
# IL CASO CLINICO:
# RUOLO DEL BIOLOGO NUTRIZIONISTA NELLA GESTIONE PRE-OPERATORIA DEL PAZIENTE CANDIDATO A CHIRURGIA BARIATRICA

**Dott.ssa Martina Perna**

# OBESITY TREATMENT

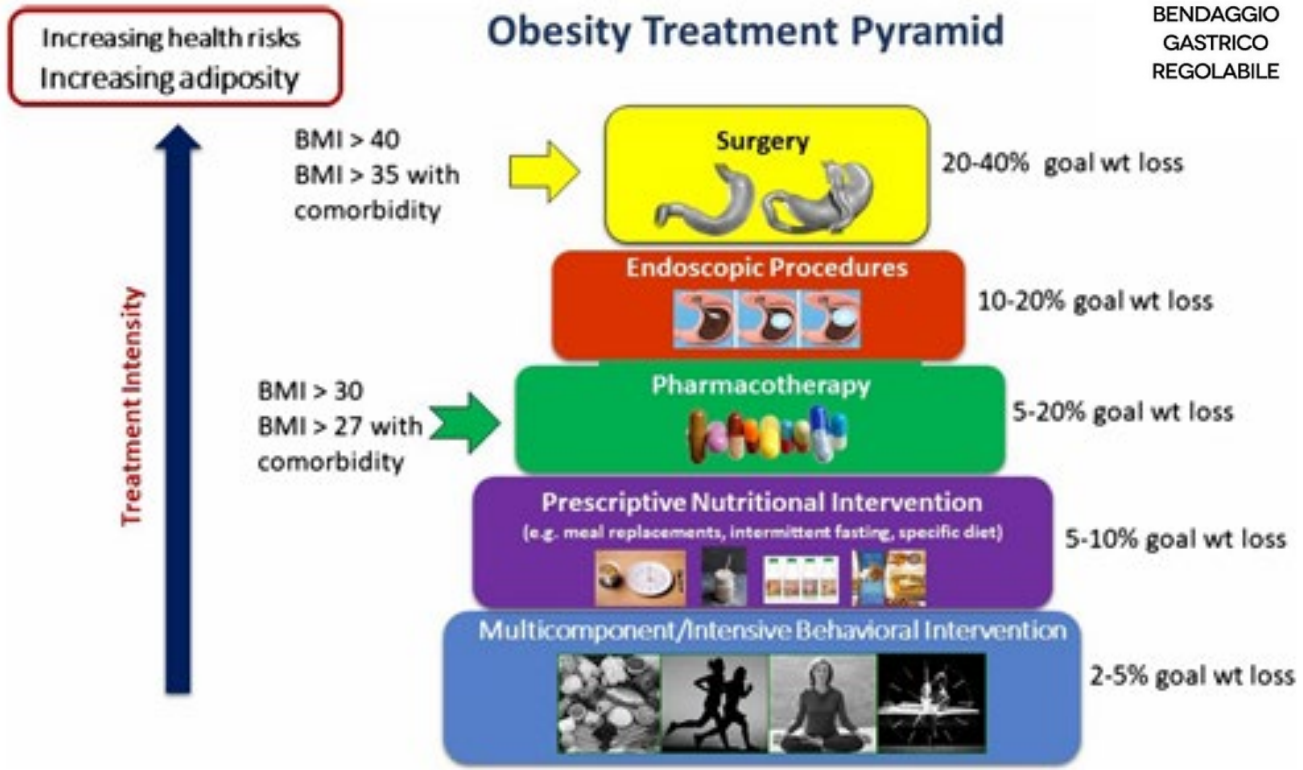
Current Obesity Reports (2021) 10:396–408
https://doi.org/10.1007/s13679-021-00444-y

OBESITY TREATMENT (D BESSESEN, SECTION EDITOR)

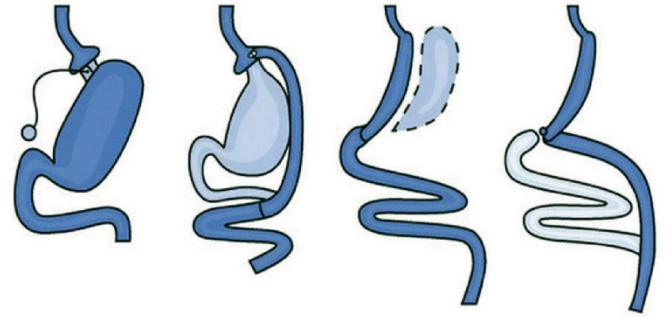
## The Most Undertreated Chronic Disease: Addressing Obesity in Primary Care Settings

Shanna Tucker[1] · Carolyn Bramante[2,3] · Molly Conroy[4] · Angela Fitch[5] · Adam Gilden[6,7] · Sandra Wittleder[1] · Melanie Jay[8,9]

Fig. 1 Obesity treatment pyramid developed by Angela Fitch, MD




## CHIRURGIA BARIATRICA



Obesity Surgery (2019) 29:1028–1030
https://doi.org/10.1007/s11695-019-03706-w

IFSO

# The Role of the Nutritionist in a Multidisciplinary Bariatric Surgery Team

Luigi Schiavo [1] · Vincenzo Pilone [1,2] · Gianluca Rossetti [3] · Antonio Iannelli [4,5,6]

Published online: 7 January 2019


**BARIATRIC SURGERY is more EFFECTIVE and HEALTHIER when combined with NUTRITIONAL CARE**


A nutritionist plays an important role in every aspect of bariatric surgery program, including:

- **preoperative assessment of the patient**
- **long-term follow up, evaluation, and monitoring**

# CLINICAL CASE

## Paziente A. 56 anni

## Candidabile?

## PARAMETRI EOSS

### 2° STADIO DI OBESITA.

### BMI 42.5 PESO 120KG

**INQUADRAMENTO CLINICO**:

- IPERTENSIONE ARTERIOSA TRATTATA FARMACOLOGICAMENTE,
- PRE-DIABETE
- SINDROME DELLE APNEE NOTTURNE
- SINDROME ANSIOSO DEPRESSIVA
- NO BEINGE

# CLINICAL CASE

## Paziente A.

## Candidabile?

## PARAMETRI EOSS

## SECONDO STADIO DI OBESITA.

## BMI 42.5 PESO 120KG

**INQUADRAMENTO EMATOCHIMICO/DIAGNOSTICO:**

- SINDROME METABOLICA
- AST, ALT, CHO, GGT ELEVATI
- GLICEMIA A DIGIUNO 108 EMOGLICATA 6.7
- FEGATO STEATOSICO
- GRASSO VISCERALE
- WHR 1.2 ANGOLO DI FASE: < 4,5°
- CARENZA MARZIALE
- CARENZA VIT D

# CLINICAL CASE

## Paziente A.
## Candidabile?


Diario alimentare

Data: _____ ©onsegreto.com

Colazione | Pranzo

Spuntini | Cena

Attività fisica | Obiettivi e rifessioni

Quantità d'acqua | Umore

Note:

## STORIA NUTRIZIONALE:

- SOVRAPPESO ADOLESCENZIALE
- NON CONOSCENZA DELL'EDUCAZIONE ALIMENTARE
- APPROCCI ALIMENTARTI FALLIEMENTARI → WEITGH REGAIN.

## ABITUDINI ALIMENTARI:

- SPILUCCAMENTO
- PASTI FAST- PRECOTTI -CONFEZIONATI
- BEVANDE GASSATE

CONSUMATI PER LO PIU IN PIEDI O SUL DIVANO

nutrients

MDPI

Review

# Preoperative Nutrition in Bariatric Surgery: A Narrative Review on Enhancing Surgical Success and Patient Outcomes

Daniel Simancas-Racines [1,†], Evelyn Frias-Toral [2,†], Martín Campuzano-Donoso [1], Daniel Ramos-Sarmiento [1], Raynier Zambrano-Villacres [3], Claudia Reytor-González [1,*,‡] and Luigi Schiavo [4,*,‡]



provements, ensuring that patients are fully equipped for success on their surgical journey (Figure 2).

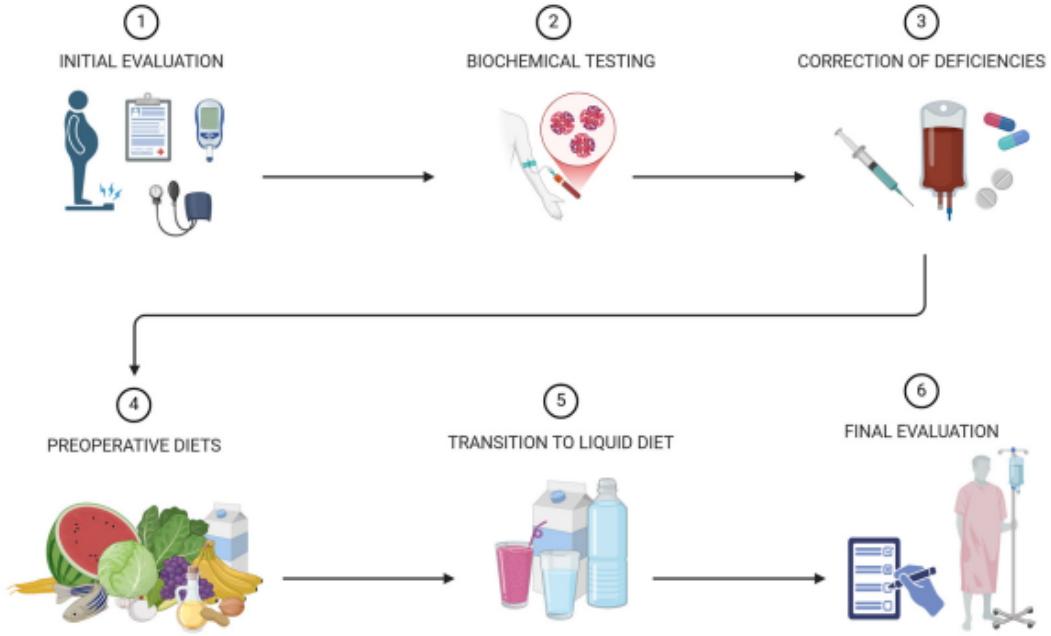



**Figure 2.** Preoperative preparation and nutritional interventions in bariatric surgery. The preoperative preparation for BS includes six stages: initial evaluation of medical and dietary history to identify comorbidities and deficiencies; biochemical testing to assess levels of vitamin D, iron, B12, folate, proteins, and other micronutrients; correction of deficiencies with tailored supplementation; implementation of preoperative diets such as VLEKT to reduce liver size and weight; transition to a liquid diet 24 h before surgery with clear liquids and protein shakes; and a final review to confirm nutritional correction and psychological readiness [5,119,120,126].

# BARIATRIC SURGERY: PRE-OPERATIVE CARE

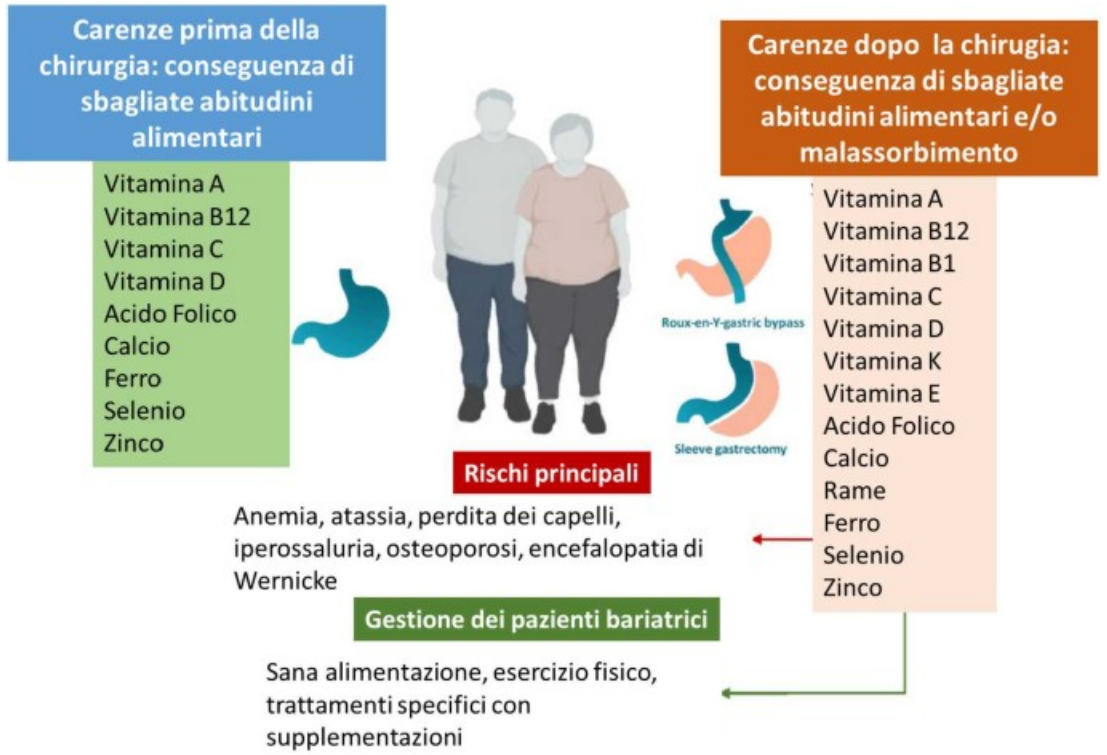
OBES SURG (2016) 26:2790–2792
DOI 10.1007/s11695-016-2381-z

LETTER TO THE EDITOR

## Why Preoperative Weight Loss in Preparation for Bariatric Surgery Is Important

**Luigi Schiavo[1] · Arnaud Sans[3] · Giuseppe Scalera[1] · Alfonso Barbarisi[1] · Antonio Iannelli[2,3,4]**

1. Reduce the body weight through balanced meals that help to preserve the FFM as much as possible.
2. Select compliant patients and make them more knowledgeable on what and how to eat after surgery.
3. Identify and correct vitamin, mineral, and trace element deficiencies in sufficient time before surgery.
4. Improve insulin resistance and obesity-linked systemic low-grade inflammation that both result in a decreased liver volume and intraabdominal fat accumulation to ultimately facilitate the surgical procedure.




| • BASELINE | • 4-8 WEEKS PRE INTERVENTO |
|---|---|
| PESO 120KG | • < 20KG |
| VOLUME EPATICO | • < 15 CM |
| DEFICIT B12, FE, VIT.D | • NORMALIZZATI |

Obesity Surgery (2018) 28:2215–2224
https://doi.org/10.1007/s11695-018-3145-8

ORIGINAL CONTRIBUTIONS

# A 4-Week Preoperative Ketogenic Micronutrient-Enriched Diet Is Effective in Reducing Body Weight, Left Hepatic Lobe Volume, and Micronutrient Deficiencies in Patients Undergoing Bariatric Surgery: a Prospective Pilot Study

Luigi Schiavo[1,2] · Vincenzo Pilone[3] · Gianluca Rossetti[4] · Alfonso Barbarisi[1,2] · Manuela Cesaretti[5,6] · Antonio Iannelli[7,8,9]

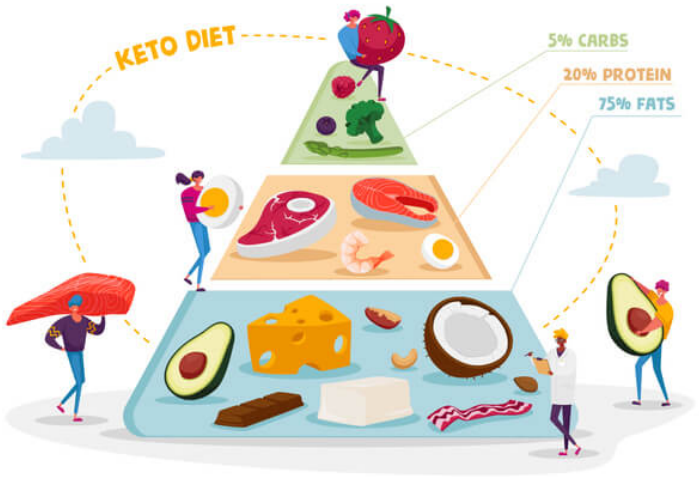



**Table 1**. Characteristics of the study patients at baseline and after a 4-weeks course of preoperative ketogenic micronutrient enriched diet (KMED)

| Clinical characteristics | Baseline mean ±SD | 4-weeks follow up mean ±SD | P |
|---|---|---|---|
| †Patients (M/F) | 10/17 | 10/17 | - |
| Body weight, kg (M/F) | 136.3±6.67/127.5±5.03 | 122.2±6.1/117.1±4.57 | <0.001 |
| Left hepatic lobe volume ($cm^3$) | 627 ± 85 | 503 ± 61 | <0.001 |
| BMI ($kg/m^2$) | 44.5±10.5/46.9±11.7 | 40.6±6.5/43±13.4 | <0.001 |
| Glucose (mg/dL) | 115 ± 26.3 | 85 ± 10.5 | <0.001 |
| Insulin (mU/L) | 10.5 ± 5,9 | 6.6 ± 4.9 | 0.0108 |
| Iron (g/dL) | 64.9 ± 12,7 | 72.6 ± 21.9 | 0.120* |
| Hb (mcg/dL) | 12.5 ± 5,9 | 13.6 ± 4.9 | 0.459* |
| Creatinine (mg/dL) | 0.86 ± 1.3 | 0.83 ± 0.16 | 0.906* |
| Ketonemia (mmol/L) | 0.05 ± 0.04 | 0.11 ± 0.3 | 0.308* |
| Total Cholesterol (mg/dL) | 224 ± 19.4 | 190 ± 20.2 | <0.001 |
| HDL (mg/dL) | 51 ± 11.5 | 54 ± 15.3 | 0.419* |
| LDL (mg/dL) | 162 ± 27.9 | 120 ± 19.2 | <0.001 |
| Total Cholesterol/HDL ratio | 4.4 ± 2.9 | 3.5 ± 1.8 | 0.176* |
| Triglycerides (mg/dL) | 204 ± 35.4 | 127 ± 24.9 | <0.001 |
| GOT (U/L) | 53 ± 14.1 | 28 ± 12.7 | <0.001 |
| GPT (U/L) | 39 ± 19.3 | 27 ± 11.6 | <0.001 |
| GGT (U/L) | 31 ± 19.6 | 20 ± 15.8 | 0.0274 |
| Uric Acid (mg/dL) | 6.7 ± 1.2 | 5.4 ± 1.8 | 0.0029 |
| Urea /mg/dL) | 31.4 ± 11.2 | 24.2 ± 9.8 | 0.0151 |
| GFR (mL/min) | 95.4 ± 23.2 | 85.1 ± 15.8 | 0.0621* |
| †Vitamin B12 deficiency (M/F) | 7/8 | 0/0 | - |
| †Folic Acid deficiency (M/F) | 6/8 | 0/0 | - |
| †Vitamin D deficiency (M/F) | 8/12 | 1/2 | - |
| †Iron deficiency (M/F) | 2/8 | 0/0 | - |
| †Zinc deficiency (M/F) | 2/7 | 0/0 | - |
| †Hypertension (M/F) | 5/3 | 2/2 | - |
| †Diabetes type 2 (M/F) | 4/2 | 1/0 | - |
| †Dyslipidemia (M/F) | 4/4 | 0/0 | - |

† Number of patients
*not statistically significant

**BMI** = Body Mass Index
**HB** = Haemoglobin
**HDL** = High Density Lipoprotein
**LDL** = Low Density Lipoprotein
**GOT** = Glutamic oxaloacetic transaminase
**GPT** = Glutamic pyruvic transaminase
**GGT** = Gamma-glutamyl transferase
**GFR** = Glomerular Filtration rate

This study demonstrates that a 4-week preoperative KMED is safe and effective in reducing BW, left hepatic lobe volume, and correcting MD in obese patients scheduled for BS.

# MULTIDISCIPLINARY APPROACH IS CRUCIAL

*nutrients*

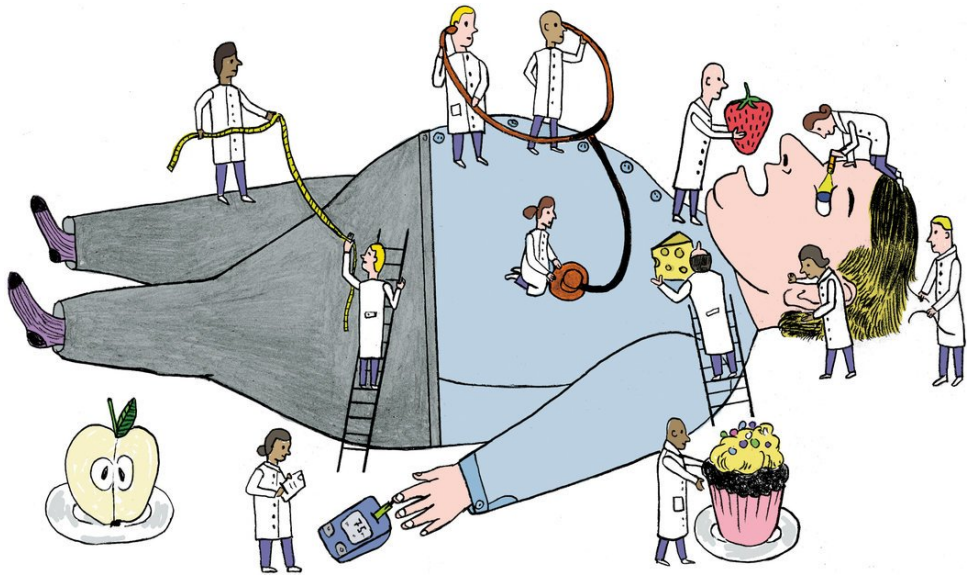
MDPI



*Review*

## Optimizing Nutritional Management Before and After Bariatric Surgery: A Comprehensive Guide for Sustained Weight Loss and Metabolic Health

Evelyn Frias-Toral [1,†], Sebastián Chapela [2,3,†], Victoria Gonzalez [4,5], Andres Martinuzzi [6,7], Julieta Locatelli [8], Natalia Llobera [3], Ezequiel Manrique [9,10], Gerardo Sarno [11], Monica Mingo [12], Federica Marchese [12], Raffaele Cuomo [12], Ludovica Romaniello [12], Martina Perna [12], Annalisa Giordano [12], Biagio Santella [12,13] and Luigi Schiavo [12,13,*]



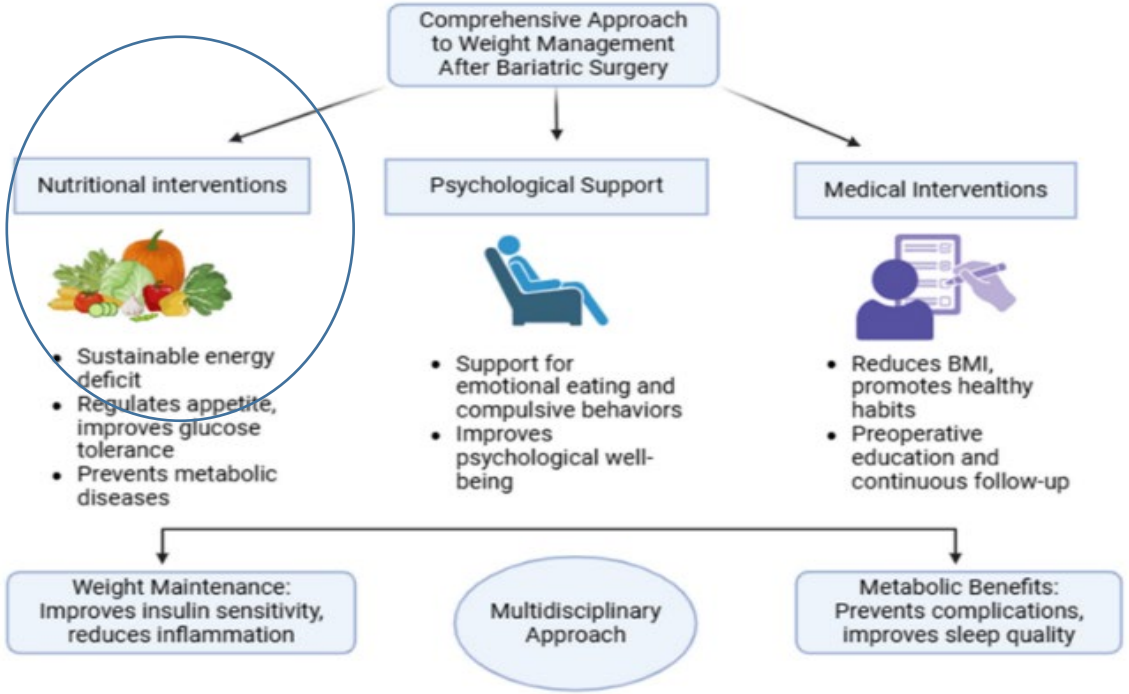



**Figure 3.** Comprehensive approach to weight management after BS [23,24,52,63]. A multidisciplinary approach is essential for the success of these interventions. This requires nutritional interventions, psychological support, and medical interventions.

# CONCLUSIONI

OTTIMIZZARE LA GESTIONE **NUTRIZIONALE PRE-OPERATORIA** E' FONDAMENTALE PER MIGLIORARE IL SUCCESSO DELLA B.S. E I RISULTATI DEI PAZIENTI-.

È FONDAMENTALE **INDIVIDUARE E MONITORARE LA CONDOTTA ALIMENTARE E** GENERARE ACQUISIZIONE DI ATTEGGIAMENTI, ABITUDINI E STILI DI VITA NUOVI E SOSTANZIALMENTE DIVERSI DA QUELLI IN USO.

E' FONDAMENTALE GARANTIRE **L'ASSESTMENT NUTRIZIONALE AL** PAZIENTE CANDIDATO MEDIANTE LA GESTIONE SPECIALISTICA MULTIDISCIPLINARE **PRE-OPERATORIA** AL FINE DI STABILIRE SE È IDONEO O MENO ALLA PROCEDURA CHIRURGICA E AL PERCORSO BARIATRICO.

La  È il team


# GRAZIE PER L'ATTENZIONE!