

LAMINO® 10% PLUS

••• Amino acids injection 10% w/v with Electrolytes •••

DESCRIPTION:

LAMINO® 10% PLUS (Amino Acid Injection) is a sterile, nonpyrogenic hypertonic solution of essential and nonessential amino acids with electrolytes.

COMPOSITION:

Each 100 ml contains:

Ingredients:	Quantity:	Ingredients:	Quantity:
L-Isoleucine USP	0.510 gm	L-Asparagine H2O	0.372 gm
L-Leucine USP	0.890 gm	L-Cysteine hydrochloride H2O USP	0.073 gm
L-Lysine hydrochloride USP	0.700 gm	L-Glutamic acid BP	0.460 gm
L-Methionine USP	0.380 gm	L-Ornithine hydrochloride	0.320 gm
L-Phenylalanine USP	0.510 gm	L-Serine USP	0.240 gm
L-Threonine USP	0.410 gm	L-Tyrosine USP	0.030 gm
L-Tryptophan USP	0.180 gm	Acetyetyrosine BP	0.123 gm
L-Valine USP	0.480 gm	L-Malic acid	0.100 gm
L-Arginine USP	0.920 gm	Sodium acetate 3H2O IP	0.395 gm
L-Histidine USP	0.520 gm	Potassium Acetate USP	0.245 gm
Glycine IP	0.790 gm	Magnesium Acetate 4H2O BP	0.056 gm
L-Alanine USP	1.370 gm	Sodium dihydrogen phosphate 2H2O IP	0.140 gm
L-Proline USP	0.890 gm	Water for Injection IP	Q.S
L-Aspartic acid BP	0.130 gm		

INDICATIONS & ADMINISTRATION:

LAMINO® 10% PLUS is indicated as an adjunct in the offsetting of nitrogen loss or in the treatment of negative nitrogen balance in patients where: (1) the alimentary tract cannot or should not be used, (2) gastrointestinal absorption of protein is impaired, or (3) metabolic requirements for protein are substantially increased, as with extensive burns.

DOSAGE:

The total daily dose of **LAMINO® 10% PLUS** depends on the patient's metabolic requirement and clinical response. Daily amino acid doses of approximately 1.0 to 1.5 g/kg of body weight for adults with adequate calories are generally sufficient to satisfy protein needs and promote positive nitrogen balance.

- **Central Vein Administration:** Central vein infusion should be considered when amino acid solutions are to be admixed with hypertonic dextrose to promote protein synthesis such as for hyper catabolic or depleted patients or those requiring long term parenteral nutrition.
- **Peripheral Vein Administration:** For patients in whom the central vein route is not indicated, amino acid solutions diluted with low dextrose concentrations may be infused by peripheral vein when supplemented with or without fat emulsion.
- **Protein-Sparing:** Dilute amino acid solutions for peripheral administration may be used in patients who exemplify no clinically significant protein malnutrition.

PRESENTATION:

LAMINO® 10% PLUS is available in 500 ml glass bottle.

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I am: _____
Call me on: _____
Mail me at: _____



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LAMINO[®] 10% PLUS

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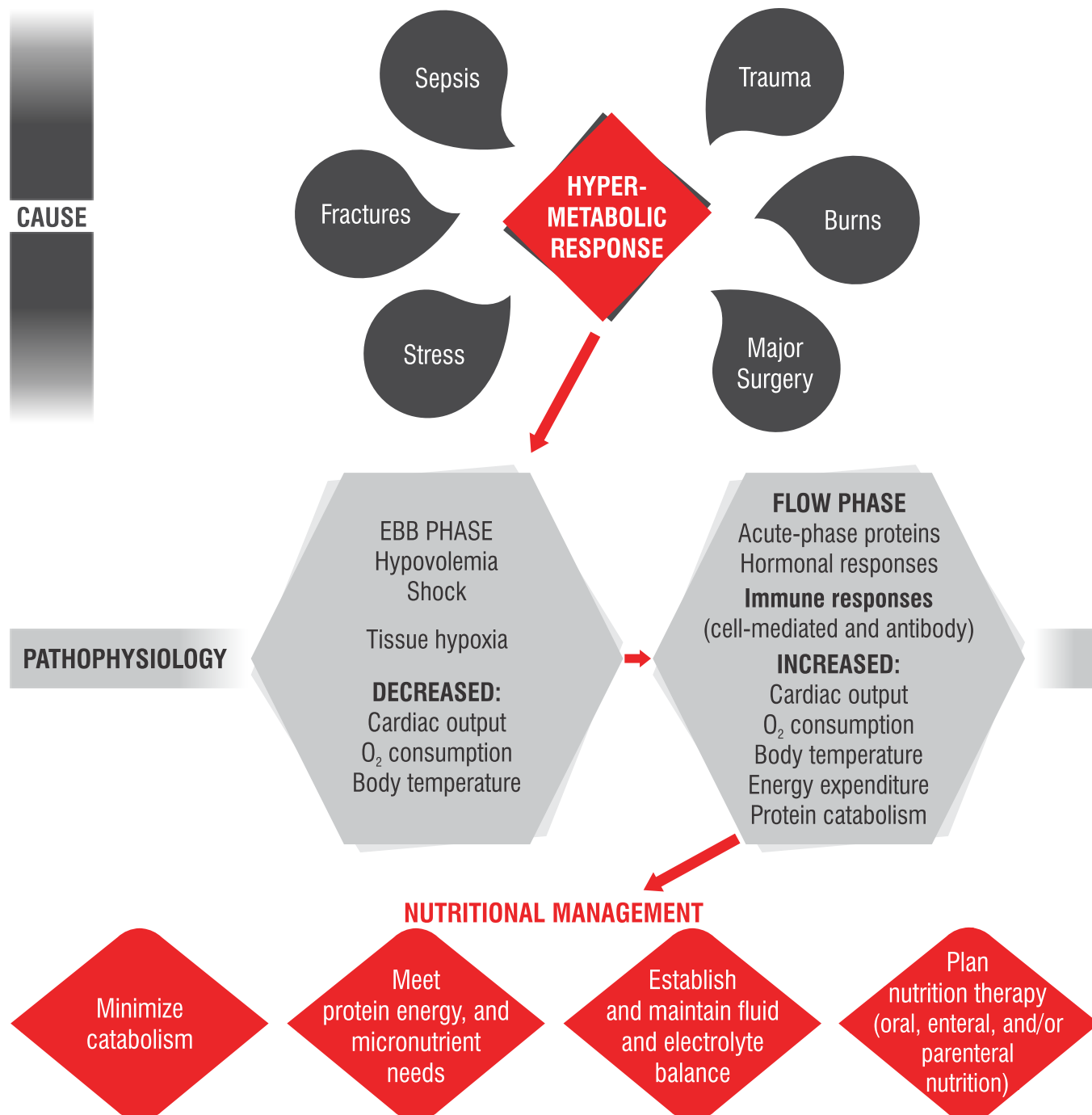
BACKGROUND:

Metabolic Stress:

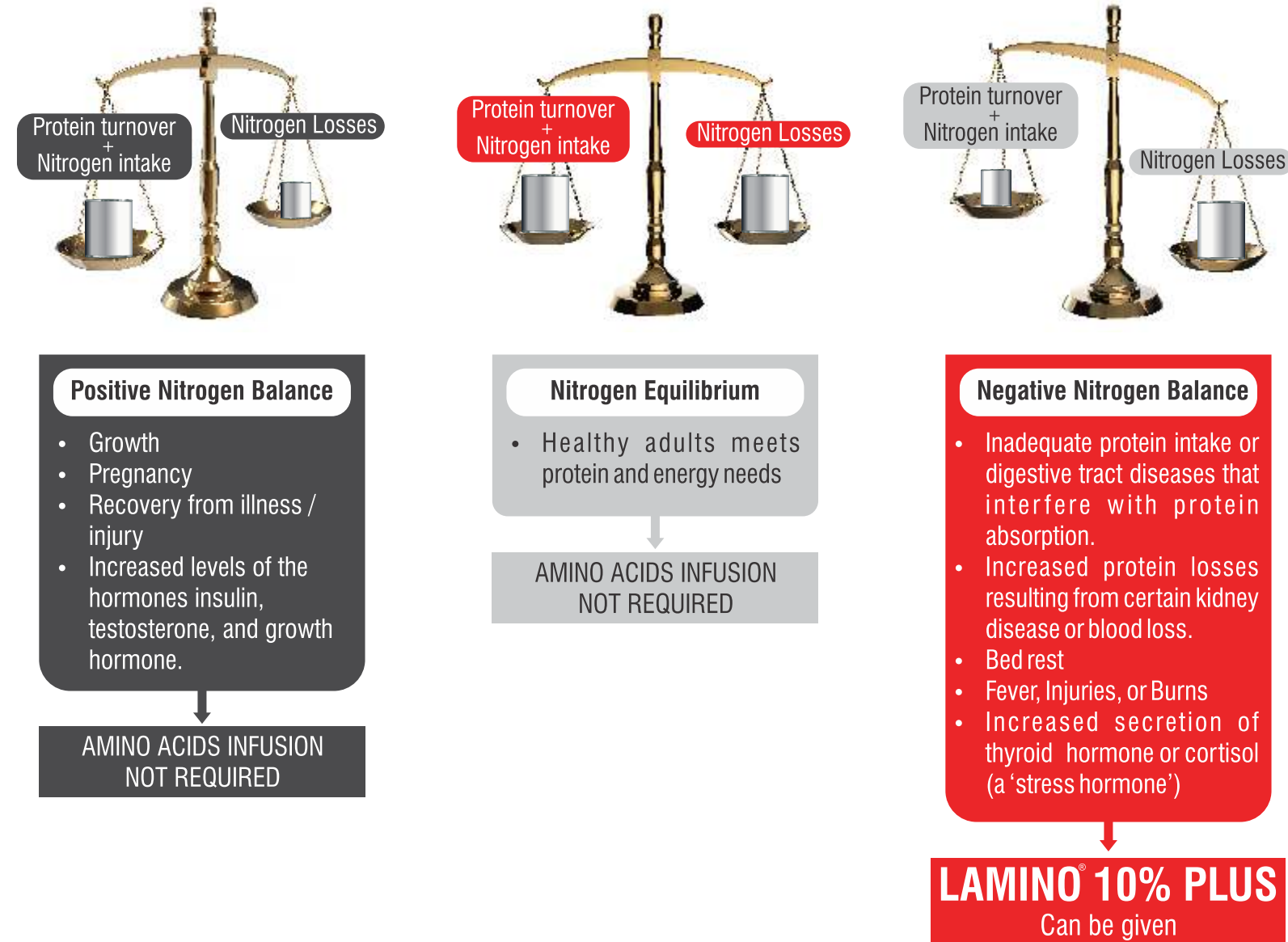
- Metabolic stress is the hyper metabolic, catabolic response to severe injury or disease. The degree of metabolic stress is correlated to the severity of the injury.
- Multiple stresses result in increased in catabolism & even greater loss of nitrogen leading to negative nitrogen balance.

LAMINO[®] 10% PLUS & METABOLIC SEVERE STRESS

HYPERMETABOLIC RESPONSE



LAMINO[®] 10% PLUS & NEGATIVE NITROGEN BALANCE



CLINICAL EVIDENCE:

Short-term amino acid infusion improves protein balance in critically ill patients

Objective:

Effects of parenteral amino acid supplementation (equivalent to 1 g/kg/day) over the course of 3 hours on whole-body protein turnover in critically ill patients in the intensive care unit (ICU) during the first week after admission.

RESULTS:

Parenteral amino acid supplementation significantly improved protein balance on both occasions, from a median of -4 to +7 μmol phenylalanine/kg/hr (P = 0.001) on the first study day and from a median of 0 to +12 μmol phenylalanine/kg/hr (P = 0.018) on the second study day.

CONCLUSION:

Extra parenteral amino acids infused over a 3-hour period improved whole-body protein balance and did not increase amino acid oxidation rates in critically ill patients during the early phase (first week) of critical illness.

References:

- 1) Mahan LK, Escott-stump S: Krause's food, nutrition & diet therapy, ed 11, Philadelphia, 2004.
- 2) Liebau et al. Critical Care (2015) 19:106