



# Juven<sup>®</sup>: Rebuild. Recover. Heal.

## Case Study: Non-healing Surgical Incision

Mrs. M, a 78 year-old woman, underwent an extended right hemicolectomy for treatment of colorectal cancer. Recovery was complicated by development of 2 fistulas; the fistula tract was removed via a 2-incision laparotomy procedure, in which an end ileostomy was also created. Although a moderate-sized abdominal rooftop incision (7 x 2 x 2cm) seemed to close normally, an abdominal midline incision (12 x 4.5 x 4cm) developed a sloughy base and moderate exudates (Figure 1). This incision site was covered with a hydrofiber dressing containing ionic silver to control microbicidal activity (Aquacel AG), and dressing changes were made every-other-day.



**Figure 1**  
Five days after surgery for colorectal cancer, an abdominal midline incision (12 x 4.5 x 4cm) showed a sloughy base with moderate exudates.



**Figure 2**  
Three weeks later, the wound edges were somewhat contracted (10 x 3 x 2cm), but excessive exudates and bleeding indicated that the wound was not healing normally.

Three days later, staff nurses called the wound-team nurse for a case review because of accumulating fluid exudates. The wound nurse recommended a switch to a dressing with a higher absorbance capacity and a higher concentration of silver (Seasorb Ag) and advised continuation of every-other-day dressing changes.

After 3 weeks, the staff nurses again became concerned that the wound was not healing normally; they called for yet another review. While the edges of the incision wound appeared to be contracting, the wound was still sloughy, the wound bed was not filling with granulation tissue, and there was evidence of bleeding (Figure 2). The nurse in charge noted excessive, foul-smelling exudate, so she recommended use of an alginate gel dressing to help manage this fluid (Algisite Ag).

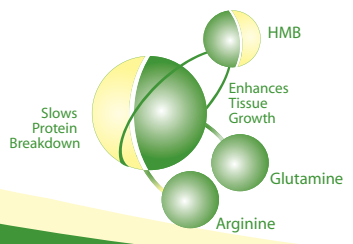
On March 16, 2009, about one month after the original procedure, the surgeon offered a new treatment strategy. He advised the nursing staff to start the patient on twice-daily servings of Juven nutritional therapy to help enhance wound healing.

After just 2 weeks on Juven, the wound edges had contracted markedly, granulation was improved, and exudates lessened (Figure 3). The incision was significantly reduced in size (7 x 7 x 2cm). The staff nurses and the wound nurse were amazed by the remarkable change in the course of healing.



**Figure 3**  
After just 2 weeks on Juven, the wound edges had contracted, exudates lessened, and the incision size was considerably reduced (7 x 7 x 2cm).

Mrs. M was relieved that she was approved for discharge from the hospital, and her family was happy to have her back at home. She continued to consume Juven twice-daily at home; after 3 weeks, her wound was completely healed.



Use under medical supervision and as part of a complete, balanced diet



# Only Juven is formulated with three ingredients that work together to deliver wound healing power:

## HMB\* The Protein Protector

- Enhances protein production and protects protein from breakdown,<sup>1,2</sup> thus helping to build lean body mass to promote healing<sup>3</sup>
- Helps combat the loss of protein caused by inflammatory response<sup>1,2</sup>
- Helps cells maintain strength and structure,<sup>4</sup> which is important for proper healing<sup>3</sup>

β-hydroxy-β-methylbutyrate)

## ARGININE The Wound-Repair Warrior

- Regulates wound healing and supports tissue repair through collagen synthesis and deposition<sup>5</sup>
- As a precursor of nitric oxide, increases blood flow and oxygenation through vasodilation<sup>6</sup>
- Stimulates secretion of the hormones that can have a positive impact on wound healing<sup>7</sup>

## GLUTAMINE The Collagen Crusader

- Helps stimulate collagen and protein synthesis<sup>8,9</sup>
- Helps maintain body protein and donates nitrogen during times of metabolic stress<sup>10</sup>
- Serves as an energy source for the cells of the immune system and GI tract, which helps prevent, and assist in recovery from, infections<sup>11</sup>

### Availability



Or order online at [www.juven.com](http://www.juven.com) or call **1-877-465-8836**

	Flavor	List #	Case	List #	Carton
0.85-oz (24-g) packets					
30 packets/carton	Orange	57935		58012	
6 cartons/case	Grape	57936		58011	
180 packets/case	Unflavored	54000		56094	



**References** 1. Smith HJ, et al: *Cancer Res* 2005;65(1):277-283. 2. Smith HJ, et al: *Cancer Res* 2004;64:8731-8735. 3. Wolfe RR: *Am J Clin Nutr* 2006;84(3):475-482. 4. Nissen SL, et al: *J Nutr Biochem* 1997;8:300-311. 5. Schaffer MR, et al: *J Surg Res* 1996;63:237-240. 6. Schaffer MR, et al: *J Surg Res* 1997;71:25-31. 7. Barbul A, et al: *Surgery* 1990;108:331-337. 8. Bellon G, et al: *Biochem Biophys Acta* 1995;1268:311-323. 9. Karna E, et al: *Comp Biochem Physiol B Biochem Mol Biol* 2001;130:23-32. 10. Hammarqvist F, et al: *Ann Surg* 1989;209:455-461. 11. Smith RJ: *JPEN* 1990;14(S4):40S-44S.

\*Juven (Orange) is the recipient of the ChefsBest® Certified Award. The ChefsBest Certified Award is awarded to brands highly rated overall by independent professional chefs.

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