





Introduction to Personalized Cognitive Behavioral Therapy for Obesity CBT-OB

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CBT-OB MAP



Preparatory Phase

Outpatient CBT-OB Phase 1 (weight loss) Outpatient CBT-OB
Phase 2 (weight maintenance)

Module 1

Monitoring food intake, physical activity and body weight

Module 2

Changing eating

Module 3

Developing an active lifestyle

Module 4

Addressing obstacles to weight loss

Module 5

Addressing weight-loss dissatisfaction

Module 6

Addressing obstacles to weight maintenance

Preparatory Phase

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Goals

- 1. To assess the nature and severity of obesity using an obesityfocused history
- 2. To engage patients in the treatment by adopting an engaging style, providing education on obesity and CBT-OB and involving them actively in the decision to change
- 3. Deciding how best to proceed.

Preparatory Phase

Procedures

- 1. Developing a collaborative and trusting relationship
- 2. Obesity Assessment Interview:
- Personal information
- Weight history
- Previous treatments for obesity
- Current status
- Medical history
- Weight goals and reasons for wanting to lose weight
- **3. Physical examination** (Body weight and height, waist circumference Blood pressure, skin examination, thyroid examination, presence of oedema, neurological examination)
- **4. Fitness assessment** (Resistance, balance, flexibility, and strength)
- **5. Psychosocial assessment** (EDE-Q, ORWELL, BSI)



Preparatory Phase

Weight Loss Indications

- BMI≥ 30
- BMI between 25 and 29.9/high waist circumference + 1 or more CVD

Weight Loss Contraindications

- BMI <25 with waist circumference <88 cm in women and <102 cm in men
- Pregnancy/Breastfeeding
- Eating disorders
- Major depression and other disease in which caloric restriction is contraindicated

Weight Loss Obstacles:

- Psychological: MDD, BED, poor motivation
- Drugs: psychiatric medications, diabetes drugs,...
- External circumstances: holidays, lack of time, lack of support,.



Educating The Patient on Obesity and Weight Loss Benefits in an Informative Way

- Inform not terrorize
- Obesity increases the risk of numerous disease
- Weight loss (even 5%) reduces the medical risks associated with obesity

Treatment Description

Phase 1 (weight loss): 6 months

- 16 sessions
- First 8 weeks: one session a week
- Then one session every two weeks

Phase 2 (weight maintenance): 12 months

12 sessions held at 4 weeks interval

Preparatory phase

Treatment Description (cont')

Behavioural and cognitive change

- Behaviours (eating and physical activity)
- Cognitions (obstacles to weight loss and long-term weight control mind-set)

Weight goals

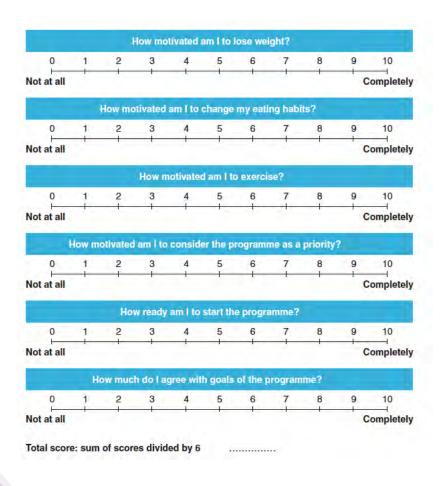
Achievable weight loss: About 0.5-1kg per week for 6 months

The Role of The Patient

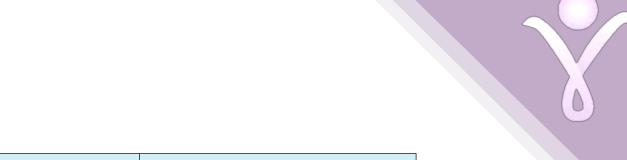
- Play an Active role/Be engaged
- Treatment as a priority
- Starting well
- Not skipping the session (therapeutic momentum)
- Homework outside the sessions are essential

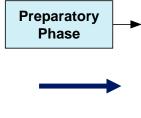
Preparatory phase

Assessing the patient motivation (cont')



"To lose weight or not to lose weight" questionnaire





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Addressing obstacles to weight maintenance

1. Explaining What The Treatment Will Involve

It starts in session 1 and continues till the end of the treatment

2. Educating on Energy Balance

- Energy Intake by calculating the calories consumed
- Energy Expenditure

BMR	DIT	Physical Activity
60-70% of daily energy expenditure	10% of the total amount of energy ingested over 24 h	20-30% of energy expenditure

3. Establishing Real-Time Monitoring of Food Intake and Physical Activity

- Achieves better weight loss results
- Promotes more accurate control of portion sizes
- Increased adherence to the diet and physical activity

Day				Daily calo	ie goal	Day	Monday, February 4th	Daily calori	e goa	ala	1,500 kcal
A. ENE	RGY INTAKE						and the same				
Time	Food and drink consumed	Calories	* F	Place	Comments and contexts		RGY INTAKE				
						Time	Food and drink consumed	Calories	*	Place	Comments and contexts
						8:00	coffee with 5 g of sugar	20		Kitchen	101 kg. This is my weight at the start of the
							low fat milk (1.8%) 20 g	10	_		treatment
							1 small slice of fruit tart	180	\dashv		
						10:30	3 apricots 125 g	35		Office	
						13:00	rise 90 g	300		Kitchen	
							sauce with mushrooms 40 g	30			
							parmesan cheese 10 g	40			
							frozen spinach	45			
							olive oil 10 g	90			
							1 pear 250 g	65			
						16:30	1 yogurt cream 150 g	150		Office	
						17:30	2 cookies 15 g	80	*	Office	They were on my table and I could not resist
						20:00	soft cheese 100 g	300		Kitchen	and I could not resist
							potatoes 225 g	190			
							boiled zucchini 300 g	35	_		
							olive oil 20 g	180			
							1 apple 190 g	80			
							coffee with 5 g of sugar	20	_		
							conce with a g of sugar		\rightarrow		
	Daily energy intake						Daily energy intake	1,850			

			Calories
Steps	Number		
Formal exercise	Type	Minutes	
Formal exercise	Type	Minutes	
Basal metabolic rate			
Diet-induced thermog	enesis (about 10	0% of the total calories consumed)	
		Daily energy ex	penditure
C. ENERGY BALANC	CE		
	-	=	
Daily energy in		Daily energy expenditure	Energy balance

B. ENERGY EXPENDITURE					
			Calories		
Steps	Number 4,351		140		
Formal exercise	Type exercise bike	minutes 10	76		
Forma exercise	Туре	minutes			
Basal metabolic rate	1,449				
Diet induced thermogen	185				
	1,850				

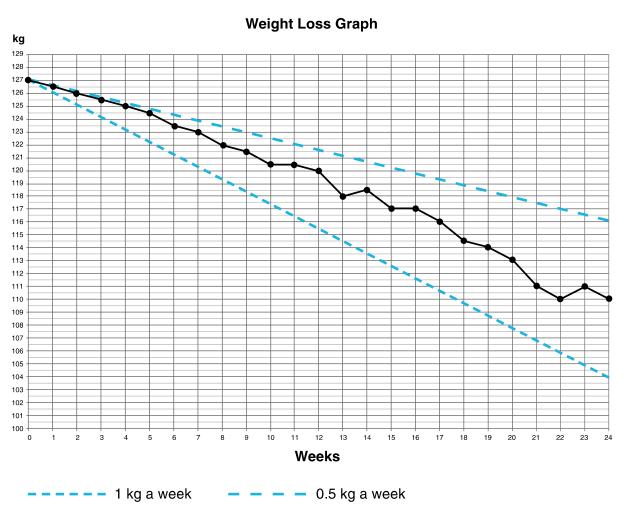
C. ENERGY BALANCE				
1,850	-	1,850	=	0
Daily energy intake		Daily energy expenditure		Energy balance

4. Initiating Weekly Weighing

- It provides patients with realistic information about their weight and how it changes
- It helps patients identify and interpret changes in their weight

Procedure

- Psycho-education about body weight
- Weighing at home is stopped
- Weekly weighing is initiated at the beginning of each session
- Plotting the weight on a "weight-loss graph"
- Interpretation of the weight trend (4 readings) in session with the therapist



Reviewing Records and Other Homework

- Each session (from # 2 onwards) opens with the measurement and interpretation of the weight and the review of the monitoring records
- The monitor records should be discussed in great detail
- The process of recording
 - Was it done in real time?
 - Were all episodes of eating and drinking reported?
 - Were the asterisk and comment columns were used correctly?
- The content of recording
 - Were the calculations of the daily calorie intake correct?
 - Were step count and formal exercise and diet-induced thermogenesis were accurate.
 - What the patient has learned by recording his/her behavior?



Preparatory Phase

Outpatient CBT-OB
Phase 1 (weight loss)

Outpatient CBT-OB
Phase 2 (weight maintenance)

Module 1

Monitoring food intake, physical activity and body weight



Module 2

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Addressing obstacles to weight maintenance

It starts in session 2 -Changing eating to create a moderate energy deficit

Educating Patients

- Obesity is a chronic condition necessitating lifestyle modification
- Weight loss speed: 0.5-1kg per week is achievable with 500-1000Cal deficit/day
- Composition of weight loss (75% fat mass and 25% lean body mass)
- Very low-calorie diets (< 800 kcal/day) are contraindicated leading to nutritional deficiencies
- **Diet composition**: does not influence amount of weight loss, key is adherence to caloric restriction



Based on Multiple Research Studies:

There is no clear advantage of a "Low-carb" over a "High-carb diet"

1-Johnston et al (2014). Comparison of Weight Loss Among Named Diet Programs in Overweight and Obese Adults. *JAMA*, *312*(9). doi:10.1001/jama.2014.10397.

2-Hall et al. (2015). Calorie for Calorie, Dietary Fat Restriction Results in More Body Fat Loss than Carbohydrate Restriction in People with Obesity. *Cell Metabolism*, *22*(3), 427-436. doi:10.1016/j.cmet.2015.07.021

3-Gardner et al. (2018). Effect of Low-Fat vs Low-Carbohydrate Diet on 12-Month Weight Loss in Overweight Adults and the Association With Genotype Pattern or Insulin Secretion. *JAMA*, 319(7). doi:10.1001/jama.2018.0245

• A focus on **carbohydrate quality** (low-GI, fibre), and **food-based approaches** (whole grains, pulses, and fruits and dietary pattern (Med diet, Dash diet, etc) rather than carbohydrate quantity provides best evidence for benefit



Based on Multiple Research Studies (cnt'):

- VLCD have no advantages versus LCD on weight loss; Lack nutrients, are associated with a high risk of overeating, and will not help in developing long-standing healthy eating habits (Evolution of Very-Low-Calorie Diets: An Update and Meta-analysis. Obesity, 14, 8: 1283-1293)
- **Adherence** is one of the most important determinants for attaining the benefits of any diets (Dansinger et al. *JAMA* 2005).
- Health professional should advise patients on evidence-based dietary patterns which align best with each patient's values, preferences and prevention/treatment goals to achieve the greatest adherence over the long-term (Estruch et al. . (2018). Primary Prevention of Cardiovascular Disease with a Mediterranean Diet Supplemented with Extra-Virgin Olive Oil or Nuts. New England Journal of Medicine, 378(25), e34. doi:10.1056/NEJMoa1800389).



How to increase adherence to the diet?

 Increasing the diet structure increase the rate of weight loss and weight maintenance

Underestimation of the caloric intake

People with obesity: 30%-50%

People in normal weight: ~20%

Dietitians: ~10%

Educating Patients (Cont')

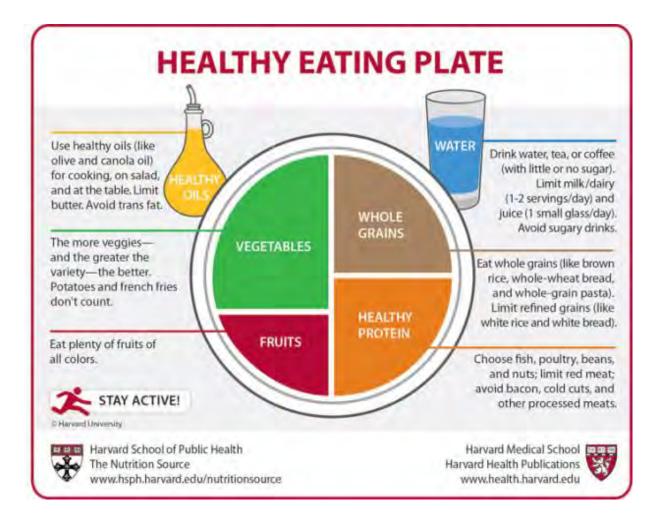
- Limiting the food variety (greater the variety, greater the energy intake, repetition of behaviors facilitates the developments of habits)
- Weighing the food
- Moderate Dietary Restriction: Meal plan of 1200-1500Cal/day for women and 1800-2000Cal for men 2013 AHA/ACC/TOS, Obesity Guidelines
- Regular eating (3 meals + 2 snacks + 0 in between/ 3 to 4 hours in between meals and snacks)/Planning ahead When, What, and Where to eat
- Diet Composition- The Mediterranean diet model/Harvard Healthy Plate
 Low glycaemic index

Adequate protein intake (25%)

Moderate fat intake (25-30%)

Rich of fruit and vegetable





Strategies

1. Calories counting

- Promoting a greater weight loss and improving weight maintenance
- Engaging the patient and be more aware of the eating behaviour
- Promoting more flexibility and freedom of choice in their eating
- Subtracting 500-1000Cal/day from the TEE measured using the monitoring record will allow a weight loss of 0.5 -1 Kg per week.

2. Personalized meal plan

- Based on the Food Exchange Lists adapted for the Mediterranean diet and the GCC region.
- Educating patients on the different food groups: Starches, protein, dairy, fruits, vegetables and fats and their portion size based on 1 exchange.
- **3. Meal replacement** (use of meal replacement is associated with a greater weight loss and a better maintenance in the long term)

Meal Planning Exchan



Starch List:

	Each exchange = 15g carbohydrate,	3g protein, 0-1g fat, 80Cal
	Food Item	Exchange
	Bagel, 4-oz (Large)	1/4 (1-oz)
	biscuit (6cm across)	1
	Bread roll/French bread (small)	1, small (30gm)
	Bread roll (sammoun/large)	1/2, large
	Bread sticks, 4-inch long	4
	Chapatti (15cm across)	1, small
	Crepe, plain	1 thin medium
	Croutons	1 cup *count also as ex fat
	English muffin	1/2
	Hamburger bun	1/2
	Hot dog bun	1/2
	Kaak balls (very small)	20 pcs
	Kaak fingers (small)	10 pcs
	Kaak, long	1 pc
Breads & Crackers	Kaak, sesame	1/6 pc * count as 1 fat ex
	Kaak, knefeh	1/2 pc * count as 1 fat ex
	Markouk bread (large)	1/4
	Markouk bread (medium)	1/2
	Naan bread (20 cm x 5 cm)	1/4
	Pancake, 4-inch across	1, small
	Pita bread, (Arabic bread) med	½ loaf
	Pita bread, (Arabic bread) small	1 loaf
	Rice cakes	2
	Rigag	1/4
	Ryvita	4 biscuits
	Saltine-type crackers	6 pcs
	Small pretzells	14 pcs
	Samoun bread, regular size (white or whole-grain)	1/2

Meal Planning Exchan

	Food Item	Exchange
	Taco shell	2 shells *count also as 1 fat ex
	Toast, bread (white, rye, whole-grain)	1 slice
Breads & Crackers	Dry toast (Americana Rusks)	2 small
greats a Grackers	Tortilla bread, 6-inch across (flour or corn)	1
	Whole wheat crackers (square shape)	4-6 slices
	Waffle (10cm square)	1

Starch List (cont'd):

	Food Item	Exchange
	Bran cereals	½ cup
	Frosted corn flakes	1/2 cup, (25g)
	Regular plain corn flakes	3/4 cup, (20g)
	Semolina / Smeed	2 tbsp
	High fiber corn flakes, no sugar added	³¼ cup, (25g)
	Granola, low-fat	1/4 cup
Cereals	Muesli	1/4 cup
	Oatmeal, cooked with water, unflavored	½ cup
	Oats	Dry: 3 tablespoons 1/4 cup
	Shredded wheat	½ cup
	Wheat flour	3 tbsp
	Wheat germ	3 tablespoons

Starch List (cont'd):

	Food Item	Exchange
	Baked beans	1/3 cup
	Beetroot	1 cup
Other Grains, Legumes & Starchy Vegetables	Beans & peas (chickpeas, kidney beans, fava beans), cooked	½ cup *count also as 1 lean meat exchange
	Bulgur (cracked wheat), cooked	½ cup
	Buckwheat/Kasha	1/2 cup
	Cassava (Tapioca)	1/3 cup

Meal Planning Exchan

List (cont'd):		MEI MEI	
List (com a).	Food Item	Exchange	
	Falafel (medium)	3 pcs * count 1 ex starch, 1 ex meat, 1 ex fat	
	Shishbarak	5 pcs * count 1 ex starch, 1 ex meat	
	Stuffed Zucchini (kousa mehshi)	3 pcs * count 1 ex starch, 1 ex meat, 1 ex fat, 1 ex vegetable	
Arabic dishes	Stuffed cabbage (Malfouf)	4 pcs (finger size) * count 1 ex starch, 1 ex meat, 1 ex fat, 1 ex vegetable	
	Stuffed vine leaves	12 pcs (small size) * count 1 ex starch, 1 ex meat, 1 ex fat, 1 ex vegetable	
	Manakeesh, cheese	1/6 regular size, 1 mini size * count 1/2 ex of high fat meat	
	Manakeesh, zaatar	1/6 regular size, 1 mini size * count 1 ex fat	
	Mini pizza	1 pc * count 1/2 ex high fat meat	
	Mjadara	1/2 cup * count 1 ex meat	

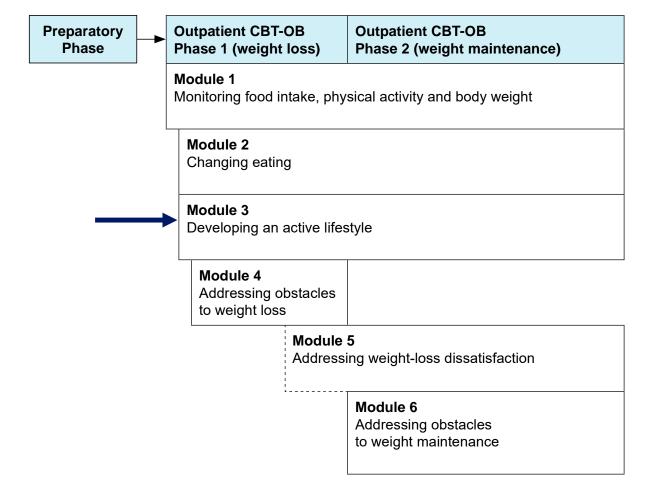




Strategies to Increase Adherence to The Meal Plan

Increase dietary restraint and decrease dietary disinhibition:

- Planning ahead When, What, and Where to eat (in advance, in the monitoring records)
- Continuing Real-Time Monitoring of Food Intake (✓ real time when they have eaten the planned food on the monitoring record, 🔻 if any deviation from the meal plan)
- Educating about food portioning
- Eating Consciously
 - Slowly, without distractions, sitting down,...
 - Following the meal plan without being influenced by external (seeing food,..) or internal (craving, need for gratification, hunger,..) stimuli
- Minimizing variety



It starts in session 2 simultaneously with Module 2 -changing eating

Primary Goal

Increasing the level of active lifestyle

Secondary Goals

- Practicing a fitness program (cardiovascular risks, tone and muscle strength, flexibility and muscle elasticity,..)
- Doing formal exercising (In patients who are already doing it or thinking about starting it, exploring the pros and cons)

Physical Assessment

Has been done in the preparatory phase

Motivate Patients to Exercise

- **1.** Adopting an engaging/collaborative style (collaborative style, empathy,..)
- 2. Educating on the benefits of regular physical activity

Module 3: Developing an active

Motivating patients to exercise (cont')

3. Assessing individual exercise levels and barriers to change in a non-judgmental way

Asking patients the reasons for their sedentary lifestyle and about any barriers to exercise they perceive

- General barriers (shared with people without obesity)
 - low motivation and perceived self-efficacy, no history of learning to exercise, lack of coping skills and aversive environmental features (e.g., poor access to gyms or other facilities, high costs of training programmes) low social and cultural support and time constraints

Specific barriers

 low fitness, physical conditions (e.g. arthritis, obstructive sleep apnoea), boredom and lack of stimuli, laziness, negative comparisons with others, shame associated with exposing their body, weather constraints and fear of injury or death,

Motivate Patients to Exercise (cont')

4- Involving the patient actively in the decision to change

Pros and cons table for reasons not to exercise and reasons to exercise

Reasons not to exercise	Reasons to exercise
I will have to exercise even when I don't feel to like it	I will lose more weight and keep it off
I will have to overcome my laziness	I will be in better shape
I like to rest when I have free time	I will improve my health
I feel very tired when I exercise	I will meet new people
I will have less time to play chess—my hobby	I will be happier
I will be tired all the time	I will be more physically attractive
I will be embarrassed if other people see me exercising	I will increase my self-confidence

Types of Exercise Recommended

1. Adopt an Active lifestyle

Strategy

a) Reducing Sedentary Activities

At home

- Reducing the use of labour-saving devices (e.g. using the body's energy to mix food, open cans, mow the lawn, and so on)
- Walking up and down the stairs several times a day (if the house has more than one floor)
- Gardening
- Cleaning the house
- Washing cars by hand rather than at the car wash

At work

- Taking the stairs instead of the elevator
- Taking a walk during morning and mid-afternoon breaks
- Raising the body off a chair by bearing weight on the arms or hands (if they sit for many hours a day)

Transport

- Walking rather than driving a car
- Parking farther away in the parking lot
- Avoiding shortcuts and introducing detours when walking.

b) Increase the daily step count

Types of Exercise Recommended (cont')

2. Exercises to improve physical fitness

 Personalized exercise program and advice given by a physiotherapist based on the assessment of a patient's functional exercise capacity

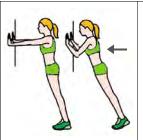
3. Formal exercise

 Encouraging patients to continue or commence formal exercise if they want to as it is not the goal of the program



Exercise 1 Knee-bends. Patients are

instructed to bend their knees as low as possible without feeling pain in their joints while keeping their back straight. To reduce the difficulty, patients may be advised to rest their hands on the back of a chair.



Exercise 2

Wall-pushes. The patient should placing their hands on the wall and bend their elbows. For a proper distance, patients should be instructed to have the trunk slightly forword flexed as a starting position.



Esercise 3

Free-standing balance. The patient should keep their balance on one leg for as long as possible. If the exercise is too difficult, patients can be advised to rest their hand(s) on the back of a chair initially.

Strategies for increasing a patient's adherence to exercise

- Factors influencing the adherence
 - Stage of change
 - pre-contemplation (no exercise now and no intention of exercising in the next 6 months)
 - contemplation (no exercise, but intention to do so in the next 6 months)
 - preparation (no exercise, but intention to do so in the next 30 days)
 - action (exercising for fewer than 6 months)
 - maintenance (exercising for more than 6 months).
 - Patient's self-efficacy
 - Initial psychological wellbeing
 - Unrealistic expectations

Strategies for Increasing a Patient's Adherence to Exercise

- Tailoring personalized activity goals
 - Achievable but moderately challenging, specific and quantifiable
 - Weekly, at home

Real time self-monitoring

B. ENERGY EXPENDITURE					
			Calories		
Steps	Number 9,737		385		
Formal exercise	Туре	minutes			
Forma exercise	Туре	minutes			
Basal metabolic rate	1,417				
Diet induced thermog	133				
	1,935				

Strategies for Increasing a Patient's Adherence to Exercise

- Responding to non-adherence
 - Congratulate on every success
 - Unconditional acceptance of a patient's behavior
 - Problem solving approach

Long-term success in body weight management is related to a set of skills rather than willpower alone.

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Module 4

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Module 5

Addressing weight-loss dissatisfaction

Module 6

Addressing obstacles to weight maintenance

It starts in session 3 till the end of phase 1
Achieve cognitive behavioural skills to address the obstacles to weight loss

Procedures

- Identify the obstacles:
 - 1. Revision of the monitoring records
 - 2. Revision of the weight-loss obstacle questionnaire given weekly
 - 3. Collaboratively create a Personal Formulation

BEHAVIOURS □ yes□ no 8. Did youe at betweenyour planned mealsand snacks? If yes, how many times did you eat between meals? What was the reason? 9. Did you overeat at mealtimes? □ yes□ no If so, how many times?_____ What was the reason? 10. Did you skip any meals? □ yes□ no If so, how many times?_____ What was the reason? 11. Did you have any episodes of binge eating (i.e. being unable to stop yourself eating a large amount of food)? □ yes□ no If so, how many times?_____ What was the reason? 12. Did you eat at night? □ yes□ no If so, how many times?_____ What was the reason? 13. Did you avoid eatingcertain food groups on some days? □ yes□ no If so, how many times?_____ What was the reason? □ yes□ no 14. Did youdrink too much alcohol? If so, how many times?_____ What was the reason?

Instructions: The following questions refer to the past seven daysonly. Please read each question carefully. Please answer all the questions.

PROCEDURES

Did you fill in your Monitoring Records every day? If not, how many days did you miss? What was the reason?	□ yes□ no
2. Did you count calories every day? If not, how many days did you miss? What was the reason?	□ yes□ no
3. Did you do yourphysical activity every day? If not, how many days did you miss? What was the reason?	□ yes□ no
4. Did you use the step counter every day? If not, how many days did you miss? What was the reason?	□ yes□ no
5. Did you checkyour weightonce a week? If not, how many days did you check your weight? What was the re-	□ yes□ no eason?
6. Did you stick to youcalorie limit every day? If not, how many days did you go over the limit? What was the reas	□ yes□ no son?
7. Did you do at least 10,000 steps every day? If not, how many days did you miss? What was the reason?	□ yes□ no

SOCIAL SUPPORT

How often have	vou received	support from	significant	others?

18. In times of crisis	0 Nev	1 /er	2	3	4	5	6	7	8	9	10 All the time
19. In creating an environn	nent th 0 Nev	1	ilitate: 2	s char 3	nge 4	5	6	7	8	9	10 All the time
20. In applying the progran	nme p 0 Nev	1	ures 2	3	4	5	6	7	8	9	10 All the time

How often have you received criticism from significant others?

21. On your body weight	0 Nev	1 er	2	3	4	5	6	7	8	9	10 All the time
22. On your eating behavio	ur 0 Nev	1 er	2	3	4	5	6	7	8	9	10 All the time
23. On your level of physica	al activ 0 Nev	1	2	3	4	5	6	7	8	9	10 All the time

ATTITUDES

15. How satisfiedare you wit	h your	weig	ht los	s so f	ar?						
·	0 Not a		2	3	4	5	6	7	8	9	10 Extremely
16. How able do you think y	ou are	to lo	se we	eight?							
	0 Not a	1 atall	2	3	4	5	6	7	8	9	10 Extremely



Antecedent stimuli

Having too much junk

food (like chips, cookies,

& carbonated drinks) at

Having too many social

Boredom, anxiety, stress

eating occasion

Non-eating stimuli

cakes, chocolate, candies

Eating stimuli

home

Problematic thoughts I eat because I am stressed Eating is the only way I have to relax after a hard day's work When I see sweet foods I can't resist - I haven't got enough willpower It is not polite to refuse food offered by others When I eat out with friends I have no control **Positive consequences** I feel good (the food gives me intense feelings of pleasure) **Unhealthy Eating** I feel better and relaxed Behaviour I enjoy eating with others Picking, snacking, eating large amounts of food on social occasion

Procedures (cont')

Antecedent Stimuli

Addressing eating stimuli (environmental stimuli)

Table done in session with patient: What I used to do and What I will do now

What I used to do	What I will do now
Doing the grocery shopping I used to go to the supermarket once a week and bought food (often junk food) without a shopping list.	I will now go to the supermarket three times a week. I will plan in detail what to buy, and buy only food that requires preparation and that I need for my meal plan.
Storing food I used to place chocolates and sweets in a dish by the TV.	I will no longer leave any food in sight.
Preparing food I used to make a large amount of food, using a lot of fat and condiments, and often tasted the food while I was cooking.	I will cook the exact amount of food I need and prepare single portions. I will use the least amount of fat possible, and I will not taste food during preparation.
Serving food I used to put all the food on the table on large serving dishes, so that family members could help themselves.	I will avoid placing serving dishes on the table, and instead serve food on individual plates, like in a restaurant.
During eating I used to eat very fast, and I was always the first to finish a meal.	I will take small bites and chew each one thoroughly. I will put my knife and fork down between bites, and try to gradually increase the time it takes me to finish a meal.
After eating I usually stayed at the table after finishing the meal, and often snacked on chocolates or walnuts afterwards.	I will avoid staying at the table for a long time, and I will stay out of the kitchen after meals.
Social occasions I often used to drink too much alcohol, and I ate all the food that was served.	I will cut down on (or even avoid) alcohol, and I will plan ahead what to eat; I will order first and eat slowly.
Sedentary lifestyle stimuli I always used to drive everywhere.	I will get to work by bike and plan daily physical activity.

Procedures (cont')

- Addressing non-eating stimuli
- 1. Proactive problem solving— to address the events influencing eating
 - Step 1. Identify the problem as early as possible
 - Step 2. Understand the problem
 - Step 3. Consider as many solutions as possible
 - Step 4. Think of the pros and cons of each solution
 - Step 5. Choose the best solution or combination of solutions
 - Step 6. Act on the solution
 - Step 7. Review the process of problem-solving

Procedures (cont')

- Addressing non-eating stimuli (cont')
- 2. **Procedures of things to say and do-** to address impulses and emotions influencing eating and physical activity plan

Things to say

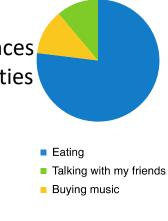
- No choice (I cannot change my schedule).
- Hunger is not an emergency; I can tolerate it.
- Think how healthy I will be when I reach my weight-loss goals.
- Reflect on the negative consequences of overeating.
- I do not want to let myself down.
- Desire for food is like a wave; it gets bigger and stronger until it reaches its peak, then diminishes in intensity.
- Think of the reasons that led me to stop eating too much.
- It's tough, but I can do it.
- I'm following a scientific programme that helps me to keep control over my eating.
- Hunger is powerful, but sooner or later it will go away.

Things to do

- I will immediately walk away from food stimuli.
- I will call a friend.
- I will take a walk.
- I will wait until the desire for food diminishes.
- I will not eat for one hour.
- I will read a book.
- I will listen to my favourite music.
- I will slap a cushion.
- I will pick up an ice cube and focus on the physical sensation.
- I will brush my teeth.

Procedures (cont')

- Addressing Problematic Thoughts
 - 1. Identify the problematic thoughts in real time
 - 2. Do the opposite using a self-reminder
- Addressing the use of food as a reward:
- Identifying rewarding activities and their consequences
- Enhancing the importance of other rewarding activities
- Using non-food rewards
 - Favourite activities
 - Saying nice things to themselves,
 - Thinking about nice things,





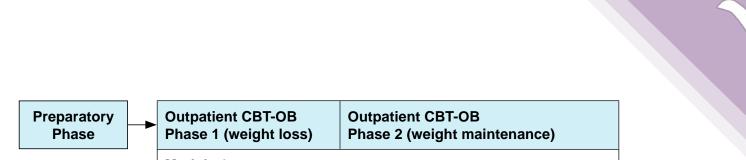
- Eating
- Going out with my friends
- Buying music
- Staying with my dog
- Photograph
- Reading a book
- Walking with my brother

Procedures (cont')

- Getting Back on Track
 - 1. Addressing the violation effect (Do not catastrophize)
 - 2. Learning by the setbacks and reacting in a constructive way (Proactive problem solving)

Involving significant others

- 1. If they can help:
- Asking for help openly, without fear
- Describing their problems without fear
- Thanking for the help received
- 2. If they are an obstacle to the patient change
- Using assertive communication
- Making specific requests.



Module 1

Monitoring food intake, physical activity and body weight

Module 2

Changing eating

Module 3

Developing an active lifestyle

Module 4

Addressing obstacles to weight loss

Module 5

Addressing weight-loss dissatisfaction

Module 6

Addressing obstacles to weight maintenance



It is introduced between weeks 16 and 20 till the end of the program

Adherence to diet, weight loss and weight-loss satisfaction, measured during the late weight-loss phase, are associated with weight-loss maintenance

Eat and Weight Disord (2018). Calugi, Marchesini, El Ghoch, Gavasso, Dalle Grave.



Procedures

1- Detect weight-loss dissatisfaction (weight loss obstacle questionnaire)

15. How satisfied are you with your weight loss so far?

A score of 7 or less after week 19 identifies individuals who will not maintain weight.

2- Identify reasons for weight-loss dissatisfaction

- Unrealistic weight goals
- Dysfunctional primary goals for losing weight (from the weight and primary goals questionnaire)
- Negative body image (from the body image inventory questionnaire)- To be addressed first
- 3- Addressing barriers to accept a reasonable and healthy weight

Two strategies

- If dissatisfaction occurs in the first 12 weeks of treatment, and is associated lower with a rate of weight loss than the weekly CBT-OB goal (i.e. 0.5 kg/week) → it is addressed via the strategies and procedures described in Module 4 (addressing obstacles to weight loss)
- If weight-loss dissatisfaction occurs after week 12 → it is addressed directly

Identifying Reasons for Weight-Loss Dissatisfaction

- 1. Unrealistic weight goals
- 2. Dysfunctional primary goals for losing weight
- 3. Negative body image

The Weight and Primary Goals Questionnaire

Qı	uestions on your weight	goal:		
1.	What is your dream weig (The weight you would re probably unattainable)		world, even thou	igh you understand that this is
2.	What is your desired we (The weight you think yo		obably will achie	ve during the treatment)
3.	What is your acceptable (The highest weight you		l be able to accep	
Qı	uestions on your desire	d weight (the w	eight you wrote	in question 2):
4.	In the past, was your des	ired weight diffe	erent?	□ yes□ no
	If so, why?			
5.	How long have you beer	at your desired	d weight in your li	fe?
	☐ Less than 1 year	ar		
	☐ Between 1 and	3 years		
	☐ Between 3 and	5 years		
	☐ More than 5 ye	ars		
6.	How hard do you think it	will be to remai	n at your desired	weight?
	□ Very	☐ A lot	□ A little	□ Not very
7.	How important is it for yo	ou to achieve yo	ur desired weigh	t?
	□ Very	☐ A lot	□ A little	□ Not very
8.	How would you feel if yo	u did not reach	your desired wei	ght?

	losina weiaht:

Instructions: Please put an X in the box you think most appropriate for each statement.

- 1 = Totally disagree; 2 = Disagree; 3 = Slightly disagree;
- 4 = Slightly agree; 5 = Agree; 6 = Totally agree
- 9. Why do you want to reach your desired weight?

	1	2	3	4	5	6
To improveyour physical appearance						
To reduce the size of some parts of your body						
To reducing your clothing size						
To have a greater choice of clothes						
To reach the weight advised by the doctor						
To go back to the weight you had at an important time in your life						
To go back to the weight you achieved in a previous weight loss attempt						
To reach your ideal weight, according to the ideal weight table						
To have the same weight as other people your age						
To have the same weight as friends or family members						
To have the same weight as famous people						
To improve your health						
To improve your physical fitness						
To improve the quality of your free time						
To improve your sex life						
To be more sexually attractive to others						
To getattention from others						
To get a promotion						
To get a new job						
To improve your social life						
To stop being stigmatised						
To improve your interpersonal relationships						
To improve your self-esteem						
To feel better psychologically						
To be able to have a baby						
To be around for your children						

Of the primary goals that you scored "5" or "6" in question 9:

- 10. Which is the most important?_
- 11. Which necessarily require weight loss?__
- 12. Which do not necessarily require weight loss?_
- 13. How would it feel if you did not achieve these goals?

The Body Image Inventory

Instructions: The following questions refer to the past 4 weeks (28 days). Please read each question carefully and respond to ALL questions. Thank you.

How many times in the last 28		1-5	6–12	13–15	16–22	23–27	Every
days	Never	days	days	days	days	days	day
Questions on body concerns:							
Have you been dissatisfied with your body?							
Have you had critical thoughts about your body?							
Have you been worried about the size of some parts of your body?							
Have you been preoccupied with your body?							
Have you had contempt for your body?							
Have you felt disgust for your body?							
Have you been ashamed of your body?							
Have you felt embarrassed about your body?							
Have you judged yourself poorly because of your body?							
Questions on body avoidance:							
Have you worn clothes that hide your body?							
Have you avoided physical intimacy situations to avoid judgment about your body?							
Have you avoided wearing clothes that reveal your shape?							
Have you avoided places where it is necessary to expose your body?							

How many times in the last 28 days	Never	1–5 days	6–12 days	13–15 days	16–22 days	23–27 days	Every day
Have you avoided weighing yourself?							
Have you avoided looking at yourself in a mirror?							
Questions on body checking:							
Have you weighed yourself?							
Have you studied the appearance of your body in the mirror?							
Have you measured the circumferences of some parts of your body?							
Have you pinched your body folds to see how much fat there is?							
Have you compared the shape of your body to that of others?							
Have you tried on some clothes to see if they are tight?							
Have you asked for reassurance from others about your shape and weight?							
Questions on feeling fat:							
Have you felt fat?							

- Questions to understand if the patient is exposed to specific social pressures (family attitudes, work)
- Questions to explore if attitudes and behaviors associated with body image create harm

Which reasons for weight-loss dissatisfaction to address first?

- If patients do not report a negative body image
 - Address unrealistic weight goals and eventually dysfunctional primary goals for losing weight
- If patients reports a negative body image
 - Addressing body image as a priority, as it will be difficult to help patients not to pursue unrealistic amounts of weight loss if they are unable to accept their new weight and appearance.
 - The body image intervention should be integrated, using the procedures to address unrealistic weight-loss goals and any associated primary goals

1- Addressing unrealistic weight goals

(Not adressed at the beginning of treatment)

- Educating the patients on body weight regulation
- Questioning the desired weight
- Reviewing the causes of poor weight-loss maintenance in previous attempts
- Identifying the benefits of current weight
- Evaluating the pros and cons of aiming for the desired weight
- Reviewing and adjusting the desired weight

Procedure

Addressing unrealistic weight goals (cont')

1. Educating the patients on body weight regulation

- Some aspects of obesity can be changed, others cannot Body weight is partially controlled by genetics
- There are currently no treatments (with the exception of bariatric surgery) that determine a mean weight loss greater than 10–15% of the initial body weight.
- Even people who lose a lot of weight have difficulty maintaining it in the long term.
- Unrealistic expectations may lead them to abandon the programme or not engage in weight-loss maintenance, because they consider the achievable result unsatisfactory.
- A 5–10% weight loss has many health benefits, and this can have a positive effect on quality of life, as well as reducing the major medical complications associated with obesity.
- A good treatment helps to change what can be changed and to accept what cannot.
- Essential to accept what cannot be changed otherwise high risk of relapse

Procedure

Addressing unrealistic weight goals (cont')

2. Questioning the desired weight

- Sources of the desired weight.
- Variability of the desired weight.
- Previous weight-loss attempts.
- Difficulties and risks in pursuing the desired weight.
- Consequences of achieving the desired weight or not.

Procedure

Addressing unrealistic weight goals (cont')

3. Reviewing the causes of poor weight-loss maintenance in previous attempts

- Weight-loss phase
 - Initial weight, how long the weight-loss phase lasted, how much weight they lost and whether or not they reached their desired weight
- Weight-maintenance phase
 - Patient should be asked if they intentionally decided to start weight maintenance. If so, why? If not, why not?
 - How long their weight maintenance lasted and which factors affected their subsequent weight regain.
 - Three main processes:
 - 1. Having unrealistic weight-loss goals and being dissatisfied with the weight that they had achieved made them abandon the commitment to maintaining the weight lost
 - 2. Not knowing how to maintain weight+
 - 3. Having difficulties adhering to an excessively restrictive diet for a long time.

Procedure

Addressing unrealistic weight goals (cont')

4. Identifying the benefits of current weight

- Physical appearance and reduced clothing size
- General wellbeing
- Self-confidence
- Obesity-related medical complications
- Physical fitness



Procedure

Addressing unrealistic weight goals (cont')

- 5. Evaluating the pros and cons of aiming for the desired weight
- 6. Reviewing and adjusting the desired weight
 - Homework
 - Reviewing the desired weight and evaluate if it is necessary to adjust it to a higher and more realistic level.
 - Considering which problems can occur if you one does not accept a higher weight

Instill doubt about the potential risks and disadvantages of achieving overly challenging weight goals



2- Addressing dysfunctional primary goals

- Improving physical appearance
- Improving health
- Improving physical fitness
- Improving interpersonal relationships
- Improving self-confidence
- Making life changes

Encourage patients to improve all of the above before reaching the desired weight to make these changes

Procedure

Addressing dysfunctional primary goals (cont')

- Improving physical appearance
 - Most patients are satisfied with a moderate weight loss
 - Those who maintain a significant degree of body dissatisfaction despite the weight loss achieved should be helped to understand that the problem is not the body weight per se but their subjective opinion of their physical appearance
 - Losing weight is not the only solution so encouraging that patients treat themselves to a haircut or new clothes and make-up, without waiting until they reach their desired weight to make these change

Improving health

- It is an achievable goal with a weight loss of 5-10%
- It might be useful to prescribe bio-humoral and instrumental examinations that objectively highlight the improvements obtained

Procedure

Addressing dysfunctional primary goals (cont')

- Improving physical fitness
 - Encouraging the patients to adopt an active lifestyle
 - It is useful to repeat the measurements of functional exercise capacity done at baseline (i.e. 6MWT, handgrip test, five times sit-to-stand test and functional reach test

Improving interpersonal relationships

- Encouraging and supporting the patient to be more socially active
- Do not delaying this task until the desired weight is reached
- Patients should be advised to break down this process and set themselves small, specific, achievable goals (e.g. calling a friend and inviting them to go for a walk or have a coffee).
- To address the obstacles, patients should be advised to use a proactive problemsolving procedure

Procedure
Addressing dysfunctional primary goals (cont')

Improving self-confidence

- In a person with adequate self-esteem, low self-confidence usually derives from general demoralisation, whereas other patients may suffer from long-standing low self-esteem
- Suggesting that patients consider trying other means, in addition to weight loss, of improving their self-confidence
- These changes will have a limited effect on subjects who suffer from low self-esteem
 - In such cases, the patient should be referred to a psychology specialist to address this issue.

Procedure

Addressing dysfunctional primary goals (cont')

Making life changes

Suggesting that the patient implements the desired changes (e.g., getting a better job or a promotion, taking up a new hobby, interrupting n unsatisfactory relationship, starting a new relationship and/or taking up a sport) straight away, without waiting until they achieve their primary goal.



3- Addressing negative body image

- Explaining the differences between body image and physical appearance
- Engaging the patients in the decision to address negative body image
- Discussing the maintenance of negative body image
- Addressing social pressures (weight stigma)
- Enhancing other self-evaluation domains
- Addressing body checking
- Addressing body avoidance
- Addressing feeling fat

GOAL: Accepting a reasonable and healthy weight.

Changing what can be changed (lifestyle) and accepting what cannot

(i.e. attaining an "ideal" body shape and weight)

Procedure

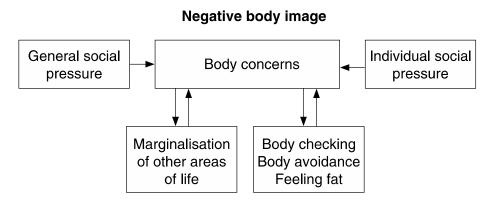
- Explaining the differences between body image and physical appearance
 - Body image (the mental picture that people have about their own body) vs physical appearance
 - Many people feel fat and overweight, even if they are not considered so objectively
 - Some people who have obesity feel good about their body and have good self-esteem and interpersonal relationships, despite their excess weight
 - Many people with body dissatisfaction might like how they look after a moderate weight loss and making changes to other aspects of their appearance
 - In some people, body image concerns continue to have a negatively impact on self-esteem and their everyday functioning despite a healthy weight loss, and in such cases it will be necessary to address these concerns to achieve successful weight maintenance

Procedure

- Engaging the patients in the decision to address negative body image
 - Informing patients that there are specific strategies and procedures that, by addressing the cognitive and behavioural mechanisms maintaining a negative body image, can help to promote a positive acceptance of body shape, irrespective of the amount of weight lost
 - Reviewing with the patient their previous weight-loss attempts and the effect that these had on their physical appearance and body image
 - Emphasizing that it might be interesting to understand and address the mechanisms that maintain a negative body image not related to the physical aspect

Procedure

- Discussing the maintenance of negative body image
 - General and individual social pressures
 - Marginalisation of other areas of life
 - Body concerns
 - Body avoidance
 - Body checking
 - Feeling fat



Procedure

- Devising a plan to address negative body image
 - Focused on the main maintenance processes operating in the patient
 - Body Image Inventory and general and personal social pressures
 - Three complementary strategies
 - 1. Addressing social pressures
 - 2. Enhancing the personal significance of other self-evaluation domain
 - 3. Addressing the expression of body concerns (i.e. body checking, body avoidance and feeling fat).

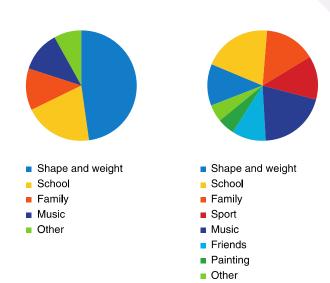
Procedure

- Addressing social pressures
 - Helping the patient to become aware of these social pressures and the negative effect they have on people that are not naturally normal weight
 - Negative social attitudes towards people with obesity are unjustified—merely the result of prejudice and ignorance (obesity is the result of a complex interaction between genetic and environmental risk factors
 - Is it my problem or a problem with society in general?
 - Encouraging patients to distance themselves from these prejudices and to avoid being negatively influenced by them. It
 - Ignoring them and responding to criticism assertively, or more active, for example, writing a letter to a newspaper and/or joining a group that fights prejudice against people with obesity.
 - Involving significant others in the treatment if the pressure is within the family



Procedure

- Enhancing the personal significance of other self-evaluation domains
 - Educating the patients on the abstract concept of selfevaluation
 - Building the self-evaluation pie chart
 - Helping the patients to identify new domains
 - Old interests, what other people of the same age do in their spare time, activities that they have always wanted to do but have never got round
 - The last column of the Monitoring Record should be used to record and review any progress or obstacles in this area on a weekly basis, and any barriers that arise should be addressed through a problem-solving approach.



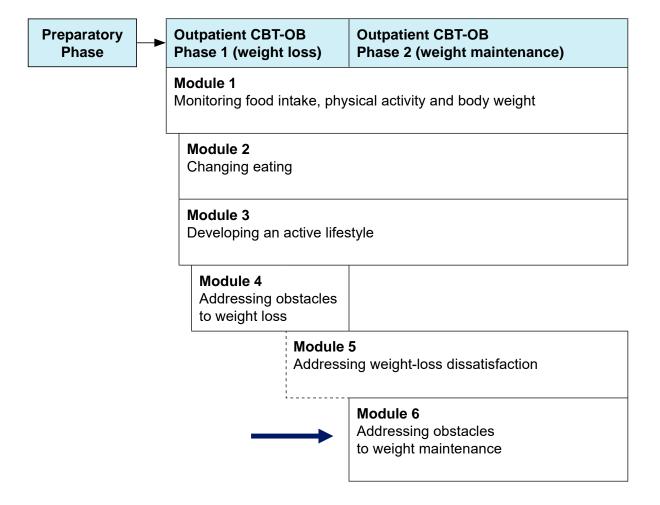
Procedure

Addressing negative body image (cont')

- Addressing other expressions of negative body image
 - Addressing body checking
 - Addressing body avoidance
 - Addressing feeling fat

See CBT-E procedures





It starts at the beginning of Phase 2 and lasts for 12 months

Strategies

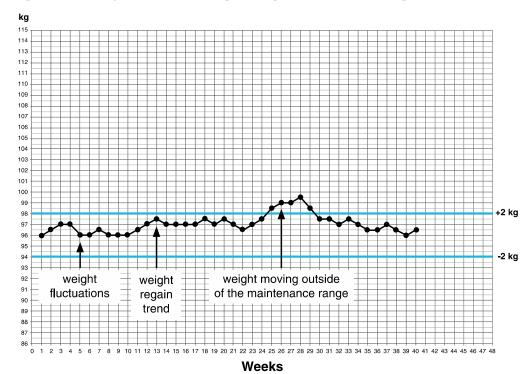
- Interrupting any weight-loss attempt
- Developing the skills to maintain long-term weight loss

Procedures

- 1- Educating on weight maintenance
- More difficult than weight loss but POSSIBLE.
- 2- Involving the patient actively in the decision to start weight maintenance
- Pros and cons for starting weight maintenance to be discussed in session with patient.

Procedures (cont')

3- Establishing Weekly Self-Weighing and a Weight Maintenance Range



Procedures (cont')

4- Adopting eating habits conductive to weight maintenance

- Mediterranean Diet, low glycemic index foods, moderate fat, high protein (about 25%)
- Maintain the same nutritional composition as the meal plan they adopted for weight loss

5- Adopting physical activity habits conductive to weight maintenance

- Step goals: 10 000 steps a day is required to maintain the weight loss
- Continuing the physical activity practiced during weight loss phase

Procedures (cont')

- 6- Constructing a weight-maintenance mindset
- Collaboratively create a list of the patient's personal reasons for maintaining the weight
- Adopt a weight-maintenance mindset:
- Meal Planning
- Conscious Eating
- Cognitive rewards
- Pro-active problem solving
- Procedure of "things to say and do" to address impulses to overeat and cravings.
- Procedure of decentring to address thoughts that promote the adoption of old eating and physical activity habits.

Procedures (cont')

7- Identify and address high-risk situations

- Phases of life: holidays, illness, ...
- Behaviors: eating food rich in fats and calories, overeating in social occasions, not being active in general
- Thoughts: dysfunctional reactions to weight regain, false confidence

8- Preventing a lapse becoming a relapse

- Get immediately back on track
- Analyze and address the underlying reason(s) for the lapse using pro-active problem solving

9- Addressing weight regain

- a. Identify the weight variation
- b. Identify the reason for the weight regain
- c. Identify the underlying causes
- d. Address weight by creating an energy deficit of 500kcal/day
- e. Design and implement a plan to address the underlying causes using pro-active problem solving

Procedures (cont')

10- To use the PPS in the event of 3 possible scenarios:

- Increase in body weight,
- Situation that might increase the risk of weight regain
- Situation where it is not possible to do the weekly weighing

11- Discontinuing real-time monitoring of food intake

• It is better to stop real-time self-monitoring during treatment

12- Evaluating possible future weight-loss attempts

- Reasons
- Risks

13- Preparing a weight maintenance plan:

- Weight maintenance range
- Reasons to maintain weight lost
- Procedures for maintaining the weight lost
- Procedures for preventing weight regain

13- Bringing the treatment to a close

- Instruct the patient in self-efficacy:
 - Tools to maintain the lower weight by themselves without the therapist supervision
 - Congratulate the patient for the results achieved, attributing their success to their own efforts and ability
- Encourage the patient to continue to apply the key procedures learned for weight maintenance:
 - Periodically reviewing their weight maintenance plan
 - Weekly weighing and analytical interpretation of any change
 - Maintaining the eating and physical activity habits required to control weight
 - Keeping the weight maintenance mindset active at all time
- Invite the patient to attend post-treatment review session every 3 months
 for a period of at least 1 year.







THANK YOU Q&A