Bariatrics and Obesity in the elderly population

- Caring for residents who've had bariatric surgery
- Caring for residents with obesity
- Weaving Dignity and Sensitivity into your daily care of people with obesity

Steve Heuer PA-C

Disclosure: Employed by UW Health Metabolic & Bariatric Surgical Weight Loss Program.

Obesity

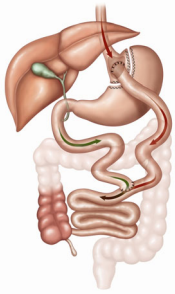
- During the past 30 years, there has been a dramatic increase in obesity in the U.S.
- More than 1/3 of U.S. adults are obese

Center for Disease Control and Prevention

What's out there ?
past and current bariatric surgeries

- Gastric Bypass (RNY)
- Vertical Sleeve Gastrectomy (Sleeve)
- Lap-Band
- VBG (vertical band gastroplasty)
- Duodenal Switch

Gastric Bypass



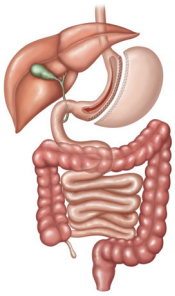
Restrictive (small pouch size)

Malabsorptive
(skips part of the intestine)

Alters hunger hormones & insulin sensitivity
- little to no hunger
- much improved diabetes

The most common bariatric surgery until recently

Vertical Sleeve Gastrectomy



Restrictive (small pouch size)

To a lesser degree:
alters hunger hormones

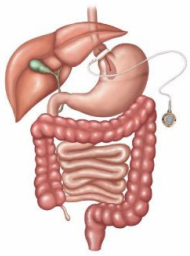
~ The most popular bariatric surgery today

Lap-Band

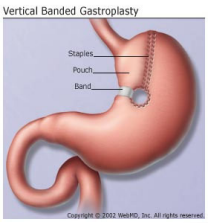
small pouch size, a speed bump

PROBLEMS
- **Does not reduce hunger**
- **Does not insulin sensitivity**
- **Restriction can be quite variable**
- **If too tight or not following eating rules**
  - **Pain**
  - **Reflux (GERD)**
  - **Esophageal dysmotility and deformity**

- **Band volume reduction (unfill)**
  loss of restriction = **on-off switch**
- **Band can slip (up or down)**
  On Upper GI (band appears horizontal)
- **Band can erode into the stomach**



VBG
Vertical Band Gastroplasty



Similar to the lap-band

Restrictive (small pouch size)
A speed bump

PROBLEMS
- **Hunger unchanged**
- **Insulin sensitivity unchanged**
- **Stenosis (scaring)**
  - Too tight leads to very poor nutrition
  - UGI shows very slow transit of contrast

No longer performed.
More popular 20 years ago.

Duodenal Switch

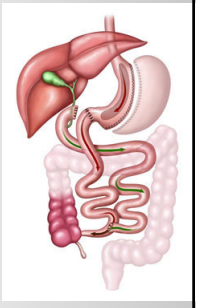
- **Restrictive** (small pouch size)
- **Malabsorptive**
  skips large portion of small intestine
- **Alters hunger hormones and insulin sensitivity**
  - ✓ little to no hunger
  - ✓ much improved diabetes

PROBLEM Poor nutrient absorption

↓

MALNUTRITION

Keep a closer eye on these patients
- ✓ Check nutritional labs more often
- ✓ Supplement compliance is crucial

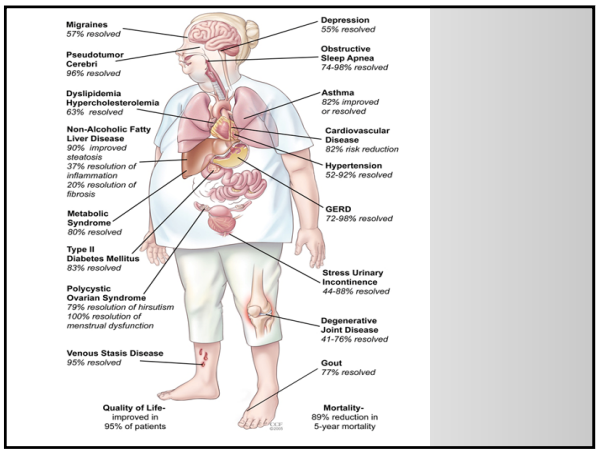


~Far less common these days

Why surgery ?

Improved Co-morbid Conditions

- Type 2 Diabetes
- Obstructive sleep apnea
- High cholesterol
- Hypertension
- Heart Disease
- GERD (reflux/heart burn)
- Gallstones
- Degenerative joint disease
- Fatty liver disease
- Asthma
- Stress incontinence
- Birth defects
- Miscarriages
- Infertility
- Cancer
  - Breast
  - Cervical
  - Endometrial
  - Ovarian
  - Colorectal
  - Liver
  - Pancreatic
  - Esophageal
  - Lung
  - Prostate
  - Kidney
  - Lymphoma
  - Multiple myeloma
  - Leukemia



The end-game

is not a number

- ✓**Improved Quality of Life**
- ✓**Longer Life**

A "normal" BMI is not necessary to achieve profound health benefits and improved quality of life.

Eating Rules (habits)

Support & reinforce eating rules and habits

- ✓**Eat slowly (w/o distractions)**
- ✓**Keep portions small**
  - **One bite can be all it takes to be too much**
- ✓**Chew Chew Chew**
  - **When in doubt spit it out**

WHY?

- ➢**Stomach is now:**
  - **much smaller**
  - **not stretchable**
  - **no longer able to chew food (if your mouth didn't)**

Eating Rules (habits)

Don't drink with meals
or immediately after eating

WHY?

Cheat #1

- It can flush the pouch making it easier to continue eating/grazing
- It robs you of satiety (sense of fullness)
- It can be too much volume for your stomach, triggering pain and vomiting.

Best to wait 30-60 minutes

Eating Rules (habits)

AVOID or limit:

- **Calorie dense foods (high-cal, low-nutrient)**
- **Carbonated beverages**
- **Sweets (natural sugars)**
- **Alcohol**

Eating Rules (habits)

AVOID or limit:

- **Calorie dense foods (high-cal, low-nutrient)**
- **Carbonated beverages**
- **Sweets (natural sugars)**
- **Alcohol**

Cheat #2

Promotes cravings and is an easy way to get in more calories than needed, leading to weight regain.

Eating Rules (habits)

AVOID or limit:

- Calorie dense foods (high-cal, low-nutrient)
- **Carbonated beverages**
- Sweets (natural sugars)
- Alcohol

Bubbles can stretch the pouch. This can be painful, might aggravate GERD or (over time) enlarge the pouch.

Eating Rules (habits)

AVOID or limit:

- Calorie dense foods (high-cal, low-nutrient)
- Carbonated beverages
- **Sweets (natural sugars)**
- Alcohol

Too much sugar (any natural sweetener) and sometimes really fatty foods can trigger a dumping episode.

Dumping Syndrome

Symptoms (patient may experience some or all)

- ❑ Flushed feeling
- ❑ Lightheaded
- ❑ Racing heart (tachycardia)
- ❑ Sudden and profound fatigue
- ❑ Nausea (mild to profound)
- ❑ Belly discomfort
- ❑ Vomiting
- ❑ Diarrhea

Dumping Syndrome

- Dose-dependant > 5 grams of sugar
- Sx present 2-20 minutes after consuming the triggering food or drink
- Seen in ~ 50% of RNY patients
  - Unpredictable
- OTC cold, flu remedies often contain natural sweeteners and alcohol

Eating Rules (habits)

AVOID or limit:

- Calorie dense foods (high-cal, low-nutrient)
- Carbonated beverages
- Sweets (natural sugars)
- **Alcohol**

Alcohol

Alcohol absorbs more completely and lightning fast

leading to more rapid, intense, and lasting inebriation with far less alcohol than prior to surgery.

- → Weight regain
- → Rapid intoxication →DWI
- → Toxicity (liver)
- → Transfer of addiction

Nutrition considerations
(eating rules part 2)

- ✓ **Water (nutrient #1)**
- ✓ **Macronutrients**
  - **Protein**
  - **Fats (oils)**
  - **Carbs**
- ✓ **Micro-nutrients**
  - **Vitamins**
  - **Calcium**
    - **+ other minerals**
  - **Iron**

WATER
and other fluids

Water water water

We all should be drinking enough water to have to urinate every 2-3 hours during the day.

CHALLENGE: don't flush your pouch

Wait 45-90 minutes after a meal before returning to fluids

Sweet drinks and bubbles

Bubbles can be painful (some have difficulty belching)
Sweet drinks promote obesity and may trigger a dumping episode.

Alcohol absorbs very rapidly and more completely

Easy to get drunk or toxic
Liquid OTC preparations may have sugar +/or alcohol.

Macro-nutrients (all of us)

PROTEIN

- **Protein first and at every meal**
- **Helps with satiety**
- **Helps with sustained energy**
- **60g-100g/day**
- **<u>Less</u> processed meats**
  - **Brats**
  - **Dogs**
  - **Case meats/cold-cuts (varies)**

Macro-nutrients (all of us)

FATS

- Eat some fat at every meal
- Avoid processed fats
  - Shelf-foods often contain processed (trans) fats for shelf-life.
  - If it doesn't rot it's not food

➢ **Better oils are:**

- Extra virgin Olive
- Avocado
- Coconut

Macro-nutrients (all of us)

CARBS

- Complex/slow carbs are the best
- Minimize simple/fast carbs
  - ✓ **Sweets + sweet drinks**
    - including juice
  - ✓ **Flour-based foods**
    - Breads
    - Pasta
    - Chips
    - Crackers
    - Pastries

Micro-nutrients

Vitamins

- ❑ **Mulit-vit complete (chewable)**
- ❑ **B-complex (B-50)**
  - Make sure it contains at least 50mg thiamine
  - B-3 (niacin) in higher doses triggers red-face and flushed feeling.
- ❑ **B-12 sublingual 500-1000mcg**
  - WHY SL? With a smaller stomach there is much less intrinsic factor (necessary for B-12 absorption from the gut).
- ❑ **D-3 5000 iu/day (check)**

Micro-nutrients

- ❑ **Calcium**
  - **Calcium citrate (Citrucel)**
  - **Take 2-3 x/day (to a total of 1200-1600mg/d)**
    CHALLENGE: not close to when taking iron.
- ❑ **Iron**
  - **ferrous sulfate does not absorb as well, is more likely to cause GI upset**
  - **Ferrous Gluconate 325mg**
  - **Take with vit C and not close to when taking calcium**

TESTING for micros

ROUTINE SCREEN

- **B-1 (Niacin)**
- **B-12**
- **Calcium**
- **PTH**
- **Vit D-25**
- **CBC**
- **Iron**
  - **TIBC**
  - **Ferritin**
- **Vit D**

MANY OTHERS

- **B-6**
- **Vit-A**
- **Vit E**
- **Vit K**
- **Selenium**
- **Zinc**
- **Copper**
- **etc……..**

Vitamin D is often low (<30)

TREATMENT

➢**IF D is 15-25**
- Ergocalciferol 50,000 IU 3 times weekly for 4 weeks
- AND OTC D-3 5000 iu daily
- THEN Ergocalciferol 50,000 IU weekly (ongoing)

➢**IF D is 1-14**
- Ergocalciferol 50,000 IU 3 times weekly for 8 weeks
- AND OTC D-3 5000 iu daily
- THEN Ergocalciferol 50,000 IU weekly (ongoing)

➢**IF D is 25-35** Ergocalciferol 50,000 IU weekly (ongoing)

RECHECK after 3 months (and yearly)

B-1 (thiamine) + B-1

Vitamin B-1 below 60 is urgent.

- Thiamin IM 100mg daily for 3 injections
- OTC vitamin B-1 (thiamine) 100mg daily.
- Recheck in 3 weeks.

Elevated B-1 and B-12 are very common and not worrisome.

IF significantly elevated,

->THEN ok to reduce B-complex or B-12.

Recheck in 3-6 months

Pre-albumin

- **Pre-albumin** <20 indicates inadequate protein absorption.
- I ask patients to increase protein intake (maybe add a protein shake) and recheck in three to six months.

A word on Calcium

Calcium in the chem panel is not a reliable check
PTH
Vit D-25

IF Vit D is low, PTH is often very elevated

WHEN D is in normal range (50-80)
and PTH is high => insufficient calcium absorption

PTH takes calcium from your reserve (bones and teeth)

Abdominal Pain
is a common complaint

Eating Rules (habits)

- ✓Eat too fast
- ✓Eating too much
  - – One bite can be all it takes to be too much
- ✓Not chewing well enough
  - – When in doubt spit it ou

Abdominal Pain

Some foods may consistently be bothersome

- **Meat**
  - esp. dry chicken
  - When in doubt spit it out
- **Bread**
  - Toast or more substantial breads may be fine
- **Fruits with thicker skins**

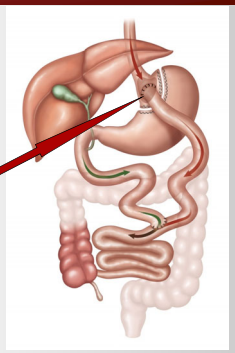
Abdominal Pain

- **Pain with eating?**
  - ➢**First bite => Think ULCER or stricture**
    - Is there nausea too? => THINK ulcer
  - ➢**Toward the end of the meal** (or after)
    - Eating too much or too fast
    - Not chewing food well enough
    - Gallbladder
      - – Pain is variable (wavelike) upper abdomen, often radiates to chest or upper back
    - Constipation
      - – Pain is often lower in abdomen
      - – May radiate to low mid back

Abdominal Pain

Nicotine use

Ulcer at GJ anastomosis
- ❑**Nicotine**
- ❑**Regular use of NSAIDS**



Protect the Pouch
GI irritants MUST GO

NSAIDS
- – **Motrin**
- – **Aleve/Naprosyn**
- – **Voltaren**
- – **etc….**
- – **Aspirin**

ALTERNATIVES
- –Tylenol
- –Fish oil
- –Tramadol
- –Opioids
- –CBD oil

PO steroids (daily)
- – **IM Steroids injections**
- – **Interarticular steroids injections**

Protect the Pouch
GI irritants MUST GO

Daily bisphosphonates such as Fosamax are irritating to the gut, trigger GERD.

ALTERNATIVES
- **IV bisphosphonate + Zoledronic acid 5mg once yearly**
- **IV Ibandronate 3mg every 3 month**
- **PO Alendronate 70mg weekly**
- **PO Risedronate 35mg weekly (or 150mg monthly)**
- **PO Ibandronate 150mg monthly**

PPIs
Omeprazole and more

When ongoing PPI therapy is indicated:

- Ongoing GERD sx (more likely in Sleeve patients)
- History of every having a gastric ulcer post-op
- Ongoing ulcer-promoting behaviors
  - Daily ongoing NSAID use
  - Nicotine use

MEDICATION ABSORPTION

Altered gut may mean altered absorption of meds

- No comprehensive pharmacokinetic studies on post-bariatric patients
- Mostly an issue with gastric bypass (RNY) and duodenal switch

MEDICATIONS

A smaller body may need a lower dose

Bottom-line

Monitor for the desired medication effect (and side-effects)
THEN adjust as needed.
Just like you do when starting a new med.

Skin and Bone issues

- Extra skin
  - Skin fold rash
    - Air and sun exposure
    - Daily Nystatin pwd
    - Periodic or prn Lamisil AT cream (or stronger antifungal)
    - Referral to plastic surgeon (document skin issues)
- Bones resurfacing
- Loss of bone mass
  - Osteopenia
  - Osteoporosis
  - Calcium and Vit D
  - Weight-bearing exercises

Weight regain

- Old habits die hard (drift back)
  - Distraction = mindlessness
  - Stress
  - Boredom
- Our world makes it so easy
- Metabolism wanes
- Activity wanes

Too much weight loss

- May be a problem with the anatomy
  - Stricture
  - Ulcer
- No appetite
- Micro-nutrient deficiency and lead to macronutrient deficiency
- Eating disorder

Transfer of addictions

- Alcohol
- Tobacco
- Other drugs
- Gambling
- etc……

Diabetes

- Diabetes often resolves following bariatric surgery
- Diabetes can return
  - Weight regain
  - Poor eating
    - Sweets
    - Sweet drinks
    - Simple carbs
  - Sometimes just with time it can return

Sleep Apnea

- Sleep apnea often resolves (88%) with profound weight loss in the first year following surgery.
- CPAP or Bipap or AutoPap are often discontinued.
- Sleep apnea can return with weight gain.
- Chronically poor sleep greatly promotes weight gain. (which makes sleep apnea worse)
- Use Stop Band or Epworth scales yearly to see of a sleep consult (sleep study) is indicated.

TESTS considerations

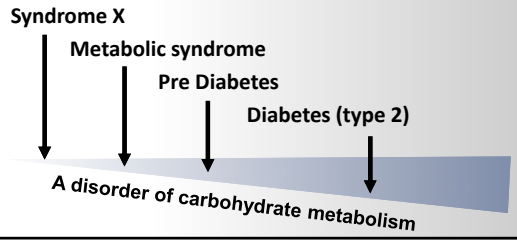
- **Upper GI**
  - use thin Barium (water soluble) **150 cc max**
- **CT with oral contrast**
  - limit oral contrast to **150 cc**
    - give **just before** CT is to begin
- **Bowel prep for colonoscopies or pre-op**
  - give ½ volume over longer period of time (36 hours)
  - OR smaller-volume option

Caring for residents with obesity

- **The Diabetic Spectrum**
- **Sleep**
- **Skin Care**
- **Mobility**

The Diabetic Spectrum

Most who have obesity also have some degree of diabetes.



Know your carbs

- Promote slow (complex) carbs
- Reduce or eliminate fast (simple) carbs

Fast/simple carbs:
- Sweets
  - Including sweet ingredients
- Sweet drinks (include milk)
- All things flour + corn
  - Bread
  - Pastries
  - Pasta
  - Chips
  - Crackers

Slow/complex carbs:
- Veggies
- Greens
- Legumes
- Nuts & Seeds

Fruits

Processed foods kill

- Meats are better if it's just meat
  - Avoid processed meats
    - Brats
    - Dogs
    - Case meats/cold-cuts (varies)
- Read the ingredients list

Rule #1: the fewer ingredients the better (healthier)

Rule #2: food that doesn't rot is not food

Sleep

- Enough sleep
- Sleep apnea & Hypoventilation
- Bead Elevation

Skin Care

- Daily bathing
- Skin fold cleaning
  - Drying
  - Sun light exposure
  - Medications
    - Nystatin powder
    - Other anti-fungals (prescription)
    - Gold bond

Mobility & Safe Transfer

- Patients with obesity often require more frequent repositioning as they are at higher risk of:
  - wounds
  - impaired circulation
  - nerve damage
  - respiratory distress
- Patient's may be less able to assist with transfers and repositioning
- Patient weight may exceed the capacity of available equipment

Movement => health

- Move often
- Footwear
- Gait Belt
- Walker

Anticipate his/her needs

- bariatric bed
- chair without arms
- accessible bathroom
- appropriate-sized blood pressure cuffs
- appropriate-sized hospital gowns

- **Become knowledgeable of your equipment:**
  - weight capacity
  - location
  - blood pressure cuffs
  - reinforced toilets, etc…

- Be mindful of the amount of physical space between items such as the bed, toilet, walls, etc.

Tools to Move

- **Stands:** used when a patient is able to bear some weight, has upper body strength, and follows commands
- **EZ-Lifts, Hoyer Lifts, and Ceiling Lifts:** used when a patient is unable to follow commands and/or unable to bear weight to upper or lower extremities
- **Hover Matt:** used for assistance with lateral sliding transfers
- **Gait Belt:** used when a patient is weight bearing or partial weight bearing and requires assist for ambulation and transfer activities.

Tools to Move

- **Encourage patient to assist in their own transfers and repositioning when possible.**
- **Seek input from the patient and family on successful strategies they may have used at home for safe maneuvers.**
- **Discuss transfer and positioning with your patient/resident PRIOR to the event.**
- **Be consistent across staff.**
  - **What works best for each patient**

Tact

- Choose words carefully
- Communicate using supportive language
- Put yourself in the patient's shoes and try to avoid using any statements or language that may be misinterpreted in a negative context
- Focus every statement and action on the care, quality, safety, comfort and providing a patient-centered experience for your patient

Obesity is a chronic illness
NOT A CHARACTER FLAW

- We don't judge or laugh at those with:
  - Diabetes
  - Heart disease
  - Cancer
  - COPD

  All these have a lifestyle component
  Obesity is just as deadly
- We still don't know all there is to know about the causes of obesity.
- Train your staff to be sensitive by being a good role model.
- Don't tolerate behind-the-back whispers and jokes about obesity, even in private.
- Lead by example

Obesity is a chronic illness
NOT A CHARACTER FLAW

- Train your staff to be sensitive
- Don't tolerate behind-the-back whispers and jokes about obesity, even in private.
- Lead by example (be a good role model)

There is no shortage of shame
thrown at individuals with obesity

- **People with obesity have endured decades of prejudice from every corner of life.**
- **Choosing bariatric surgery is often met with negative judgements (even by medical staff).**
  "That's the easy way" ***"That's so extreme"***

Tact

- **Refer to patients as those who suffer from morbid obesity**
  - rather than the "*morbidly obese patient*" or other derogatory terms. We wouldn't refer to a patient with ovarian cancer as "*the ovarian cancer women*."
- **Avoid referring to bariatric equipment in ways that might offend such as "*big boy bed.*"**

Respectful Habits

- **Introduce yourself and your role.**
- **Establish and maintain eye contact.**
- **Get to know the patient as an individual.**
- **Avoid assumptions based on weight, BMI, size and appearance.**

Respectful Habits

- Avoid using medical jargon & unfamiliar language.
- Practice teach-back and reflective listening.
- Communicate in a calm manner.
- Partner with & discuss plan of care with patient.

CHALLENGE

Go a day without saying "big words."

- Big
- Huge
- Large
- Massive
- Etc….