Treatment of Patients with Obesity:

New Perspectives in Primary Care

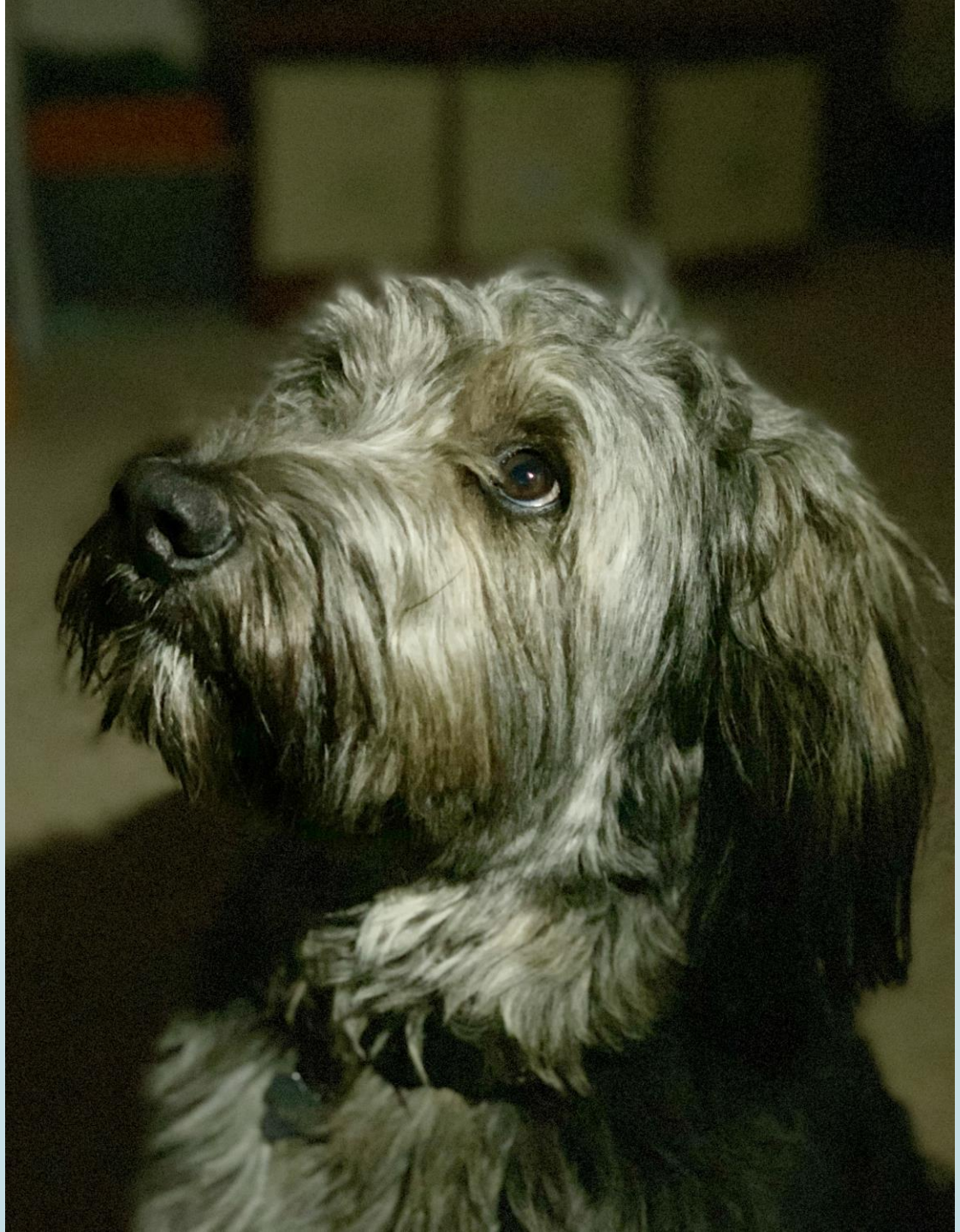
Introduction:

- Dr Andrew L Toth, MD
- Board Certified in Family Pracitce
- Board Certified in Obesity Medicine
- Lived in Wenatchee, WA for last 20 yrs

Disclosures:

- Receives honoraria for participating in Collaborative on Obesity treatment with AMGA. Sponsored by Novo-Nordisk
- Receives honoraria for CE courses and seminars, including this one.
- Non-salaried associate clinical professor UW school of medicine
- Partner in Wenatchee Valley Medical Group contracted with Confluence Health

I was raised as a cat lover, but many trail runs with my Dog have also made me a dog lover.



Walter

Objectives:

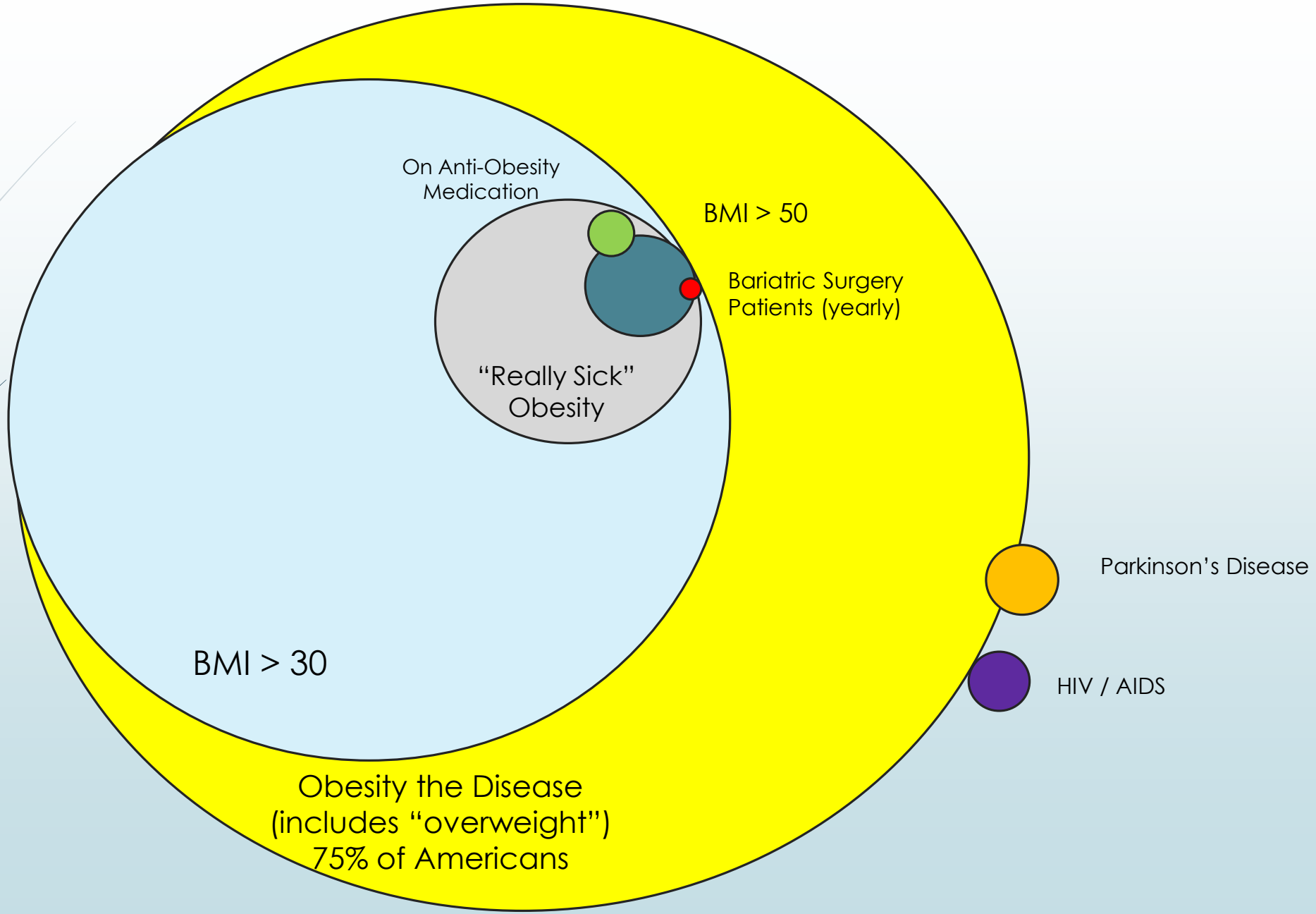
1. Discuss the New Paradigm of Obesity
2. Review the Best Practices of Obesity Treatment
3. Review some Barriers to the Treatment of Obesity
4. Review some Nutritional recommendations following Bariatric Surgery

The Story of Obesity Treatment

- **The Obesity Medicine Association's definition of obesity is "a chronic, relapsing, multifactorial, neurobehavioral disease, wherein an increase in body fat promotes adipose tissue dysfunction and abnormal fat mass physical forces, resulting in adverse metabolic, biomechanical, and psychosocial health consequences."**

- Rates of Obesity continue to climb
  - Obesity rates in adults now nearly 40% - highest ever
  - Including overweight, nearly 75% of adults in U.S. fall into this category
  - This growth continues despite increasing knowledge about the health benefits of exercise and healthy nutrition.

The Magnitude of Obesity



Defining a Disease

- A Clear definition of what is and isn't a disease is lacking
- A growing number of Medical and Scientific organizations have come to regard obesity as a disease
- In 2013 the AMA recognized obesity as a disease, not without some controversy

How Many see young woman?

How many see old woman?

I want you to shift your perspective to see the **same** old **problem** of **obesity** from a **new angle**

New Paradigm for Obesity

Old Paradigm

Obesity is **Not** a Disease

- It is a lifestyle choice (like wearing bicycle helmets)
- No specific symptoms associated with it
- It is a risk factor for disease, not a disease itself

New Paradigm

Obesity **Is** a Disease

- It is associated with impaired body function
- Like other diseases, it results from physiological dysfunction
- It causes, exacerbates or accelerates more than 200 comorbid diseases
- It is associated with a substantial burden of morbidity and premature death, in addition to social and economic dysfunction

As a disease in its own right…

- Obesity needs to be **respected**

  …as force for health, economic and social disruption

  …as a difficult pathophysiological challenge

  …as a complex and difficult problem demanding sophisticated thinking and interventions

- Obesity needs to be better **understood**

  …from mechanistic, clinical and public health perspectives

Continued:

- Obesity needs to be **treated**

  …using **ALL** effective means available

  …through the engagement of all relevant healthcare providers

  …through the use of effective evidence-based approaches

- Obesity needs to be **prevented**

  …using evidence-based approaches

Competing Models of Energy Balance Regulation

If you believe that purposeful behavior **drives** the physiology of energy balance regulation:

Implications:

- Increased caloric intake drives weight gain
- All calories have similar effects
- Calories burned during physical activity drive weight loss

If you believe that physiological regulation of energy balance **drives** behavior:

Implications:

- Changes in the modern diet alter physiology
- The chemical nature of the calories is critical
- Re-regulation of the abnormal physiology is essential for success

In normal physiology of Energy Balance the body seeks stable Fat mass

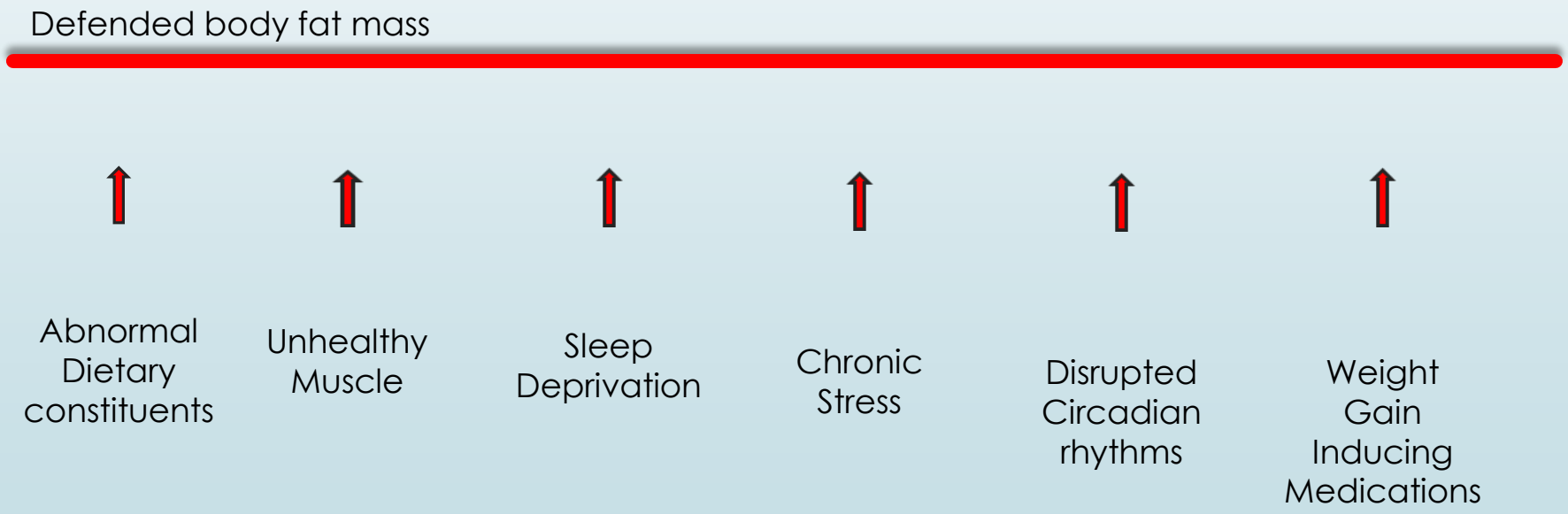
Why does the body defend the fat mass?

- The body needs to defend a fat mass set point
  - To shed the excess calories consumed daily (when we eat too much)
  - To recover appropriately from acute illness or injury

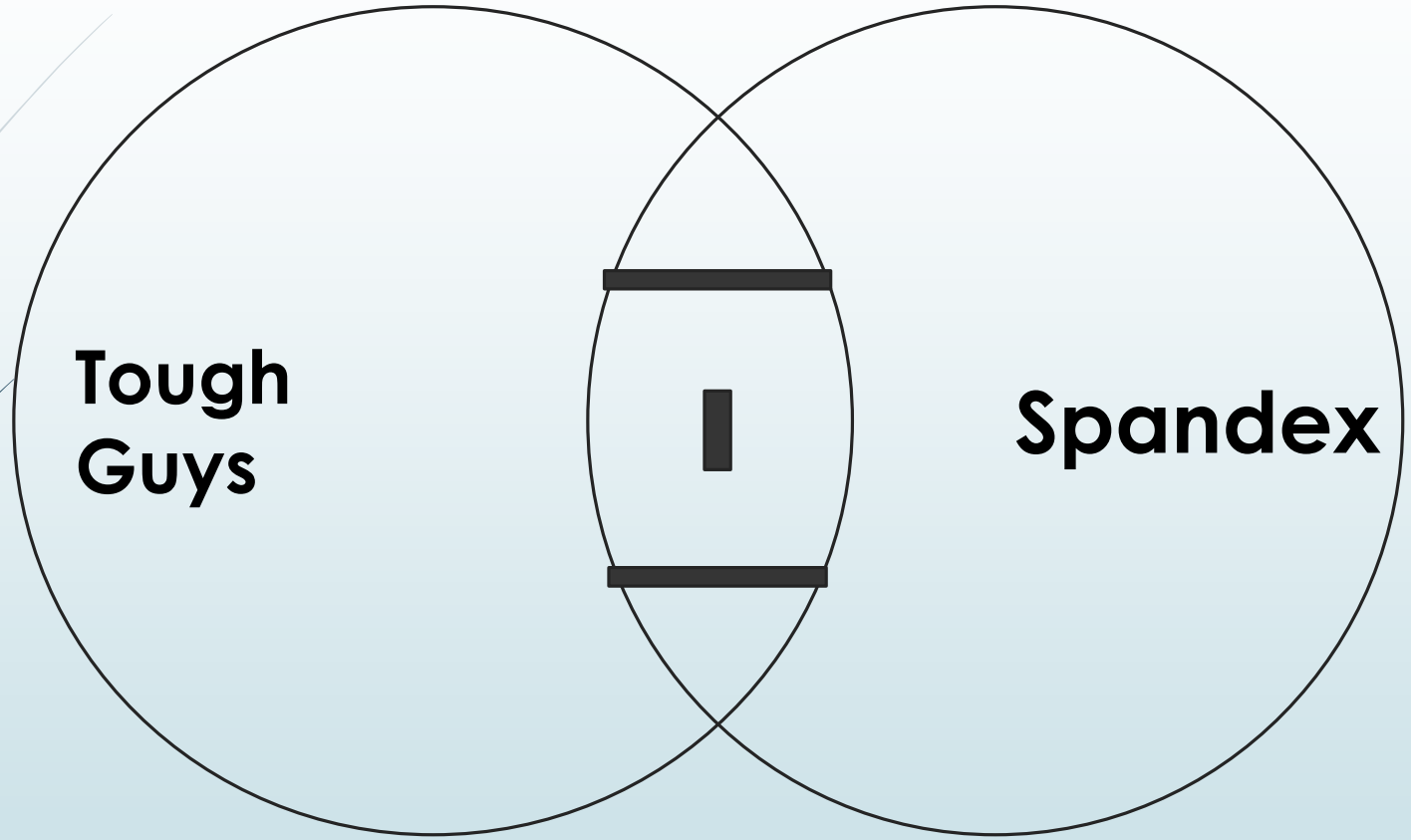
- The body defends its fat mass set point
  - Even if it is abnormally high (i.e., obesity)

Sumithran et al. NEJM 2011; 365:1597-1604

The Modern Environment Causes Obesity by Driving up the Defended Fat Mass



Venn Diagram

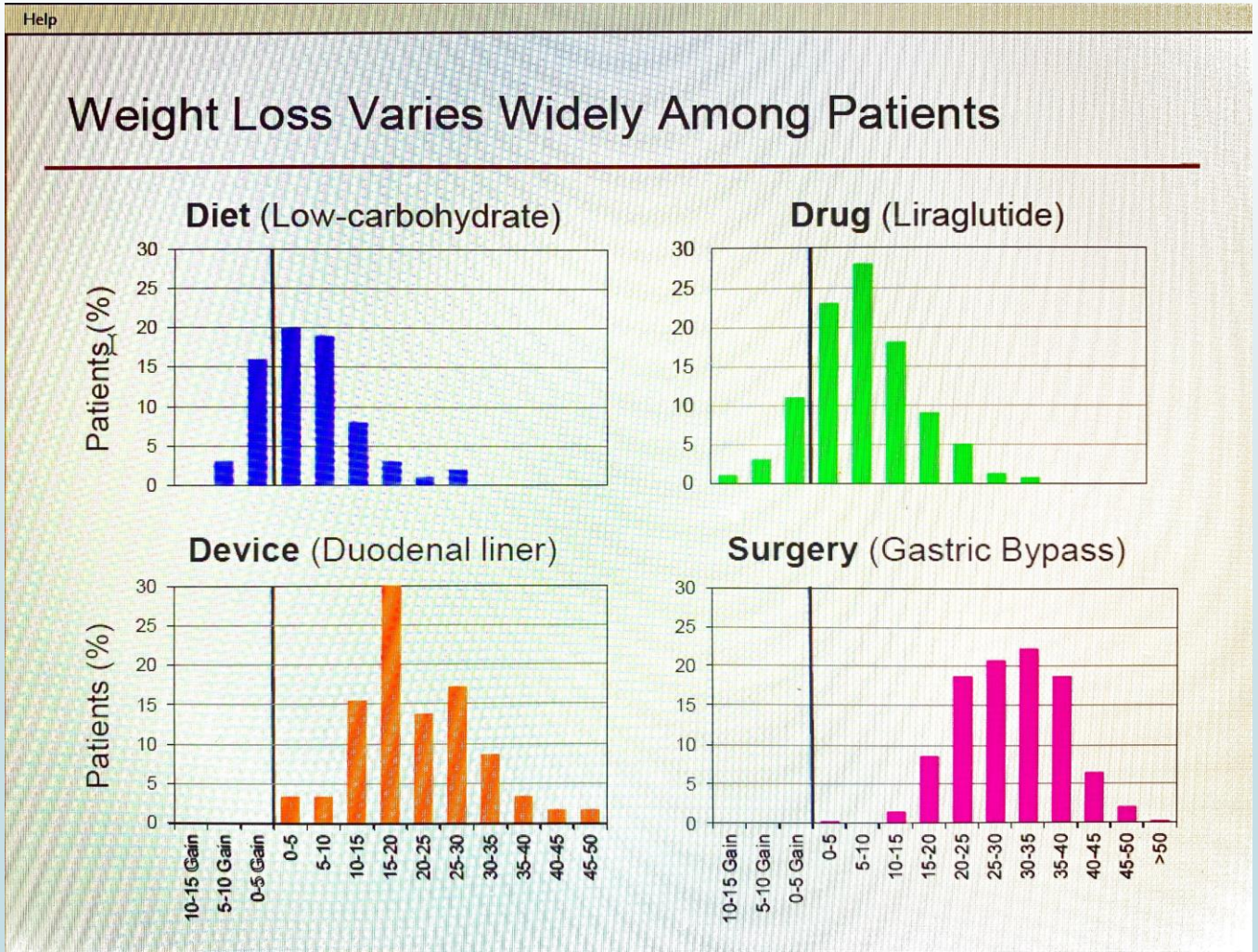


American Football

Core Principles of Obesity Treatment

1. The goal of effective treatment is to **reduce the elevated fat mass set point**
2. There is **wide heterogeneity** in the causes and manifestations of obesity
3. This leads to **wide patient-to-patient variability** in the response to all obesity therapies

Weight loss varies widely among Patients for all interventions



Core Principles of Obesity Treatment

1. The goal of effective treatment is to **reduce the elevated fat mass set point**
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3. This leads to **wide patient-to-patient variability** in the response to all obesity therapies
4. People who respond to one therapy **may not** respond to another, and vice versa
5. The strategy is to **match** each patient with the treatment most effective and suited to them

Wide variability in therapeutic response is best explained by clinically relevant subtypes

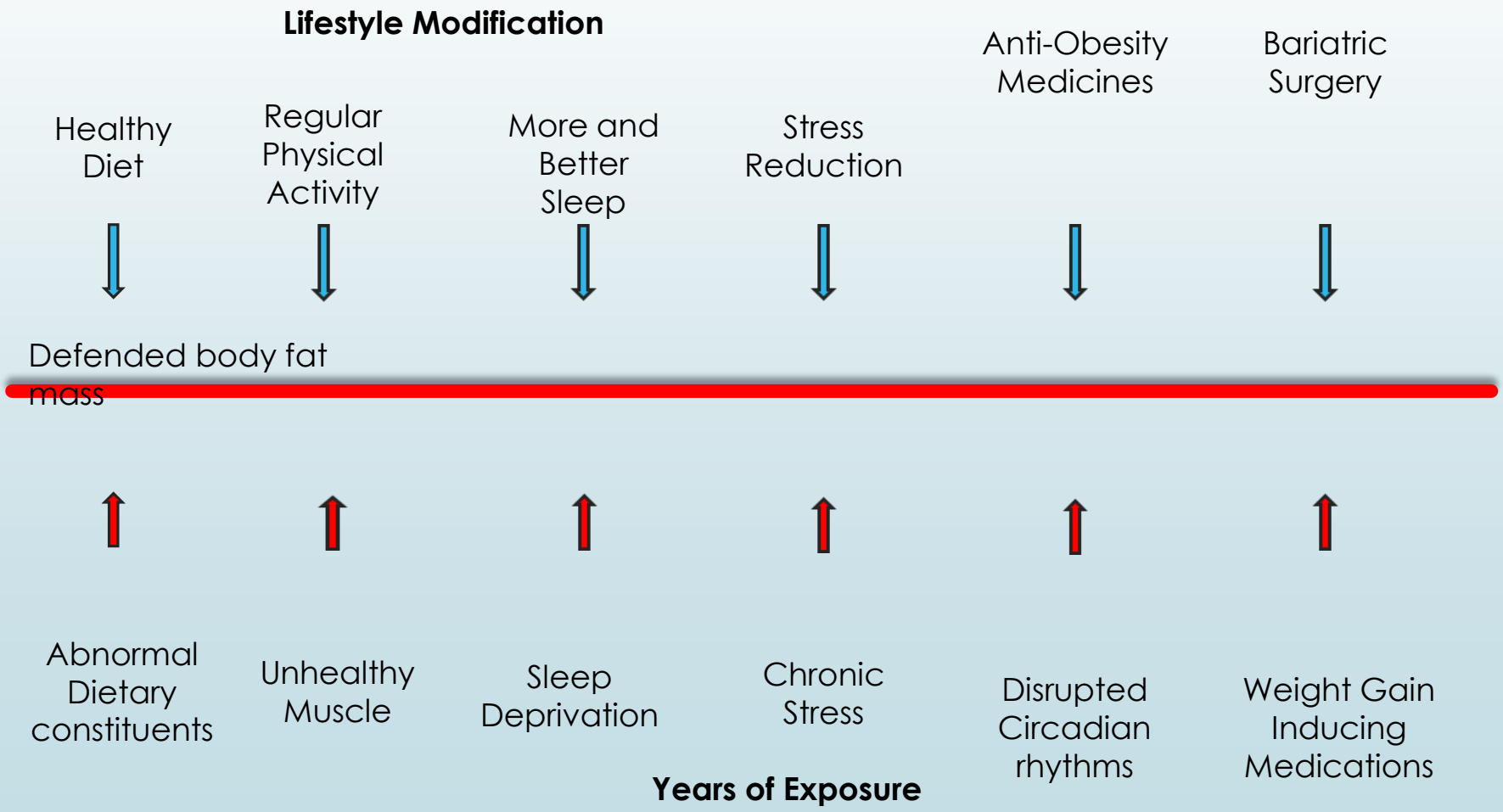
At least 100 subtypes identified and more on the way, these subtypes differ in:

- Timing of obesity onset
- Fat location and distribution
- Phenotypic differences
  - -Hunger
  - -Satiety
  - -Reward based eating (craving)
  - -Energy expenditure (thermogenesis)
- Response to environmental causes (stress, lack sleep, dietary content, etc)
- **Response to therapies**

continued

- The existence of clinically different obesity subtypes can easily explain the heterogeneous response to all therapies
- This underscores the need for numerous options and the need to learn how to use **ALL** available options
- Suggests the value of **combinational** approaches
- Also suggests the fallacy of **one-size-fits-all prevention** strategy

How do we influence this Fat Mass Set Point?



So what does this look like from a practical standpoint in Primary Care office?

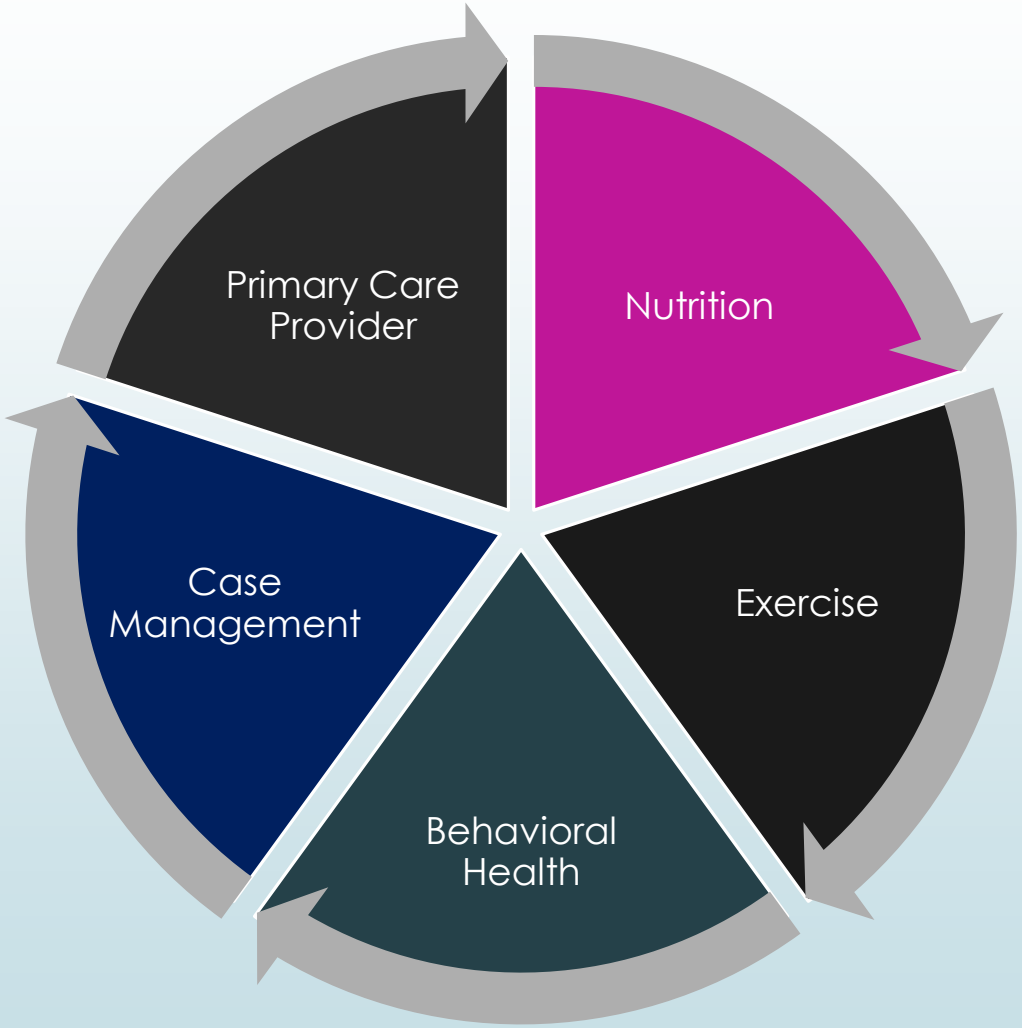
- I truly believe it is best treated in multidisciplinary team approach.

Multidisciplinary Team

- Diagnose BMI and comorbidities
- 5 A's (Ask, Assess, Advise, Agree and Assist)
- Pharmacotherapy
- Bariatric surgery feasibility
- **Provide accountability**
- **Problem solve**

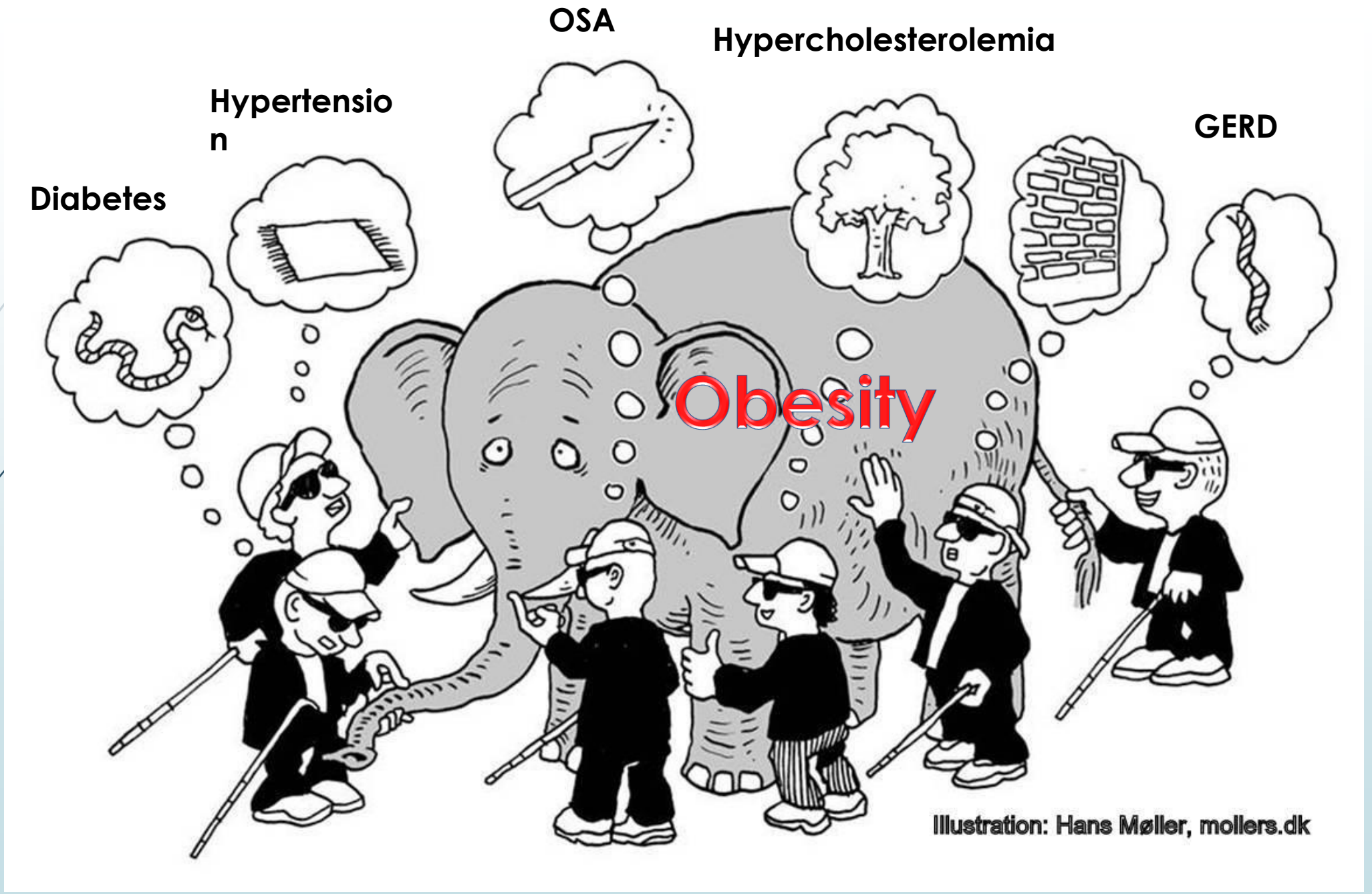
- One-on-one support
- Accountability
- Knowledge about surgical options
- Easy access point to system

- Cognitive Behavioral Therapy
- Motivational interviewing
- Problem solving
- Stress management
- Contingency management
- Stimulus control



- Eating Disorder screen
- Practical meal planning
- Choosing Nutritional plan
- Review barriers to change
- Teaching Self-monitoring

- Exercise prescription
- Refer to physical therapy
- Pre-participation clearance
- Education
- Help choose a method that is enjoyable


OSA
Hypercholesterolemia
Hypertensio
n
GERD
Diabetes
Obesity
Illustration: Hans Møller, mollers.dk

Case Study A

- 59 y/o male in for DM f/u. On max dosages of metformin, glipizide and invokana. Really worked hard to lose 10 lbs over previous 1.5 yrs, but HgbA1c still not at goal. Comorbid conditions included HTN, hyperlipidemia and had previous history of Pancreatitis.

- Interventions:

- Primary Care Provider provided him with options, assessed his willingness to change, set up accountability (monthly visits with PCP) and discussed pharmacotherapy (insulin, glipizide, anti-obesity meds)
- Patient set up to see Certified Dietician
- Patient declined behavioral health
- Set goal of 10,000 steps a day at his work monitored by his fit bit

Case Study A

- We calculated his BMR out to 1900 kcal/day, recommended 1,600 kcal/day for safe, sustainable weightloss

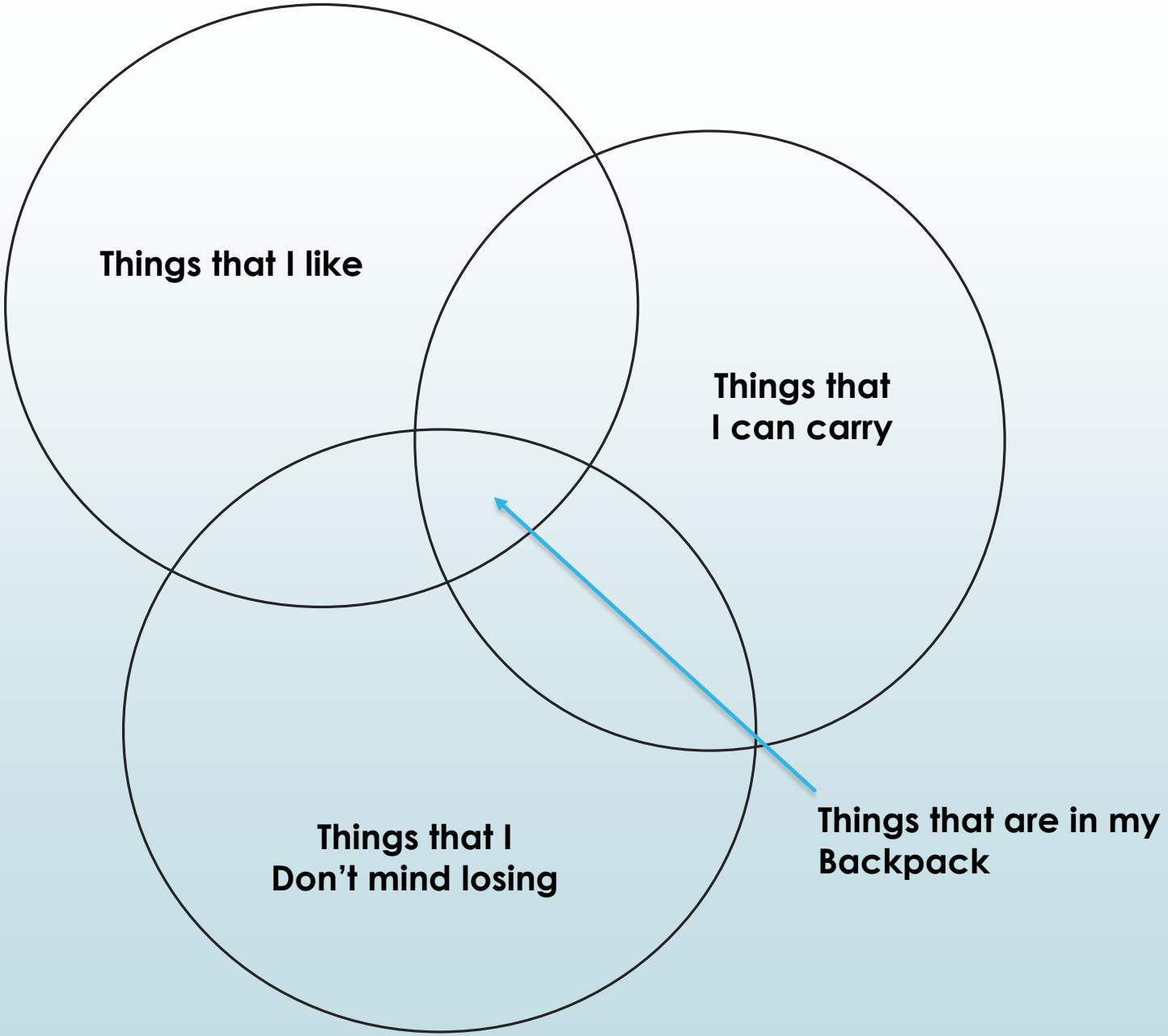
- After discussing options, we started him on Phentermine 15 mg daily

	7/21/17	4/3/18	7/31/19
Weight	233	193	193
BMI	31.6	26	26
Waist Circ	38	30	31
HgbA1c	7.3	6.6	6.5

Case Study A

- He was able to stop his glyburide and Invokana fairly quickly, just staying on Metformin.
- We reduced his lisinopril from 40 mg to 10 mg daily
- He weaned off phentermine 9 months ago and maintained his weight for 6 months. Over the holidays he started to gain some weight and got up to 200 lbs so we restarted low dose phentermine again to get him back to baseline. Last time I saw him he was still on Phentermine 15 mg daily, maintaining weight.

Another Vin Diagram



Barriers to Effective Obesity Care

- Misunderstanding of the biological mechanisms of obesity
- Obesity not viewed as a disease
- Expectation that body weight can be durably self-managed
- Perception that effective therapies require more provider time than is available
- Inadequate reimbursement for treatment of obesity
- Perceived ineffectiveness of current anti-obesity therapies
- Lack of perceived patient interest or motivation

Next Steps

- Start talking to your patients about weight
- If they meet the criteria, put the problem on their problem list
- Have patients come back monthly for accountability and problem solving
- Educate yourself – CME, journal articles, OMA
- Use all the tools in your tool box
- Ask yourself what you would do for any other chronic disease…and then do it

Nutrition in Pregnancy Following Bariatric Surgery

1. Preconception Counseling

- It is advisable to delay pregnancy for at least 12 months following bariatric surgery
- Non-oral contraception recomended since absorption may be compromised
- Global Recommendations for supplements post-bariatric surgery.
- Recommendations for laboratory monitoring post-bariatric surgery

Global Recommendations for supplements Post-Bariatric Surgery

	Recommendation	Comments
Multivitamin and mineral supplement	1–2 daily	Avoid retinol-based vitamin A during pregnancy and lactation; safe to continue beta-carotene
Calcium	800–1500 mg daily	Calcium citrate may have better bioavailability
Vitamin D	800 units daily	Higher doses may be necessary if pre-existing deficiency
Iron	45–60 mg daily	100 mg elemental iron is recommended for menstruating women
Vitamin B12	1000 micrograms orally daily or 1000 micrograms intramuscular injection 4–12 weekly	
Thiamine (B1)	As contained in Multivitamin or 12–50 mg daily	Additional 200–300 mg if prolonged vomiting is experienced
Folic Acid	As contained in Multivitamin or 400–800 microgram daily	5 mg preconception to 12 weeks of gestation
Vitamin A	As contained in Multivitamin or 5000–1000 IU daily	Additional screening in BPD/DS * or if Steatorrhoea. Increased requirements in pregnancy—avoid retinol and retinyl esters.
Vitamin E	As contained in Multivitamin or 15 mg daily	Additional screening in BPD/DS * or if Steatorrhoea
Vitamin K	As contained in Multivitamin or 90–300 micrograms daily	Additional screening in BPD/DS * or if Steatorrhoea
Zinc	As contained in Multivitamin to meet 100–200% RDA †	Maintain Ratio of 8–15 mg Zinc per 1 mg Copper
Copper	As contained in Multivitamin to meet 100–200% RDA †	Maintain Ratio of 8–15 mg Zinc per 1 mg Copper
Selenium	As contained in Multivitamin	

Global Recommendations for Laboratory Monitoring Post-Bariatric Surgery

Recommended lab tests 2 months, 6 months, and yearly:

- Iron status (FERRITIN and TIBC)
- Folate
- THIAMINE (B1)
- Cobalamin Methylmalonic Acid (B12)
- Vitamin D, 25-OH
- Serum calcium
- PTH
- Phosphorus
- Magnesium
- Zinc

2 months only: vitamin A

Only when indicated: Vitamin E, Vitamin K, Copper, Selenium

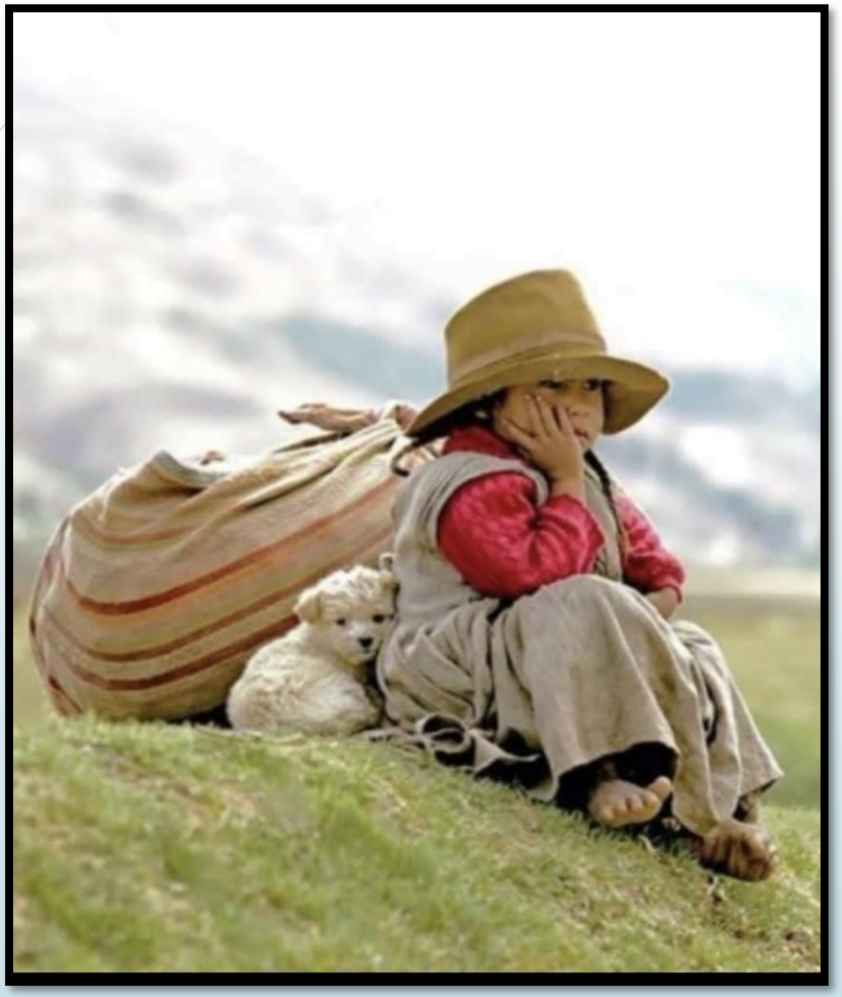
adapted from Mechanick, et al, SOARD 2013.9:159-191

During the Pregnancy

1. Energy Requirements:
   - Increase by 200 kcal/day in final 3 months only
   - Weight gain 6 kg if BMI >25
   - Weight gain 12 kg if healthy BMI

2. Protein Intake:
   - Minimum 60 gm Protein/day
   - Check for hypoalbuminemia if has edema

3. GERD:
   - PPI common after surgery – omeprazole
   - Avoid NSAID post-partum if possible



If it seems a little overwhelming

Don’t get discouraged

There is a JOY in the Journey

Thank You

Questions?