

# MULTIDEX<sup>®</sup>

maltodextrin wound dressing case study summary



**GEL**



moist - dry  
wound

**POWDER**



wet wound



Improving Care. Improving Business.®

# maltodextrin wound dressing



wet - moist - dry  
wound



**In a side-by-side clinical comparison, a more significant decrease in wound size was achieved in wounds treated with Multidex® wound dressings versus using wet-to-dry dressings.\*\***

**Healing is observed in difficult-to-heal wounds following the application of Multidex® wound dressings.**

Chronic or non-healing wounds are some of the most difficult and expensive to treat, and may never heal. However, Multidex® dressing has been successfully treating hard-to-heal wounds for over 25 years. Beginning with Dr. Silveti's<sup>1</sup> ground breaking research in the early 1980s, **a more significant decrease in wound size was achieved in wounds treated with Multidex® wound dressings versus using wet-to-dry dressings.\*\*** – Multidex® dressing time and time again has worked when other products and techniques have failed or stalled. Multidex® dressing addresses 4 major concerns when working with non-healing wounds:

*As first explored in a study by Bonham and Schaffer; published in the Journal of WOCN<sup>5</sup>, after trying two different unsuccessful treatment regimens over 13 months, on non-responsive peristomal wounds, the wound condition significantly improved with Multidex® dressing as the primary dressing allowing final resolution. Recalcitrant wounds are difficult to heal, this case supports the use of Multidex® dressing as a primary dressing in wounds that do not improve with other dressings. Others have also reported success in treating difficult to heal wounds with Multidex® dressing.<sup>6-15</sup>*

1. Facilitates autolytic debridement,
2. Multidex® dressing softens dry, necrotic tissue helping to reduce pain associated with mechanical debridement,
3. Has a low pH, and studies show a low pH is conducive to wound healing and bioburden reduction<sup>2-4</sup>, and Multidex® dressing
4. Creates an ideal environment for the body to heal itself.

week 0



week 2



week 24



\*\*Data on file

## Maltodextrin/ascorbic dressing stimulates wound closure by increasing collagen turnover<sup>10</sup>

In a study similar to that of Krotzsch et al. 2005, a team investigated the physiochemical properties in the wound environment that led to wound healing when Multidex® dressing was used as the treatment and compared with a control group. Experiments found that collagen turnover was increased due to correlated increases in TGF-β1, MMP-1, gelatinase activity, while TIMP-1 decreased.<sup>10</sup> These biomarker changes are correlated with normal wound healing. “[They] observed that venous leg ulcers treated with maltodextrin/ascorbic acid diminished microorganism population and improved wound repair during a 12 week period. When maltodextrin/ascorbic acid treatment was compared with zinc oxide, almost four fold wound closure was evidenced.”<sup>9,10</sup> The study concluded that **Multidex® powder used as primary dressing helps to establish an optimal moist wound environment conducive to wound healing.**

## Multidex® & Algidex® dressing used to heal tracheostomy ulcers in pediatric patients<sup>11,12</sup>

Wounds related to tracheostomies are common, in particular with children due to their shorter necks, increased movement and the routine use of firm and inflexible methods to secure the tube. These factors often lead to areas of pressure and friction that can frequently result in open wounds.<sup>(8,9)</sup> After seeking options for treatment, and learning very little existed in the way of research in this area, the clinicians went to work to find alternative treatment methods. Using a combination of Multidex® dressing and the DeRoyal® Algidex® foam tracheostomy dressing, researchers’ treated 11 patients for tracheostomy related wounds; **all achieving complete healing and no adverse effects were noted.** In addition to the rate of successful treatment, the length of treatment was also remarkable with the average being less than 2 weeks for complete healing (12.8 days - range 6 to 28 days). While more research is being conducted, the authors concluded that the described treatment protocol is safe and effective for treating friction and pressure injuries associated with pediatric tracheostomies.

**Patient 1:** ES Stomal and Infrastomal wound.  
Before and After 28 days of treatment.



Hartzell, 2011

**Patient 2:** MG Infrastomal Wound.  
Before and After 10 Days of treatment



## Saving limbs indicated for a limb amputation in low income areas using Multidex® wound dressings<sup>14</sup>

This study describes a cost effective limb preservation protocol for diabetic foot patients indicated for limb amputation in a low income developing country as performed by Dr. Puerta. The protocol uses Multidex® maltodextrin/ascorbic acid dressings and gauze...**that's all!** Study author proclaimed that “Multidex® dressing is the key component” to the successful healing of his patients. Multidex® dressing established an ideal moist environment that promotes the body's natural wound healing process. It also aided in autolytic debridement of dry wounds when used in its gel form. Results were truly astounding with twelve of thirteen wounds achieving **complete healing during the study without skin grafting**; the remaining patients achieved 70% healing before skin grafting.

**week 0**



Wound Area: 41.84 cm<sup>2</sup>  
Granulation: 48.8%

**week 1**



Wound Area: 40.02 cm<sup>2</sup>  
Granulation: 73.9%

**week 9**



Wound Area: 19.16 cm<sup>2</sup>  
Granulation: 98.1%

**week 21**



Wound Area: 0.29 cm<sup>2</sup>  
Granulation: 100%

# MULTIDEX®

## maltodextrin wound dressing case study

### Evaluation of a maltodextrin/ascorbic acid dressing\* for treating chronic and acute wounds of various etiology<sup>15</sup>

An evaluation of Multidex® dressing was performed in 73 wounds of various etiologies at a leading wound center in the Netherlands. The patient population was advanced age (75% > 70 years of age) and most patients (90%) had co-morbidities (endocrine/metabolic disorders, vascular disorders, and/or heart disease) documented to impair wound healing. Despite the challenges of the patient population, results from the evaluation demonstrated **an overall significant reduction in wound area and PUSH score, and rapid development of granulation tissue was observed.** Further, the study noted that excellent autolytic debridement was observed with Multidex® dressings supporting its use in the debridement process to remove all types of necrotic tissue.

### OVERVIEW

- A clinical evaluation of Multidex® dressing was performed at the Huub Brull's Expertise Centre in Wound Care between 11/2015 – 3/31/2016.
- 72 patients with 73 wounds of different etiologies were included in the evaluation.
- Wound etiologies included pressure ulcers, traumatic/surgical wounds, diabetic foot ulcers, leg ulcers of venous, arterial, or mixed origin, wound dehiscence, radiation, or other unspecified etiology.

### RESULTS

- 53 of 73 (71.6%) wounds decreased in area or PUSH score at final observation.
- The median wound area decreased from 2 cm<sup>2</sup> (0.1–28.1 cm<sup>2</sup>) to 0.5 cm<sup>2</sup> (0–22.4 cm<sup>2</sup>; p=.004).
- The median PUSH score decreased from 9 (4-15) to 6 (0-15; p=5.5E-6).
- Causes of non-progression: death, non-compliance, pain, and co-morbidities that complicated wound healing.

### DISCUSSION

- Patient population was of advanced age (75% > 70 years of age).
- Most patients had co-morbidities well documented to impair wound healing.
- Due to acuity of patient population, non-responsive wounds were expected.
- Study dressing also aided in cleaning and debridement process (through autolytic debridement) decreasing time to establish a healthy wound bed.

### CONCLUSION

- Improvements in wound area, PUSH score, and rapid development of granulation tissue support the use of the study dressing in the management of difficult to treat acute and chronic wounds.
- Excellent autolytic debridement observed with study dressing supporting use in the debridement process to remove all types of necrotic tissue.

#### case 1

Pat 70 yrs old with PU after heart surgery



week 0



week 1



week 4



week 8

#### case 2

Pat 85 yrs old with necrotic tissue after unsuccessful SSG



week 0



week 1



week 4



week 8

#### case 3

Pat 83 yrs old with Diabetes Mellitus and PU after hip surgery



week 0



week 1



week 4



week 8



moist - dry  
wound

## MULTIDEX® GEL

maltodextrin gel  
wound dressing



wet wound

## MULTIDEX® POWDER

maltodextrin powder  
wound dressing

### indications:

- Venous stasis ulcers
- Dermal ulcers
- Partial and full thickness wounds
- Arterial ulcers
- Abdominal wounds
- Infected wounds
- Superficial wounds
- Pressure ulcers
- Dermal injuries
- Second degree burns
- Donor sites
- Diabetic ulcers

Product #	Size	Qty/Bx	Qty/Cs	HCPC
46-711	¼ fl. oz.	10	30	A6248
46-710	½ fl. oz.	10	30	A6248
46-712	3 fl. oz.	6	36	A6248

Product #	Size	Qty/Bx	Qty/Cs
46-704	6 gram	10	60
46-703	12 gram	5	30
46-702	25 gram	5	30
46-701	45 gram	6	36

## directions for use

### preparation of site

1. Necrotic tissue should be debrided according to acceptable practice or as directed by an attending physician.
2. The site should be irrigated liberally with a sterile physiological 0.9% normal saline or a balanced salts solution.

### application of multidex powder or gel

1. After irrigation, apply Multidex® dressing.
  - a. For shallow wound – ¼" thick over entire wound site
  - b. For deep wound – fill wound site to surface taking care to fill all undermined areas
2. Cover with a non-adherent, non-occlusive dressing such as Covaderm Plus®, MultiPad™, Sofisorb®, or Polyderm™ Plus non-adherent dressings. If necessary, tape in place or use roll gauze or Stretch Net™ elastic bandage to secure dressing.
3. Dressing change should be once a day on minimally to moderately draining wounds and twice a day on heavily exuding wounds.

### removal of multidex

1. Remove non-adherent dressing with care. If dressing adheres to wound, soak with saline for several minutes before removing so the fragile granulation tissue is not disturbed.
2. Flush site liberally but gently with a sterile, physiological irrigating solution to remove debris. This will leave newly formed granulation tissue undisturbed.
3. Usual frequency of dressing change is once a day, depending upon drainage and the type of secondary dressing.



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