

# PolyMem<sup>®</sup>

## CASE STUDY

### Athlete Attributes Decreased Inflammation and Stunning Healing to PolyMem Dressings



Severe road rash after removal of conventional dressings. PolyMem dressings initiated.



7 days of PolyMem use



PolyMem dressings helped relieve the pain and inflammation for this cyclist, who competed and won a race 7 days after severe road rash.

## CASE STUDY

# Athlete Attributes Decreased Inflammation and Stunning Healing to PolyMem Dressings

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### PROBLEM

A 31-year-old amateur track cyclist was favored to win the 1000m and Sprint events at the National Track Cycling Championships of Switzerland on June 27 – July 4, 2006. Ten minutes after winning the 1000m, during the Scratch race, the cyclist collided with another participant, somersaulted, and skidded across the concrete velodrome.

The cyclist was treated at the venue by paramedics; his open wounds were cleansed and dressed. He fulfilled media obligations, and then left the competition, unable to continue due to the pain.

### RATIONALE

Since the cyclist had less than a week to recover before the National Sprint competition, he needed more rapid healing of the abrasions, ecchymosis and edema than he expected from experience with dressings used for previous injuries. Using conventional modern wound care, the cyclist anticipated limited range of motion and severe pain, which would inhibit training. The athlete was willing to try a completely different dressing (PolyMem) to hasten his return to training and competition.

PolyMem dressings possess several key integral components which enhance wound healing. These components work together to concentrate healing substances from the body into the wound bed to promote rapid healing, hydrate the wound bed when needed, and help decrease pain and ecchymosis. Glycerol in the dressing prevents sticking and protects the periwound from maceration. Starch co-polymers give the dressings superior absorption, and a thin semi-permeable film backing optimizes moisture and protects the wound.



#### DAY 1

Athlete removed conventional dressings and began treatment with PolyMem dressings.



#### DAY 1

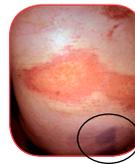
PolyMem Dressing Application

(Circled area failed to be covered on day 1.)



#### DAY 2

Wound healing after only one day.



(Circles indicate areas not initially covered with PolyMem dressings.)

The built-in mild, nonionic, nontoxic, tissue friendly cleansing agent facilitates autolytic debridement directly by loosening the bonds between the slough and the wound bed. PolyMem dressings insulate the wound bed, helping to maintain a steady warm temperature, further facilitating brisk healing.

PolyMem dressings inhibit the nociceptor response at the wound site, decreasing pain, edema and inflammation-related ecchymosis. The dressing acts locally, but may also affect the nociceptor response centrally. Dressings should be changed whenever they become saturated with sweat or wound fluid.

## METHODOLOGY

Two hours after the fall, the cyclist arrived home and removed the conventional modern dressings the paramedics had applied. The cyclist had severe road rash and localized swelling, especially in the shoulder girdle area, from the impact with the concrete. He and a friend replaced all of the conventional modern dressings with PolyMem dressings, which he requested from a friend. The wound care was easy; the cyclist and his friend changed his PolyMem dressings daily after training. Per dressing instructions, no additional wound cleansing was done at dressing changes.

## RESULTS

The athlete reported: "To my great surprise, the initial swelling went down right away and there were no blue marks. I kept nearly all of my mobility. The next morning I could go to work... and was able to train at night. Where PolyMem dressings had been applied, I felt almost no discomfort. Only my right shoulder (without PolyMem dressings) hurt. Even the dressing changes I usually dreaded were simple and pain-free."

When the cyclist applied the dressings that first night, he left out a less deeply wounded spot on the small of his back and an area of intact skin on his left buttock (see circled areas of photos on the opposite page). The areas covered with PolyMem dressings did not develop edema or ecchymosis, but where the dressings were not applied, the edema and ecchymosis were significant.

On day six, the cyclist competed in the semi-final qualification round for the Sprint championship with no complications. On day seven, the cyclist competed and won the Sprint National Championship of Switzerland. The fans, media, and competitors never anticipated such a rapid recovery from this amateur cyclist. When reporters asked the cyclist how he was able to recover so quickly, he replied, "I got back in shape so quickly only thanks to good care and a wound dressing that had been used successfully by the US athletes at Athens 2004... The dressing prevented swelling and bruising without the use of medications."

## CONCLUSION

The injured cyclist benefitted from the drug-free PolyMem formulation in many ways. PolyMem provided him with a significant reduction in pain, edema and ecchymosis. The rapid wound healing the athlete experienced was another huge benefit.



### DAY 6

On day six, the cyclist competed in the semi-final qualification round for the Sprint championship with no complications.



### DAY 7

On day seven, the cyclist won the Swiss Sprint championship.



### DAY 20

## OBJECTIVES

1. Explore evidence for the use of PolyMem dressings to decrease pain inflammation and bruising, even on intact skin.
2. Consider the many advantages associated with PolyMem dressings' ability to continuously cleanse the wound bed.
3. Appreciate the many attributes of PolyMem dressings that served to promote full mobility and quick healing in this extremely independent patient.



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**BIBLIOGRAPHY:**

1. Beitz AJ, Newman A, Kahn AR, Ruggles T, Eikmeier L. A polymeric membrane dressing with antinociceptive properties: analysis with a rodent model of stab wound secondary hyperalgesia. *J Pain*. 2004 Feb;5(1):38-47.

2. Foresman PA, Etheridge CA, Rodeheaver G. A wound dressing evaluation of partial-thickness rat wounds. *SAWC Health Management Pub*. 1991; Annual Meeting Power Point Presentation.

3. Clay CS, Chen, WYJ. Wound pain: the need for a more understanding approach. *Journal of Wound Care*. 2005;14:4,181-184.

4. Fleck, CA. Managing wound pain: today and in the future. *Advances in Skin and Wound Care* 2007;20:3,138-145.

5. Kim Y, Lee S, Hong S, Lee H, Kim E. The effects of polymem on the wound healing. *J Korean Soc Plast Reconstr Surg* 1999;109:1165-1172.

6. Togo T, Alderton JM, Bi GQ and Steinhardt RA. The mechanism of facilitated cell membrane resealing. *Journal of Cell Science* 1999;112(5)719-731.

7. Kahn AR. A Superficial Cutaneous Dressing Inhibits Pain, Inflammation and Swelling In Deep Tissues. Presented at the World Pain Conference, July 15-21, 2000. *Pain Medicine* 2000 June;1(2):187.

ORIGINAL POSTER PRESENTED AT\*: National Athletic Trainers Association (NATA). June 28-30, 2007. Anaheim, CA USA.

\* This version has been modified from the original; it reflects PolyMem branding.

PolyMem, PolyMem Silver, PolyMem Wic, Wic, PolyMem Wic Silver, PolyMem Wic Silver Rope, PolyMem Max, Max, PolyMem Max Silver, Shapes, Shapes by PolyMem, The Shape of Healing, The Pink Dressing, SportsWrap, SportsWrapST, More Healing • Less Pain, interlocking circles design, PolyMem For Sports, Not too Loose...Not too Tight...Just Right!, Ferris and FMC Ferris and design are marks owned by or licensed to Ferris. The marks may be registered or pending in the US Patent and Trademark Office and in other countries. Other marks are the property of their respective owners.

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