

Background

Chronic wounds pose a significant clinical challenge, often exacerbated by malnutrition and systemic inflammation. While standard wound care addresses local pathology, emerging evidence underscores the importance of treating the “whole patient” — including nutritional status. The latest TIMERS framework for Wound Bed Preparation advocates this holistic approach, emphasizing nutrition as a modifiable co-factor in healing outcomes.

Prior pilot studies presented that Epigran Protein, a fortified supplement containing arginine, glutamine, branched-chain amino acids, and edible bird’s nest (EBN) plus micro nutrients, could improve biochemical markers and wound outcomes.

Objective

To evaluate the efficacy of Epigran Protein in improving wound healing outcomes among patients with chronic wounds.

Methods

• Patients:

50 chronic wound cases aged 18–80 years, open wound persisting for over one month (>4 weeks) Inclusion criteria required oral intake capability and compliance with weekly follow-ups.

• Intervention:

Standard wound care protocol with addition of Epigran Protein (20g sachet), taken twice daily for 30 days.

• Monitoring:

Wound size progression weekly and patients’ biochemical parameters (Albumin, C-reactive protein (CRP), erythrocyte sedimentation rate ESR) were recorded bi-weekly.

Number of patients with improved bio-marker after supplementation

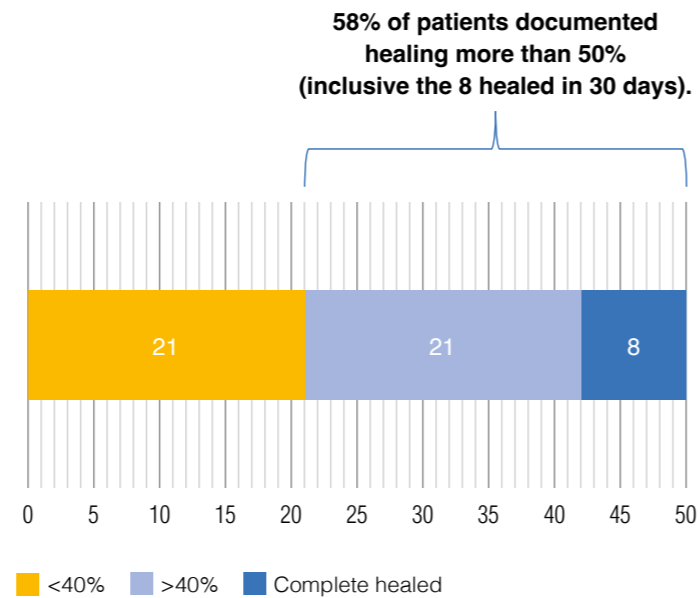
- Three key biomarkers — Albumin, C-Reactive Protein (CRP), and Erythrocyte Sedimentation Rate (ESR) — were tracked pre- and post-intervention with 50 patients. Number of patients with **below-normal** biomarkers were recorded & comparison done at the end of the trial period.

| Bio Markers | Number of patients recruited - below normal (baseline) | Number of patients show Improvement after 30 days | % of patients show improvement | Number of patients Reverted to Normal bio marker level | % |
|---------------|--|---|--------------------------------|--|-----|
| Albumin (<35) | 26 | 20 | 77% | 16 | 62% |
| CRP (>4) | 37 | 30 | 81% | 6 | 16% |
| ESR (>20) | 40 | 31 | 76% | 7 | 18% |

Results

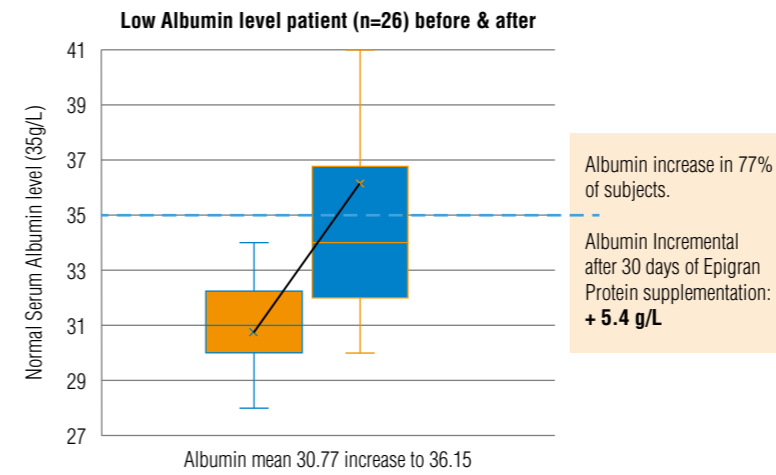
Wound Size Reduction

| Wound Type | Total Cases (n=50) | ≥50% Reduction in 30 days trial | Total Wound Closure |
|--|--------------------|---------------------------------|---------------------|
| Diabetic Foot Ulcer (DFU) | 20 | 10 | 4 |
| Venous Leg Ulcer (VLU) | 14 | 5 | 3 |
| Necrotizing Fasciitis | 5 | 2 | 0 |
| Others (Trauma, Abscess, Vasculitis, etc.) | 11 | 4 | 1 |
| Total | 50 | 21 (42%) | 8 (16%) |



Overall result register 21 patient with >50% size reduction and another 8 patients with full wound closure.

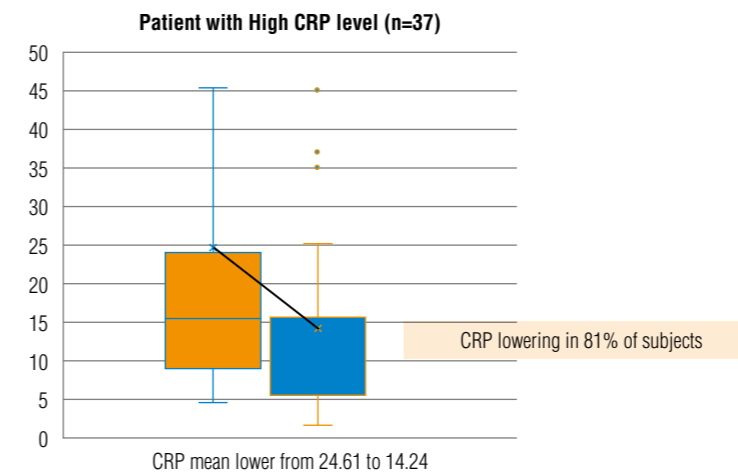
This shows **total 58%** (n=29) patients chronic wound experienced a positive wound healing rate towards the end of the trial.



Patients with below-normal albumin level (n=26)

20 out of 26 patients (77%) in the below-normal albumin level group of patients (<35g/L) register upward improvement after 30 days of supplementation.

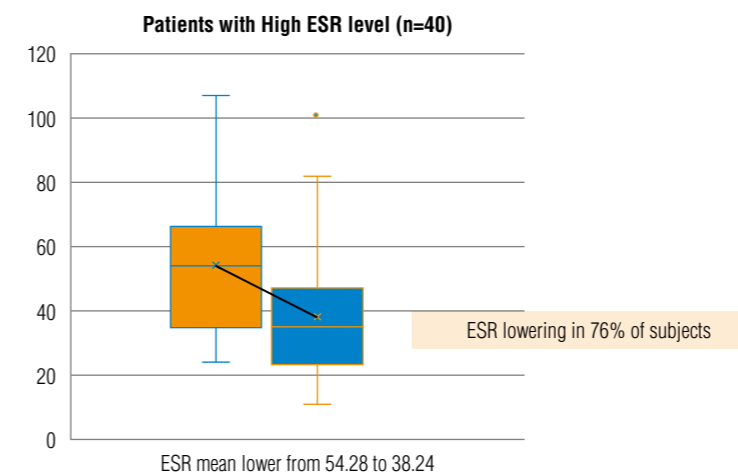
62% of these patients manage to reverse their albumin level to normal. Mean incremental upward trend achieved +5.4g/L indicating a positive correlation towards wound healing.



Patients with high CRP level (n=37)

30 of 37 patients (81%) with high CRP level (quantum) show a reduction after 30 days of supplementation.

16% of these patients manage to show lower CRP level at normal range.



Patients with high ESR level (n=40)

31 out of 40 patients (76%) with high ESR level register a lower level after 30 days of supplementation.

18% of these patients revert their ESR level to normal range.

These notable reductions in inflammatory markers (CRP, ESR) and improvement in Albumin level correlated with wound size improvement. It enhances the hypothesis that the nutrient-dense formula — enriched with Arginine, Glutamine, BCAAs, and Edible Bird’s Nest extract — could alter cellular repair and tissue regeneration and provide aid in chronic wound cases.

Conclusion

The link between biomarker normalization and wound size reduction highlights Epigran Protein as a valuable nutritional adjunct in wound care. By reducing inflammation and correcting protein deficiency, it supports faster healing and better chronic wound management protocol.

In this 50-patient trial, Epigran Protein added to standard care led to improve albumin levels, reduce inflammatory markers, and enhanced tissue repair. The results align with prior pilot studies and suggest broader clinical potential of adding nutrition to speed up wound healing process.

Wound progression:



Start
3.5 x 3 X 0.5cm

Week 4
Healed



Start
16 x 6 X 0.5cm

Week 4
12 x 3.8 x 0cm



Start
13 x 10cm

Week 4
10.5 x 8cm



Start
18 x 8 X 1cm

Week 4
6 x 3.5 x 0.5cm



Start
10cm x 5cm

Week 4
6.8cm x 3.8cm



Start
13 x 13cm

Week 4
10 x 7.5cm

Epigran Protein

Epigran Protein's blend of arginine, glutamine, BCAAs, and Edible Bird's Nest (EBN) targets inflammation, collagen production, and cell regeneration. It significantly boosted albumin levels — a key marker of nutritional status and healing capacity.

Arginine

Enhances nitric oxide synthesis, improving blood flow and collagen deposition.

Glutamine

Protects against inflammatory injury and supports immune function.

Branch Chain Amino Acids, Leucine, Isoleucine, Valine

Repair of muscle / tissue by preserving the structural integrity of muscle cell, stimulate protein synthesis, prevent protein catabolism help in wound healing

Edible Birds Nest

Rich in sialic acid and EGF-like peptides, promoting cellular regeneration and reducing MMP-1 activity.



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