



# UIHC Bariatric Surgery Nutrition

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# Objectives

- Learn bariatric pre-surgery diet education process
- Learn bariatric post-surgery diet advancement
- Learn general bariatric diet and lifestyle guidelines
- Learn diet adjustment tactics for particular situations
- Learn to troubleshoot various issues

# UIHC pre-bariatric surgery diet education

- Meet in class setting
- Provide each patient with eating plan
  - Based on calculations for weight loss
  - General goal: 10% weight loss over 6 months
- Teach exchange system
  - Helps patient learn to track protein and carbohydrate intake
  - Use 'bubble sheets'

# Bubble system

- Our presentation of exchange system
- ~45% carb
  - Grain, veg, fruit, milk
- ~30% pro
  - Meat/subs, milk, grains, vegs
- ~25% fat
  - Fats, med and high fat meats

1400 calories

Grains/starchy vegs	0 0
Meat/subs	0 0 0 0 0 0 0 0 0 0
Milk, skim	0 0 0
Veg (nonstarch)	0 0 0
Fruits	0 0 0
Fats	0 0 0 0 0 0 0
Water	0 0 0 0 0 0 0 0
Exercise	

# Bariatric nutrition follow-up

- Most meetings are individual
- Review patients' food records
- Review exchange system as necessary
- Stress nutrient-dense diet
- Stress adherence to bariatric guidelines

# Bariatric nutrition follow-up

- Compliance reflects motivation and understanding of lifelong habits needed
- Goals are
  - to be making progress toward diet recommendations
  - To be making progress toward exercise recommendations
  - To lose weight

# Bariatric diet recommendations

In preparation for bariatric surgery, patient needs to:

- Eat three meals per day
- Eat protein and carb at each meal
- Eat protein food first
- Eat nutrient-dense foods
- Avoid calorie-dense and non-nutrient-dense foods

# Bariatric diet recommendations

In preparation for bariatric surgery, patient needs to:

- Avoid pop, juice and alcohol
- Drink 8 oz skim/soy milk for snack 3 x day
- Drink 6+ cups plain water per day
- Avoid fluids with meals and within 30 minutes of meals



# Bariatric diet recommendations

In preparation for bariatric surgery, patient needs to:

- Chew food to puree consistency
- Take 30 minutes to eat meals
- Exercise 30+ minutes/day
- Avoid tobacco use
- Keep detailed records and bring to each appt

# Bariatric nutrition follow-up

## Weight loss goals:

- Generally encourage 10% weight loss over 6 months time
- If patient needs to lose a certain amount of weight to make surgery safe, that is per physician guidelines

# Dietitian visits

Patient meets with dietitian:

- At each compliance visit
- At pre-op visit
- At first post-op visit
- At one month post op visit
- Per request or need after that

# Psychological issues with food

- Many insurance companies require psych evaluations
- If binge eating, night eating, etc; psychologist may recommend additional sessions
- If patient with history of EDO, must be under control for 2+ years

# Pre-surgery diet education

## Diet progression:

- Bariatric clear liquid: in hospital
- Bariatric full liquid: days 2-14
- Bariatric pureed: days 15-30
- Bariatric mechanical soft: 31-60 days
- Bariatric general: day 61+

# Bariatric clear liquid

- Skim/soy milk
- Water
- Broth
- Ice chips
- Sugar-free popsicles

Patients are given medicine cups to sip from

Goal: 6 cups (8 oz each) water and 3 cups (8 oz each) skim/soy milk

Activity goal: walk 30 minutes/day (5-10 minutes at a time)

# Bariatric Full Liquid diet

## Meals:

- Yogurt (light, smooth)
- Soup (blended, strained)
- Pudding (no-sugar-added)
- About 4 oz per meal

## Snacks

- Double milk (8 oz skim milk plus 1/3 cup nonfat dry powder)
- Instant Breakfast (no-sugar-added)
- Greek yogurt (light)

Goal: up to 100 gm protein/day

# Bariatric Mechanical Soft Diet

Goal: 100 gm protein and 100 gm carb/day

- 3 meals/day
  - 3 oz protein, 1 carb, 1 veg and/or fat
  - 3 skim milk/soy milk/yogurt/Greek yogurt snacks
- Exercise: add strength training; increase to 60 minutes/day



# Bariatric General Diet

- More texture, more variety
- Nutrient-dense diet
- Goal: 100 gm protein, 100 gm carb/day
- Exercise 60 minutes/day; both aerobic and strength training

# Vitamin/mineral supplements

## RYGB

- Complete chewable multivitamin 2 x day
- Chewable calcium with D 3 x day
- Vit D, 1000 IU/day
- B12 tablet or sublingual, 500 mcg 1 x day
- B-complex tablet
- Iron, 65 mg/day

# Vitamin/mineral supplements

## Gastric sleeve

- Complete chewable multivitamin 1 x day
- B12 tablet or sublingual, 500 mcg/day
- Vit D, 1000 IU/day

## Gastric band

- Complete chewable multivitamin 1 x day

# Bariatric diabetic

- Close blood glucose monitoring by endocrine physician early after surgery
- Often go home on no diabetic medications
- Bariatric eating plan is a consistent carbohydrate eating plan

# Bariatric renal

Work with renal dietitian to create a plan

- Renal vitamin/mineral supplements
- Phosphate binder with milk
  - May have patient drink rice milk with protein powder added
- Amount of fluid allowed

# Bariatric pregnancy

- Close monitoring by obgyn
- minimum of 175 grams of CHO per day for pregnancy
- All bariatric supplements plus 2 prenats (RYGB)
  - VITAMIN A NOT TO EXCEED 5,000 IU PER DAY
- Weight gain goals: generally weight is about 20 pounds.
- Frequent ultrasounds may be helpful to make sure the baby is growing well.
- ~Avoid glucose tolerance test – instead consider home glucose monitoring, a fasting and 2 hour post-prandial glucose test or hemoglobin A1C.

# Bariatric Breastfeeding

- Continue bariatric supplements plus 2 prenats (RYGB)
  - VITAMIN A NOT TO EXCEED 5,000 IU PER DAY
- Weight loss goal: gradual loss of ½-1 lb/week toward goal
- Excess calorie restriction decreases milk supply
- Talk to physician about daily multivitamin for infant (poly-vi-sol)

# Bariatric athlete

Meet needs for particular sport with bariatric adjustments

- protein needs for endurance and strength-trained athletes range from 1.2 to 1.7 g/kg (0.5 to 0.8 g/lb) body weight per day
  - 100 gm protein goal meets most needs



# Bariatric athlete

- Carbohydrate needs: 30 to 60 g per hour of endurance exercise
  - limit carbohydrate intake to less than 10 grams per “dose”; 10 gm carb 3-6 x hr
- Fluid needs: (16 to 24 oz) fluid for every 0.5 kg (1 lb) of body weight (sweat) lost during exercise.
- Source: Nancy Clark’s Sports Nutrition books

# Troubleshooting various issues

- Dumping syndrome
  - Eating carbs first
  - Eating simple carbs
  - Drinking sugar-sweetened beverages
  - Drinking with meals or too close to meals

# Troubleshooting various issues

- Hypoglycemia
  - Skipping meals
  - Skipping milk snacks
  - Going too long between meals/snacks
  - Eating carbs first
  - Eating low fiber carbs
  - Meds need to be adjusted

# Troubleshooting various issues

- Hunger
  - Eating carbs first
  - Eating combination foods
  - Drinking with meals or too close to meals

# Troubleshooting various issues

- Limited weight loss
  - Snacking
  - Limited activity
  - Poor food choices
- Note: women with PCOS tend to lose weight more slowly in general

# Troubleshooting various issues

- Fatigue/low energy
  - Skipping meals
  - Skipping milk snacks
  - Avoiding carbs
  - Not taking supplements as directed

Questions...



# Resources

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# Resources

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