Jetmino 100 ML Infusion

Nutritive Pure Crystalline Amino Acid Infusion (100 ml)

Category:

Parenteral Nutrition

Dosage Form:

Infusion (IV)

Volume:

100 ml per vial

Composition:

Each 100 ml of Nutritive Pure Crystalline Amino Acid Infusion contains:

- **Amino Acids (Crystalline form): A combination of essential and non-essential amino acids, designed to meet the body's protein and nitrogen requirements.**
  - **Essential Amino Acids: L-Leucine, L-Isoleucine, L-Valine, L-Lysine, L-Phenylalanine, L-Tryptophan, L-Threonine, L-Methionine, L-Histidine**
  - **Non-Essential Amino Acids: L-Alanine, L-Arginine, L-Aspartic Acid, L-Glutamic Acid, L-Proline, L-Glycine, L-Cysteine, L-Tyrosine**
  - **Concentration: Amino acid concentration varies to provide optimal nutritional support.**
- **Electrolytes and Sodium: To support osmotic balance and normal cell function.**
- **Water for Injection: As the solvent.**

Indications:

Nutritive Pure Crystalline Amino Acid Infusion is primarily indicated for:

- **Parenteral Nutrition (PN): For patients who cannot take sufficient nutrition via oral or enteral routes.**
- **Nutritional Support for Critically Ill Patients: Including patients with malnutrition, severe burns, trauma, surgery, or critical illness where a high nitrogen requirement is necessary.**
- **Support in Post-operative Recovery: Especially for patients who require prolonged recovery periods.**
- **Chronic Renal Failure: As part of the management of protein-calorie malnutrition in patients on dialysis.**
- **Hypercatabolic States: Such as cancer, severe infections, or injuries that increase the body's protein and amino acid needs.**
- **Increased Nitrogen Losses: As a result of extensive burns or trauma.**

Mechanism of Action:

The infusion provides a balanced mixture of essential and non-essential amino acids, which are the building blocks of proteins necessary

for numerous metabolic processes. Amino acids play a key role in tissue repair, immune function, enzyme production, and energy metabolism.

- **Essential Amino Acids (EAAs): These cannot be synthesized by the body and must be provided through the infusion. They are critical for muscle protein synthesis and immune function.**
- **Non-Essential Amino Acids (NEAAs): These can be synthesized by the body but are necessary for overall metabolic function and for nitrogen balance.**

The amino acids are metabolized by the body to promote anabolism, repair tissue, and maintain protein synthesis, especially in the muscles, liver, and other vital organs.

Dosage and Administration:

- **Route of Administration: Intravenous (IV) infusion.**
- **Standard Dosage:**
  - **The typical dose is 100 ml per day, but this can vary based on the patient's age, weight, condition, and specific nutritional needs.**
  - **The infusion rate generally ranges from 0.5 ml/min to 1 ml/min depending on patient tolerance.**
  - **In patients with severe malnutrition or high protein needs, the dose may be increased.**
  - **The exact dose should be prescribed by the healthcare provider based on individual nutritional requirements.**

Administration Instructions:

- **Use sterile technique for preparation and administration.**
- **The infusion should be administered slowly over a period of several hours, especially in critically ill patients, to avoid adverse reactions.**
- **Monitor electrolyte balance, renal function, and blood glucose during the infusion, especially for patients with preexisting conditions such as kidney disease or diabetes.**
- **Do not administer via IM or subcutaneous routes.**

Contraindications:

- **Hypersensitivity to any of the components of the amino acid infusion, including amino acids or any excipients.**
- **Severe hepatic failure or severe metabolic disorders where amino acid infusion is contraindicated due to impaired metabolism or clearance.**
- **Fluid overload conditions: Should not be used in patients with severe heart failure or conditions where fluid retention may be problematic.**
- **Uncontrolled hyperglycemia or renal failure (without appropriate monitoring and adjustments).**
- **Infants with inborn errors of metabolism that affect amino acid metabolism should not be given this infusion without proper evaluation.**

Precautions and Warnings:

- **Renal Dysfunction: In patients with impaired renal function, use with caution as renal failure can impair the clearance of nitrogenous waste products. Regular monitoring of kidney function and electrolytes is advised.**
- **Electrolyte Imbalance: Prolonged use or high doses may cause imbalances in**

potassium, sodium, calcium, or phosphate levels. Routine monitoring of electrolytes is recommended.

- **Glucose Intolerance/Hyperglycemia: Some patients may experience elevated blood glucose levels, especially if they have a history of diabetes or insulin resistance.**
- **Monitoring of Liver Function: Periodic monitoring of liver enzymes and function is advised for patients receiving long-term infusion therapy, as liver metabolism is involved in processing the components of the infusion.**
- **Infusion Site Reaction: Local reactions, such as phlebitis or thrombophlebitis, may occur at the infusion site. Proper care during infusion and monitoring of the infusion site is essential.**

Adverse Effects:

Common side effects include:

- **Gastrointestinal: Nausea, vomiting, abdominal discomfort, or bloating.**
- **Metabolic: Electrolyte imbalances (hypokalemia, hyperkalemia, hypophosphatemia), hyperglycemia.**
- **Injection Site Reactions: Pain, redness, or swelling at the IV site.**
- **Renal: Increased blood urea nitrogen (BUN) or creatinine levels in patients with renal impairment.**
- **Hepatic: Elevation in liver enzymes (AST, ALT), especially with long-term use or in patients with liver dysfunction.**

Serious side effects (rare but possible) include:

- **Anaphylactic Reactions: Hypersensitivity or allergic reactions to the infusion components.**
- **Severe Electrolyte Disturbances: Risk of severe electrolyte imbalance, which can lead to life-threatening arrhythmias or muscle weakness.**
- **Hyperammonemia: Elevated ammonia levels in the blood, which can be dangerous in patients with pre-existing liver disease.**

Drug Interactions:

- **Caution with Diuretics or Drugs that Affect Electrolyte Balance: Since Nutritive Pure Crystalline Amino Acid Infusion can affect electrolyte levels, patients on diuretics or those with electrolyte imbalances should be monitored closely.**
- **Glucose-Lowering Medications: For diabetic patients, the infusion may require adjustment of insulin or oral hypoglycemic agents due to the potential for hyperglycemia.**
- **Medications Metabolized by the Liver: Use caution when administering with drugs that are metabolized by the liver, as this may affect the metabolism of both the amino acids and the co-administered medications.**

Storage Instructions:

- **Store in a cool, dry place, away from light, at room temperature (15°C to 25°C).**
- **Do not freeze.**
- **Use within the expiration date on the packaging.**
- **Discard unused portions of the infusion after use.**

Key Benefits:

- **Efficient Nutritional Support: Provides a balanced combination of essential and non-essential amino acids, crucial for patients requiring nutritional supplementation.**
- **Versatile Use: Suitable for a wide range of patients, including those with critical illness, surgical recovery, trauma, or malnutrition.**
- **Supports Protein Synthesis: Helps in tissue repair, muscle recovery, and immune function during critical illness or post-surgery.**

Conclusion:

Nutritive Pure Crystalline Amino Acid Infusion (100 ml) is a highly effective and clinically essential solution for patients requiring parenteral nutritional support. It provides a balanced amino acid profile that supports protein synthesis, tissue repair, and general metabolic functions. Proper administration and monitoring are essential to maximize the therapeutic benefits and minimize the risk of adverse effects.

Manufactured in India for:

Cafoli™ LIFECARE

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