ROBARD CORPORATION
Leaders in Weight Management

Katie Chapmon MS, RD

Empowering Sustainable Weight Loss: Integrating Lifestyle and Nutrition for VLCD and GLP-1 Patients

Katie Chapmon, MS, RD

In This Presentation ...

Section 1: Importance of nutrition and lifestyle modifications in the success of weight loss therapy

Section 2: Practical strategies to prevent sarcopenic obesity

Section 3: Nutritional and behavioral techniques to support long-term post weight loss therapy

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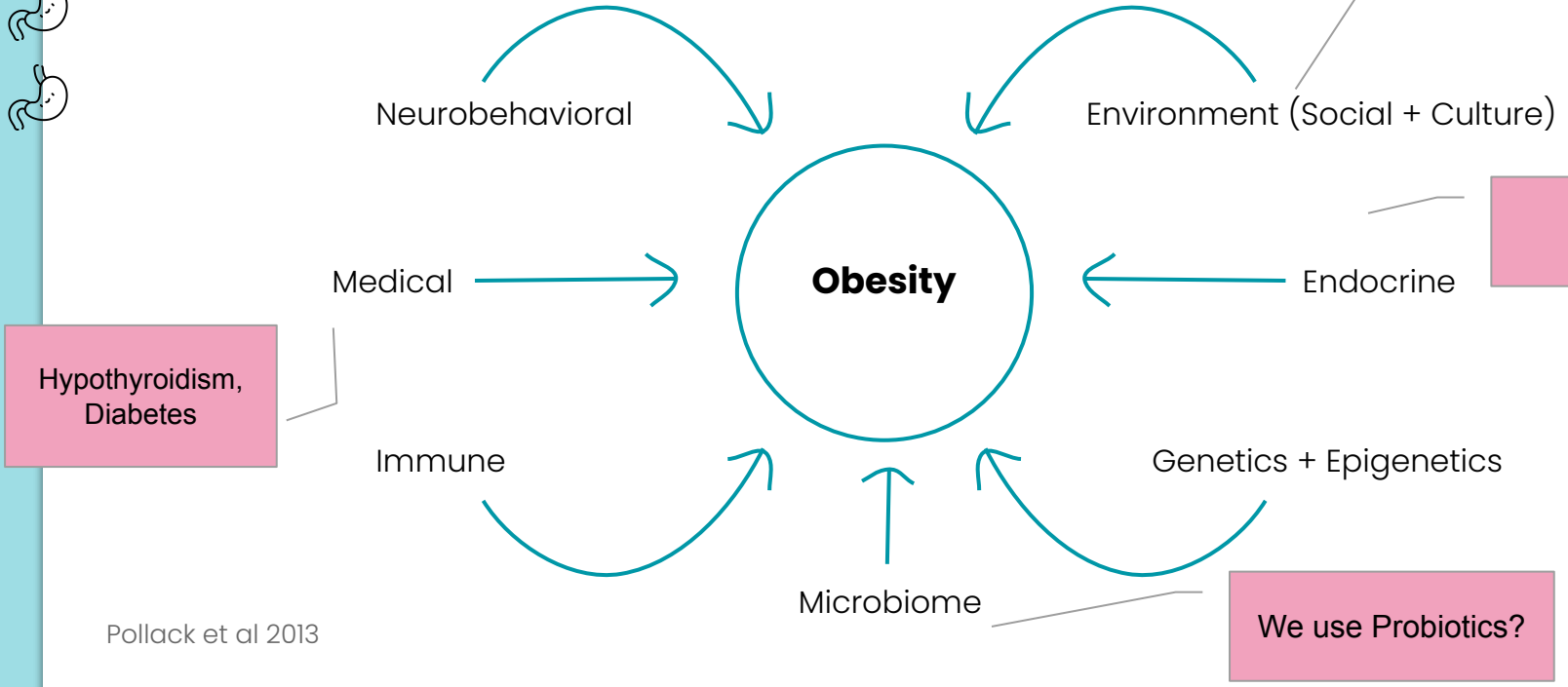
Obesity is a Multifactorial Disease



Food replacement strategy?

Hormone disruptors?

Hypothyroidism, Diabetes

We use Probiotics?

Pollack et al 2013

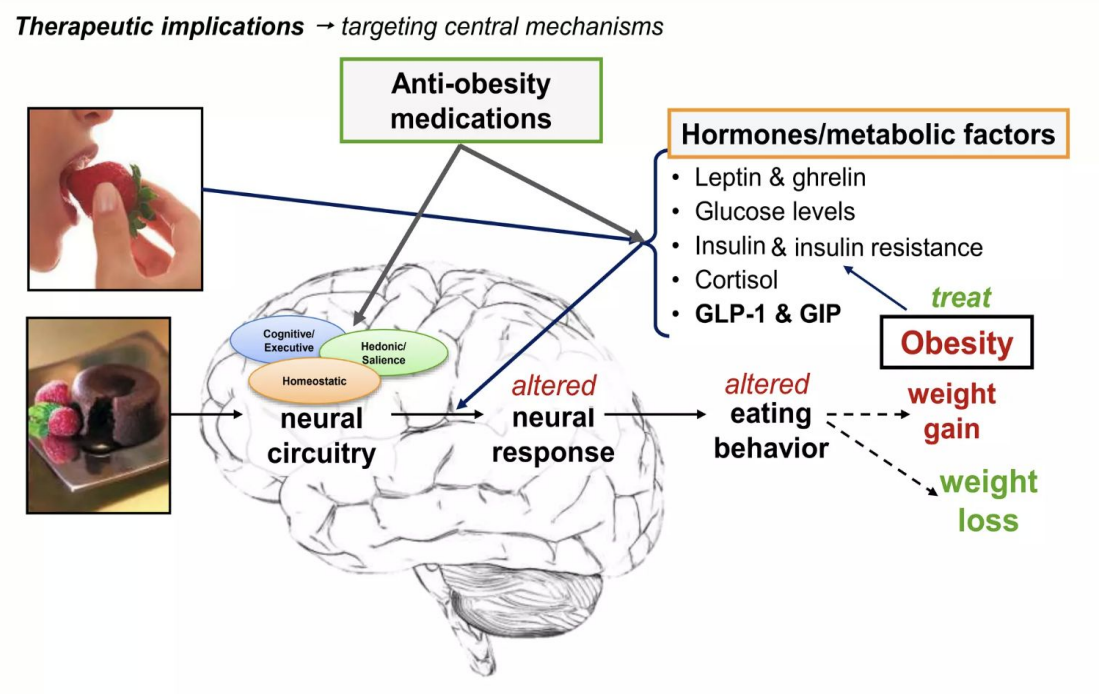
Why Nutrition and Lifestyle Matter

- The growing use of Very Low-Calorie Diets (VLCDs) and GLP-1 receptor agonists in weight management
- While these approaches are effective, long-term success hinges on sustainable lifestyle changes

Nutritional considerations	Lifestyle considerations
• Prevent nutrient deficiencies	• Enhance adherence and long-term success
• Optimize medication effectiveness	• Manage medication side effects
• Support sustainable weight loss	• Prevent weight regain

Anti-obesity medications mechanism of action

Jastreboff 2011



Mechanism of action for VLCD

Kashyap et al 2022; Steven et al 2016; Janssen et al 2023

- Calorie deficit
  - Typically <800 calories/day
- Metabolic changes
  - State of ketosis
  - Improved insulin sensitivity
  - Increased thermogenesis
- Hormonal effects
  - Decreased ghrelin
  - Increased peptide YY and glucagon-like peptide-1
  - Reduced insulin levels

Understanding the Role of VLCDs and GLP-1s

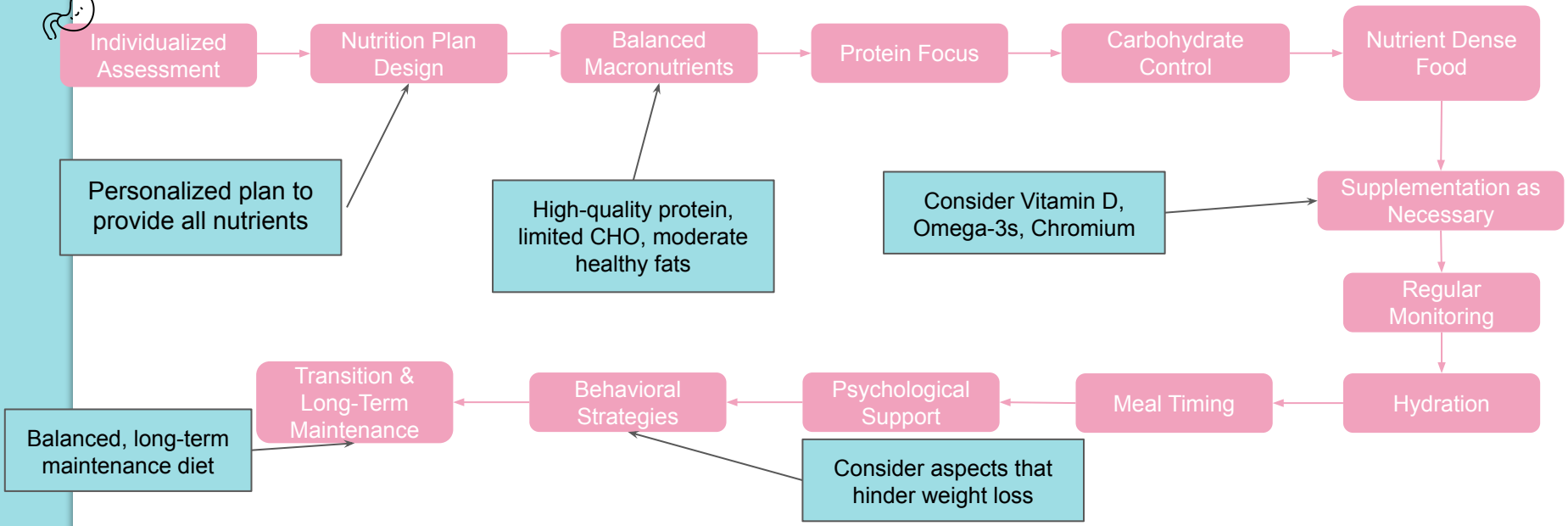
Anyiam et al 2024

- VLCDs:
  - Typically <800 calories/day
  - Benefits: Rapid weight loss, reduced comorbidities
  - Considerations: Nutrient deficiencies, loss of lean muscle mass, metabolic demands

- GLP-1s (Glucagon-Like Peptide-1 receptor agonists):
  - Appetite suppression, slowed gastric emptying, improved insulin sensitivity
  - Benefits: Significant weight loss, improved metabolic markers
  - Considerations: Side effects, long term use

Nutritional strategies for GLP-1s and VLCD

Salama et al 2015; Khalid et al 2023



Macronutrients for VLCD and GLP-1s

Janssen et al 2023; Kim 2021

- Balanced macronutrient intake

- Protein
  - Vital for muscle preservation and satiety; aim for 1.2-1.6g/kg body weight or adjusted body weight for those with obesity daily
  - At least 60-80 g / day

- Healthy Fats
  - Support hormonal balance and brain health
  - Omega-3s from fatty fish or flaxseed

- Carbohydrates
  - Focus on low-GI sources for sustained energy
  - Incorporate fiber-rich veggies and whole grain to improve digestion

Hydration and Fiber for VLCD and GLP-1s

Janssen et al 2023; Kim 2021; Offringa et al 2021

- Hydration:
  - Adequate water intake for metabolic processes and appetite control
    - Weight ÷ 2 in oz

- Fiber
  - Key in supporting digestion
  - Choosing high fiber foods improves satiety and are often lower in calories
  - 25-30 g / day

- Both may be an important factor in balancing side effects: nausea, constipation, energy, etc.

Micronutrients for VLCD and GLP-1s

- Specific micronutrients consistently deficient in caloric restriction
- Omega-3 fatty acids also commonly low in caloric restriction
- Multivitamin/mineral and omega-3 supplementation to cover potential deficits

Micronutrient	Percentage of average RDA intake for people using reduced calorie diets
Vitamin D	57%
Chromium	9%
Biotin	29%
Molybdenum	24%
Iodine	34%
Vitamin E	34%

Calton 2010

Cui et al 2022. NIH 2023

Vitamin recommendations to support weight loss therapy

Micronutrient	Why supplementation may be necessary	Recommended daily allowance (RD) for adults
B Vitamins	Essential for functioning metabolism and support of breakdown of carbohydrates, protein, and fat	Varies
Vitamin D	Support hormones and immune system, maintain strong bones	15 mcg (1000 IU)
Iron	Carries oxygen to cells in the body, supports muscle function	Males 18 mg Females 8 mg
Calcium	Maintains strong bones, increase in thermogenesis	Males 1,000 mg Females 50+ y/o 1,200 mg
Chromium	Supports insulin resistance and lipid metabolism	Males: 35 mcg Females 25 mcg Adequate Intake (AI) not RDA
Omega-3s	Reduce inflammation and support lipid metabolism	Males 1.6 g Females 1.1 g

Lifestyle: Stress Management

Raja-Khan et al 2015; Benson et al 2009

- Chronically activated endocrine glands may lead to overproduction of androgen hormones
- Psychological distress may contribute to increased risk for cardiovascular disease, diabetes, obesity, and chronic inflammation
- Mindfulness-based stress reduction may lead to favorable changes in blood pressure, blood glucose, distress, and quality of life
- Treatment of mental health conditions
- Stress reduction may include exercise, medication, breathing, talk therapy

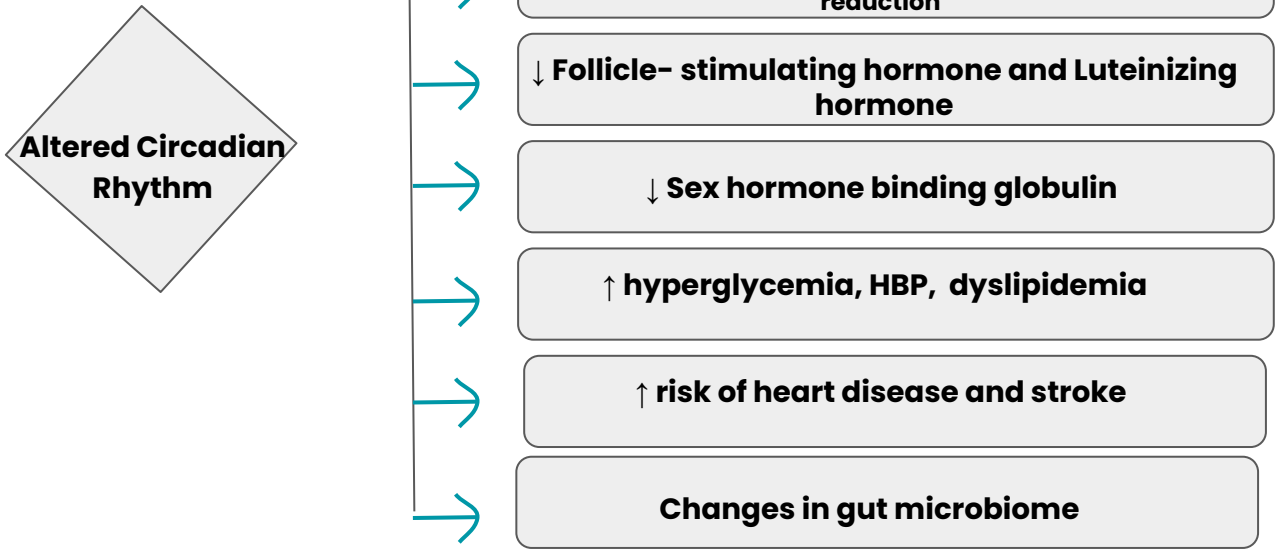
Lifestyle: Sleep Management

Broussard et al 2016; Fogel et al 2001

- Obstructive sleep apnea and excessive daytime sleepiness common those with obesity
- Short sleep duration associated with increased BMI in children and adults
- Altered circadian rhythms increase risk for obesity
- Deprivation stimulates hunger / appetite

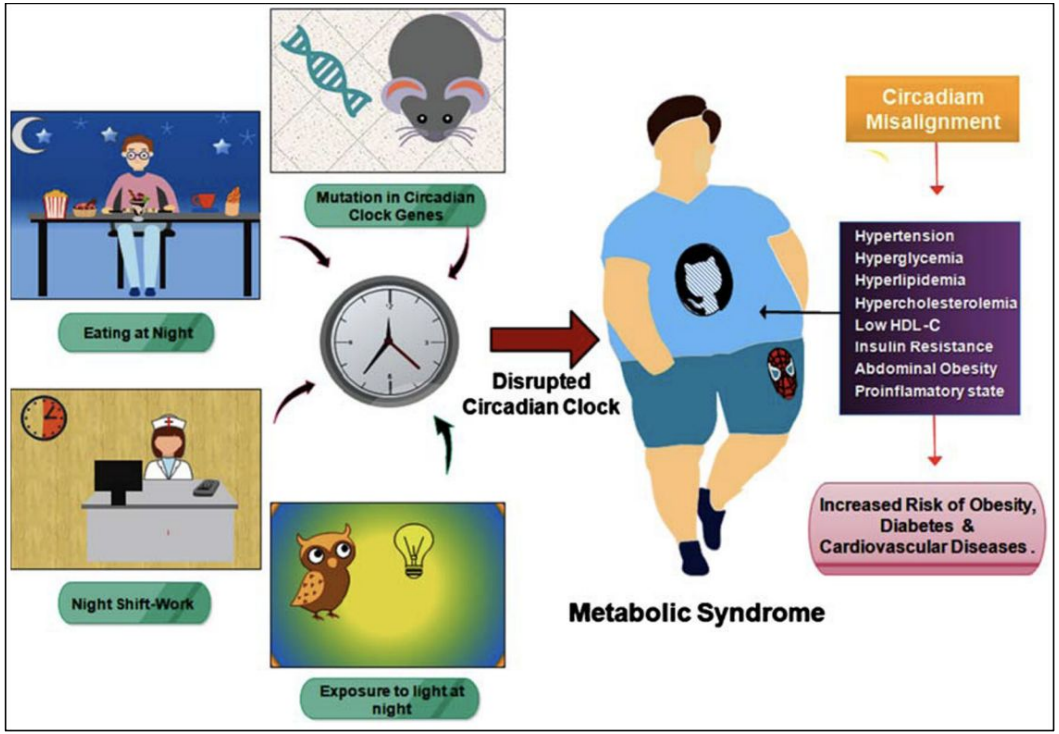
Sleep disruption and obesity

Cappuccio et al 2008; Broussard et al 2016



Altered sleep and obesity

Fatima & Rana 2020



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Sarcopenic Obesity

Kim 2021

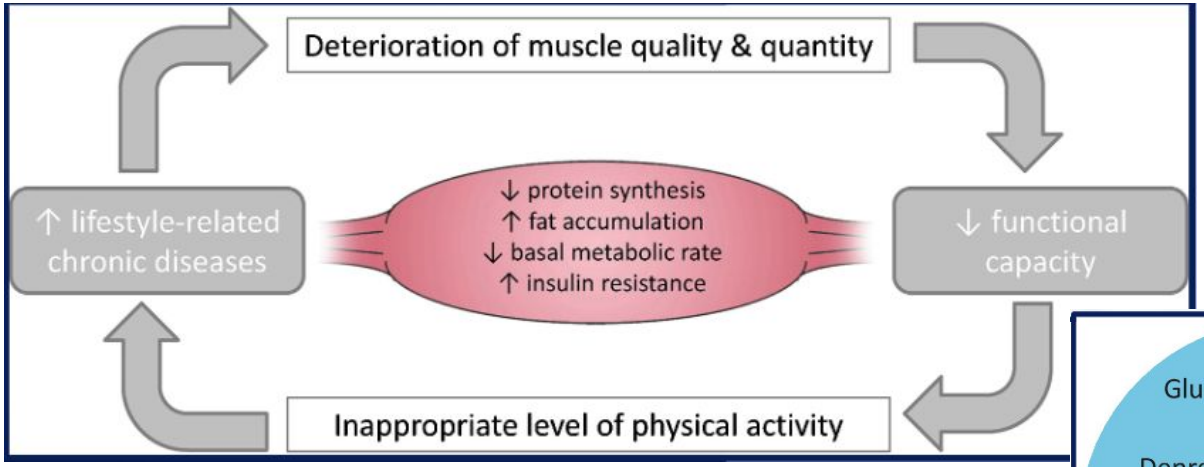
- Condition characterized by the coexistence of:
  - Sarcopenia (age-related loss of muscle mass and strength or physical performance)
  - Obesity (excess body fat)

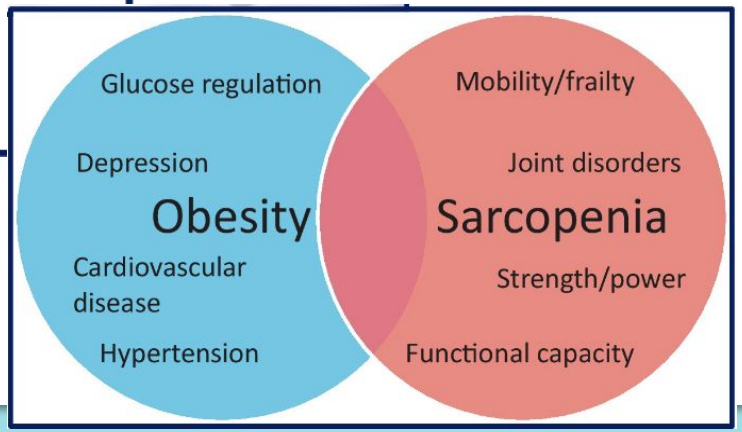
- Diagnosed by:
  - Body composition assessments
  - Anthropometric measurements (e.g., height, weight, BMI, waist-hip ratio)
  - Evaluation of muscle mass, strength, and physical performance

- Associated with
  - Accelerated functional decline
  - Increased risk of cardiometabolic diseases
  - Higher mortality rates
  - Disability and institutionalization
  - Reduced mobility and overall health

Rapid weight loss and sarcopenic obesity

Parr et al 2013





How to address sarcopenic obesity

Parr et al 2013

DEXA	NFPE	Recommendations

• Body fat % with comparison to the reference population
• Regional body fat %
• Central abdominal fat (Visceral adipose tissue)
• Total lean tissue (muscle)
• Regional muscle mass and muscle symmetry
• Total bone density
	Recall muscle wasting
	• Temples
	• Clavicle
	• Shoulder
	• Scapula
	• Quad (have patient dig heel into floor)
	• Knee
	• Calf
		• Ensure multivitamin usage
		  ○ Adequate Calcium and Vit D levels
		• Maintain protein goal
		• Adequate hydration
		• Exercise prescription with weight bearing exercise
		  ○ Strength training 2-3x / week
		  ○ Collaborate with exercise trainer / physiologist

Interventions

- Exercise
- Emphasize hydration
- Protein forward diet
- Use supplementation when necessary
- Mitigate side effects
- Work with a dietitian or nutrition professional to personalize needs

Lifestyle: Exercise

De Sousa et al 2016; Niemiro et al 2022

- Exercise:
  - Resistance Training: preserves lean muscle mass and boosts metabolism
  - Aerobic Exercise: Supports cardiovascular health, enhances fat loss, and improves mood.
  - Flexibility and Balance: Incorporate yoga or stretching to prevent injury and support overall mobility

- Recommended 30 minutes per day of moderate physical activity for those with obesity

- Lose weight:
  - At least 200 to 300 minutes of moderate to vigorous physical activity / week

- Maintain or prevent weight regain:
  - Minimum of 150 to 300 minutes of moderate physical activity / week or 75 to 150 minutes of vigorous physical activity / week

Lifestyle: Exercise

De Sousa et al 2016; Niemiro et al 2022

Example exercise prescription

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	
30 minute Aerobic training 	40 minute Resistance Training 	1 hour Mind-body exercise 	Rest day 	45 minute Resistance Training 	35 minute Aerobic training 	Active rest - 15-20 minute walk 	Total = 230 minutes

Medical Synergy in Pharmacotherapy for Weight Loss

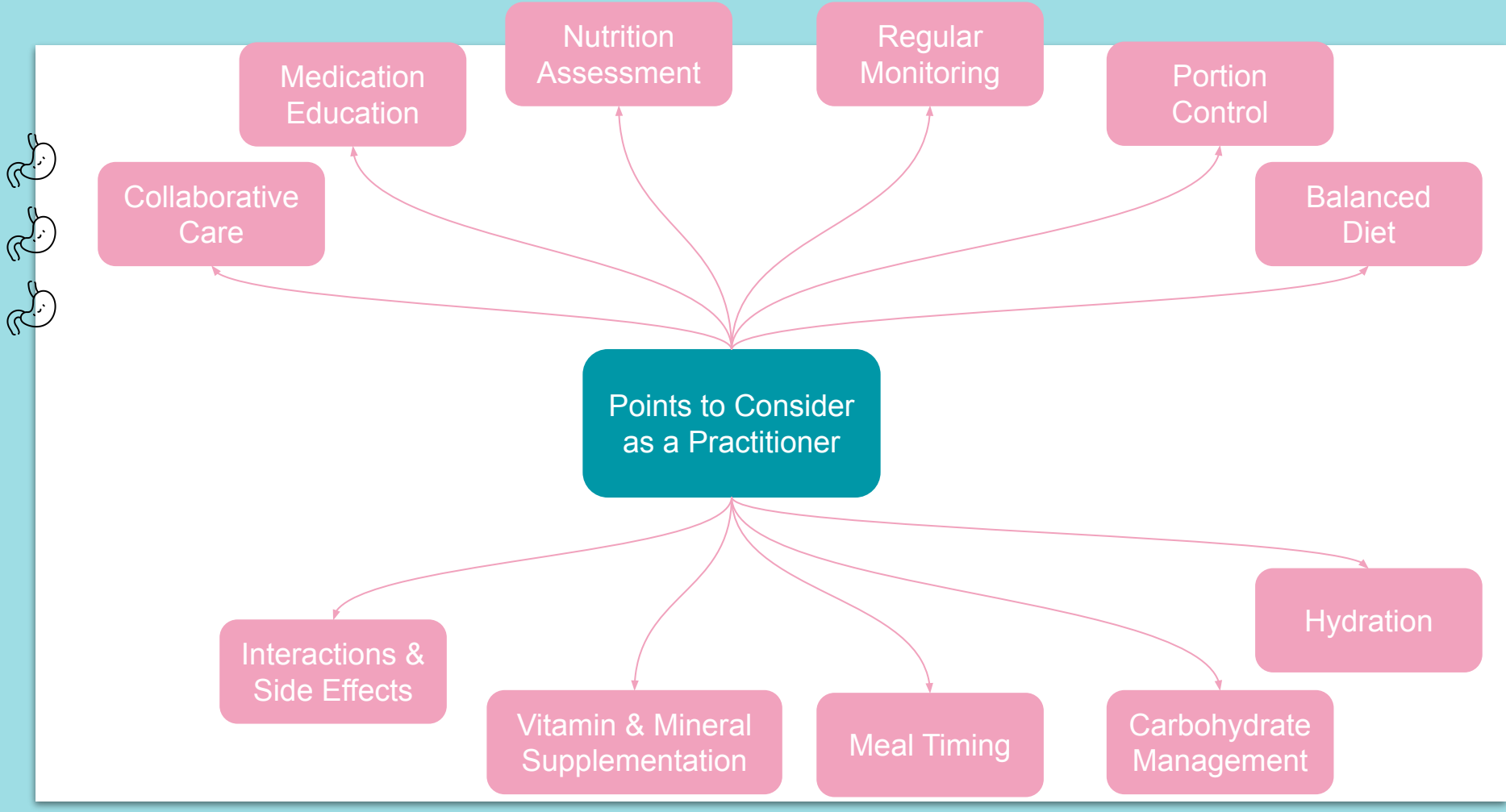
Jastreboff 2011

WL medication side effect	Practitioners assistance
Nausea	Take medication with food, small frequent meals, emphasize hydration, use electrolytes, use of peppermint candy or gum
Vomiting	Consider food diary, emphasize bland foods, small amount of food and hydration
Diarrhea	Consider food diary, emphasize bland foods and hydration, use electrolytes, avoid spicy and high fat foods
Constipation	Consistent eating schedule, increase fiber intake, increase physical activity, emphasize hydration, consider fiber supplementation
Decreased appetite	Small frequent meals, soups and smoothies, emphasize hydration, take a walk before eating to increase appetite

Medical Synergy in Pharmacotherapy for Weight Loss

Jastreboff 2011

WL medication side effect	Practitioners assistance
Dyspepsia	Consider antacid, small frequent meals, lower dietary fat content
Insomnia	Recommend consistent sleep/wake cycle, stop eating 3 hours before bed, consider supplementation, avoid caffeine, nicotine, and alcohol
Dry mouth	Emphasize hydration (water or low-sugar drinks), take frequent sips, chew ice chips, chew low-sugar gum
Headaches	Increase fluid intake, promote Magnesium foods and consider supplementation
	**If patient is experiencing severe side effects, work with practitioner and consider discontinue of specific medication


Medication Education
Nutrition Assessment
Regular Monitoring
Portion Control
Collaborative Care
Balanced Diet
Points to Consider as a Practitioner
Interactions & Side Effects
Vitamin & Mineral Supplementation
Meal Timing
Carbohydrate Management
Hydration

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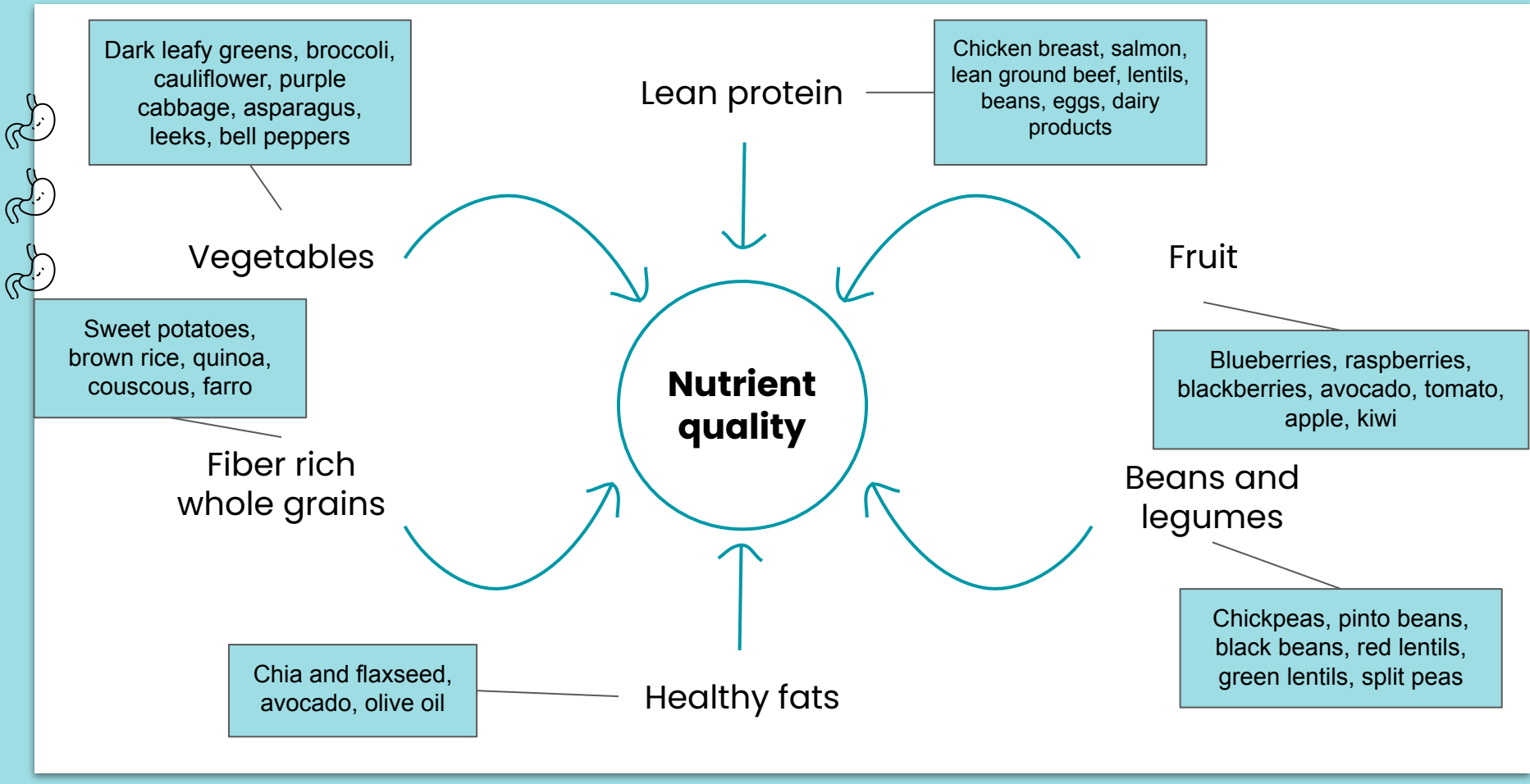
Nutrition to optimize weight maintenance post weight loss therapy

- Personalized, enjoyable, sustainable
- Caloric maintenance
- Top tips and tricks
    - Protein first (this is a main priority), then produce for fiber
    - Continued smaller portions
    - 5-10 minute waiting period before getting seconds
    - Avoid eating close to bedtime/laying down
    - Heavy/fatty, spicy foods may be poorly tolerated

Nutrient quality when quantity won’t be met

Kim 2021

- Caloric deficit as important factor for weight loss
- No statistical evidence for one “diet” over another
- Some nutritional guidelines may improve other chronic diseases associated with obesity
- Emphasizing nutrient quality over simply calories may be an effective tool in weight loss


Dark leafy greens, broccoli, cauliflower, purple cabbage, asparagus, leeks, bell peppers
Vegetables
Lean protein
Chicken breast, salmon, lean ground beef, lentils, beans, eggs, dairy products
Fruit
Blueberries, raspberries, blackberries, avocado, tomato, apple, kiwi
Beans and legumes
Chickpeas, pinto beans, black beans, red lentils, green lentils, split peas
Sweet potatoes, brown rice, quinoa, couscous, farro
Fiber rich whole grains
Nutrient quality
Chia and flaxseed, avocado, olive oil
Healthy fats

Tips and Tricks for Implementation

Amiri et al 2023; Nelson 2017

Practical Meal Planning	Mindful Eating Practices	Exercise Integration
• Simple, balanced meal ideas that fit within a VLCD framework • Discuss the use of pre-prepared options or meal delivery services to make adherence easier	• Teach techniques like portion control, eating slowly, and recognizing hunger cues • Encourage keeping a food journal to track habits and identify areas for improvement	• Provide quick, at-home workout routines that require minimal equipment • Suggest ways to incorporate physical activity into daily routines (e.g., walking meetings, standing desks)

Behavioral Strategies for Sustainable Change

Bays et al 2021; Mastellos et al 2014

Goal Setting and Accountability	Overcoming Barriers:	Building a Support Network
• Set realistic, measurable goals with a clear action plan • Discuss the role of tracking progress and regular check-ins with a healthcare provider or support group	• Identify common obstacles: social situations, emotional eating, time constraints • Provide practical tips for navigating these challenges, such as meal prepping, healthy snack options, and seeking support.	• The importance of a supportive environment, including family, friends, or online communities • Consider the role of a dietitian or health coach in ongoing support and education

Obesity and Behavior

Silventoinen & Konttinen 2020

- Eating behavior is complex
- Affected by all 5 senses (sight, smell, hearing, taste, and feel)
- Affected by emotions, stress, environment, rewards, and habitual time cues
- May be affected by eating disorders or multi-layered food relationships
- Weight loss therapy often involves a large and qualified healthcare team

Perspective Challenges to Behavioral Change

Karppinen et al 2018; Mather et al 2022

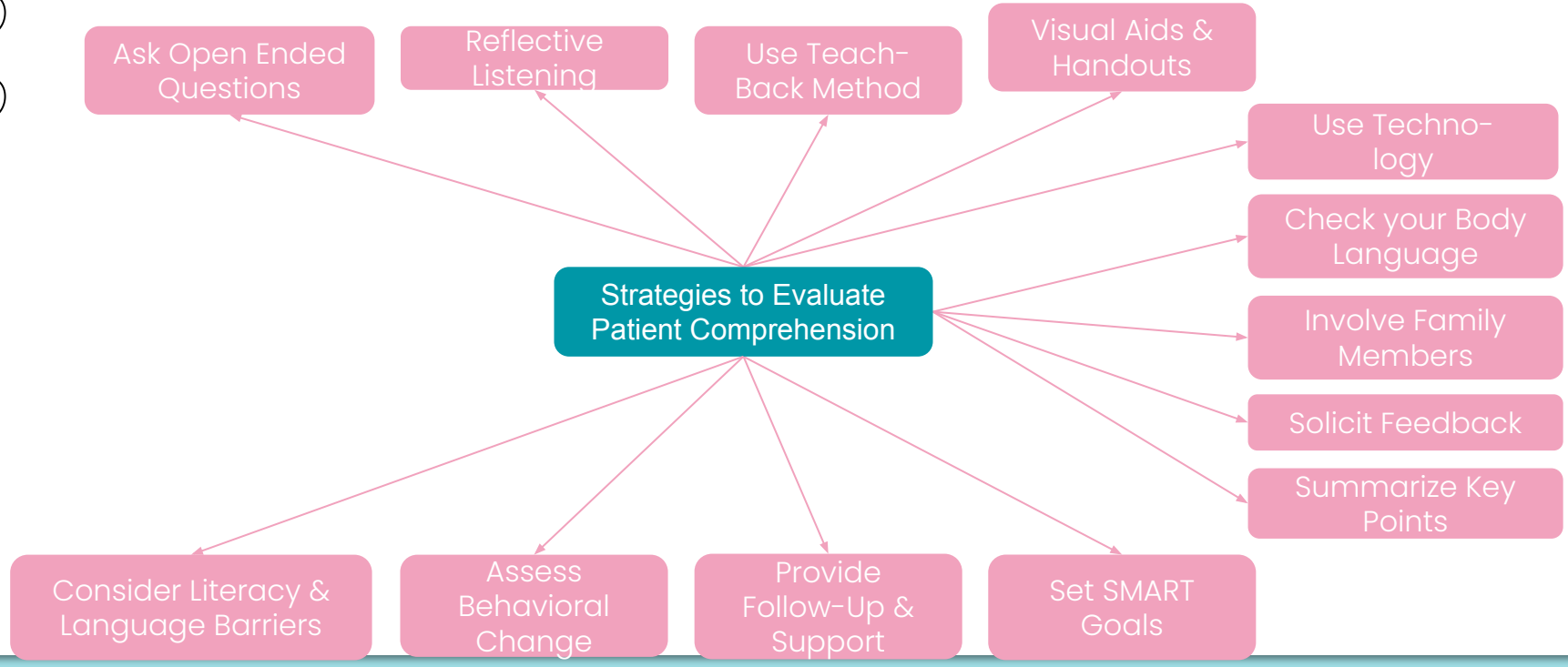
Challenges to health behavior change from the practitioners perspective:

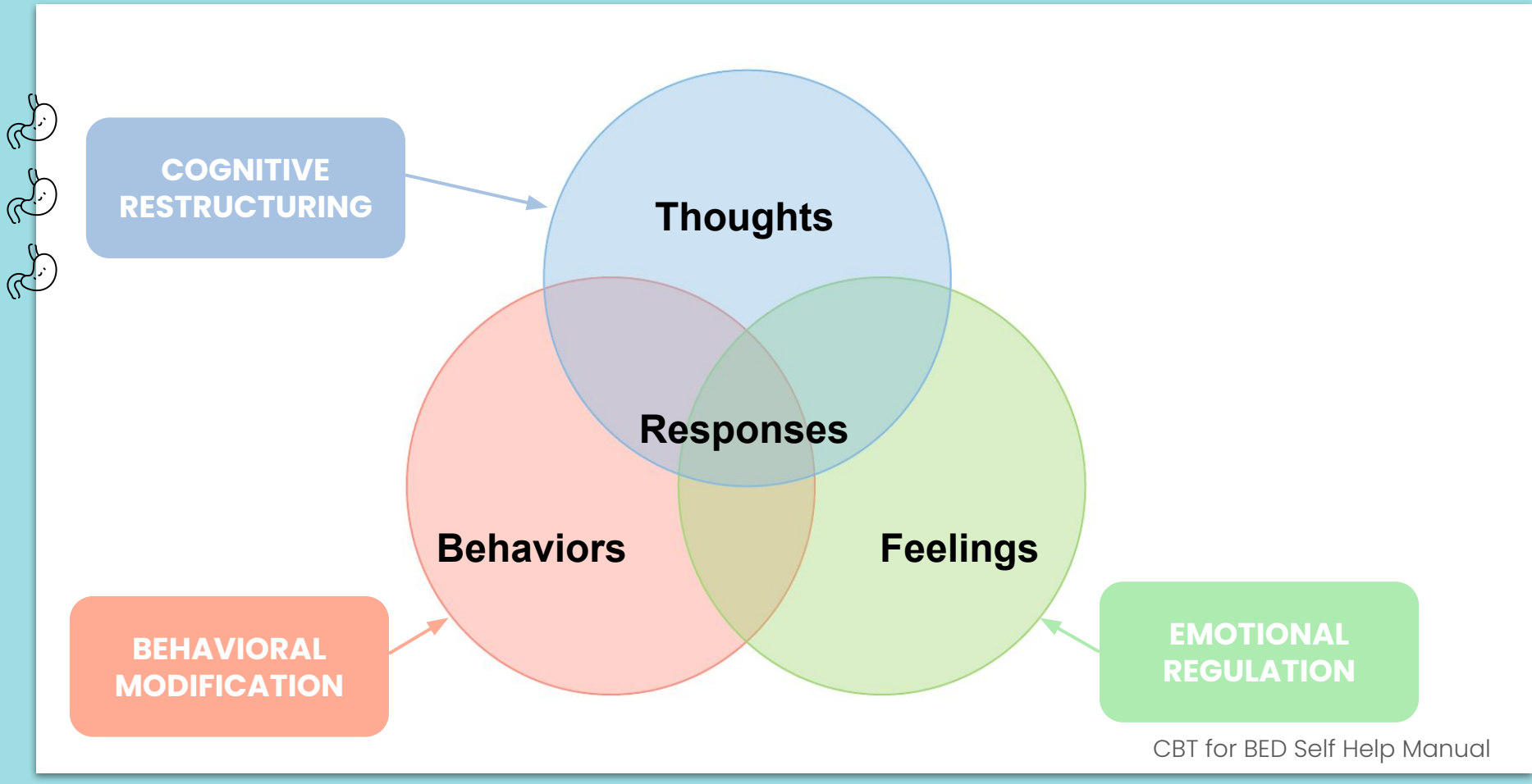
- Limited education
- Communication challenges
- Organizational constraints
- **Limited Time & Resources**
- Financial constraints
- Limited cultural competence of the healthcare giver
- Patient variability
- **Complexity of Behavior Change**
- **Stress & Burnout**
- **Lack of Behavioral Change Training**

Challenges from the patient's perspective:

- **Resistance to Change**
- Health status
- **Underlying Psychological Issues**
- Lack of motivation
- Ambivalence
- Limited health literacy
- Food insecurity
- Lack of confidence
- Mistrust
- Financial constraints
- **Time constraints**
- Lack of support
- **Ingrained Habits**
- **Sociocultural Factors**

Some Strategies Practitioners can use to Evaluate Patient's Comprehension & Make Adjustments As Needed




COGNITIVE RESTRUCTURING
Thoughts
Responses
Behaviors
Feelings
BEHAVIORAL MODIFICATION
EMOTIONAL REGULATION

Focus on the Cue

Rearranging Cues:

- Avoidance
  - Remove the trigger
- Restricted stimulus field
  - Restrict additional cues that trigger behavior
- Strengthen cues for desired behavior
  - Create new cues associated with healthy consequences

Changing Your Response to Cues:

- Build in a pause - delay the response
  - Break the cue from the automatic response
- Alternative behaviors
  - Associate a different, adaptive behavior with high risk cues
- Exposure and response prevention
  - Structure your environment so responses can be adaptive following an exposure to a cue

Focus on the Consequences

Rewarding behaviors

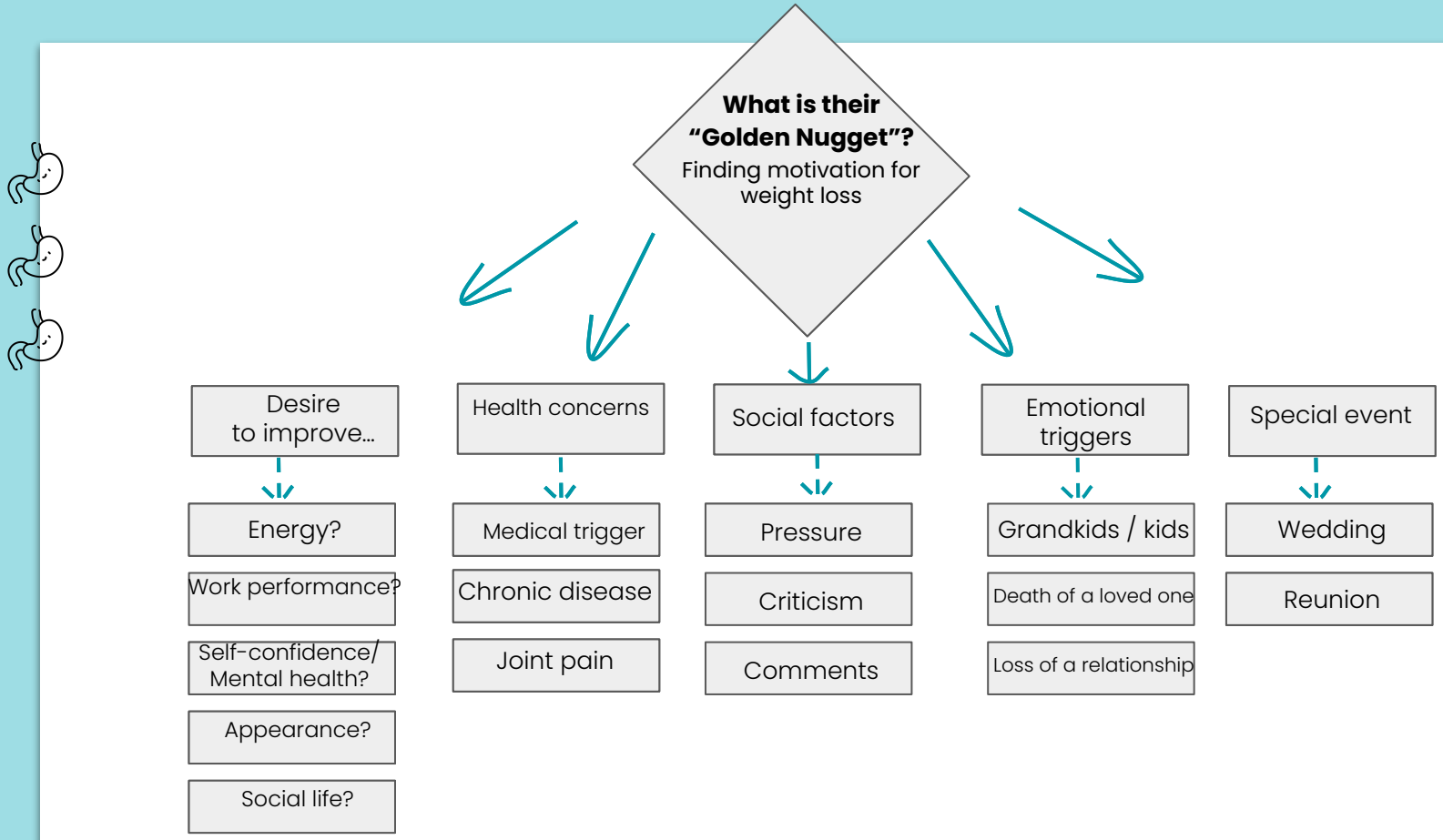
- Always follows behavior, never proceeds
- Must be contingent on occurrence of behavior (no behavior, no reward)
- Should follow the behavior as quickly as possible
- Reward behavior in small steps

Mental rewards

- Congratulate all minor victories
- Something positive to oneself about oneself, or thinking about something pleasant
- Used anytime, anywhere, given immediately after accomplishing the goal
- Tailor-made to the client

Material or activity rewards

- Treating oneself to something fun or pleasurable when accomplishing a goal
- Activities should be easily attainable and tailor-made


What is their "Golden Nugget"?
Finding motivation for weight loss
Desire to improve...
Energy?
Work performance?
Self-confidence/ Mental health?
Appearance?
Social life?
Health concerns
Medical trigger
Chronic disease
Joint pain
Social factors
Pressure
Criticism
Comments
Emotional triggers
Grandkids / kids
Death of a loved one
Loss of a relationship
Special event
Wedding
Reunion

Sustaining Weight Loss Post-Therapy Usage

Kim 2021

- Avoiding Weight Regain:
  - Gradual reintroduction of a balanced, nutrient-dense diet to maintain weight loss.
  - Continued emphasis on protein intake to support muscle maintenance and control hunger.
  - Regular physical activity to keep metabolism elevated and prevent fat accumulation.
- Psychological Support:
  - Address potential emotional responses to coming off GLP-1s, such as fear of weight regain.
  - Provide resources for coping strategies, including cognitive-behavioral therapy or support groups.

Practical Tips for Weight Regain / Continuing Momentum

- Small frequent meals
- Nutrient timing
- Focus on protein and fiber
- Explore mindful, intuitive eating
- Re-identify barriers
  - Cognitive
  - Behavioral
  - Support
  - Situational
- Understand obesity is a multifactorial disease
  - Consider other systems at play
    - Stress
    - Sleep
    - Gut health
    - Hormone health
- Consider increasing physical activity, NEAT, and leisure activities
  - Burning 200 calories per day
  - Brisk walking
  - Decreasing sedentary behaviors

Bays et al 2021

Review

- Successful weight management using VLCDs and GLP-1 therapy requires a comprehensive approach, including nutrition, exercise, and lifestyle changes
- Sarcopenic obesity must be addressed during and after use of GLP-1s
- Importance of ongoing support, behavioral change, and realistic goal-setting for sustained results

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Thank you!

- Reach out if you have any questions
- For Healthcare Professionals: Check out BariatricNutritionPro.com

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