*Compared with 3M™ Prevena™ Dressings.

# How 3M™ Prevena™ Therapy reduces edema.

The effects of negative pressure applied to intact skin via Prevena Therapy were evaluated using finite element analysis (FEA).[9]

**Closed Terminal Lymphatic Pore**
(overlapping endothelial cells)[10]

**Open Terminal Lymphatic Pore**
(separated endothelial cells)[10]




**Based on the analysis, it is hypothesized that volumetric expansion may help:**[9]

1. Expand the tissue beneath the dressing, pulling the tissue open.
2. Lower local interstitial fluid pressure.
3. Open lymphatics to allow fluid clearance.

**Tissue beneath the dressing is expanded, not compressed.**

# 3M™ Prevena Restor™ Therapy: Real-world experience.

**Case Study**

## Management of Total Knee Arthroplasty Revision with 3M™ Prevena Restor™ Arthro•Form™ Incision Management System.

Yavonne, L.; Johnson, PA-C.; Evan Argintar, MD; Washington, DC

### Patient
A 72-year-old female presented to the hospital, requiring a revision following a total knee arthroplasty of the right knee. The patient's medical history included heart murmurs, tobacco use, and obesity.

### Procedure
The patient underwent a total knee arthroplasty revision, resulting in a <15-cm incision on the right knee (Figure 1). The incision was closed using staples, and the patient received clindamycin for prophylactic antibiotic control.

### Application
Immediately after incision closure, 3M™ Prevena Restor™ Therapy was initiated using a 3M™ Prevena Restor™ Arthro•Form™ Dressing, which covered the full length of the incision and the area above and below the knee (Figure 2). Negative pressure was applied at -125 mmHg.

### Discharge and Follow-up
The patient was discharged on postoperative day 5. Seven days after surgery, Prevena Restor Therapy was discontinued, and the incision remained closed (Figure 3). On postoperative day 14, the incision remained closed without any complications. The patient reported less pain and swelling and improved post-surgical range of motion in the right knee following Prevena Restor Therapy with Prevena Restor™ Arthro•Form™ Dressing use compared to the previous total knee arthroplasty procedure.

Patient data and photos courtesy of Yavonne L. Johnson, PA-C, Evan Argintar, MD; Washington, DC.

**Note:** As with any case study, the results and outcomes should not be interpreted as a guarantee or warranty of similar results. Individual results may vary, depending on the patient's circumstances and condition.

**Note:** Specific indications, contraindications, warnings, precautions and safety information exist for these products and therapies. Please consult a clinician and product Instructions For Use prior to application. This material is intended for healthcare professionals.

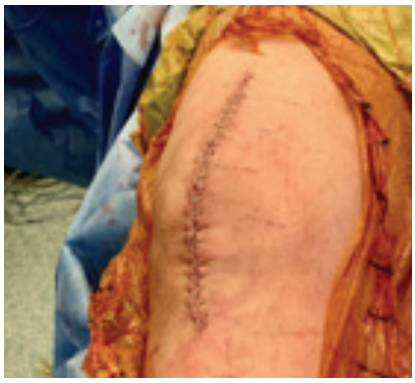


**Figure 1.** Closed surgical incision.

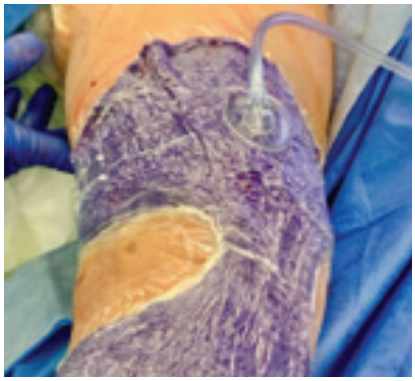


**Figure 2.** Application of Prevena Restor Therapy with Prevena Restor™ Arthro•Form™ Dressing.

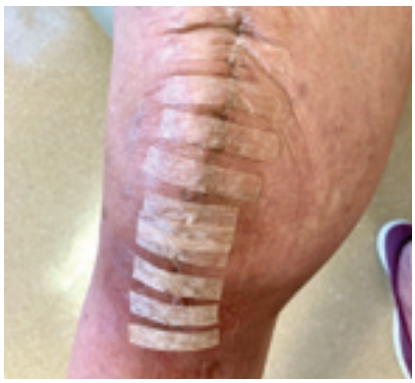


**Figure 3.** Surgical incision 7 days after Prevena Restor Therapy with Prevena Restor™ Arthro•Form™ Dressing.

Contact your local 3M representative or go to 3M.ca/PrevenaRestor for more real-world Prevena Restor Therapy case studies.

# 3M™ Prevena Restor™ Therapy — your comprehensive approach to recovery.

## Rethink recovery with Prevena Restor Therapy.

- Helps Protect the Surgical Site
- Helps Reduce Edema
- Helps Optimize the Healing Environment
- Helps Enhance the Recovery Experience

**Contact your local representative to learn more about Prevena Restor Therapy.**

| Product | Description | Unit of Measure | Pack Qty. |
|---|---|---|---|
| **PRE5001** | 3M™ Prevena Restor™ Arthro•Form™ System Kit | 33 cm x 30 cm | 1 |
| **PRE5101** | 3M™ Prevena Restor™ Arthro•Form™ System Kit | 46 cm x 30 cm | 1 |
| **PRE5055** | 3M™ Prevena Restor™ Arthro•Form™ Dressing | 33 cm x 30 cm | 5 |
| **PRE5155** | 3M™ Prevena Restor™ Arthro•Form™ Dressing | 46 cm x 30 cm | 5 |
| **PRE5221** | 3M™ Prevena Restor™ Bella•Form™ System Kit | 21 cm x 19 cm | 1 |
| **PRE5321** | 3M™ Prevena Restor™ Bella•Form™ System Kit | 24 cm x 22 cm | 1 |
| **PRE5421** | 3M™ Prevena Restor™ Bella•Form™ System Kit | 29 cm x 27 cm | 1 |
| **PRE5255** | 3M™ Prevena Restor™ Bella•Form™ Dressing | 21 cm x 19 cm | 5 |
| **PRE5355** | 3M™ Prevena Restor™ Bella•Form™ Dressing | 24 cm x 22 cm | 5 |
| **PRE5455** | 3M™ Prevena Restor™ Bella•Form™ Dressing | 29 cm x 27 cm | 5 |

**References: 1.** Molina CS, Thakore RV, Blumer A, Obremskey WT, Sethi MK. Use of the National Surgical Quality Improvement Program in orthopaedic surgery. *Clin Orthop Relat Res.* 2015 May;473(5):1574–81. doi: 10.1007/s11999-014-3597-7. PMID: 24706043; PMCID: PMC4385340. **2.** Bernatz JT, Tueting JL, Anderson PA. Thirty-day readmission rates in orthopedics: a systematic review and meta-analysis. *PLoS One.* April 17, 2015. doi:10.1371/journal.pone.0123593. **3.** Payne J. Evaluation of the resistance of the Prevena™ incision dressing top fila™ to viral penetration. San Antonio, TX: Kinetic Concepts, Inc.; June 19, 2009. Report No.: 0000021109. **4.** Suh H, Hong JP. One stage allogenic acellular dermal matrices (ADM) and split-thickness skin graft with negative pressure wound therapy. In: Gore M, ed. Skin Grafts. Intech Open, 2013. doi:10.5772/53304.15. **5.** Hall WW, Jeffords K, Hauck RM, Banducci DR, Graham WP 3rd. Negative-pressure dressings as a bolster for skin grafts. *Ann Plast Surg.* 1998 May;40(5):453–457. doi: 10.1097/00000637-199805000-00001. **6.** Wilkes RP, Kilpadi DV, Zhao Y, Kazala R, McNulty A. Closed incision management with negative pressure wound therapy (CIM): biomechanics. *Surg Innov.* 2012 Mar;19(1):67–75. doi:10.1177/1553350611414920. **7.** Kilpadi DV, Cunningham MR. Evaluation of closed incision management with negative pressure wound therapy (CIM): hematoma/seroma and involvement of the lymphatic system. *Wound Repair Regen.* 2011;19(5):588–596. doi:10.1111/j.1524-475X.2011.00714.x. **8.** Glaser DA, Farnsworth CL, Varley ES, *et al.* Negative pressure therapy for closed spine incisions: a pilot study. *Wounds.* 2012 Nov;24(11):308–316. **9.** Balakrishna H. Negative Pressure Therapy on Intact Skin: Poroelastic Finite Element Modeling of Interstitial Fluid Pressures. 25 June 2019. **10.** Skobe M, Detmar M. Structure, function, and molecular controlof the skin lymphatic system. *J Investig Dermatol Symp Proc.* 2000;5(1):14–19. doi:10.1046/j.1087-0024.2000.00001.x.

Available in Canada from your authorized 3M+KCI distributors.

KCI USA Inc., a 3M Company.
KCI owned and operated by 3M Company.
KCI Medical Canada Inc. and KCI USA Inc.

**KCI Medical Canada Inc.**
75 Courtneypark Dr W, Unit 4
Mississauga, ON
L5W 0E3

**KCI USA, Inc.**
12930 IH 10 West
San Antonio, TX
78249

The data referenced in this brochure was derived from studies using the 3M family of negative pressure technology, but not specifically 3M™ Prevena Restor™ Therapy.

**NOTE: Specific indications, limitations, contraindications, warnings, precautions, and safety information exist for these products and therapies. Please consult a clinician and product Instructions For Use prior to application. This material is intended for healthcare professionals only.**