

Nutritional Considerations Post Bariatric Surgery

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DAA Involvement



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Submission from the Dietitians Association of Australia
House of Representatives Standing Committee on Health and Ageing
Inquiry into Obesity in Australia

The Dietitians Association of Australia (DAA) commends the Standing Committee for their inquiry into obesity in Australia and welcomes the opportunity to make a submission. DAA is Australia's largest professional nutrition organisation, representing over 3500 members. DAA is the leader in nutrition and has made addressing overweight and obesity a priority for the association.

What have DAA been doing?

- Establishment of the NSW Obesity Interest group 2000
- Overweight and Obesity Nutritional Guidelines 2005
- Establishment of the National Interest Group 2006
 - Current number of members 1118
- Obesity strategy developed Sept 2006- reviewed 2008.
- Workshops on Nutritional Management for obese and bariatric patients at National Conferences since 2006
- Australia Healthy Weight Week launched 2008 – continuing each January
- House of Reps Inquiry into obesity. Written submission and public hearing appearance by DAA June 2008
- Continuing education Days on Bariatric patients QLD 2008 and 2010
- National Road Shows on Management of the Bariatric Patient (Vic, NSW, SA, WA) 2009
- Review of national Overweight and Obesity Nutritional Guidelines 2010/2011
- New Nutritional Guidelines for Bariatric patients 2010/2011

Nutritional considerations and complications

Dependent on several factors:

- Type of surgery
- Compliance with diet
- Compliance with supplementation
- Engagement and follow-up with treatment team



Laparoscopic Adjustable Gastric Band (LAGB)

Purely restrictive procedure

- Need to choose foods wisely incorporating adequate protein, iron, zinc, calcium and folate
- Even with the best diet – unable to meet all micronutrient requirements everyday
- Require a good general multivitamin / mineral per day



LAGB

Possible nutritional deficiencies include:

- Iron deficiency – most common
- Vitamin D (generally present pre-operatively)
- Protein, calcium, B12, zinc, thiamine and folate - possible but rare

Cause – usually inadequate intake and inadequate diet

LAGB

- Education re: how to eat not just what to eat to avoid maladaptive eating behaviours
- Monitoring for over tight bands that could prevent having an adequate diet
- Education on other components of food (probiotics, fibre, anti oxidants)
- Compliance with supplements

NEWSL Questionnaire

Name: _____
Date: _____

To help us ensure that your operation is working to its best ability for you, we need the following information:

Please fill in the table below by ticking how often you eat the following foods:

FOOD	Daily	2-3 x per week	Once per week	Few, rarely	Monthly	Less than monthly or never	Do not eat
Beef, chicken							
Other meat							
Small fish							
Large fish							
Seafood / other fish							
Apples / other fruit							
Cereals / other grains							
Leafy veg							
Other veg							
Fish / shellfish							
Herbs							
Spices							
Drinks							
Alcohol							
Uncooked veg							
Other							

Please tick the box that best describes how often you regurgitate (vomit) food on average:

More or rarely than once per month	Less than 1/2 hour
Less than or equal to once per fortnight	1/2 - 1 hour
Less than or equal to once per week	1 - 2 hours
2 - 3 times per week	2 - 3 hours
Daily	4 - 5 hours

Please tick the box that best describes how long it takes you, on average, to eat a meal:

Less than 1/2 hour	1/2 - 1 hour
1 - 2 hours	2 - 3 hours
3 - 4 hours	4 - 5 hours
5 - 6 hours	7 - 8 hours
9 - 10 hours	11 - 12 hours
13 - 14 hours	15 - 16 hours
17 - 18 hours	19 - 20 hours
21 - 22 hours	23 - 24 hours
25 - 26 hours	27 - 28 hours
29 - 30 hours	31 - 32 hours
33 - 34 hours	35 - 36 hours
37 - 38 hours	39 - 40 hours
41 - 42 hours	43 - 44 hours
45 - 46 hours	47 - 48 hours
49 - 50 hours	51 - 52 hours
53 - 54 hours	55 - 56 hours
57 - 58 hours	59 - 60 hours

Please tick the boxes that best describe why you stop eating a meal:

	Never	Sometimes	Usually	Always
• Feel pain or discomfort				
• Vomiting / regurgitation				
• The plate is empty				
• Feeling of fullness				
• I stop myself				

Sleeve gastrectomy

- Reductive operation so same volume issues as for AGB
- Also hormonal effects reducing appetite
- Possible decreased acid environment because of reduced stomach – some practices also supplement with calcium citrate in addition to multi vit/min
- Limited long term data so unknown long term nutritional complications



Roux-en-Y gastric bypass

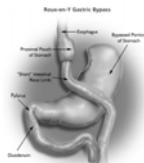
Restrictive and malabsorptive procedure

- Same volume issues for bands / sleeves
- Duodenum and first part of jejunum bypassed so reduced acid environment in stomach, malabsorption of iron B12 and calcium
- Deficiencies of protein, iron, zinc, B12, calcium, Vitamin D – more likely and more common. Thiamine, Vitamin A possible but rare.

Roux Y gastric bypass

Supplementation with:

- 40 – 60mg iron
- 1000ug B12
- 1500mg calcium citrate per day



To prevent iron, B12 deficiency and metabolic bone disease is essential.

J1 bypass / BPD +/- duodenal switch

BPD – similar nutritional complications as for RYGB

J1 bypass - purely malabsorptive procedures (not done anymore). Causes fat malabsorption. Need to monitor fat sol vitamins and supplement with VitABDECK

What we monitor routinely

Compliance with diet

- Pre operative education
- Post operative education and follow-up
- monitoring for signs of maladaptive eating
- monitoring for indications of over tight band
- Monitoring for strictures (sleeve / RY bypass)



Compliance with supplementation

Needs to be assessed at every visit. No matter how good they feel they do need supplements
❖What and how often!



Recommendations!!

Band / sleeves

- Varies between practices
- No perfect supplement until recently
- Palatability
- Nutri-chews / Elevit / Centrum / Swiss Womens...

By-pass

- We use 1 x Elevit, 1 x Nutrition care sublingual B12, 2 x Citrical + D

Follow-up

None of this can be monitored without commitment to follow up. This needs to commence pre-operative!



Take home message

Monitor rigorously:

- Pre-operatively
- Post-operative
- Multi disciplinary teams
- Do everything in your power to encourage follow up and engagement.