

3M™ Cavilon™ Durable Barrier Cream

Clinical Evidence Summaries

Cavilon™



Clinical  
Evidence  
Summaries





LOT ↑

EXP ↑

NDC 17518-028-02

**3M**

# Cavityl™

## Durable Barrier Cream Fragrance Free

Dimethicone Skin Protectant

- Protects from incontinence
- Resists wash off
- Concentrated
- Allows tape to stick

REF

### 3355

Net Weight 3.25 oz. • 92 g

LOT ↑

EXP ↑

NDC 17518-028-01

**3M**

# Cavityl™

## Durable Barrier Cream Fragrance Free

Dimethicone Skin Protectant

- Protects from incontinence
- Resists wash off
- Concentrated
- Allows tape to stick

REF

### 3354

Net Weight 1 oz. • 28 g

NDC 17518-028-03

**3M**

# Cavityl™

## Durable Barrier Cream Fragrance Free

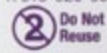
Dimethicone Skin Protectant

- Protects from incontinence
- Resists wash off
- Concentrated
- Allows tape to stick

REF

### 3353

1  2 g



Made in USA  
3M Health Care  
St. Paul, MN 55144-1000, USA  
www.3M.com/Cavityl

The background of the entire image is a solid purple color. Overlaid on this background is a pattern of numerous water droplets of various sizes. The droplets are rendered in a lighter shade of purple, creating a subtle, textured effect. The droplets are scattered across the frame, with some appearing larger and more prominent than others.

Durable.  
Comfortable.  
Unique.

It's the polymers...

# Table of Contents

3M™ Cavilon™ Durable Barrier Cream products are supported by a variety of clinical data and publications. 3M has created this document to help summarize the publications in a brief and easy-to-use format. If you have questions or need additional information, please refer to the citation referenced.

## Clinical Evidence Summaries

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A cost-effective pressure damage prevention strategy .....	5
Evaluation of a durable barrier cream in relation to pressure ulcer prevention in incontinent patients, an economic argument .....	5
Skin care trial in a low care dementia unit.....	6
A collaborative approach to improving resident outcomes .....	6
A bench study to assess the potential of various skin protectant products to interfere with brief absorption* .....	6
Comparison of the effectiveness and wash-off resistance of four dimethicone skin barrier creams* .....	7
Health care aides: first line of defense in the prevention of skin breakdown.....	7
Prevention and treatment of incontinence-associated dermatitis: literature review .....	8
Innovative strategy to prevent incontinence dermatitis.....	8
Improving resident care through use of a barrier cream with durable properties* .....	8
The benefits of implementing a new skin care protocol in nursing homes.....	9
An evaluation of two incontinence skin care protocols in a long-term care setting* .....	9
Assessment of the incontinence pad blocking potential of 3M™ Cavilon™ Durable Barrier Cream compared with Sudocrem™ and Zinc and Castor Oil .....	10
The use of 3M™ Cavilon™ Durable Barrier Cream in the treatment of incontinence dermatitis and pressure ulcers.....	10
3M™ Cavilon™ Durable Barrier Cream in skin problem management.....	11
Optimal skin care solutions: a clinical product evaluation.....	11
Comparison of the effectiveness of four dimethicone-based moisture barrier creams.....	11

\* Available as Reprints

## A cost-effective pressure damage prevention strategy

Large J, *British Journal of Nursing*, 2011 (Tissue Viability Supplement), Vol. 20, No. 6.  
Study Type: Prospective, pilot study

### OBJECTIVE OF STUDY

Develop a pressure ulcer prevention strategy which included the use of 3M™ Cavilon™ Durable Barrier Cream, Aderma™ Dermal Pads and an educational program in a 78 bed nursing home.

### KEY FINDINGS / ANALYSIS

The results of the six month pilot study indicated a zero incidence of pressure ulcers. The education program, along with the use of 3M™ Cavilon™ Durable Barrier Cream and Aderma™ Dermal Pads (used on patients with a history of ulceration, contractures resulting in pressure areas or any bony prominence at risk of pressure damage) did prevent the recurrence of pressure ulcers. It also led to a reduction in the costs associated with ongoing wound care, the quality of life experienced by the patients, and an improvement in working life for the staff.

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## Evaluation of a durable barrier cream in relation to pressure ulcer prevention in incontinent patients, an economic argument

Parnum J, Poster at Wounds UK; 2011.  
Study Type: Non-randomized, comparative study

### OBJECTIVE OF STUDY

Compare the pressure ulcer incidence and hospital costs after changing from Sudocrem™ to 3M™ Cavilon™ Durable Barrier Cream. This program also included education focusing on appropriate identification of pressure ulcers and moisture lesions.

### KEY FINDINGS / ANALYSIS

With the introduction of an education program and 3M™ Cavilon™ Durable Barrier Cream, there appears to have been a reduction in the incidence of pressure ulcer development for inpatients resulting in a substantial cost reduction in care of wounds.

## Skin care trial in a low care dementia unit

Barrett S, 3M Publication, 2011.  
Study Type: Prospective study, n=40

### OBJECTIVE OF STUDY

Compare the skin condition of residents after using 3M™ Cavilon™ Durable Barrier Cream, Kenkey® Skin Relief Sorbolene Cream with 10% Glycerin (applied daily) and Abena™ Skin Care Lotion (applied daily). There were two groups for 3M™ Cavilon™ Durable Barrier Cream. In one group, the product was applied daily and in the second group, product was applied 3 times a week (Monday, Wednesday, Friday).

### KEY FINDINGS / ANALYSIS

The results of this trial showed that 3M™ Cavilon™ Durable Barrier Cream was the superior product due to its many uses and protective properties for maintaining skin integrity in the elderly. The greatest number of improvements in total skin condition assessments compared to the other products was in the 3M™ Cavilon™ Durable Barrier Cream group with daily application. The application of 3M™ Cavilon™ Durable Barrier Cream daily provided cost savings in terms of nursing time and also patient comfort and convenience.

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## A collaborative approach to improving resident outcomes

Miras D, Poster presentation at the Symposium on Advanced Wound Care; 2010.  
Study Type: Non-randomized, comparative, n=55

### OBJECTIVE OF STUDY

Demonstrate that the use of 3M™ Cavilon™ products including 3M™ Cavilon™ Durable Barrier Cream, 3M™ Cavilon™ No Sting Barrier Film, 3M™ Cavilon™ No-Rinse Skin Cleanser resulted in a reduction of incontinence related skin breakdown, provided ease of use to staff members and patients, and was cost-effective compared to products currently being used.

### KEY FINDINGS / ANALYSIS

In this facility, the use of the 3M™ Cavilon™ products resulted in a 42% reduction in the number of patients with skin breakdown. There were no new incidences of skin breakdown after the staff began using the 3M™ Cavilon™ products.

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## A bench study to assess the potential of various skin protectant products to interfere with brief absorption

Atwood N, Smith G, Dwyer C, Poster presentation at the Clinical Symposium on Advanced Wound Care; 2010. Study Type: Laboratory study

### OBJECTIVE OF STUDY

Compare the rate of fluid intake when adult incontinence briefs are tested with and without various amounts (0.1 ml, 0.3 ml and 0.75 ml) of skin protectant products applied to the inner lining of the briefs.

### KEY FINDINGS / ANALYSIS

3M™ Cavilon™ Durable Barrier Cream had a significantly lower potential ( $p < 0.05$ ) for interfering with brief absorption function than four other skin protectants (ConvaTec Aloe Vesta® Protective Ointment, Calmoseptine® Ointment, Medline Remedy™ Calazime Skin Protectant and Smith & Nephew Secura® Protective Ointment) when 0.1 ml dose was applied to the briefs.

## Comparison of the effectiveness and wash-off resistance of four dimethicone skin barrier creams

Grove G, Houser T, Zerweck C, Poster presentation at the Clinical Symposium on Advanced Wound Care; 2010. Study Type: Clinical study, n=36

### OBJECTIVE OF STUDY

Measure and compare the moisture barrier effectiveness of four dimethicone skin protectants (3M™ Cavilon™ Durable Barrier Cream, Smith & Nephew Secura® Dimethicone Protectant Cream, Medline Remedy™ Dimethicone Skin Protectant, Healthpoint Proshield™ Plus Skin Protectant) 30 minutes after application to the skin and following each of the three simulated normal washes in adult, healthy volunteers.

### KEY FINDINGS / ANALYSIS

Cavilon Durable Barrier Cream provided significantly better moisture barrier effectiveness ( $p < 0.0001$ ) than Secura® Dimethicone Protectant Cream, Remedy™ Dimethicone Skin Protectant, and Proshield™ Plus Skin Protectant. These differences were evident immediately after application and through three simulated washes. Differences in moisture barrier effectiveness are independent of the amount of dimethicone contained in the product.

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## Health care aides: first line of defense in the prevention of skin breakdown

Desjarlais-Tefft, Beth. Poster presentation at OLTCA (Ontario Long Term Care Conference); 2010. Study Type: Non-randomized, comparative study, n=231

### OBJECTIVE OF STUDY

Compare the incidence of pressure ulcers in a long term care facility prior to and after the implementation of Cavilon™ products including 3M™ Cavilon™ No-Rinse Skin Cleanser, 3M™ Cavilon™ Durable Barrier Cream, and 3M™ Cavilon™ No Sting Barrier Film and an educational program called RISE (Reduce Skin Breakdown through Education).

### KEY FINDINGS / ANALYSIS

Prior to the use of the Cavilon™ products, there were 96 pressure ulcers reported in the long term care facility from the period of September 2007 to August 2008. After the implementation of Cavilon™ products and an educational program (RISE), the incidence of pressure ulcers decreased 57% during the period of September 2008 to August 2009. Ninety-eight percent of the health care aides felt that the products improved the quality of life of their residents. The system was easy to use as reported by 88% of the health care aides. Seventy-five percent of the aides felt that the RISE program had increased their knowledge regarding resident's skin and maintaining skin integrity.



## Prevention and treatment of incontinence-associated dermatitis: literature review

Beeckman D, Schoohoven L, Verhaeghe S, et al., *Journal of Advanced Nursing* 2009; 65(6), 1141-1154.  
Study Type: Review Article

### OBJECTIVE OF STUDY

Review the current evidence about the prevention and treatment of incontinence-associated dermatitis and to formulate recommendations for clinical practice and research.

### KEY FINDINGS / ANALYSIS

Thirty-six publications with 25 different studies were included in the review. Data suggests: 1) implementation of a structured perineal skin care program including skin cleansing and use of a moisturizer; 2) application of a skin protectant is for patients considered at risk of incontinence-associated dermatitis development; and 3) use of a perineal skin cleanser is preferable to using water and soap. Two references (Bale (2004) and Lewis-Byers (2002)) report use of 3M™ Cavilon™ Durable Barrier Cream for prevention of incontinence-associated dermatitis.

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## Innovative strategy to prevent incontinence dermatitis

Hune S, Jyu A, Johansen K, et al., Poster presentation at the World Union of Wound Healing Societies Toronto; June 2008.  
Study Type: Prospective, non-randomized study, n=20

### OBJECTIVE OF STUDY

Develop an innovative, evidenced-based skin care protocol and system to prevent skin breakdown caused by incontinence dermatitis.

### KEY FINDINGS / ANALYSIS

Application of a three-option system included 3M™ Cavilon™ No-Rinse Skin Cleanser, 3M™ Cavilon™ Durable Barrier Film and 3M™ Cavilon™ No Sting Barrier Film helped to maintain skin integrity in this elderly population. The barriers did not interfere with the absorbency of the patient briefs resulting in patients staying drier and possibly resulting in less development of incontinence dermatitis.

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## Improving resident care through use of a barrier cream with durable properties

Frocillo CA, 3M Publication; 2004.  
Study Type: Observational, n=70

### OBJECTIVE OF STUDY

Determine if the use of a protective barrier product (3M™ Cavilon™ Durable Barrier Cream) with durable qualities requiring only two applications per day would improve peri-anal skin integrity and result in a reduction of urinary tract infections by allowing staff more time to deliver fluids to residents.

### KEY FINDINGS / ANALYSIS

In this facility, by incorporating an educational effort and developing a standardized plan of care for residents with incontinence-related skin concerns, a noticeable improvement of peri-anal skin condition resulted including a reduction in the number of urinary tract infections.



## The benefits of implementing a new skin care protocol in nursing homes

Bale S, Tebble N, Jones V, Price P, *Journal of Tissue Viability* 2004; 14(2):44-50.  
Study Type: Non-randomized, comparative study, n=164

### OBJECTIVE OF STUDY

Evaluate the effect of a new skin care protocol on patient's skin condition, staff time and associated costs in a nursing home. The new skin care protocol consisted of a gentle no-rinse cleanser (3M™ Cavilon™ No-Rinse Skin Cleanser) in combination with a dimethicone-based barrier cream (3M™ Cavilon™ Durable Barrier Cream) on patients with intact skin/mild incontinence-associated dermatitis (IAD) and an alcohol-free barrier film (3M™ Cavilon™ No Sting Barrier Film) on patients with moderate or severe IAD.

### KEY FINDINGS / ANALYSIS

After introduction of the new skin care protocol, skin condition was maintained or improved, resulting in a significantly lower incidence of incontinence dermatitis ( $p = 0.021$ ). There was also a significant reduction in time to deliver the skin care post-intervention ( $p < 0.001$ ). Staff adherence to the new skin care protocol was good.

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## An evaluation of two incontinence skin care protocols in a long-term care setting

Lewis-Byers K, Thayer D, Kahl A, *Ostomy/Wound Management* 2002; 48(12):44-51.  
Study Type: Prospective, descriptive study, n=32

### OBJECTIVE OF STUDY

Compare the effect of two skin care protocols on skin condition, pain and caregiver time.

### KEY FINDINGS / ANALYSIS

Patients were randomly assigned to a standard care regimen (soap and water cleansing followed by an application of a moisturizing lotion after each incontinence episode) or the study care protocol (3M™ Cavilon™ No-Rinse Skin Cleanser after each episode and an application of a barrier cream with durable properties, 3M™ Cavilon™ Durable Barrier Cream, after the first incontinence episode of the shift). Skin integrity was maintained in the majority of control (69%) and study group (72%). Improvement was noted in 8% of the control and 17% of the study group. Study protocol procedures took less time to complete than control procedures saving 79 minutes/patient/day. Results of this study suggest that the use of soap, water and a moisturizer may be less effective and more time-consuming than using 3M™ Cavilon™ No Rinse Skin Cleanser and 3M™ Cavilon™ Durable Barrier Cream.

## Assessment of the incontinence pad blocking potential of 3M™ Cavilon™ Durable Barrier Cream compared with Sudocrem™ and Zinc and Castor Oil

Hart J, *Nursing Scotland* 2002, Issue July/August.  
Study Type: Clinical study, n=14

### OBJECTIVE OF STUDY

Demonstrate that 3M™ Cavilon™ Durable Barrier Cream does not interfere with the absorbent capacity of a commonly used incontinence pad (Tena Comfort Extra™) and compare to Sudocrem™ and Zinc & Castor Oil Cream on adult, healthy volunteers.

### KEY FINDINGS / ANALYSIS

3M™ Cavilon™ Durable Barrier Cream did not interfere with the absorbent capacity of the incontinence pads. Significantly less 3M™ Cavilon™ Durable Barrier Cream (37%) transferred from the subject's skin to the incontinence pad compared to Sudocrem™ (63%) and Zinc & Castor Oil Cream (63%) ( $p < 0.001$ ). In addition, the incontinence pads absorbed 96% of synthetic urine in the 3M™ Cavilon™ Durable Barrier Cream group compared to 66% in Sudocrem™ group ( $p = 0.002$ ) and 67% for Zinc and Castor Oil Cream group ( $p = 0.004$ ).

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## The use of 3M™ Cavilon™ Durable Barrier Cream in the treatment of incontinence dermatitis and pressure ulcers

Pritchard B, 3M Publication; 2001.  
Study Type: Case Study n=1

### OBJECTIVE OF STUDY

Present the results of using 3M™ Cavilon™ Durable Barrier Cream on a patient with incontinence dermatitis with pressure ulcers.

### KEY FINDINGS / ANALYSIS

This case study demonstrates the value of using 3M™ Cavilon™ Durable Barrier Cream to successfully treat incontinence dermatitis in combination with pressure ulcers. 3M™ Cavilon™ Durable Barrier Cream was applied between 2 and 4 times every 24 hours and within two weeks, there was significant improvement and the excoriation had begun to heal. Within four weeks, the rash and excoriation had completely disappeared on her sacrum and thighs, leaving the skin smoother and softer in appearance. The pressure ulcers on her inner thigh had also healed. In this patient, 3M™ Cavilon™ Durable Barrier Cream provided a long lasting barrier against urine and feces while actively replenishing the skin.

## 3M™ Cavilon™ Durable Barrier Cream in skin problem management

Williams C, *British Journal of Nursing* 2001, 10(7):469-472.  
Study Type: Expert opinion

### OBJECTIVE OF STUDY

Discuss the benefits of 3M™ Cavilon™ Durable Barrier Cream.

### KEY FINDINGS / ANALYSIS

3M™ Cavilon™ Durable Barrier Cream has been shown to be useful in the management of dry skin and in the protection of “at risk” skin from incontinence. The cream contains dimethicone for protection, acrylate terpolymer for durability and tape adhesion, and additional ingredients for moisturizing and skin conditioning/replenishing.

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## Optimal skin care solutions: a clinical product evaluation

Campbell KE, Woodbury MG, Bray J, et al., Poster; 2000.  
Study Type: Prospective, non-comparative, n=47

### OBJECTIVE OF STUDY

Determine the reason for use of 3M™ Cavilon™ Durable Barrier Cream (either moisturizer or barrier), the number of days until improvement in skin was noted, the presence of skin irritation upon dressing removal and the ease of application.

### KEY FINDINGS / ANALYSIS

3M™ Cavilon™ Durable Barrier Cream was found to be an effective moisturizer and barrier cream. Forty-seven subjects with a mean age of 83 years participated in the evaluation. Fifty percent of the subjects used 3M™ Cavilon™ Durable Barrier Cream as both a skin moisturizer and a barrier where another 36% used it as only a skin moisturizer. The skin's appearance improved within five days for 85% of the subjects. Ninety-eight percent of the clinicians reported this product to be easy to use. There was no skin irritation upon removal of tapes/dressings in 100% of the subjects.

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## Comparison of the effectiveness of four dimethicone-based moisture barrier creams

Lutz JB, 3M Publication; 1999.  
Study Type: Clinical study, n=18

### OBJECTIVE OF STUDY

Measure and compare wash-off resistance of four dimethicone based moisture barriers (3M™ Cavilon™ Durable Barrier Cream, DeRoyal™ TheraSkin™ Protectant Cream, Hollister™ Restore™ Barrier Cream, and Healthpoint Proshield® Plus Skin Protectant) 30 minutes after application and after three wash cycles in adult, healthy volunteers.

### KEY FINDINGS / ANALYSIS

Results indicate that 3M™ Cavilon™ Durable Barrier Cream provided superior moisture barrier protection compared to DeRoyal™ TheraSkin™ Protectant Cream, Hollister™ Restore™ Barrier Cream, and Healthpoint Proshield® Plus Skin Protectant initially after application and through the first simulated wash.

# Trust in Proven Protection

You can count on 3M™ Cavilon™ Durable Barrier Cream to help prevent breakdown and promote skin health in patients at risk for skin damage.

For more information, visit

[www.3M.com/Cavilon](http://www.3M.com/Cavilon)

## Convenient. Comforting. Trusted.

To learn how the full line of Cavilon Professional Skin Care products can help simplify and improve your skin care program, visit [www.3M.com/Cavilon](http://www.3M.com/Cavilon), contact your 3M Skin & Wound Care Representative or call the 3M Helpline at 1-800-228-3957. Outside of the United States, contact the local 3M subsidiary.



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