



Practical Pearls for Outpatient Care After Bariatric Surgery

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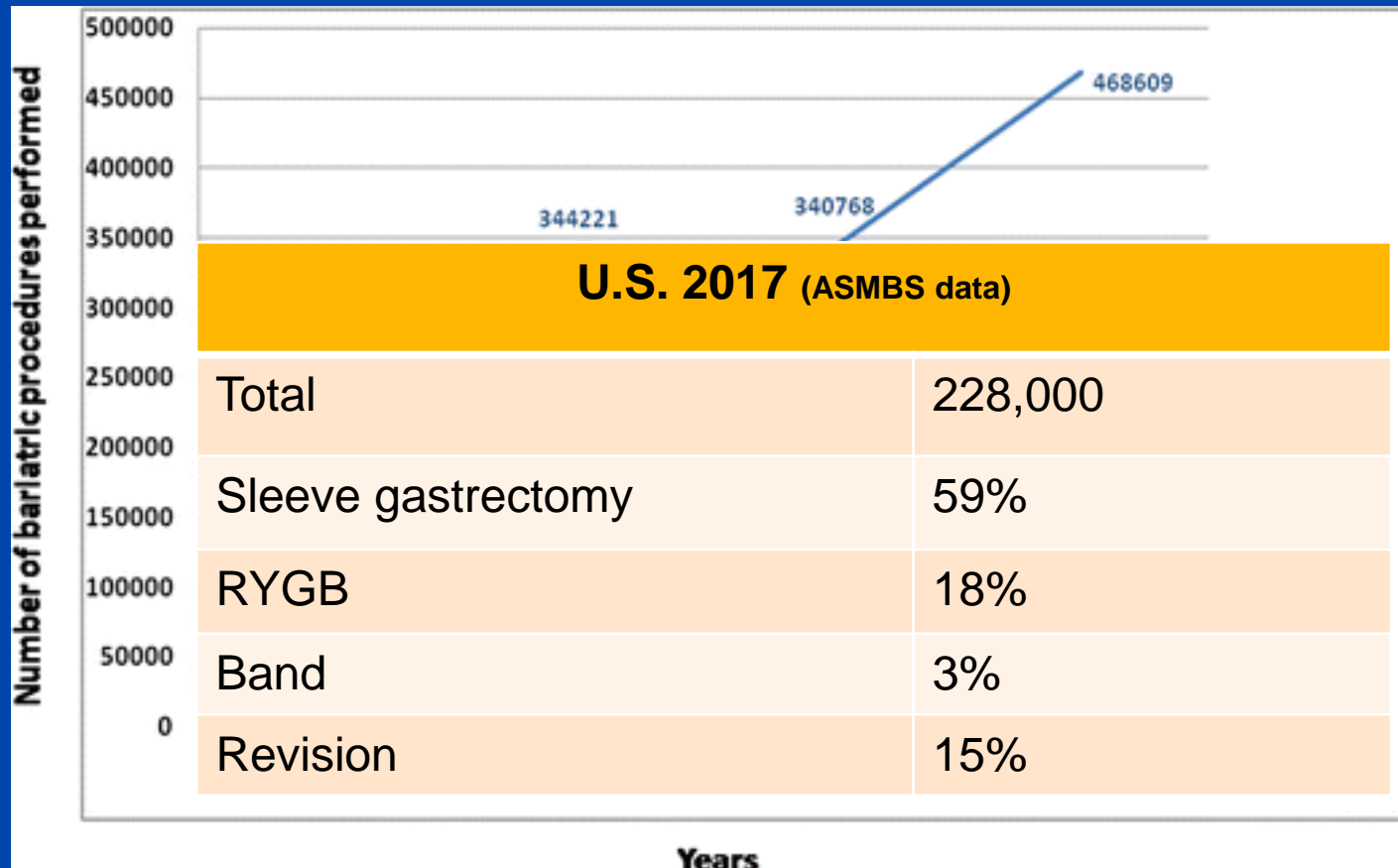
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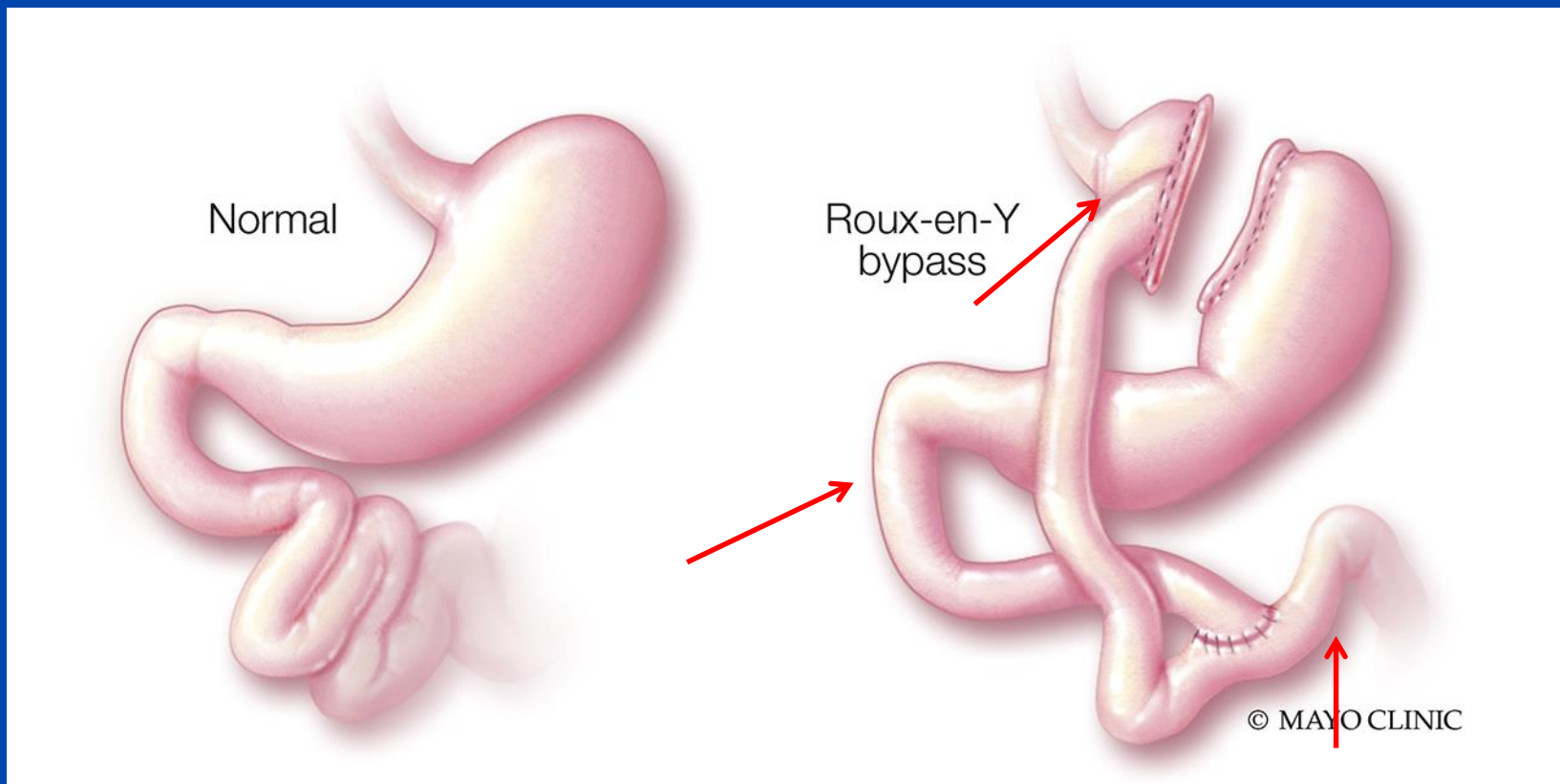
Disclosures

- Nothing to disclose

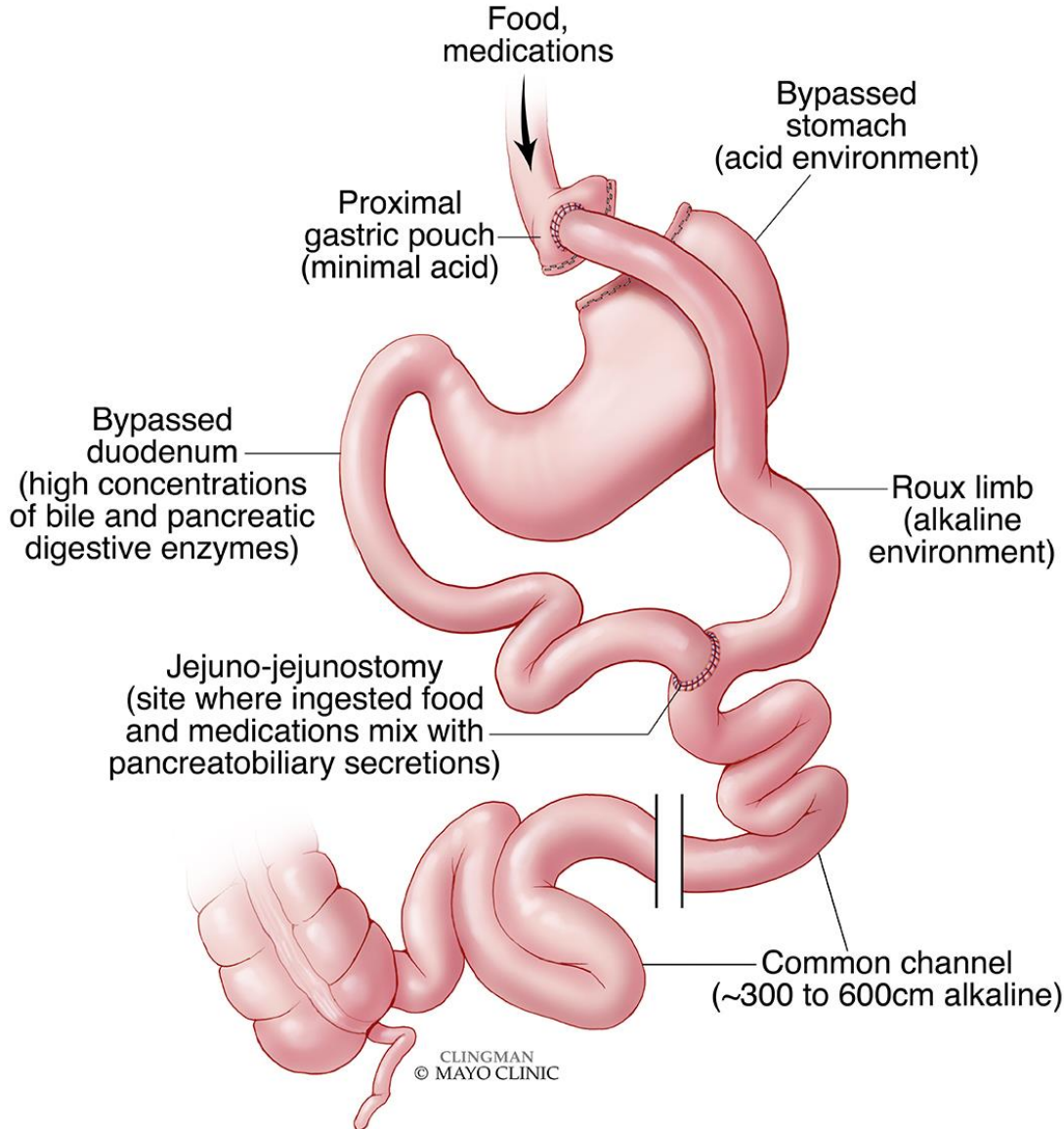
Bariatric Surgery Trends Worldwide



Roux-en-Y Gastric Bypass

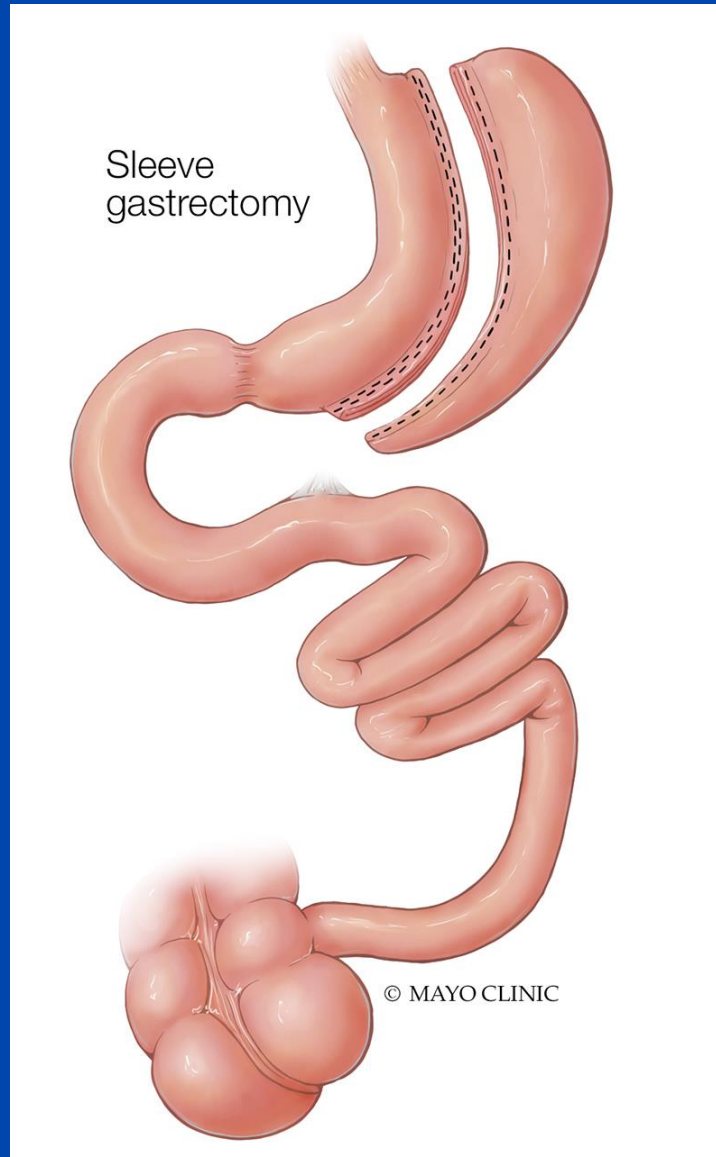


Anatomy of Roux-en-Y

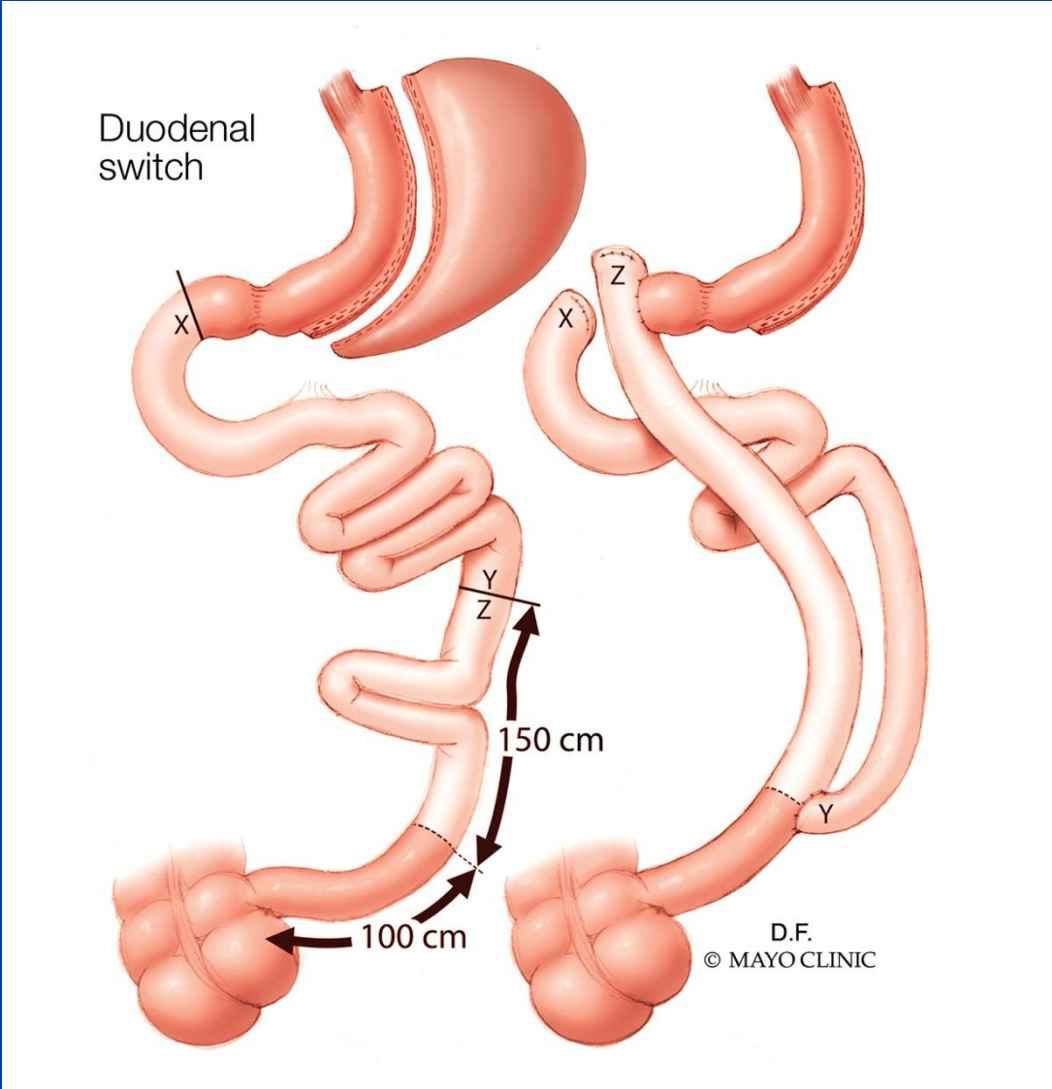


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Sleeve Gastrectomy



Duodenal switch



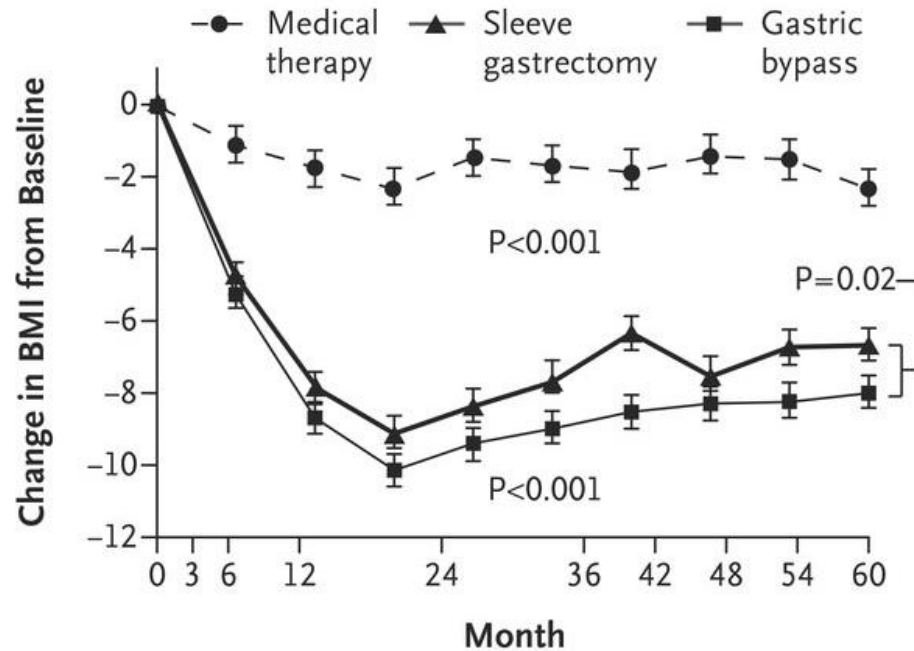
Pearl #1

Confirm post-surgical anatomy as future risk for nutritional deficiencies and weight regain is determined by this.

And therefore improvements in type 2 diabetes, hyperlipidemia, hypertension, mechanical arthropathy, etc.

Bariatric surgery works

C Body-Mass Index



Mean Value at Visit

Medical therapy	36.4	34.1	35.0	34.8	35.1	34.0
Gastric bypass	37.0	26.9	27.4	28.2	28.6	28.9
Sleeve gastrectomy	36.0	26.9	27.7	28.1	28.2	29.3

Nutrition

Risk of nutritional deficiencies

Short term (days – weeks)

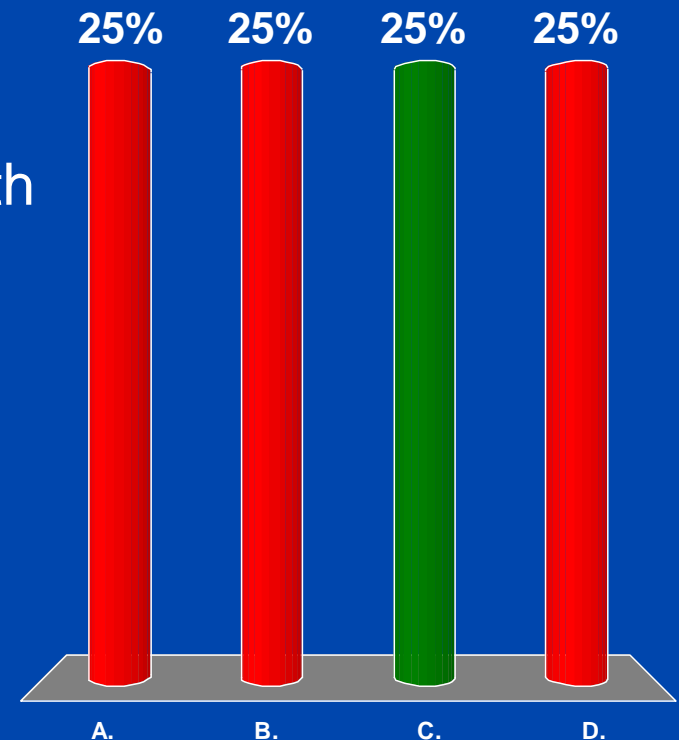
Medium term (months)

Longer term

A 48 year old lady underwent laparoscopic Roux-en-Y gastric bypass surgery 5 years ago. She now presents to you with greater shortness of breath on exertion and fatigue. Physical examination reveals conjunctival pallor. Lab testing shows a hemoglobin concentration of 9.5 g/dL (11.6- 15.0 g/dL), with a low MCV and a low ferritin level. 25 (OH) D, liver function tests, renal function and B12 levels are within normal limits.

What is the next best step?

- A. Ensure adequacy and compliance with vitamin and mineral supplementation
- B. Upper GI endoscopy to rule out anastomotic ulceration or bleeding
- ✓ C. Gynecology consultation to manage heavy menstrual periods
- D. Blood transfusion for symptomatic iron- deficiency anemia



Answer: C

- The post gastric bypass anatomy predisposes to developing iron deficiency as iron is best absorbed in the proximal duodenum. In cases of mild iron deficiency anemia, other sources of blood loss should be minimized before higher risk procedures such as an EGD or blood transfusion be undertaken. Even if patients are taking their supplements as prescribed, about 25% will require additional iron supplementation.

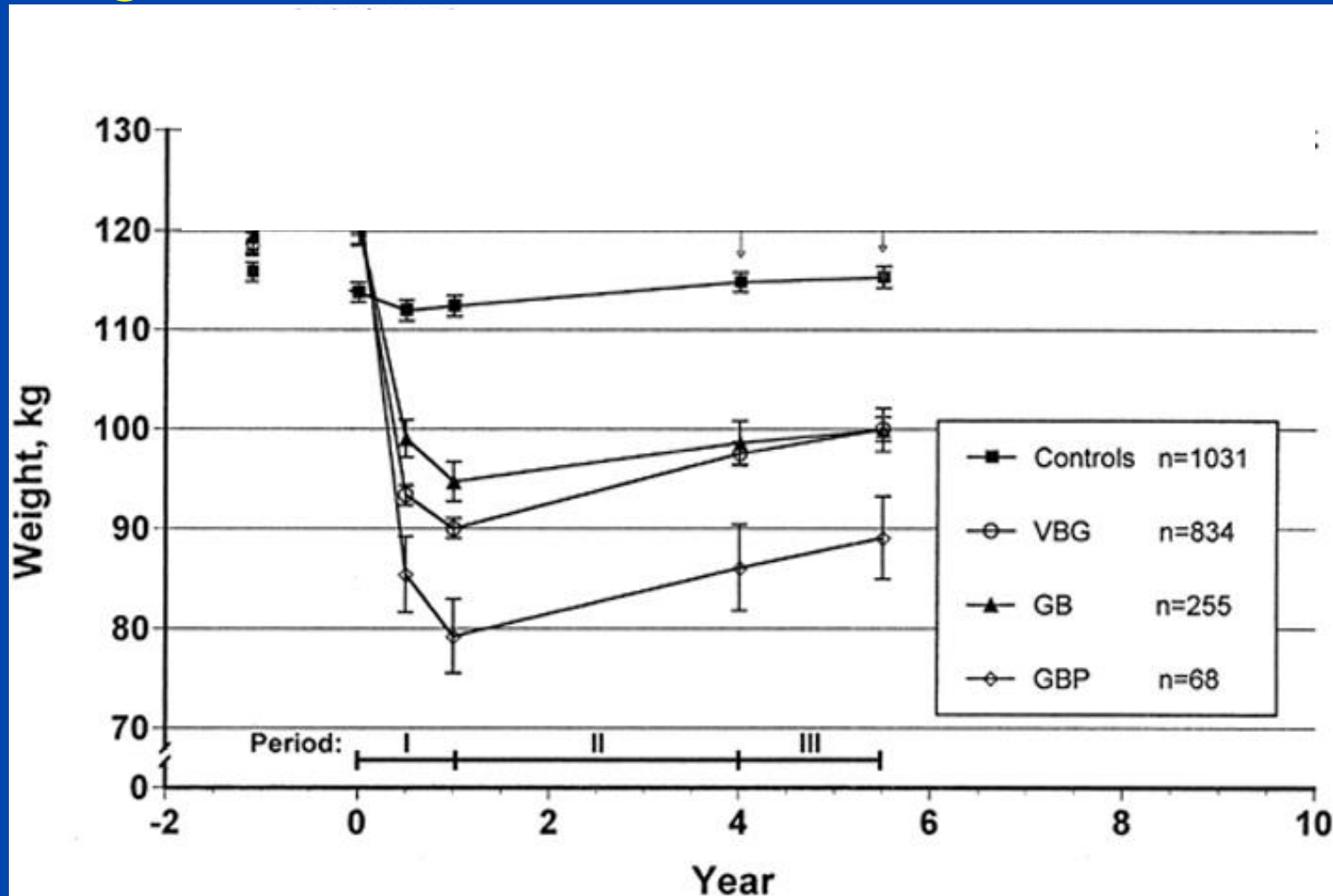
Vitamin and mineral supplementation

- 200% of RDA for vitamins AND minerals
- Calcium citrate: 1500-2000 mg elemental calcium daily with meals in divided doses
- Vitamin D3: Consider 5000 units daily
- B-12: 1000 mcg deep SQ monthly OR 500 - 1000 mcg orally daily (will need level)
- Consider deficiencies in vitamins A, zinc and copper (in mal-absorptive procedures or if symptomatic)
- Annual monitoring: CBC; ferritin; 25(OH)D; 24-hour urine volume, calcium, creatinine, oxalate

Pearl #2

Vitamin D and iron (especially men) deficiencies are the most common nutritional deficiencies after RYGB due to anatomical predisposition.

Weight



Diet

- Assess dietary compliance and recognize maladaptive eating
- Food 'aversion' exists
- All patients should see a bariatric dietician if weight regain occurs

Physical Activity

- Encourage physical activity (150-300 min/week) that is moderate in intensity

(Your breathing quickens, but you're not out of breath; You develop a light sweat after about 10 minutes of activity. You can carry on a conversation, but you can't sing.)

NOT moderate intensity physical activity

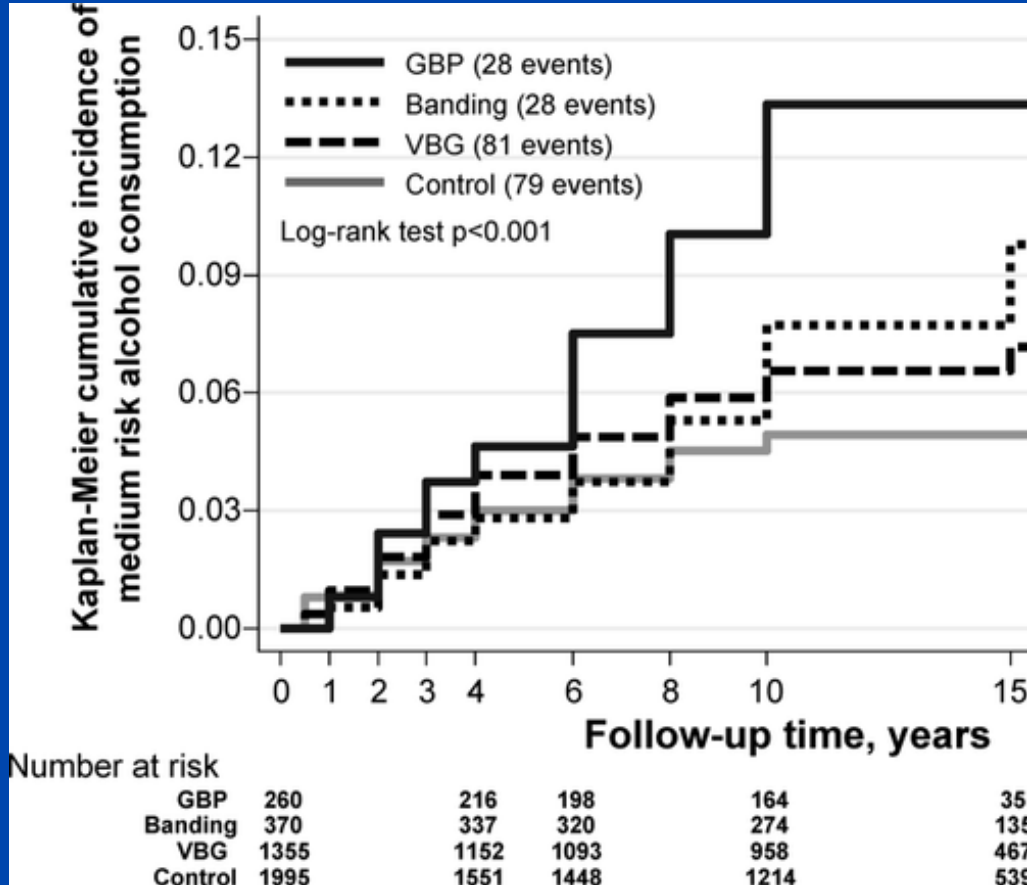
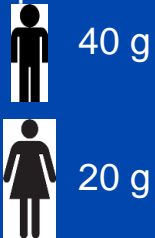


Important considerations:

- Avoid NSAIDs where possible (esp. RYGB)
- Chewable ASA 81 mg OK if indicated for cardiovascular disease
- Ask about need for support group or body contouring surgery
- Assess continued need for/use of CPAP
- Monitor bone health: increased risk of fracture after bariatric surgery
- Screen for alcohol use

Risk of alcohol use disorder

Medium risk alcohol consumption:



Pearl #3

The anatomical changes of a RYGB predisposes to alcohol use disorder, even when none existed pre-operatively.

Unique to RYGB

- Dumping
- Hypoglycemia
- Screening for gestational diabetes

Summary

- Surgery type determines risk
- Ensure patients are knowledgeable about their responsibilities (diet, exercise, supplements)
- Recognize weight recidivism and intervene if appropriate
- Screen for excess alcohol use

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