

Treatment of wounds of varying etiologies with a collagen dipeptide and amino acid oral nutrition intervention: a case series

AUTHORS:

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ABSTRACT

Objective: The objective of this case series was to observe the effect of a therapeutic nutrition intervention containing collagen dipeptides and the amino acid L-citrulline on wound healing in a variety of wound types in the outpatient setting.

Method: Patients were selected and treated at an outpatient clinic in Phoenix, Arizona between November 2021 and May 2022. Patients were placed in one of the following 4 categories based on wound type: vascular, trauma, diabetic, and pressure injury. Wounds were monitored on a weekly basis with the addition of Expedite™ being the only change to treatment plan and the only therapeutic nutrition intervention administered to each patient. Expedite is a ready-to-drink, 2-fluid-ounce (60mL) medical food to support wound healing. The product is a blend of a high concentration of two collagen dipeptides—Prolyl-Hydroxyproline (PO) and Hydroxyprolyl Glycine (OG) plus the amino acid, L-citrulline. The product functions by stimulating fibroblast activity to enhance collagen synthesis. It also drives arginine production to produce nitric oxide to support the newly built tissue. In this observational case study, patients with various wound types consumed one 2-fluid-ounce bottle of Expedite for up to 10 weeks. This was the only nutritional change to their treatment plan. All patients were able to successfully adhere to the intervention with full compliance of the daily 2-fluid-ounce portion during the observation period.

Results: Eleven patients between 45 to 97 years old were assessed. In total, 19 wounds were monitored as follows: 3 pressure injuries, 7 diabetic ulcers, 4 vascular wounds, and 5 surgical/ trauma wounds. Four of the eleven patients had multiple wounds. All patients experienced continuous improvement in wound area and volume during treatment with Expedite. All patients tolerated the treatment regimen with good compliance. Five patients had wound closure at week #3; 3 closed at week #5; 3 closed at week #6; 1 closed at week #7; 5 closed at week #8; and 1 closed at week #9. We observed that wound healing improved greatly during the first 4 weeks of nutrition intervention with Expedite. Predictably, for larger wounds, healing took longer, specifically in the pressure injury group. It was noted that 2 of the 3 patients with pressure injuries required debridement for adequate healing. This necessary procedure altered the data slightly as wounds may appear larger post-debridement.

Table 1 and 2 display the change in wound volume by type and size. Figures 1 and 2 display wound closure by type and size. We observed the fastest healing during the first three to four weeks, where much of the wound was healed.



Diabetic Ulcer



Pressure Injury



Trauma



Vascular Ulcer

Table 1 - Change in Wound Volume by Wound Type

		0	1	2	3	4	5	6	7	8	9
Volume	Diabetic Ulcer	11.893	7.864	7.783	4.866	4.473	2.420	2.618	2.337	1.088	0.000
	Pressure Injury	21.005	14.103	10.809	5.607	3.420	3.470	3.842	1.770	0.448	0.000
	Trauma	0.673	0.483	0.399	0.216	0.176	0.200	0.093	0.000	0.000	0.000
	Vascular Ulcer	0.272	0.174	0.139	0.307	0.058	0.045	0.148	0.063	0.001	0.000

Table 2 - Change in Wound Volume by Wound Size

		0	1	2	3	4	5	6	7	8	9
Volume	Small	0.215	0.133	0.160	0.110	0.013	0.008	0.043	0.011	0.000	0.000
	Big	19.565	11.642	10.319	5.916	4.973	3.482	3.538	2.183	0.896	0.000

Figure 1 - Percent Wound Closure by Type

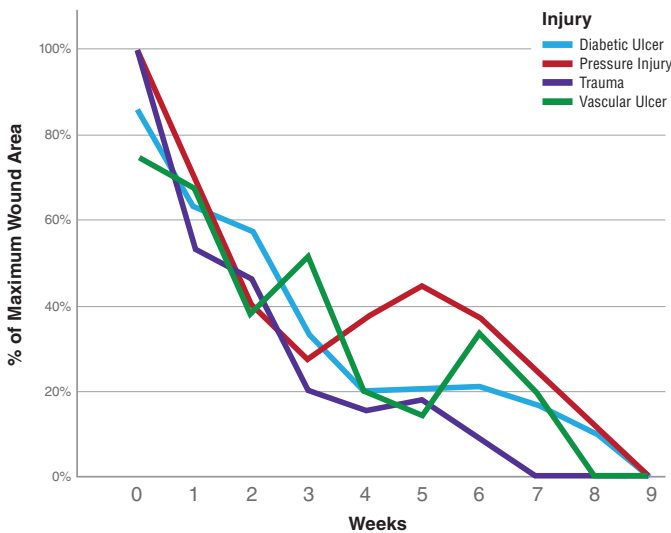
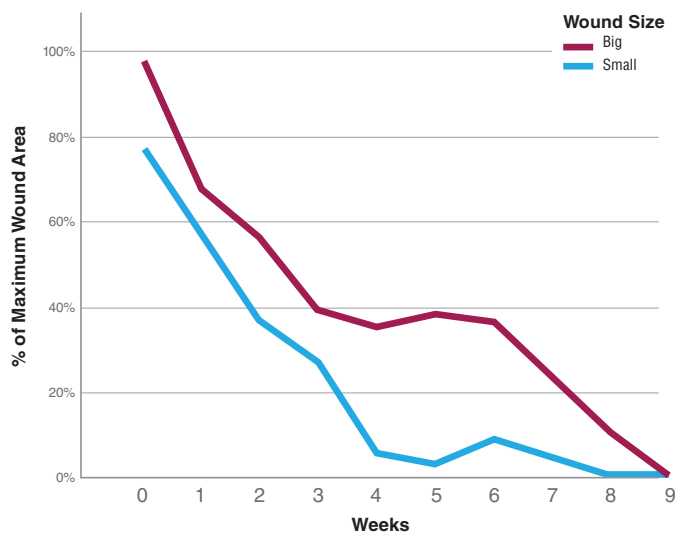


Figure 2 - Percent Wound Closure by Size



Conclusion: This case series demonstrated the effectiveness of Expedite to support wound healing in wounds of varying etiologies. Expedite is an easy-to-use product that contains ingredients shown to improve healing times and enhance the recovery process.

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