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

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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 (scarring)
  - Too tight leads to very poor nutrition
  - UGI shows very slow transit of contrast

No longer performed.

More popular 20 years ago.

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**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

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**Why surgery?**

- Improved Co-morbid Conditions
- Cancer
  - Breast
  - Cervical
  - Endometrial
  - Ovarian
  - Colorectal
  - Liver
  - Pancreatic
  - Esophageal
  - Lung
  - Prostate
  - Kidney
  - Lymphoma
  - Multiple myeloma
  - Leukemia

- 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
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?**
- 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**

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**Eating Rules (habits)**

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

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
- Less 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

**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**
- Mult-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

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**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...........

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**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 out

Abdominal Pain

Some foods may consistently be bothersome

▪ Meat
  o esp. dry chicken
  o When in doubt spit it out

▪ Bread
  o 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 GI anastomosis
- Nicotine
- Regular use of NSAIDS

Protect the Pouch

GI irritants MUST GO

NSAIDS
- Motrin
- Aleve/Naprosyn
- Voltaren
- etc....
- Aspirin

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

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

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 ever 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.

- Syndrome X
- Metabolic syndrome
- Pre Diabetes
- Diabetes (type 2)

A disorder of carbohydrate metabolism
Know your carbs

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

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<thead>
<tr>
<th>Fast/simple carbs:</th>
<th>Slow/complex carbs:</th>
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<tbody>
<tr>
<td>Sweets</td>
<td>Veggies</td>
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<td>Including sweet ingredients</td>
<td>Greens</td>
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<td>Sweet drinks (include milk)</td>
<td>Legumes</td>
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<td>All things flour + corn</td>
<td>Nuts &amp; Seeds</td>
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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....