## Treatment of chronic, non-healing wounds with a collagen dipeptide and amino acid oral nutrition intervention: A case series

## ABSTRACT

**Objective:** The objective of this case series was to observe the impact on closing chronic non-healing wounds using an oral nutrition supplement containing collagen dipeptides and L-Citrulline.

**Method:** Expedite<sup>™</sup> is a ready-to-drink, 2-ounce (60mL) wound healing medical food. The product is a blend of high concentration collagen dipeptides (Prolyl-Hydroxyproline (PO) and Hydroxyprolyl Glycine (OG)) as well as the amino acid, L-Citrulline. Simplistically, the product functions by enhancing collagen syn-thesis and driving nitric oxide production to support the healing process and improve healing time. In an observational trial, Expedite was given to patients with chronic non-healing wounds twice a day for up to 12 weeks. All patients were treated at the Center for Vascular Intervention located in Atlanta, Georgia starting in June 2021. The criterion for use of Expedite was lack of progress toward wound healing despite standard treatments and adjuvant therapies. Patients were placed in one of three wound type categories: venous/lymph, post op/trauma, and diabetic/arterial for analysis.

**Results:** We assessed 13 patients aged between 33 to 87 years old. Four patients had arterial/diabetic ulcers, five had ulcers related to lower extremity (LE) edema (venous insufficiency and/or lymphedema), and four had post traumatic or post-surgical wounds. All patients experienced progressive improvement in wound area and volume during treatment with Expedite despite experiencing stalled wound healing with prior standard of care treatment. All patients tolerated the treatment

regimen with good compliance. Three patients had wound closure at week #3; one closed at week #4; one closed at week #5; three closed at week #7; one closed at week #8; one closed at week #11 and three are still in the data collection process.

Table 1.1, 1.2 and Figure 1 Displays the percentage change in volume. We observed

the fastest healing during the first two weeks, where much of the wound was healed. This is important to note as these wounds were otherwise stalled and not responding to other therapeutic interventions. Unsurprisingly for larger wounds, the healing took longer. There was also seen little systematic difference between the three different types of wounds, even though the venous/lymph took the longest to heal.



DM / Arterial



Venous / Lymph



Post Op / Trauma

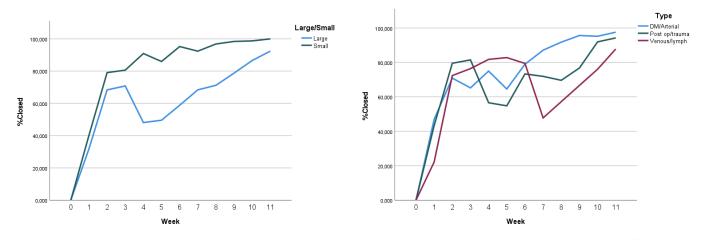
	WEEK											
	0	1	2	3	4	5	6	7	8	9	10	11
DM/Arterial	0.00%	47.03%	70.91%	65.24%	75.00%	64.60%	78.96%	87.14%	91.80%	95.67%	95.22%	97.59%
Post op/trauma	0.00%	43.31%	79.55%	81.50%	56.61%	54.81%	73.34%	71.94%	69.64%	76.79%	91.96%	94.26%
Venous/lymph	0.00%	22.16%	72.40%	76.42%	81.80%	82.84%	79.46%	47.81%	57.23%	66.66%	76.07%	87.81%
Average	0.00%	36.32	74.14%	75.71%	71.89%	67.77%	77.04%	73.19%	77.62%	83.70%	89.62%	94.32%

## Table 1.1 Change in Wound Volume by Wound Type

## Table 1.2 Change in Wound Volume by Wound Size

	WEEK											
	0	1	2	3	4	5	6	7	8	9	10	11
Large	0.00%	31.82%	68.38%	70.81%	48.12%	49.57%	58.84%	68.39%	71.22%	78.79%	86.58%	92.42%
Small	0.00%	40.18%	79.08%	80.61%	90.90%	85.96%	95.24%	92.38%	96.83%	98.41%	98.73%	100.00%

Figure 1. Percentage of Wound Closure by Size and Type



**Conclusion:** This case series highlights the effective use of Expedite<sup>™</sup> in recalcitrant soft-tissue wounds. The use of the product demonstrated a positive impact on wound healing in both early-stage wounds as well as those that had delayed healing and had otherwise not responded to standard modalities. Expedite is an easy-to-use product that contains ingredients shown to improve healing times and enhance the recovery process.



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