

# Peripheral Parenteral Nutrition

**THE RIGHT THERAPY  
AT THE RIGHT TIME**



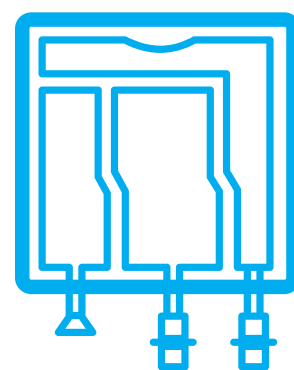
**FRESENIUS  
KABI**

caring for life

# RELEVANCE OF A BALANCED COMPOSITION

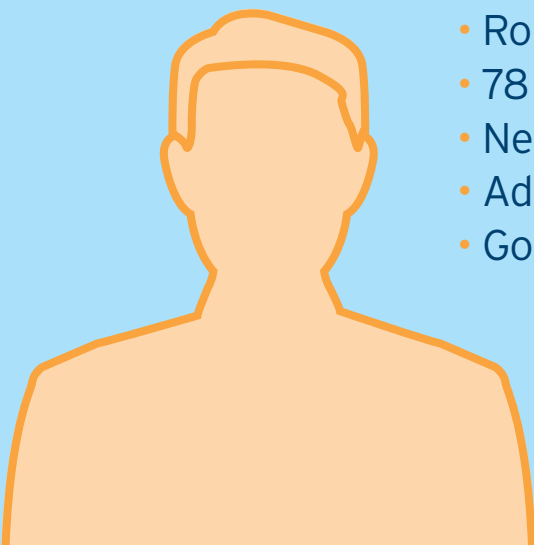
Peripheral Parenteral Nutrition is an excellent way to<sup>1</sup>

- counteract protein catabolism and support anabolism secondary to periods of starvation
- complement nutrition therapy for patients tolerating only limited quantities of oral or enteral nutrition
- meet the nutritional needs of the patient while avoiding the need for a central catheter



**Peripheral Parenteral Nutrition is a temporary method, suitable for durations of up to 14 days, to nourish patients e.g.<sup>1</sup>**

- while oral or enteral nutrition is resumed
- if central venous access is not available or contraindicated

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- Robert
  - 78 years
  - Neck cancer
  - Admitted for elective neck surgery
  - Good peripheral venous access

# INTRAVENOUS LIPID EMULSIONS<sup>2</sup>

- Are a reliable source of energy
- Reduce the admixture osmolarity
- Have a protective effect on the venous endothelium

## Mixed intravenous lipid emulsions with fish oil provide the benefits of omega-3 fatty acids



- Clinically significant positive effects on patients' outcomes, (e.g. reduction of infection and sepsis rate, reduced length of stay in intensive care and hospital)<sup>3</sup>
- Recommended as a part of PN in adult surgical patients<sup>4-6</sup>
- Benefits are evident over the entire perioperative period<sup>4</sup>

- Body weight: 60 kilograms, height: 180 cm, Body Mass Index: 18.5
- Lost 5 kg since his last check up due to poor appetite and dysphagia
- Subjective Global Assessment grade C

**In the face of the upcoming surgery and his recent weight loss, Robert is at high nutritional risk.**

# CATHETER CARE & VESSEL HEALTH

Implementation of catheter care protocols and the selection of the right site and solution for infusion can minimize the risk of catheter infections and phlebitis.<sup>7-10</sup>

## Important considerations<sup>7,10</sup>



- Select large veins and avoid placement across joints
- Choose the right catheter (polyurethane, fine bore cannulas)
- Inspect and change the administration site on a regular basis
- Select an admixture with low osmolality (<900 mOsm/L) and a balanced nutrient composition, including lipids

**Catheter changes based on clinical indications rather than routinely appear to be safe and can reduce discomfort to the patient as well as workload and costs.<sup>9</sup>**

- Caloric goals: 25 kcal/kilogram bodyweight/day
- Oral Nutrition Supplements prescribed on post-operative days 1-2, yet, compliance is poor due to swallowing difficulties
- Enteral nutrition started on day 3, yet, Robert develops diarrhea
- No possibility to place a central venous catheter

**Robert needs timely parenteral nutrition therapy to meet his caloric and nutritional goals.**

# THE RIGHT FORMULATION MAKES A GOOD CHOICE



Peripheral veins cannot tolerate high fluid volumes or solutions with a high osmolarity (>900 mOsm/L).<sup>8,12</sup>

- Peripheral parenteral nutrition 3-chamber bags are safe, well tolerated, shorten preparation time, and reduce cost.<sup>11</sup>
- Peripheral parenteral nutrition 3-chamber bags can supply 25 kcal/kilogram bodyweight/day or more to meet the energy requirements of most patients.<sup>8</sup>

**The optimal peripheral parenteral nutrition formulation should provide the right balance of nutrients, low osmolarity, and high energy density for immediate, easy, safe and time efficient delivery.**

**Robert is started on peripheral parenteral nutrition (admixture <900 mOsm/L) on postoperative day 4 to counteract further weight loss and protein catabolism until he regains his ability to maintain an adequate oral intake.**

# THE RIGHT THERAPY AT THE RIGHT TIME<sup>11</sup>

## The use of peripheral parenteral nutrition 3-chamber bags

- ① • Shortens preparation time allowing immediate initiation of nutrition therapy



- ④ Economic benefit



- ② • Is a safe and well tolerated therapy  
• Increases patient safety for those requiring nutrition therapy



- ③ • Reduces of workload and manpower costs  
• Peripheral administration facilitates nutrition therapy



## KEEP IN MIND

- Peripheral parenteral nutrition complements nutrition therapy for patients with urgent nutritional needs for up to 14 days.<sup>6</sup>
- Peripheral parenteral nutrition should include lipid emulsions, preferably including fish oil.<sup>13</sup>
- Choosing the right formulation and adhering to protocols for catheter care are critical.<sup>6</sup>
- Peripheral parenteral nutrition is a safe and effective way of nutrition - and a good choice for your patient

### References

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