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No Malnurished Patient Should EVER Have Elective Surgery……..
Without Nutritional OPTIMIZATION.

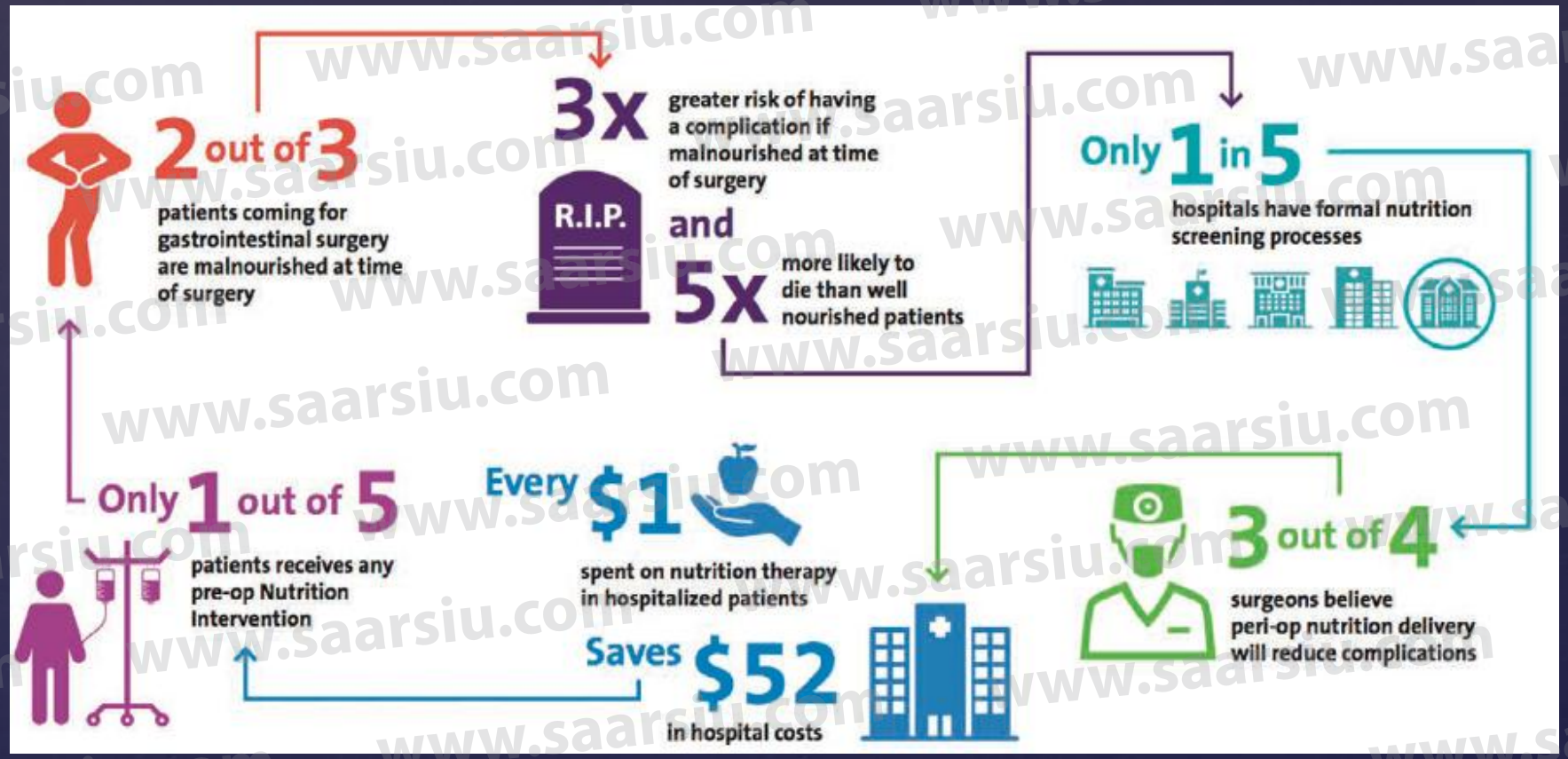
Pre-Operative Malnutrition

It is well known that suboptimal nutritional status is a strong independent predictor of poor postoperative outcomes.

Malnourished surgical patients have significantly higher postoperative mortality, morbidity, length of stay (LOS), readmission rates, and increased hospital costs.

It is estimated that 24%–65% of patients undergoing surgery are at nutrition risk.

Facts and Data About Malnutrition Screening and therapy



Data drawn from Awad and Lobo, Williams and Wischmeyer, and Philipson et al. R.I.P. indicates rest in peace.

Enhanced Recovery After Surgery
E.R.A.S

Enhanced Recovery After Surgery (ERAS) **protocols**, are combinations of **evidence based peri**-operative strategies which work **synergistically** to markedly speed recovery after surgery.

ERAS SOCIETY

ERAS® Society

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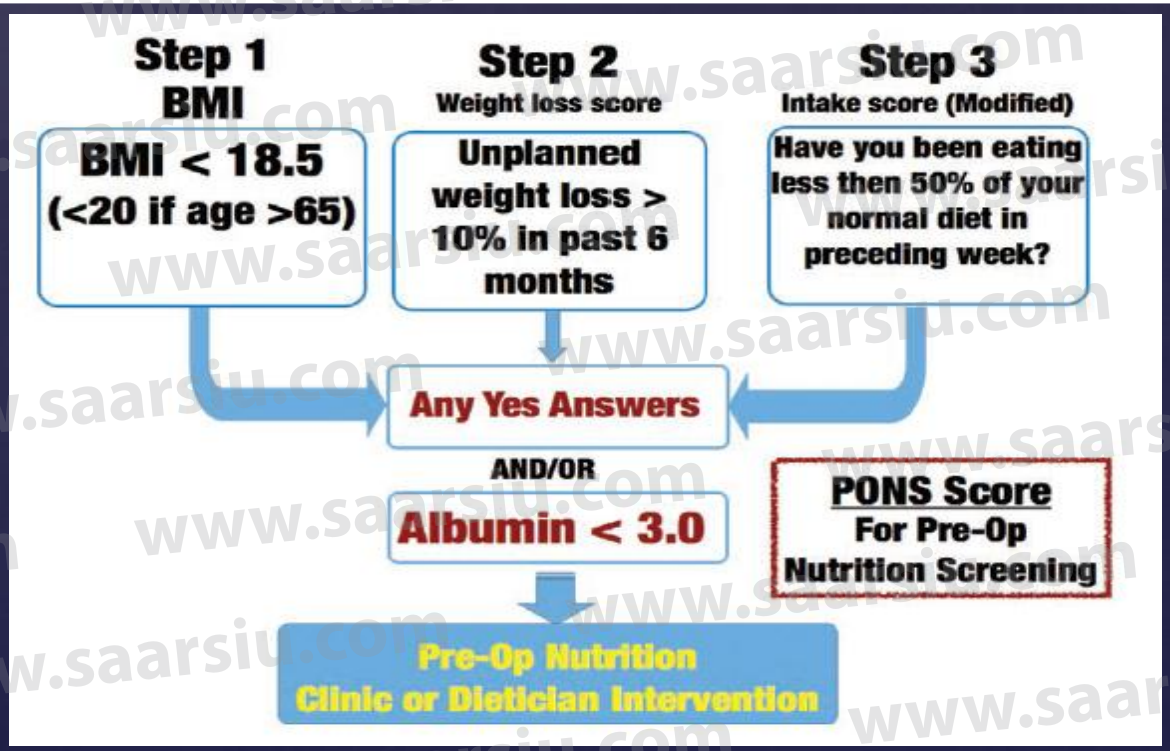
The latest Recommendations and Consensus on Pre-Operative Nutrition

1- It is recommended that screening of nutritional status should be carried out before major surgery using a simple screening tool (via electronic medical record where possible)

2- Pre- Operative Nutrition Screening (PON)



3- It is Recommended that if **any screening questions in PONS score are positive** for nutritional risk, that intervention and/or referral for formal nutrition assessment take place.

4- Reaching an overall protein intake goal is **more important than** achieving a total calorie intake in the preoperative period with a recommended protein goal **>1.2 g/kg/d**.

5- For patients who are screened as being at nutritional risk before major surgery, it is recommended that they should receive preoperative **ONSs for a period of at least 7 d**. This may be achieved with either of the following:

- IMN formulas (containing arginine, fish oil, & nucleotides)
- High-protein ONS (2–3× a day, minimum of 18 g protein/dose)

6 –It is recommended that for patients who are screened as being at nutritional risk before major surgery , where oral nutrition supplementation via ONS is not possible, that a dietician can be consulted and an enteral feeding tube be placed and home EN initiated for at least 7 days.

7- If neither oral nutrition supplementation via ONS nor EN is possible, or when protein /kcal requirement (>50% of recommended intake) cannot be adequately met by ONS / EN, Parenteral Nutrition is recommended Preoperatively to improve outcomes.

8- It is recommended that **preoperative fasting from midnight to be abandoned.**

9- In patients undergoing surgery who are considered to have minimal specific risk of aspiration, unrestricted access to solids for up to 8 h before anesthesia and clear fluids for oral intake up to 2 h before induction of anesthesia is highly encouraged.

10- A preoperative carbohydrate drink containing at least 45 g of carbohydrate is recommended to improve insulin sensitivity (except in type I diabetics due to their insulin deficiency state). It is suggested that complex carbohydrate (e.g., maltodextrin) be used when available.

The latest Recommendation and consensus on Post-Operative Nutrition

1- It is Recommended that a high protein diet (via diet or high protein ONS) be initiated on the day of surgery in most cases, with exception of patients without bowel in continuity , with bowel ischemia, or persistent bowel obstruction. Traditional clear liquid and full liquid diets should not be routinely used.

2-Reaching an overall **protein intake goal** is more important than total calorie intake in the postoperative period.

3- It is recommended that standardized protocols for postoperative nutrition support be instituted

4-IMN should be considered in all postoperative major abdominal surgical patients for at **least 7 d**.

5- In patients who meet criteria for malnutrition who are not anticipated to meet nutritional goals (>50% of protein / kcal) through oral intake , it is recommended to initiate early EN or tube feeding within 24 hours. Where goals are not met through EN it is recommended to start early PN, in combination with EN if possible.

6- It is recommended when using **gastric residual** volume's as a marker of feeding tolerance, a cutoff of **>500** mL should be used before tube feeds being suspended or tube feed/EN rate reduced.

7- It is recommended that post hospital **high-protein ONS** in all patients after major surgery to meet both calorie and protein needs, especially in the previously malnourished, elderly and sarcopenic patient.

TAKE HOME LATEST PROTOCOLS

1. Pre-op/Post-op Nutrition Screening Essential.
2. Protein more important than calories.
3. Stop feeding late pre-op, restart early post-op.
4. Consider Oral Nutrition Supplements for All.
5. Oral before enteral before parenteral.
6. Nutrition management is a team game.

THANK YOU.