MANAGING OBESITY IN THE GERIATRIC POPULATION

Ledyenska Ballesteros, MPAS, PA-C

2023 Advisory Board for Novo Nordisk

All relevant financial relationships have been mitigated.

Disclosures:

Learning Objectives:

Identify

Identify common challenges/factors in obesity management.

Discuss

Discuss steps to treat obesity in the geriatric population.

Recognize

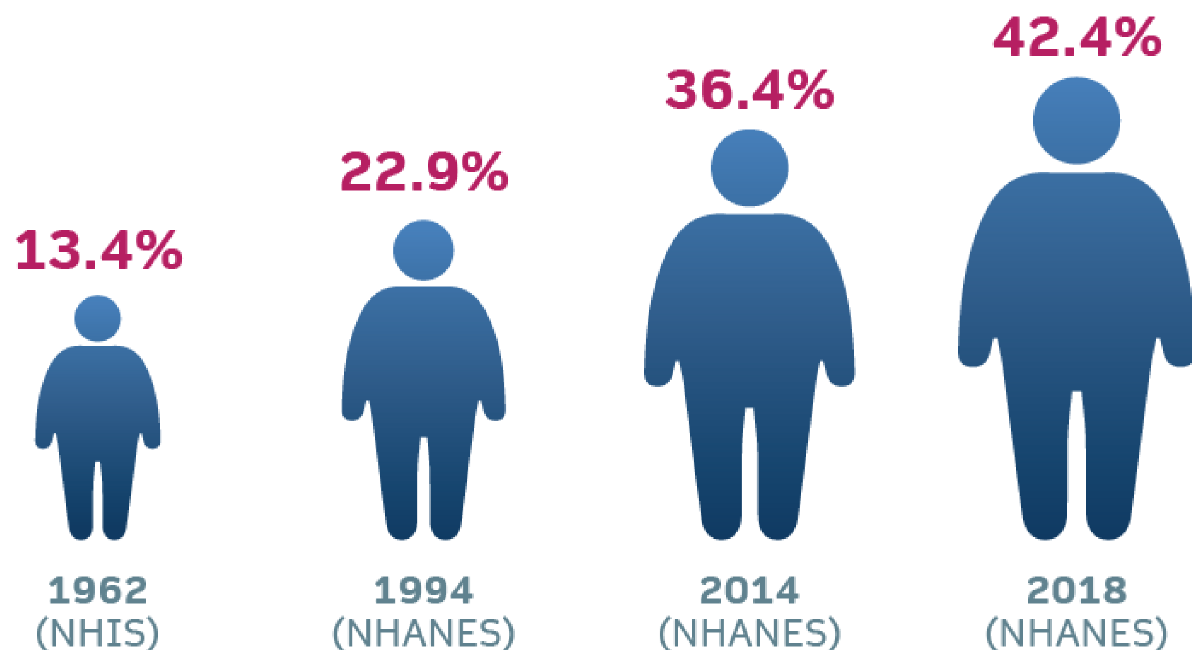
Recognize limitations with obesity management in the geriatric population.

Recommend

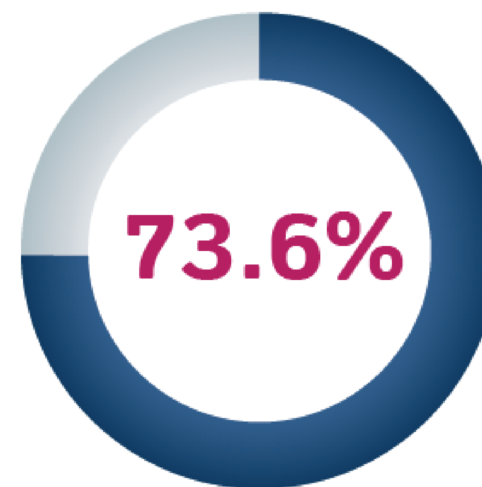
Recommend realistic patient-centered options for individualized treatment plans.

Majority of Americans are Overweight or Have Obesity

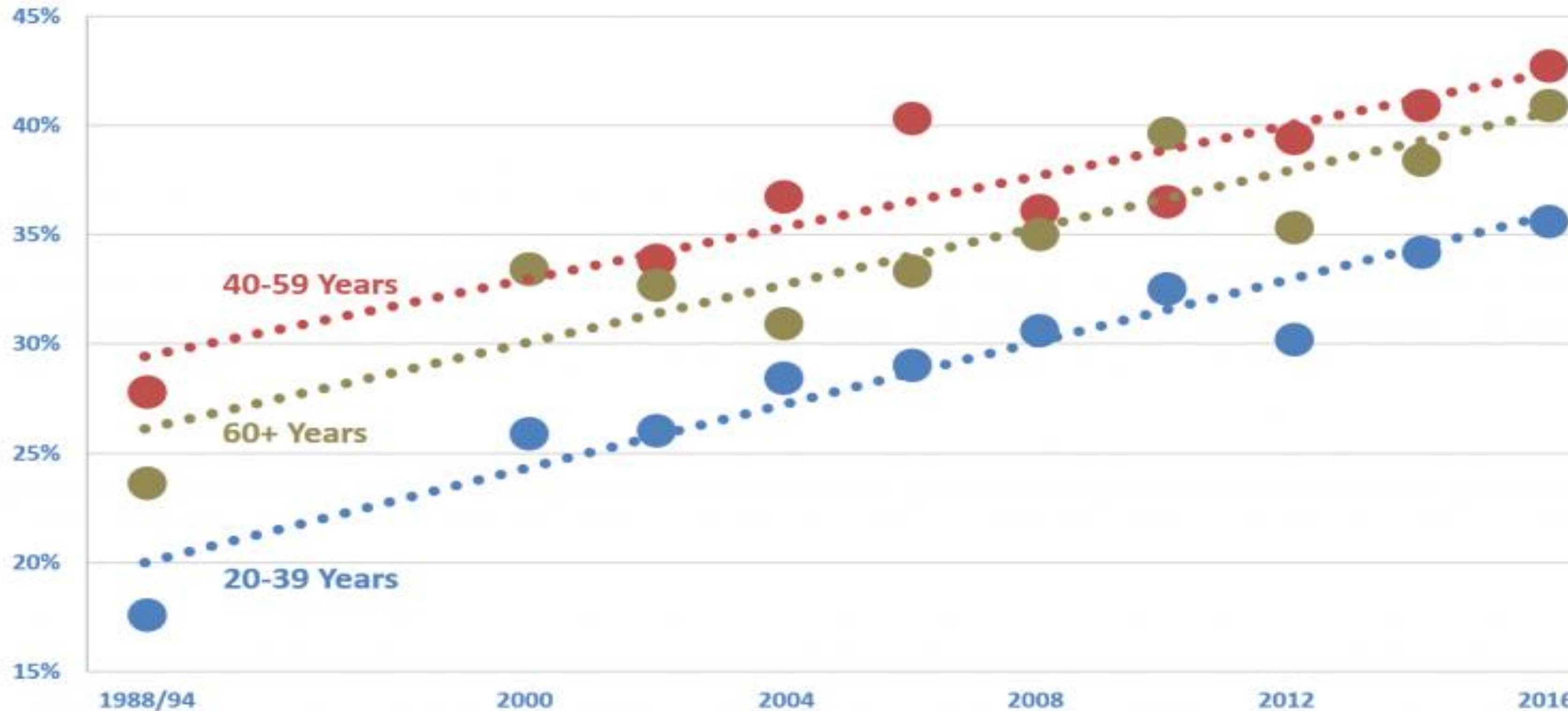
Percentage of American Adults with BMI>30
(Percentage of Americans Who Have Obesity)[1]



Percentage of Americans Over Age 20
Who Are Overweight or Have Obesity[2]



References: **1.** https://www.cdc.gov/nchs/about/factsheets/factsheet_nhanes.htm. **2.** https://www.cdc.gov/nchs/fastats/obesity-overweight.htm

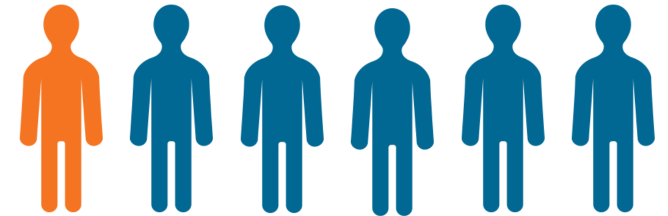


In 2020, 41.5% of Americans over the age of 60 suffered with obesity.

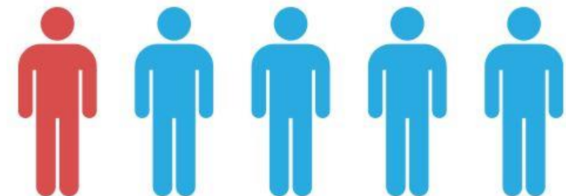
* *"US population by year, race, age, ethnicity, & more". USAFacts. May 18, 2023. Retrieved June 3, 2023.*
* https://www.investopedia.com/financial-edge/0912/which-income-class-are-you.aspx

Today’s Numbers

In 2020, the US Census Bureau confirmed that about 1 in 6 people in the United States were 65 and over.



According to the Census, the number of Americans 65yo+ will increase from 58 million (17% of the population) in 2022 to 73 million (21% of the population) by 2030.



** "US population by year, race, age, ethnicity, & more". USAFacts. May 18, 2023. Retrieved June 3, 2023.*

* https://www.investopedia.com/financial-edge/0912/which-income-class-are-you.aspx

Medicare

Enrollments

- Almost all Americans 65 and up are automatically entitled to health insurance benefits under the Medicare program. Today over 95 percent of the nation's elderly have Medicare coverage.

Costs

- In 2022, Medicare cost $747 billion — about 12 percent of total federal government spending.
- Medicare was the second largest program in the federal budget last year, after Social Security.

10 Common Chronic Conditions for Adults 65+ (In 2018)

Hypertension (High Blood Pressure)
60%

High Cholesterol
51%

Arthritis
35%

Ischemic / Coronary Heart Disease
29%

Diabetes
27%

Chronic Kidney Disease
25%

Heart Failure
15%

Depression
16%

Alzheimer's Disease and Dementia
12%

Chronic Obstructive Pulmonary Disease
11%

Source: Centers for Medicare & Medicaid Services, Chronic Conditions Prevalence State/County Table: All Fee-for-Service Beneficiaries.

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ncoa national council on aging.

- In 2018, research by the National Counsel on Aging found that nearly 95% of adults 60 and older have at least one chronic condition, while nearly 80% have two or more.
- Did you notice which diagnosis is <u>missing</u>?

Obesity and its Co-Morbidities

https://www.ncbi.nlm.nih.gov/books/NBK278973/

Heart Disease:

- Increased weight can cause elevated blood pressure, high cholesterol and stress on heart.

Diabetes:

- Obesity leads to insulin resistance which can cause sugar levels to remain chronically elevated.

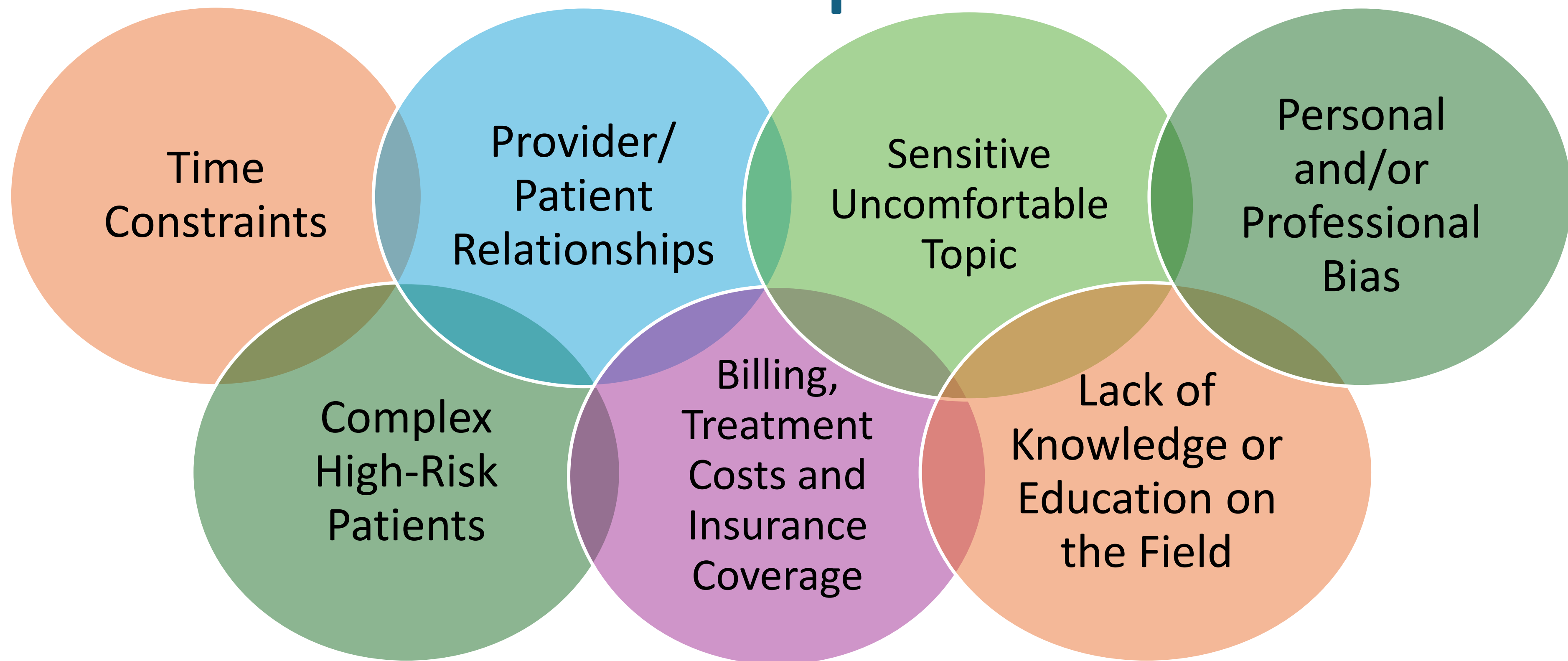
Cancer:

- 40% of cancers are linked to obesity, including breast, colon, and ovarian cancer. *(Healthcentral)*

Premature Death:

- 2.8 million people die yearly due to obesity. *(WHO)*

What Prevents Clinicians from Addressing Obesity in the Geriatric Population?



Gunther S, et al. Qual Prim Care. 2012;20(2):93-103. Accessed September 21, 2023. https://pubmed.ncbi.nlm.nih.gov/22824562/

Findings from the 2021 OBSERVE Survey (by Eli Lilly Pharmaceuticals)

67%[1]	• Providers surveyed think people with obesity should be "required to demonstrate motivation to make lifestyle changes before medical treatment is offered."
58%[1,2]	• Providers surveyed think obesity was mainly due to lifestyle choices.
67%[1]	• Participants living with obesity shared that they do not categorize their weight as "obese."
64%[2]	• Participants were unaware that prescription AOMs could help manage weight

1. Obesity Medicine Association. Accessed September 21, 2023. https://obesitymedicine.org/the-observe-study-insights-into-anti-obesity-medication-perceptions-and-barriers/ 2. Eli Lilly and Co. Accessed September 21, 2023. https://www.lilly.com/news/stories/identifying-drivers-barriers-antiobesity-medicine-use

Overweight is defined as a BMI at or above 25.

Obesity is defined as a BMI at or above 30.

Obesity is Excessive Fat Accumulation presenting a risk to one's health.

How Do We DEFINE Obesity in the Geriatric Population?

How Do We MANAGE Obesity in the Geriatric Population?

- Lifestyle Modifications
- Prescribed Nutrition
- Pharmacotherapy
- Bariatric Surgery

Managing Obesity in the Primary Care Office

THE INITIAL VISIT:

GATHER

- Detailed Medical History
- Detailed Physical Exam
- Weight History (Flowsheet/Graph)

PERFORM

- EKG
- Labs:
  - Routine: CMP, Lipid, HgbA1c, TSH
  - Specialized: TSH, Insulin, Hormones, Food Allergens

TREAT

- Lifestyle Modifications
- Co-Morbidities
- Adjust Medications
- Prescribe Anti-Obesity Medications
- Refer to specialists

Managing Obesity in the Primary Care Office

THE FOLLOW-UP VISIT:

GATHER

- Changes since last visits
  - Food Journal
  - Physical Activity Logs
  - Medication Adjustments
  - Comorbidities

PERFORM

- Physical Exam
- Labs
- Progress Reports
- Lifestyle Modifications

TREAT

- Co-Morbidities
- Adjust Medications
- Prescribe Anti-Obesity Medications
- Discuss Progress and Realistic Goals
- *Address Factors*

Challenges/ Factors in Obesity Management:

Behavioral

Biological

Environmental/Social

Medical/ Pharmaceutical

Psychological

BEHAVIORAL FACTORS

Are patients partially responsible?

Behavioral Factors

- Unhealthy Diet
- Sedentary Lifestyle
- Sleep Deprivation

Anti-Obesity Diets

Keto Diet

Paleo Diet

Intermittent Fasting

Mediterranean Diet

Low Carb Diet

Raw Food Diet

DASH Diet

And the List Goes On…

The BEST weight loss diet is the one the patient can use long term.

Meet Nutritional Needs

Is High in Nutrient-Dense Foods

Promotes a Good Relationship with Foods

Gives Patients Energy

Keeps Patients Full and Happy

Easy To Follow and Maintain

AGE

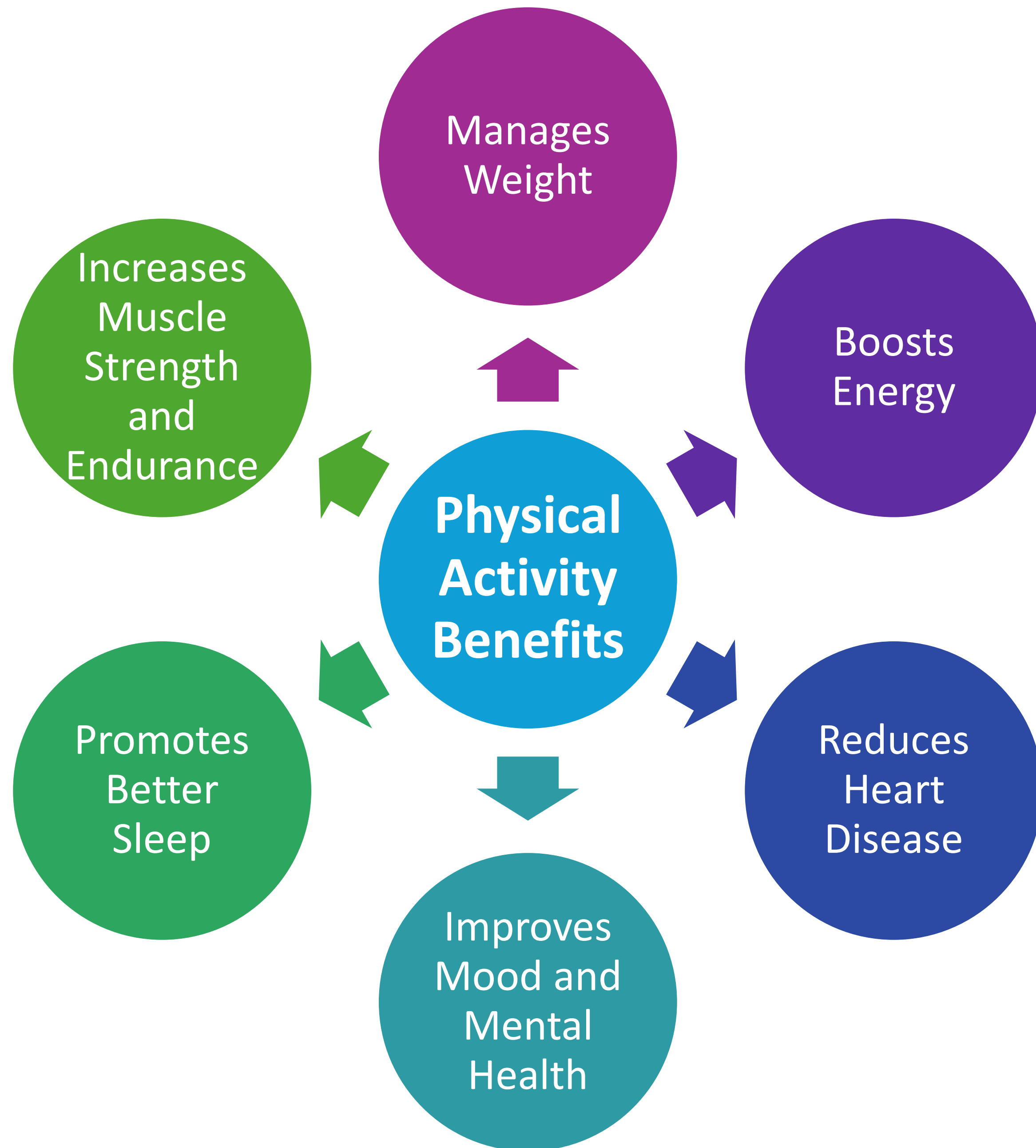
- Consider dental restrictions such as dentures.
- Remember dietary restrictions:
  - ➢Malnourishment in low calorie diets
  - ➢Grapefruit or green vegetables vs. meds and warfarin

CULTURE

- Remember belief that food is an expression of love.
- “Don’t waste food…”
- Educate on different ways to cook favorite foods.

ECONOMY

- Remember food deserts.
- Help research frozen foods and canned foods.
  - ➢Explain nutrition labels.
- Explore WIC, Food banks, and processed foods

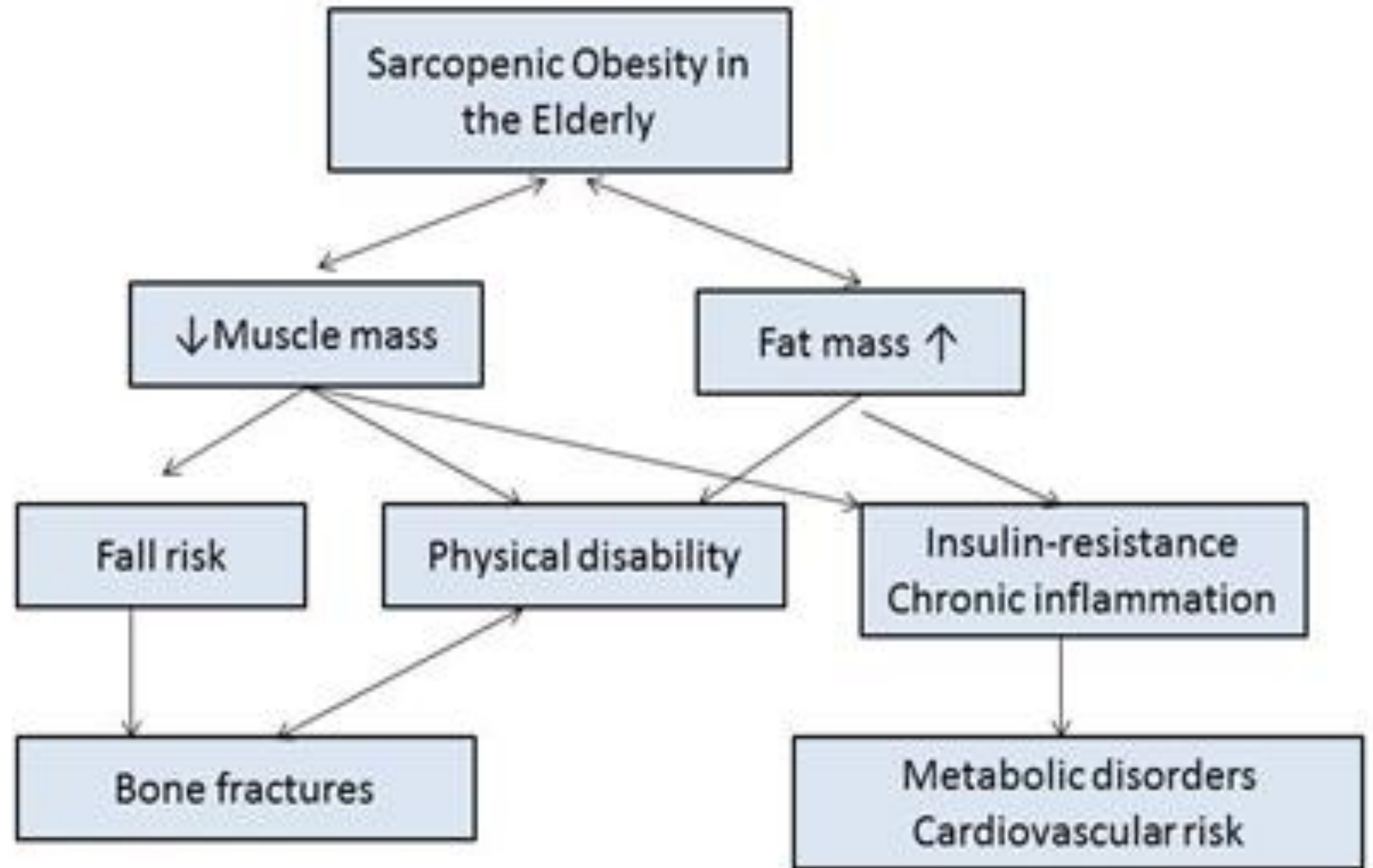


When it comes to weight loss and *"exercise"*…

- **Physical Activity** vs. Exercise
  - Words Matter!
- Remember the 80/20 Rule.
- Physical activity provides multiple health benefits, besides weight loss.
- Physical activity builds lean muscle mass, often lost during weight loss.
  - Muscle Atrophy
  - Sarcopenia

Sarcopenia

- **CAUSE:**
  - Ages 60yo +
  - Atrophy (Decrease in size) <u>and amount</u> of muscle fiber
- **SX:**
  - Weakness
  - Slow movement
  - Poor balance/falls
  - Muscle atrophy
- **DX:**
  - Muscle strength tests
  - SARCF Questions:
    - **S**trength
    - **A**ssistance with walking
    - **R**ising from chair
    - **C**limbing stairs
    - **F**alls
- **TX:**
  - Physical Activity
  - Healthy Diet with Increased Protein



https://medcraveonline.com/EMIJ/challenges-in-treatment-of-obesity-in-the-elderly.html#fig3

AGE

- Fall precautions are vital!
- Try YouTube videos & Sit, Be Fit for those with limited mobility.
- Find local senior centers to help with social interaction.
- Sarcopenia is a loss of skeletal mass/function due to weight loss. Do the SARC-F questionnaire.

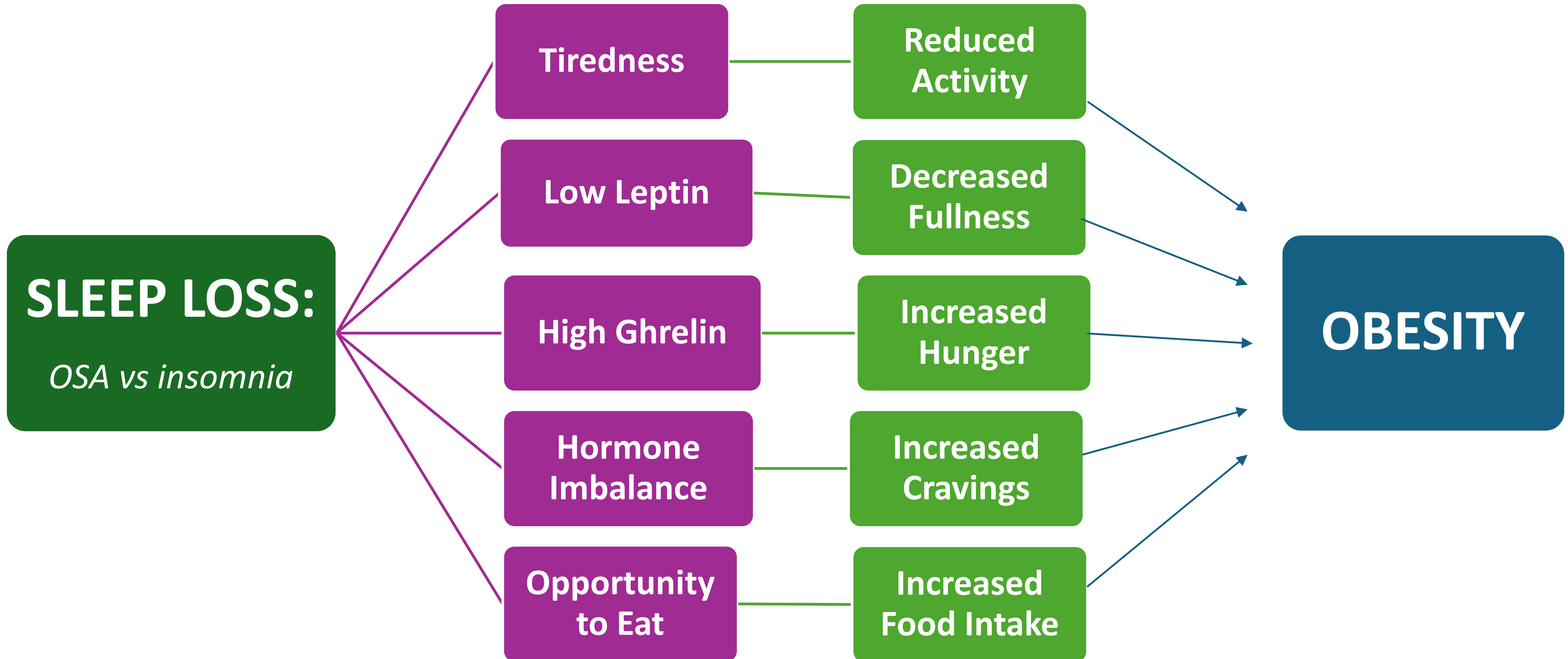
CULTURE

- Focus on group-oriented culture: involve the family/ children.
- Consider incorporating in daily lifestyle:
  - using staircase at work or exercising during commercials.
- Is there a lack of transportation?

ECONOMY

- Encourage free videos/downloads or free FitOn app.
- Try walking at Wal-Mart, Costco, Mall, etc. before shopping.
- Use the outdoors, but keep in mind safety and weather.
- Purchase cheap weights at 5 Below or pedometer at Walmart.
- Fill water bottles with rice/beans or try alternatives to gyms.

Sleep Deprivation and Obesity



AGE

- Think urinary incontinence or nocturia.
- Test for OSA with STOP-Bang questionnaire.
- Do they suffer from dementia/anxiety or medically induced insomnia?

CULTURE

- Are they retired or working late/early?
- Consider multiple generations living at home and their schedules at night.

ECONOMY

- Is home security/safety an issue?
- Urban neighborhoods and noise complaints.

ENVIRONMENTAL FACTORS

What influences patients' behavioral choices?

Environmental Factors Influencing Obesity Management:

Family	• Family Meals and Celebrations • Household Influences: Who Plans/Buys/Cooks/Serves?
Relationships	• Marital Status and Children • Work Environment
Heritage	• Celebrations • Traditions
Religion	• Kosher Foods, Prohibited Foods • Fasting and Religious Restrictions
Geography	• Access to Foods/Food Deserts and Seasonal Foods • Rural v. Urban, Climate/Weather, Crime, Transportation

Environmental Factors Influencing Obesity Management:

Factor	Details
Education	• Literacy • Language Barriers
Socioeconomic	• SNAP, WIC, Food Banks • Meals on Wheels, Assisted Living
Health	• Comorbidities: DMII, Hyperlipidemia, Anemia • Medications
Stages of Life	• Nutritional Needs • Independent vs. Dependent on Others
Personal Beliefs	• Exercise Avoidance • Food Preferences

AGE

- Use paper food journals instead of phone apps.
- Consider how to change lifelong habits.
- Set goals by moving down obesity stages instead of ideal weight due to malnutrition and muscle loss/atrophy.

CULTURE

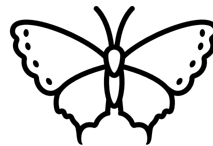
- Remember: Family/friend recommendations are valued.
- Evaluate traditional roles in families and how they influence treatment.
- Are they bilingual or Spanish speaking only?
  - Limited resources available. (Microsoft translator)

ECONOMY

- Consider lack of formal education.
  - Illiterate or grade level reading/understanding pose challenge.
  - Take photos of foods for journal.

Small Changes in the Real World

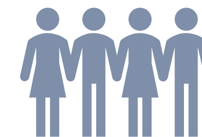
Portion Control	Removing one Favorite Item per day/week	Adding one New Item per day/week	Replacing Food/Drink w/ Similar Option	Increasing Sleep by 30 minutes
10 minutes+ Physical Activity	Adding 200-500 steps per day	Setting Alarms as Reminders	Rearranging Schedules	Adjusting Medications and Dosages



The "Butterfly Effect" is the idea that
small changes can have large impacts on a complex system.

PSYCHOLOGICAL FACTORS

Is there more than "emotional eating?"



Eating Disorders

Anorexia

Bulimia

Binge Eating Disorder

Night Eating Disorder

Situational Stressors

Conflicts in Relationships

Life Events

Acute vs. Chronic Stressors

Weight Bias and Self-Esteem

Emotional Coping

Depression and Bipolar Disorders

Anxiety and Social Anxiety

PTSD, Trauma, and/or Abuse

Emotional Hunger vs. Physical Hunger

Psychological Factors:

AGE

- Test for possible dementia: MMSE.
- Add PHQ-9 and GAD-7 screening tests.

CULTURE

- Remember the stigma of anti-depressants and therapy.
  - Consider telehealth visits.
- Ask about situational and emotional stressors.

ECONOMY

- Expensive psychotherapy sessions without insurance coverage are an issue.
  - Are there even any availabilities? Is there a wait list?
  - Consider www.psychologytoday.com, church or free local resources.

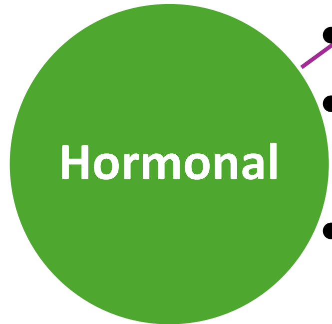
BIOLOGICAL FACTORS

Is it all in the genes?

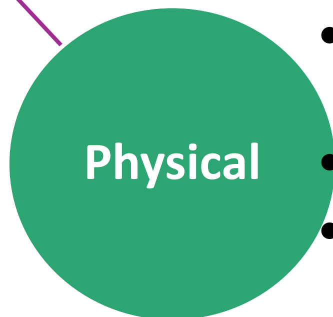
Biological Factors:

- Maternal Influences
  - For Mother
  - For Child
- Predisposition
- Gender

- Thermogenesis
- Menopause/Age
- Insulin Resistance

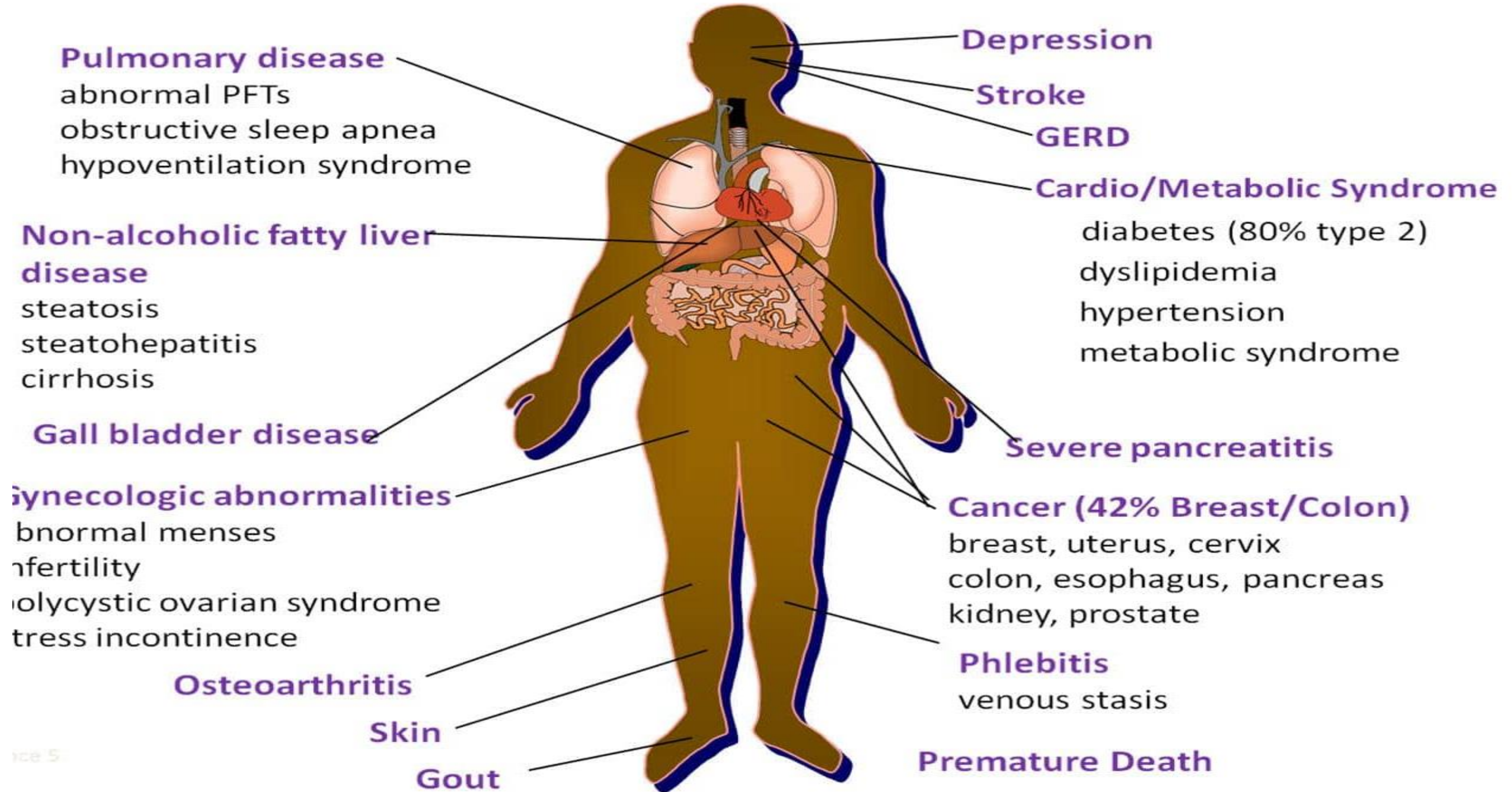


- Delayed Satiety
- Heightened Hunger Response
- Endocrinological Disorders



- Chronic Inflammation
- Physical Disabilities
- Food Sensitivities/ Gut Microbes

Obesity Impacts Nearly Every Organ System



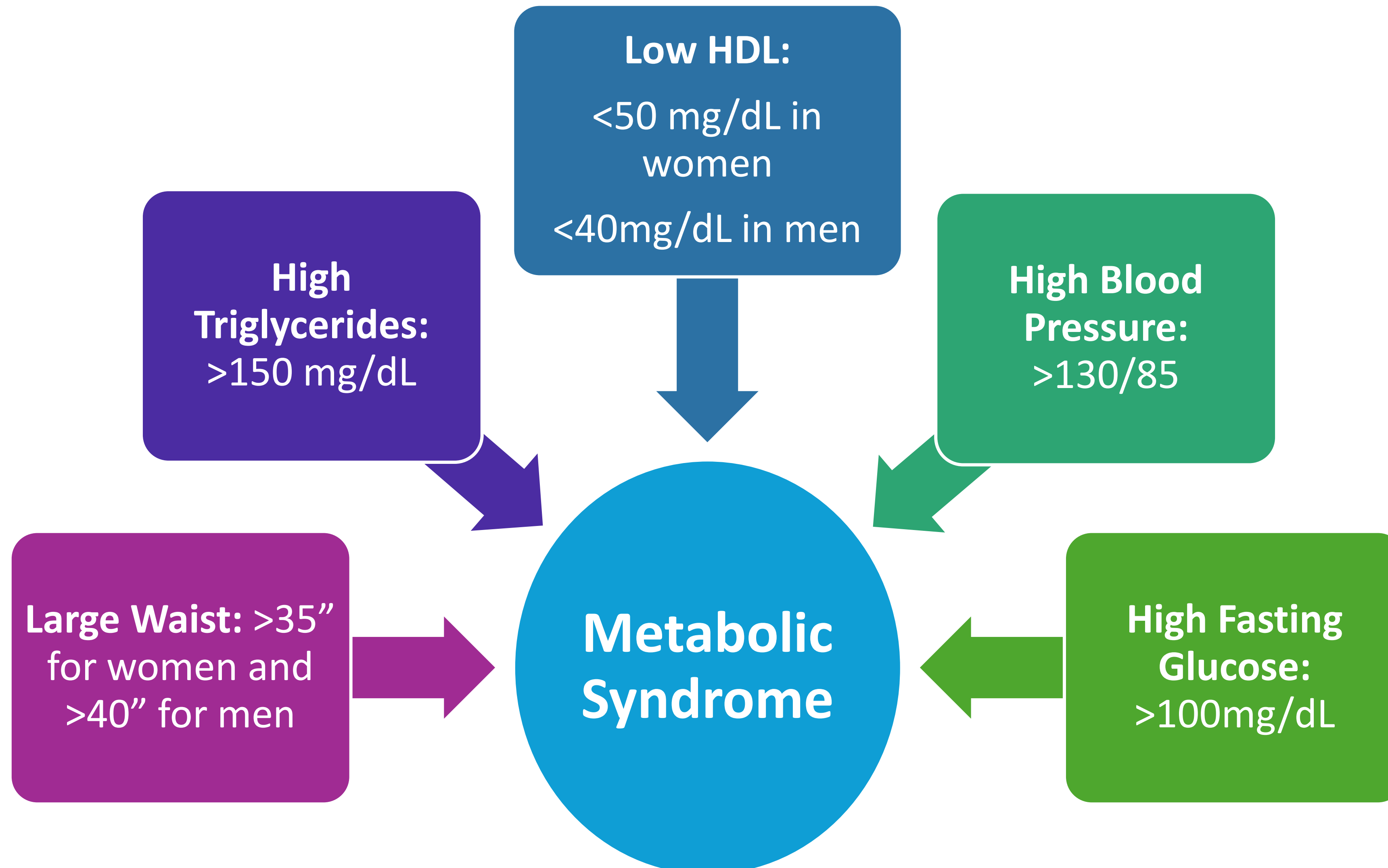
https://www.westernsurgical.com/diagnoses/morbid-obesity/

Physical Exam in Patients with Obesity

(useful when billing)

SYSTEM	FINDINGS	COMORBIDITY CONCERNS
Vitals	Elevated Blood Pressure	HTN, Stroke Risk
Skin	Acanthosis Nigricans	DMII
	Hirsutism, Acne	PCOS
	Irritation, Inflammation, Rashes	Cardiac or Rheumatoid Disorders
Eyes	Bulging Eyes	Graves Disease
Throat	Tonsillar Hypertrophy	Obstructive Sleep Apnea
Neck	Goiter	Hypothyroidism
	Enlarged	Obstrutive Sleep Apnea
Chest	Wheezing	Asthma, OSA,
	Excess Chest Fat	Gynecomastia
Abdomen	Tenderness	GERD, Cholelithiasis, Fatty Liver
	Hepatomegaly	Nonalcoholic Fatty Liver Disease
	Excess Visceral Fat	Central Obesity
Reproductive	Apparent Micropenis	Excess Fat
	Irregular Periods	PCOS
Extremities	Abnormal Gait	Arthritis
	Muscle Atrophy	Sarcopenia
	Venous Stasis/Varicose Veins	Circulation D/O

Metabolic Syndrome: 3 or more traits (NIH Classification)



PHARMACOLOGICAL FACTORS

Are we prescribing obesogenic medications?

Obesogenic Medications

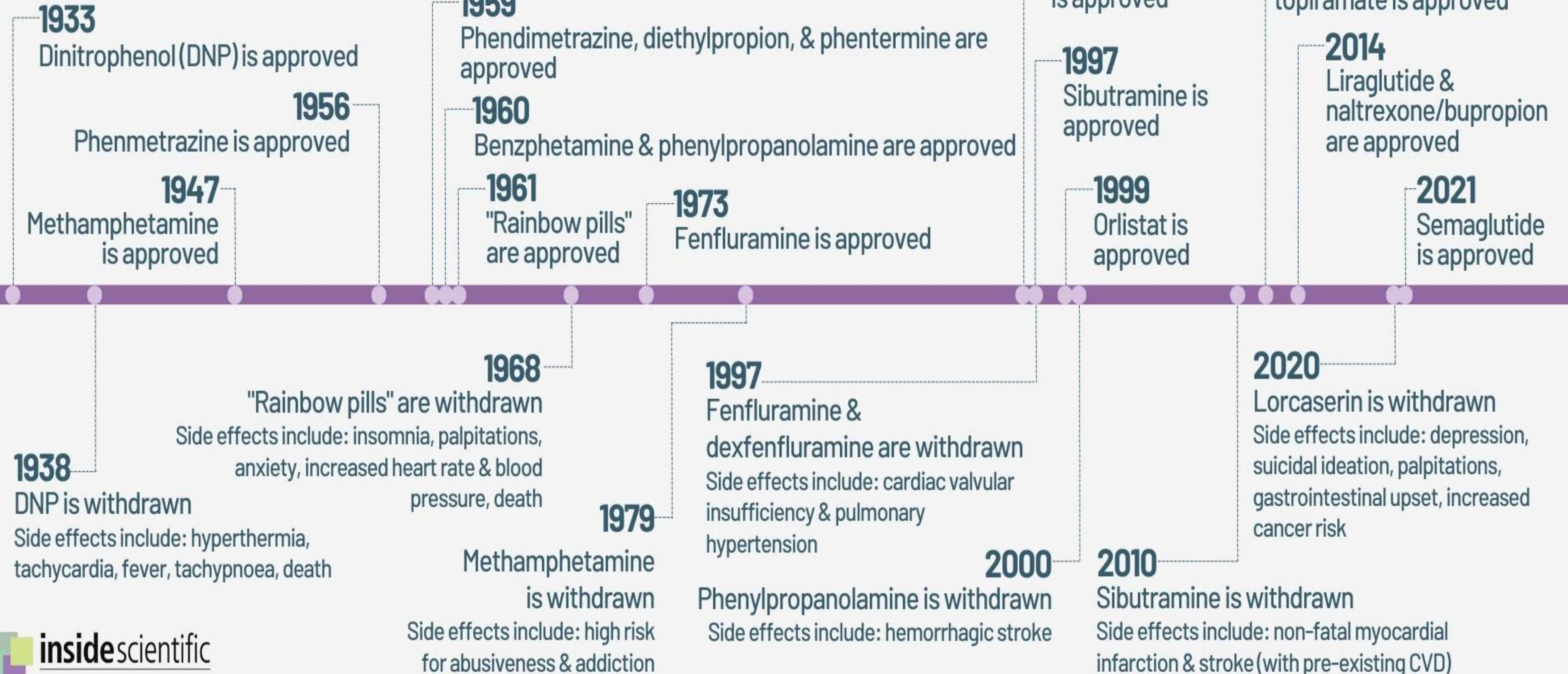
Medical Specialty	Drug Class	Associated with Weight GAIN	Alternative/ Weight NEUTRAL	Alternative/ Weight LOSS
Psychiatry	Anti-depressants	• TCAs (Amitriptyline, nortiptyline) • SSRIs (paroxetine, escitalopram)	• SSRIs (fluoxetine, sertraline)	• Bupropion
	Anti-psychotics	• MAOIs • Lithium • Quetiapine, Risperidone		• Aripiprazole
Neurology	Anti-epileptics	• Gabapentin, Pregabalin • Valproate		• Topiramate • Zonisamide • Lamotrigine

Obesogenic Medications

Medical Specialty	Drug Class	Associated with Weight GAIN	Alternative/Weight NEUTRAL	Alternative/Weight LOSS
Endocrinology	Anti-Diabetic Medications	• Sulfonylureas • Thiazolidinediones • Insulins	• DPP4 inhibitors • Alpha-glucosidase inhibitors • Bile acid sequestrants	• GLP-1s and GIPs • SGLT2 inhibitors • Metformin
	Steroids	• Corticosteroids	• Low-dose corticosteroids	
Ob/Gyn	Contraceptives	• Depo-provera • Progesterone	• OCPs	• Copper IUD • Low Dose OCPs

Obesogenic Medications

Medical Specialty	Drug Class	Associated with Weight GAIN	Alternative/Weight NEUTRAL	Alternative/Weight LOSS
Cardiology	Hypertensive Medications	• Alpha-adrenergic blockers • Beta Blockers (Metoprolol)	• ACE Inhibitors • Angiotensin receptor blockers • Beta-adrenergic blockers (carvedilol) • Calcium Channel Blockers • Thiazides	• Furosemide
General	Antihistamines	• Diphenhydramine	• Short-term use	



- https://insidescientific.com/recent-advances-in-anti-obesity-pharmacological-research/

A Closer Look into the Approved AOMs:

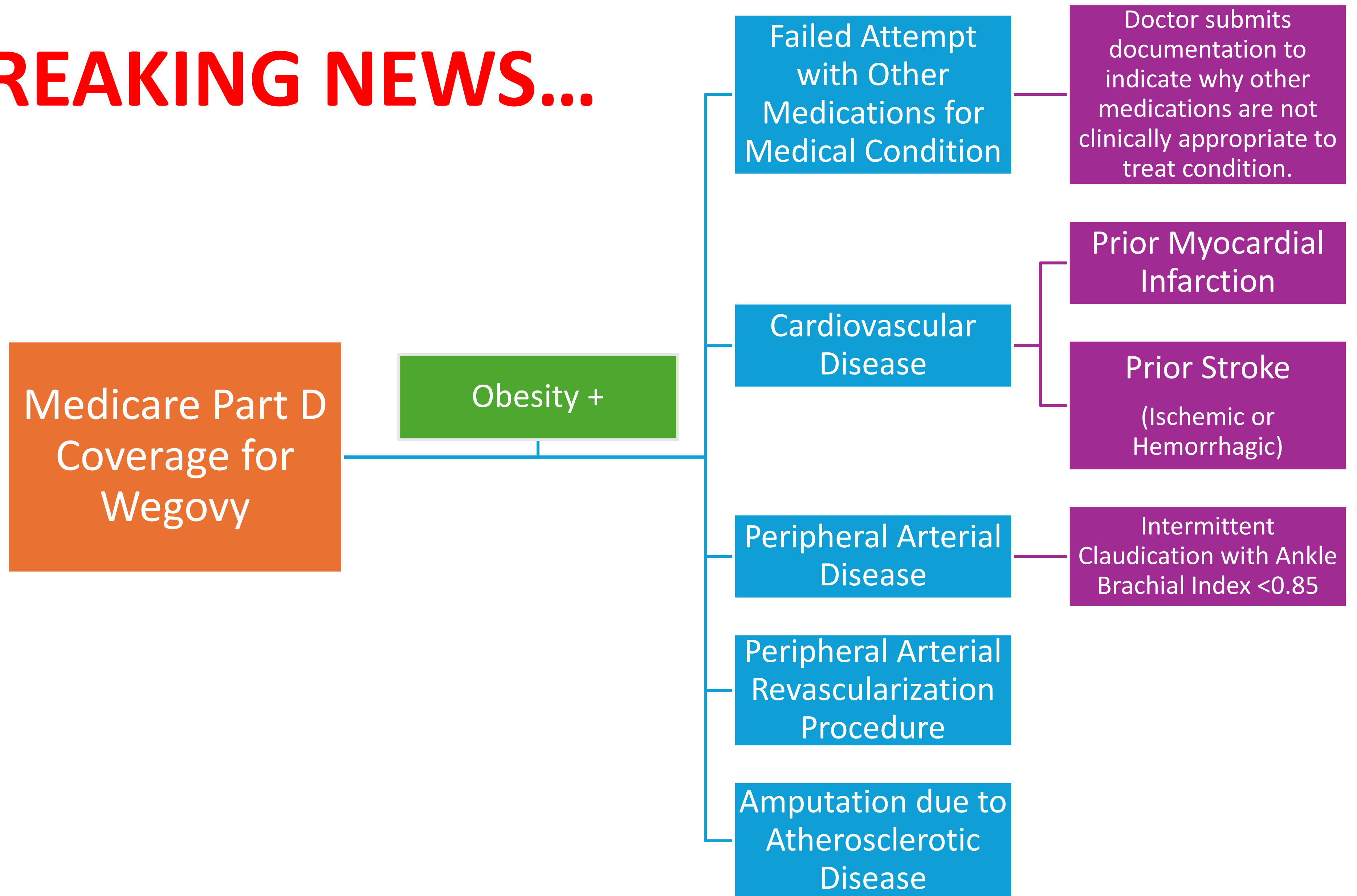
Drug	Pros / Cons
Orlistat	• PROS: Prohibits 33% Fat Absorption • CONS: Anal leakage
Phentermine **(also Phendimetrazine and Diethylpropion)**	• PROS: Increased Energy and Decreased Appetite • CONS: Elevated BP and Heart Rate
Phentermine/Topiramate ER	• PROS: Increased Energy and Faster Satiety • CONS: Can cause Drowsiness/Brain Fog/Tingling
Naltraxone/Bupropion ER	• PROS: Stop Cravings • CONS: Possible psychosis/suicidal ideation
Liraglutide	• PROS: Can use Victoza instead, initial ~5-8% weight loss • CONS: Insurance coverage, gallstones, kidney stones, gastroparesis
Semaglutide	• PROS: Can use Ozempic, once a week, 12yo+, almost 20% weight loss • CONS: Insurance coverage, Ozempic approved for DMII only, gallstones, kidney stones… *AVAILABILITY DUE TO SHORTAGE*

BREAKING NEWS…

- **NOVEMBER 8, 2023:** Tirzepatide (GLP1/GIP) was approved as the anti-obesity medication: Zepbound.
- One month supply costs $1090 (cash pay) and is now available as of 2024.
- $25 coupon cards are available on the manufacturer's website.
- Weight loss exceeds Semaglutide, averaging at 22.5%.

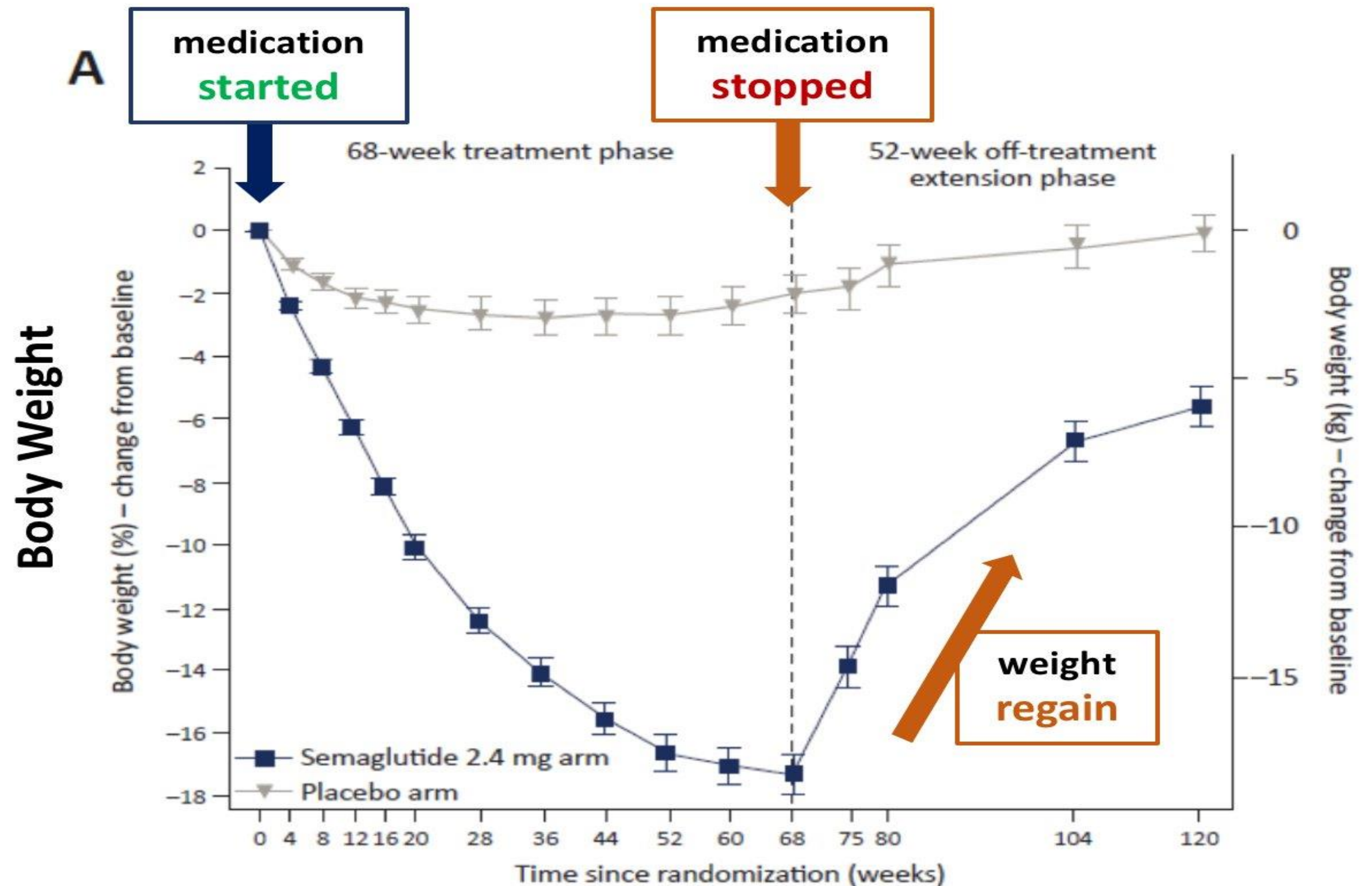
MORE BREAKING NEWS…

- **MARCH 2024:**
- Under the CMS' guidelines, Wegovy can be prescribed to patients with overweight/obesity that have heart disease.
- Medicare will not cover Wegovy if it is only prescribed for weight loss.
- Keep in mind deductibles and copays.



Key Findings:

Participants (327) regained two-thirds of their previous weight loss (11.6%) a year (52 weeks) after discontinuing semaglutide 2.4mg.



https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9542252/

https://pubmed.ncbi.nlm.nih.gov/35441470/

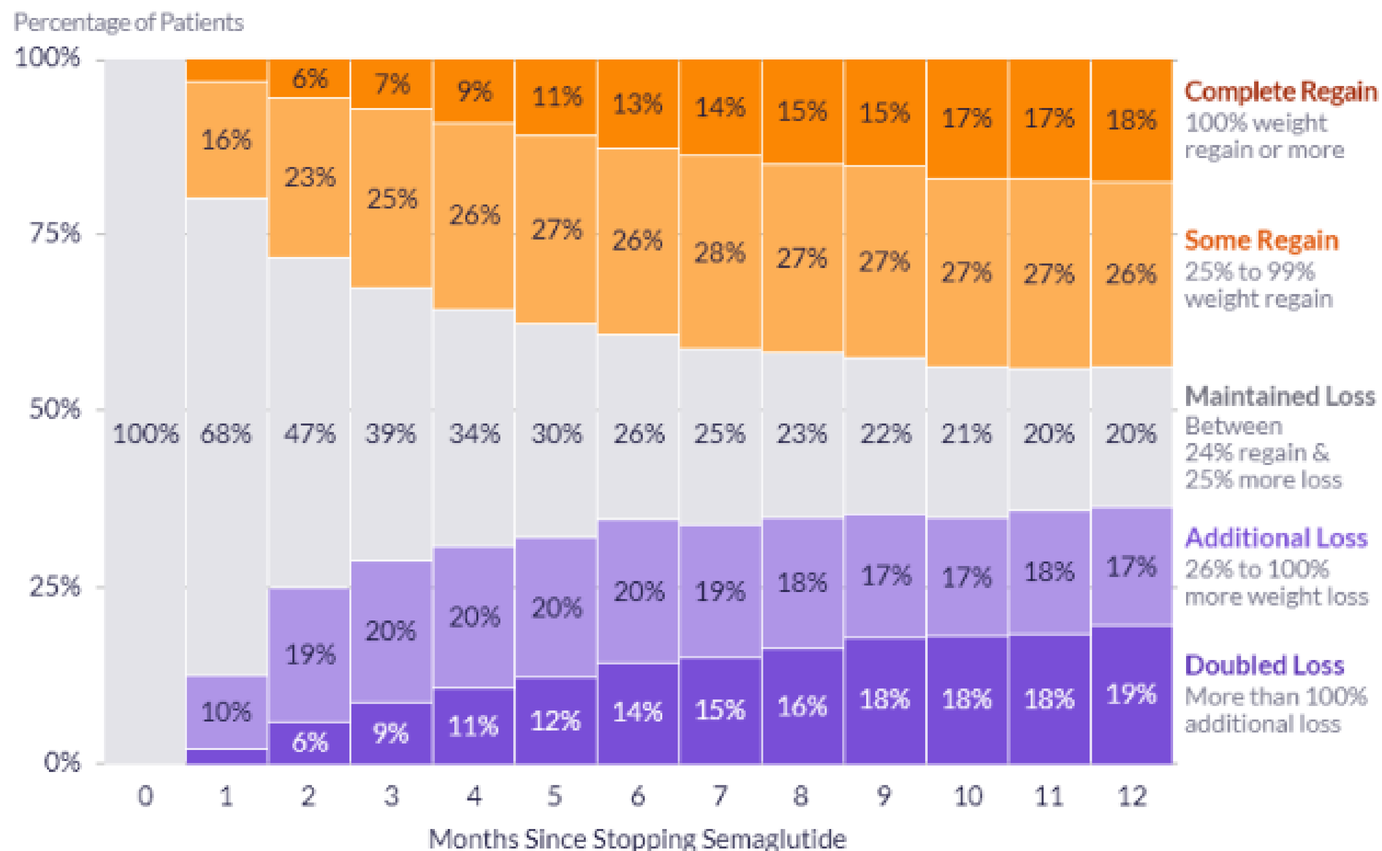


Figure 1. The proportion of patients by amount of weight regained or lost after stopping semaglutide.

Similarly, we studied 17,733 patients prescribed liraglutide who achieved a weight loss of at least five pounds while on the medication. Among this group, 18.7% experienced complete weight regain or surpassed their initial weight. However, 55.7% of these patients either remained around the weight they were at when stopping the medication or continued to lose additional weight.

Key Findings:

- 56% of patients maintain or continue with weight loss a year after discontinuing semaglutide or liraglutide.
- However, 18.7% of liraglutide users and 17.7% of semaglutide users regained all the weight they had lost or more.

https://epicresearchblob.blob.core.windows.net/cms-uploads/pdfs/many-patients-maintain-weight-loss-a-year-after-stopping-semaglutide-and-liraglutide.pdf

3rd and 4th Generation Anti-Obesity Medications:

Medication	Company	MOA	% Weight Loss	Current Status
Retatrutide	**Eli Lilly**	**GLP-1/ GIP/ Glucagon (weekly injection)**	**25%**	**Phase 2 Trial**
Oral Semaglutide 50mg	**Novo Nordisk**	**GLP-1 (oral tablet)**	**20%**	**OASIS Trial: Phase 3**
CagriSema (cagrilintide and semaglutide)	**Novo Nordisk**	**GLP-1/Amylin (weekly injection)**	**15%** (in 20 weeks)	**Phase 3 Trial**
Ecnoglutide	**Sciwind Biosciences**	**GLP-1 (weekly injection)**	**14%**	**Phase 2 Trial** (Oral- Phase 1)
Orforglipron	**Eli Lilly**	**GLP-1 (oral tablet)**	**15%**	**Phase 2 Trial** (Small molecule and significantly cheaper)
Danuglipron	**Pfizer**	**GLP-1 (oral tablet)**	**13%** (in 32 weeks)	**Phase 2 Trial** *(Twice a day version was d/c in 12/2023.)*

AGE

- Adjust current medications first, if possible.
  - Inform specialists.
- Are there interactions with current meds or disorders?
- Assess polypharmacy costs.

CULTURE

- Address stigma behind certain medications like Metformin.
- Explain the difference in GLP1 injections and insulin.

ECONOMY

- Confirm if medication is available in generics.
- Consider 30 days vs. 90 days scripts.
- Consider GoodRX, SingleCare, and assistance programs.

Bariatric Treatment

https://www.vidawellnessandbeauty.com/weight-loss-surgery/tijuana-why-is-it-the-leading-bariatric-surgery/

https://my.clevelandclinic.org/health/treatments/17285-bariatric-obesity-surgery

//www.uclahealth.org/medical-services/gastro/ies/patient-resources/endoscopic-treatment-obesity/endoscopic-suturing-weight-gain-after-bariatric-surgery

- Surgeries are non-reversible, except for gastric banding (lap-band) and the new gastric balloon.
- A person must have a BMI over 34 for most insurances to cover.
- The gastric sleeve is currently the most common option.
- FORTUNATELY, **90% of bariatric patients lost about 50% of weight within 1st two years.**
- 40% maintained at least 30% weight loss after 12 years.
- UNFORTUNATELY, **25% regain all their lost weight after 10 years.**

AGE

- Consider pre-op medical and cardiac clearances.
- Remember age restrictions:
  - Not recommended over 70 yo.

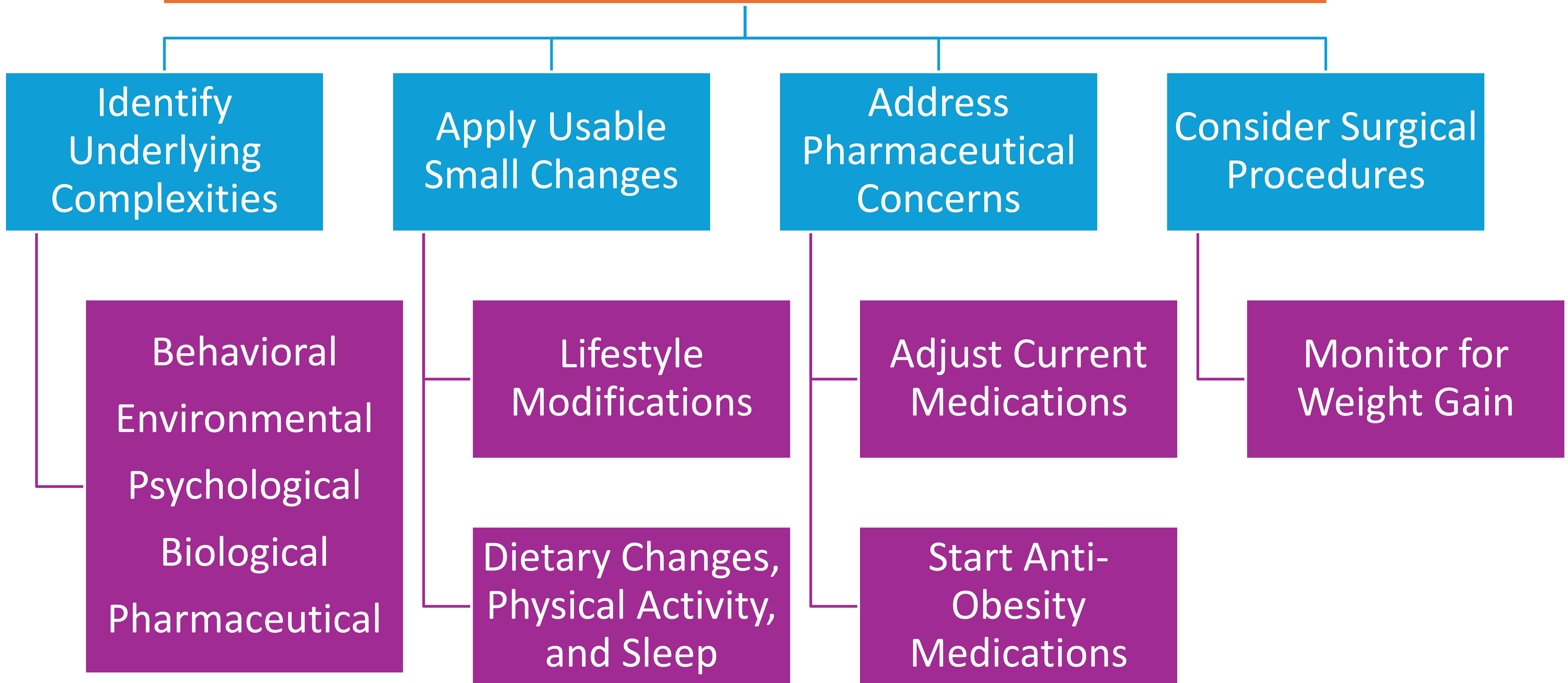
CULTURE

- Consider the stigma “easy way out”
  - Family disapproval
- Many perceive it as cosmetic & not medically necessary.
- Many fear risks and medical complications

ECONOMY

- Lap band costs: $14,500 average
- Sleeve gastrectomy costs: $14,900 average
- Bypass costs: $23,000 average

A B C



Recommending a Patient-Centered Obesity Treatment Plan:
Identify Underlying Complexities
Apply Usable Small Changes
Address Pharmaceutical Concerns
Consider Surgical Procedures
Behavioral
Environmental
Psychological
Biological
Pharmaceutical
Lifestyle Modifications
Dietary Changes, Physical Activity, and Sleep
Adjust Current Medications
Start Anti-Obesity Medications
Monitor for Weight Gain

Ledyenska Baez Ballesteros, MPAS, PA-C

Email: Ledyenska.baez@gonzaba.com

PAs in Obesity Medicine

www.PAsinObesityMedicine.org

Email: PAsinObesityMedicine@gmail.com

MEET AND GREET LUNCHEON

12p at the Scot Cotton Room

On the 2nd Floor of the Marriott Marquis Houston

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