

Dipeptiven®

Intravenous Glutamine Dipeptide



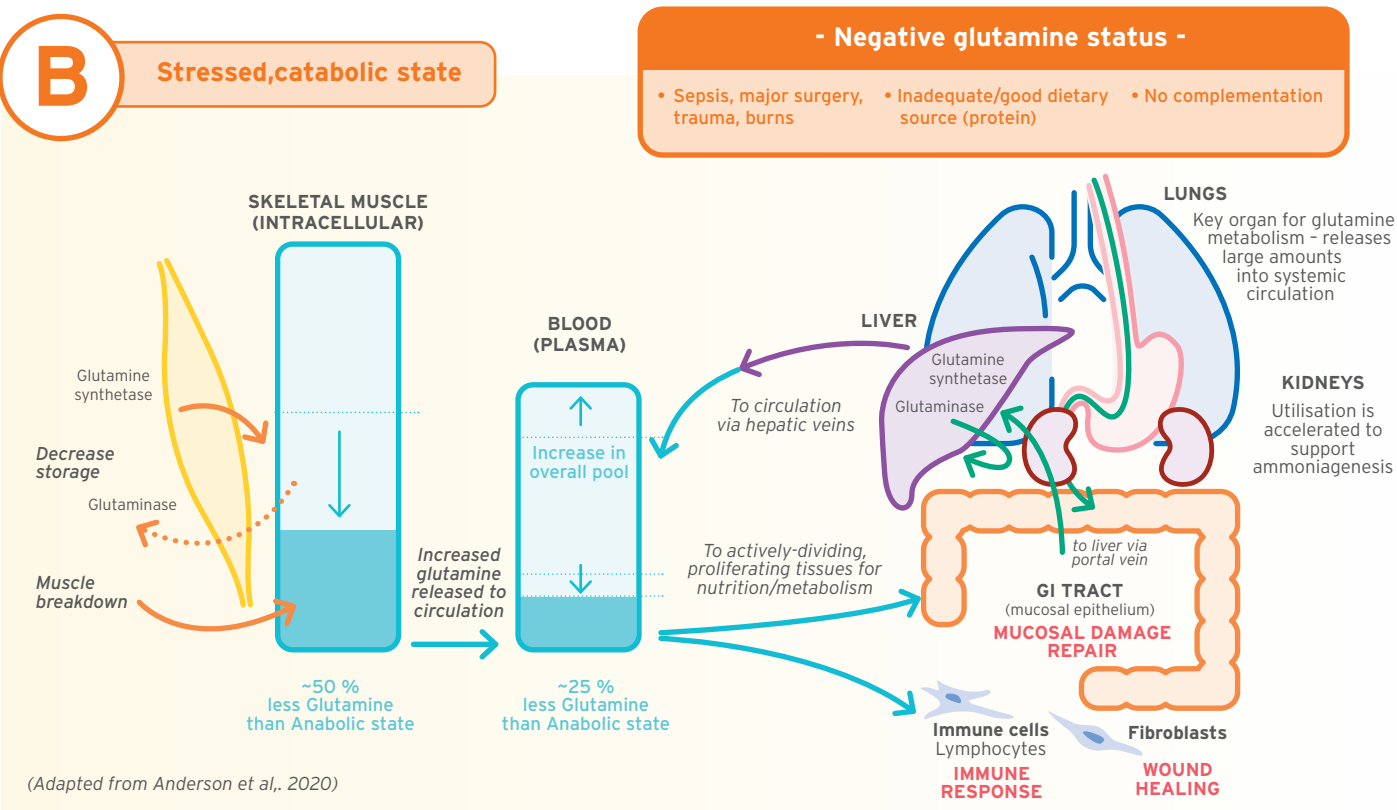
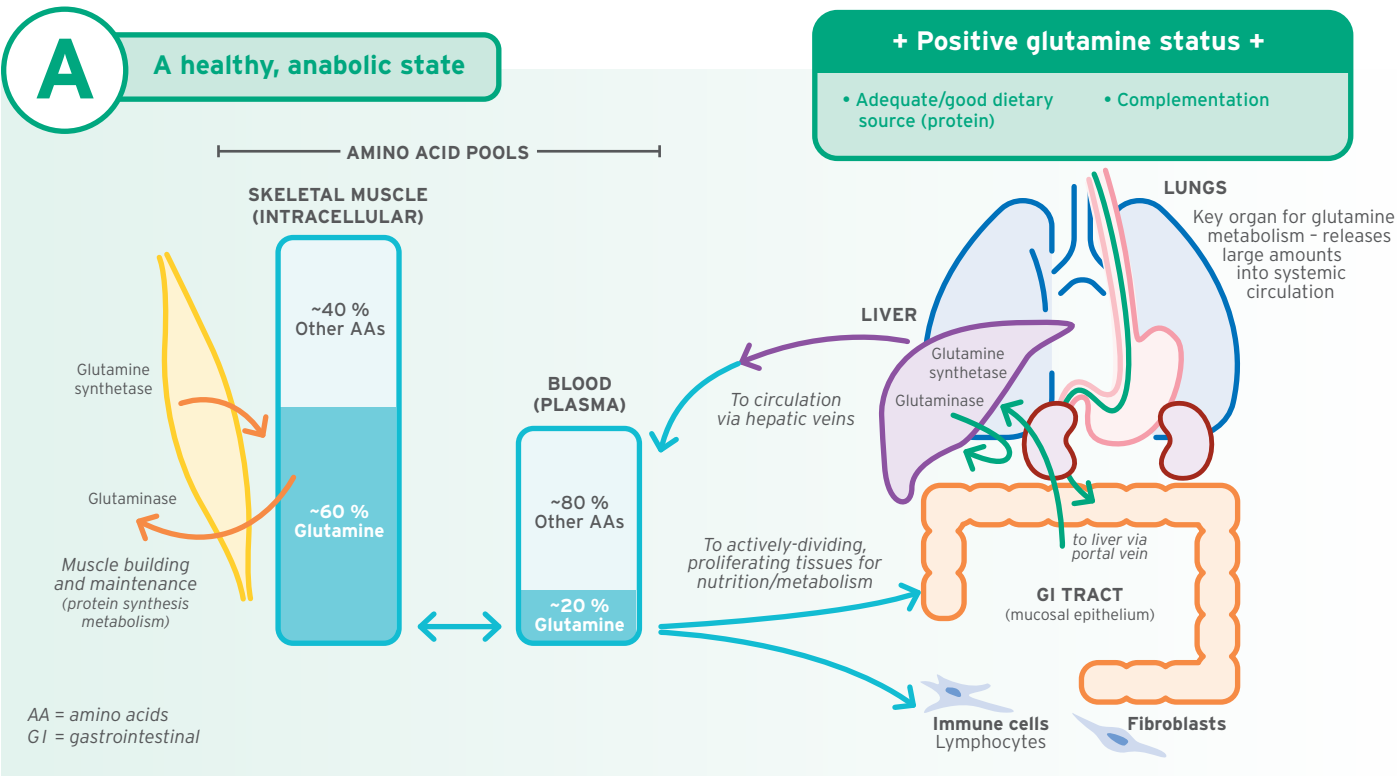
Glutamine as a Conditionally Essential Amino Acid

Glutamine is a versatile amino acid and it is the the most abundant in the human body.¹

While nutritionally classified as a non-essential amino acid because it can be synthesised endogenously, glutamine is considered '**conditionally essential**' during periods of high metabolic stress, such as sepsis, major surgery, burns, or trauma.¹

The Role of Glutamine & Consequences of Depletion

Image A reflects the **metabolism of glutamine in a healthy, anabolic state**, and Image B reflects the **metabolism of glutamine in a stressed, catabolic state**.²⁻⁵



The Role of Glutamine



(Adapted from Wischmeyer, 2003)

THE RIGHT PATIENT

Glutamine Aberration & Clinical Outcome

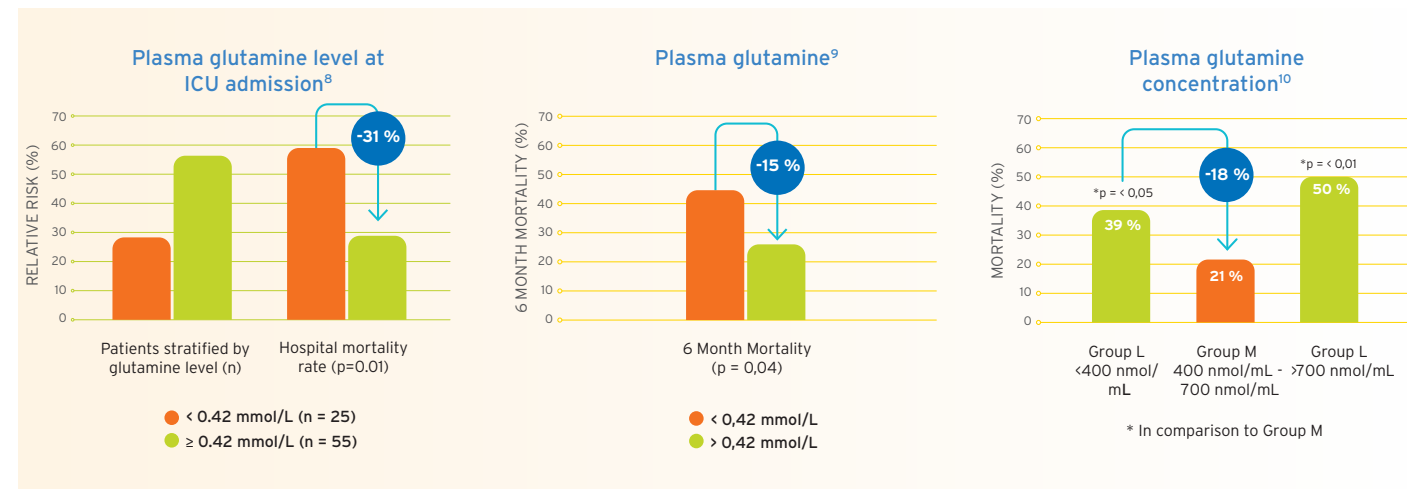
Plasma Glutamine Levels in ICU

Glutamine Deficiency



Nearly two-thirds of all critically ill medical and surgical subjects admitted to ICU have low plasma glutamine levels on admission to ICU (Observed in three South African ICU's).⁷

Patients with plasma glutamine levels above 0,42 mmol/L have a better chance of survival compared with patients with low plasma glutamine concentrations.⁸⁻¹⁰

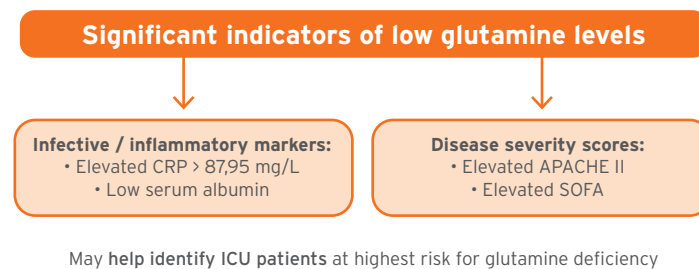


Type of patients that may experience a Glutamine Deficiency



Indicators of Glutamine Deficiency

Circulating plasma glutamine levels are not routinely measured in most hospitals. Proxy indicators of abnormal glutamine levels can assist with the clinical decision on when to provide or withhold glutamine supplementation.⁷



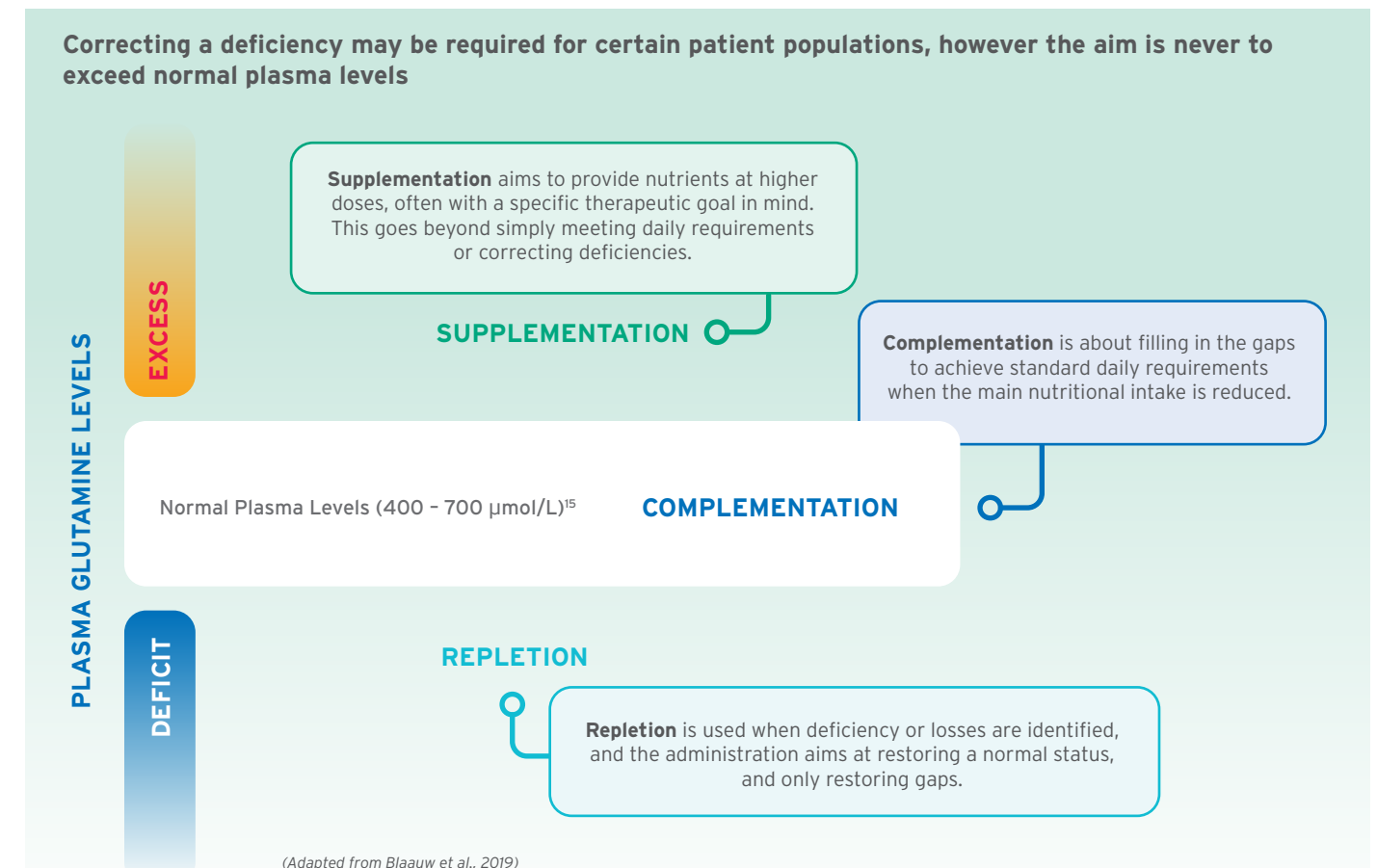
Elevated Glutamine Levels

- 14 % of patients admitted to ICU had elevated plasma glutamine levels (>0,7 mmol/L).⁷
- Elevated plasma levels are associated with increased mortality and are highest in liver failure patients.⁷

THE RIGHT DOSE

Terminology

Wischmeyer (2019) advocates for distinguishing between '**complementation**' and '**supplementation**', recommending the term '**GLN-Complemented**' TPN to clarify that glutamine is added to complete the amino acid profile at physiological levels rather than as a pharmaconutrient at supra-nutritional doses, as was done in high-dose trials.¹⁵



Dipeptiven

Targeted Glutamine Support in Parenteral Nutrition

When glutamine requirements increase, Dipeptiven elevates standard parenteral nutrition by providing a stable source of glutamine.

Administered at 0,3 - 0,5 g N(2)-L-alanyl-L-glutamine/kg body weight/day, Dipeptiven supports metabolic needs and is associated with improved clinical outcomes.

Each 100 mL of Dipeptiven provides:
20 g alanyl-glutamine dipeptide
Equivalent to 13,46 g glutamine.



THE RIGHT RESULT

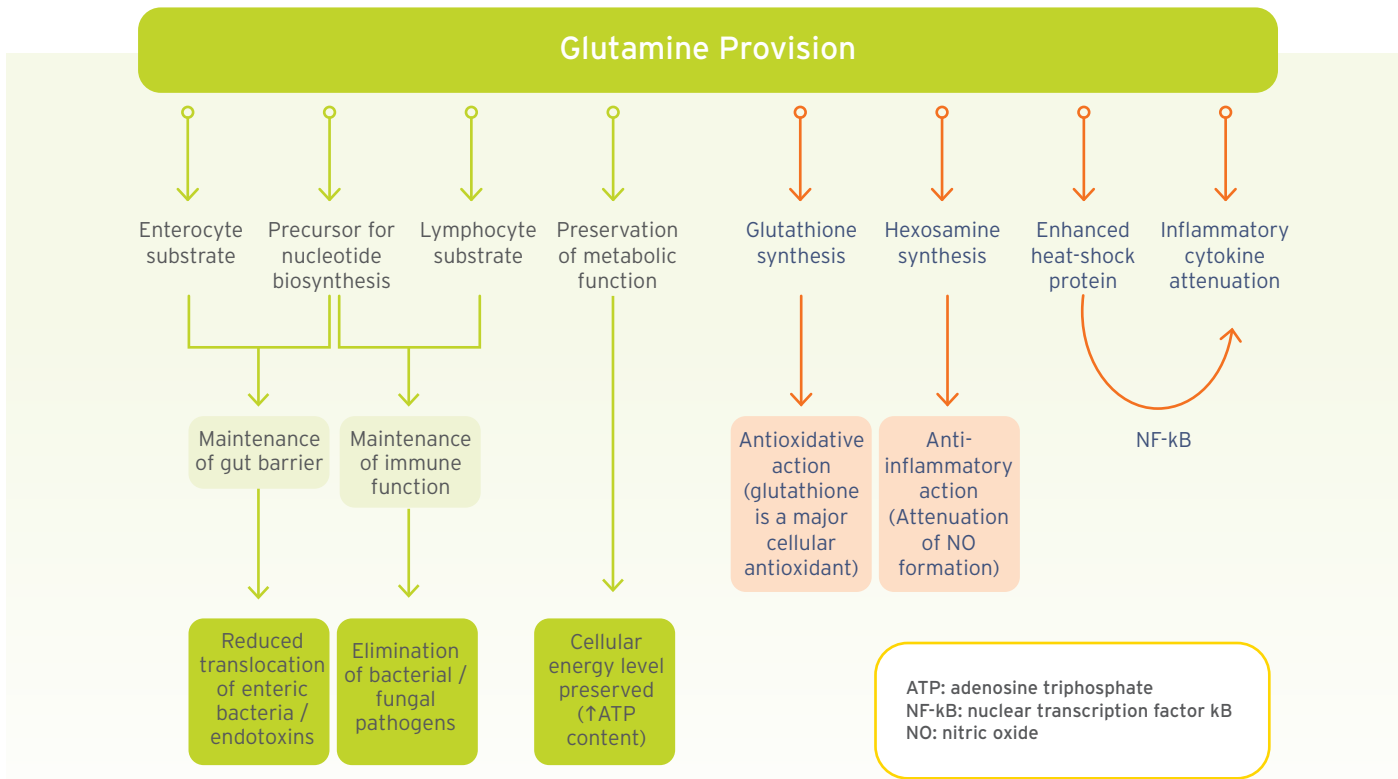
Glutamine Provision

Mode of action²

The underlying mechanism of the beneficial effects of the provision of glutamine in patients with severe illness might be due to a variety of mechanisms. These include⁵



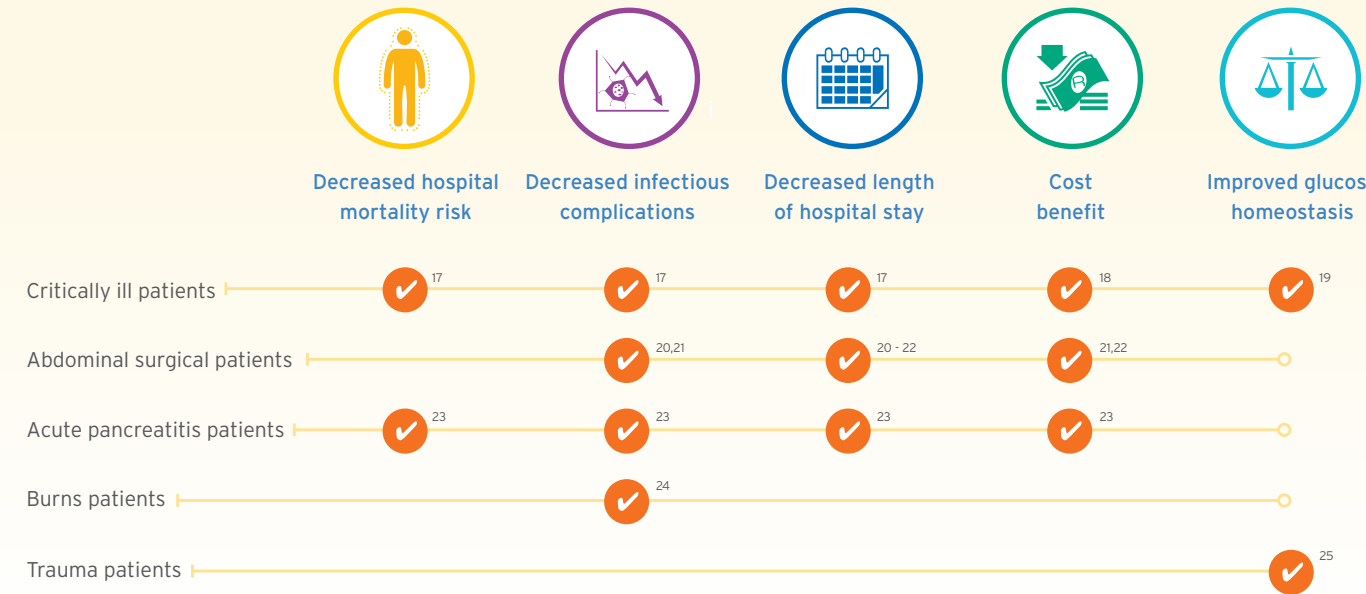
Potential Mechanisms for Glutamine's Beneficial Effects in ICU Patients⁵



(Adapted from Wischmeyer 2003)

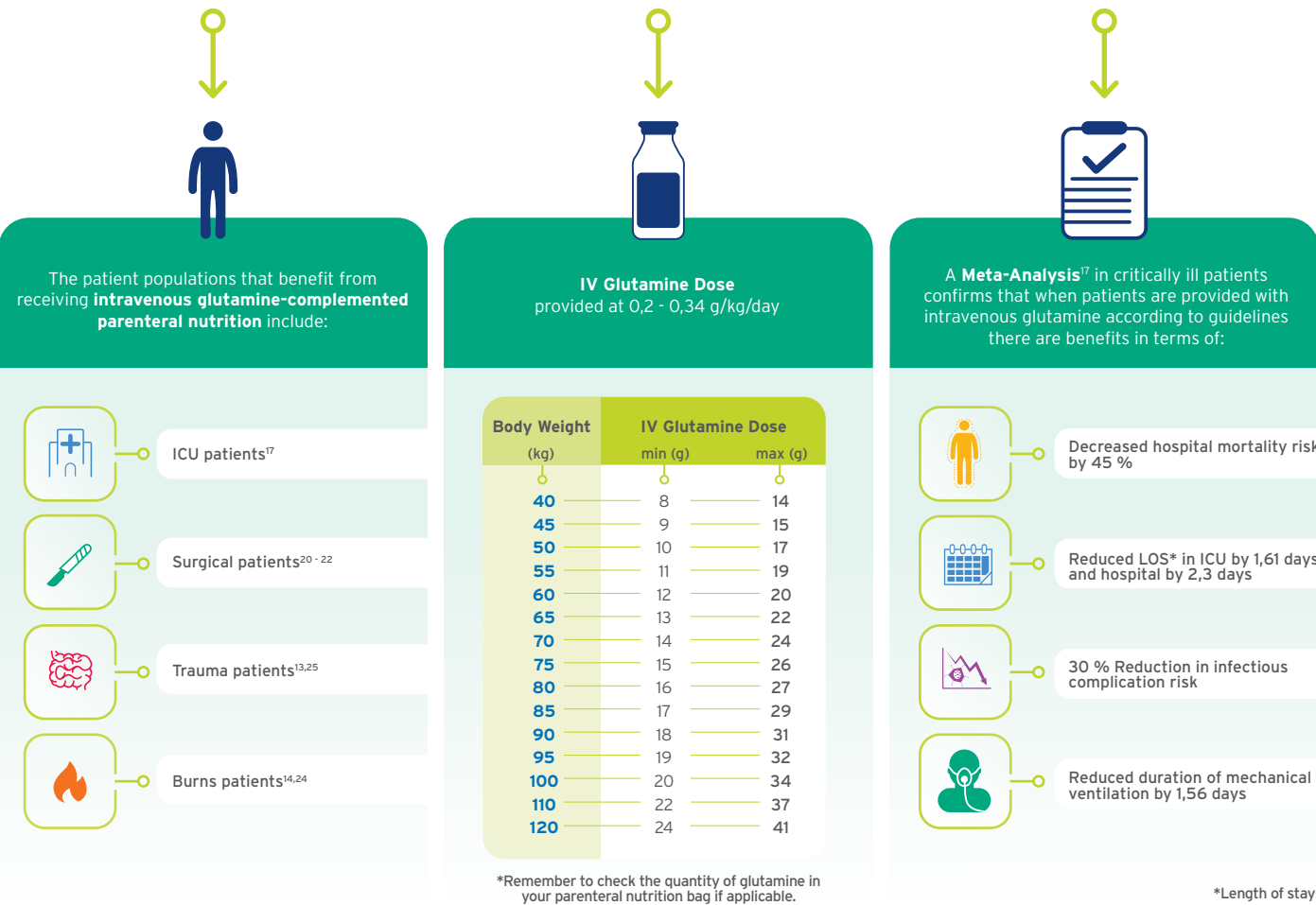
Benefits of Glutamine Provision

The patient populations that benefit from receiving intravenous glutamine supplemented parenteral nutrition include:



Summary

RIGHT PATIENT RIGHT DOSE RIGHT RESULT



References

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S3 Dipeptiven®

Each 1 000 ml solution contains N(2)-L-alanyl-L-glutamine 200,0 g (= L-alanine 82,0 g, L-glutamine 134, 6 g).
Reg No.: 33/23/0210

For full prescribing information refer to the professional information approved by the South African Health Products Regulatory Authority.