Obesity: Modern Approach to Chronic Disease Management

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What is Obesity?

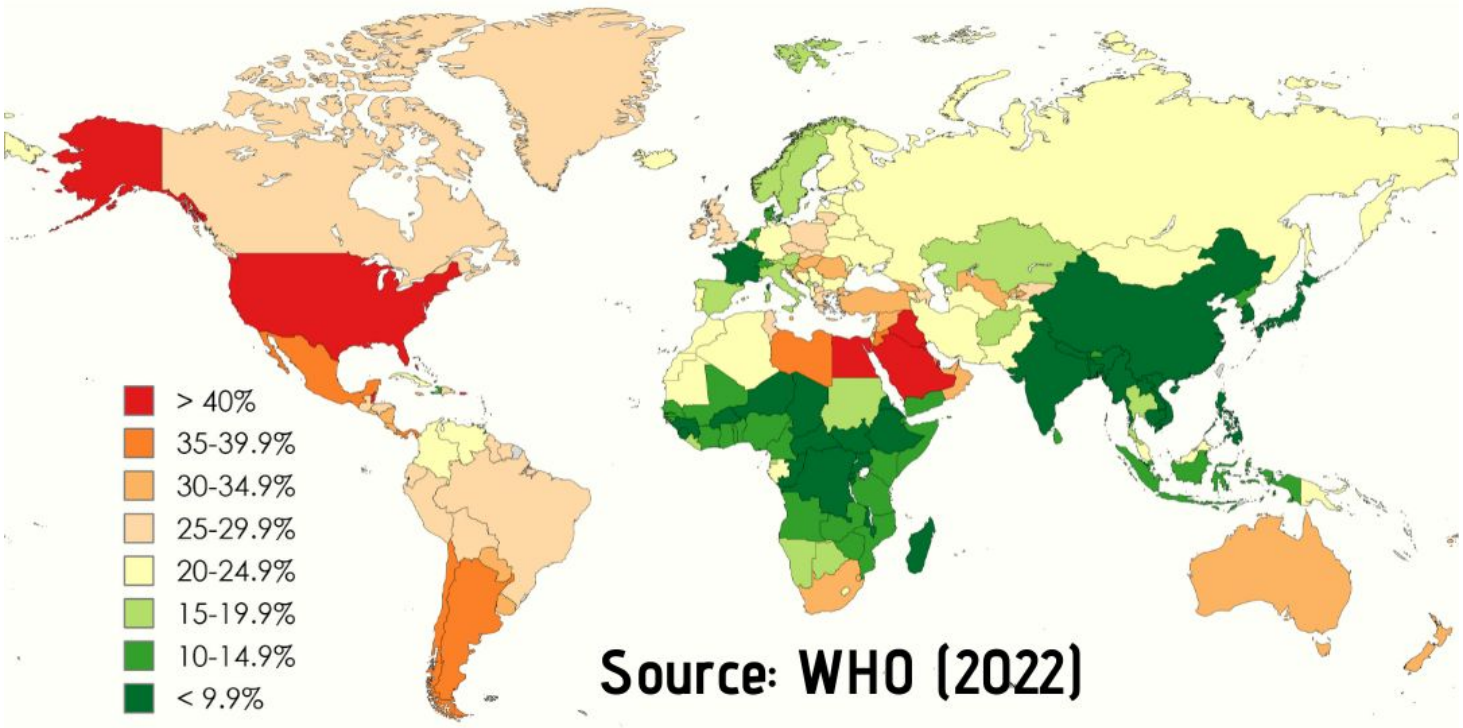
"A **chronic**, **relapsing**, **progressive** disease characterized by excessive or abnormal accumulation of body fat that **impairs health**."

Key elements of the definition:

1. **Chronic**: It requires long-term management, not just temporary interventions.
2. **Relapsing**: Weight regain is common; ongoing support is essential.
3. **Progressive**: Without treatment, obesity tends to worsen over time.
4. **Health impact:** Associated with increased risk of type 2 diabetes, cardiovascular disease, certain cancers, sleep apnea, and reduced life expectancy.

Epidemiology

Poland: >22% of adults affected (NFZ, 2022). Warsaw trends are similar despite higher awareness. US: ~42% of adults affected (CDC, 2023). Rising prevalence especially among young adults.



Diagnosis of Obesity (EASO Framework)

1. Anthropometric Measures

- Body Mass Index (BMI):
  - ≥30 kg/m² = Obesity
- Waist Circumference:
  - Men >94 cm, Women >80 cm → Central obesity
- Waist-to-Height Ratio (WHtR):
  - ≥0.5 → Increased cardiometabolic risk

2. Clinical Evaluation

- Screening for obesity-related conditions:
  - Type 2 diabetes
  - Hypertension
  - Dyslipidemia
  - NAFLD
  - Sleep apnea
  - Osteoarthritis

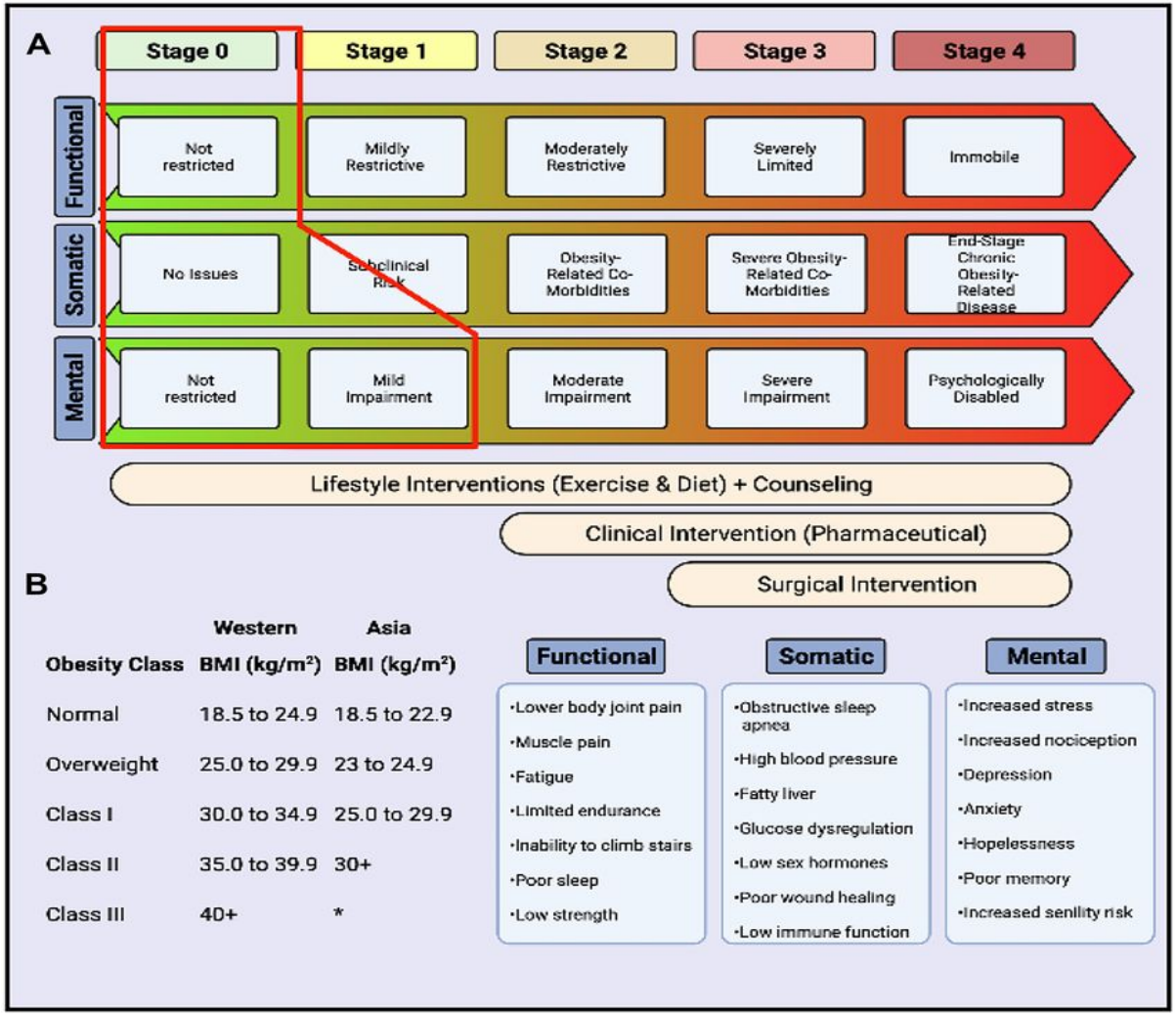
3. Body Composition Analysis (when available)

- DEXA, BIA, or other tools → precise fat and lean mass distribution

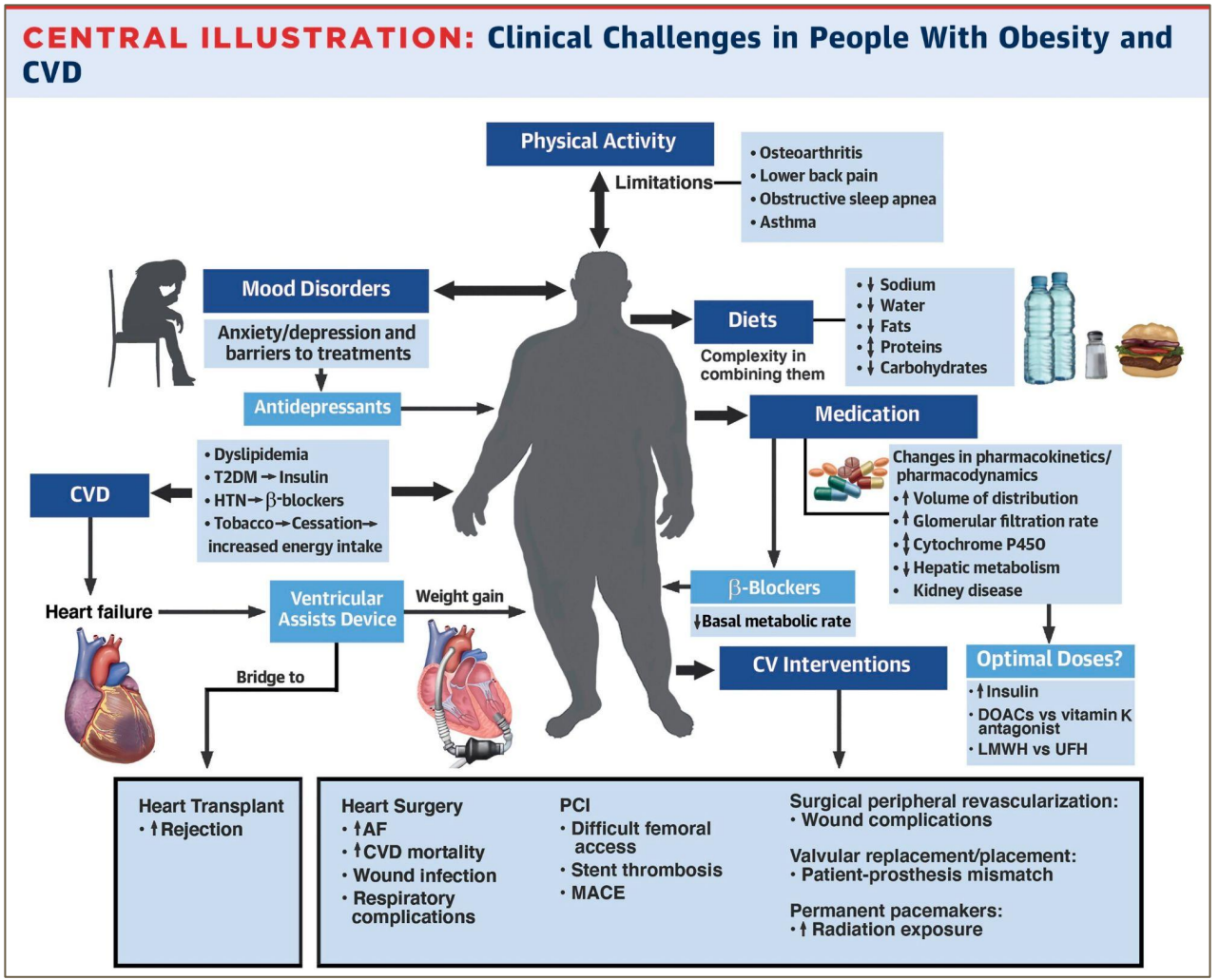
4. Functional and Psychosocial Assessment

- Impact on daily activities, quality of life, and mental health

Staging


A
Stage 0
Stage 1
Stage 2
Stage 3
Stage 4
Functional
Not restricted
Mildly Restrictive
Moderately Restrictive
Severely Limited
Immobile
Somatic
No Issues
Subclinical Risk
Obesity-Related Co-Morbidities
Severe Obesity-Related Co-Morbidities
End-Stage Chronic Obesity-Related Disease
Mental
Not restricted
Mild Impairment
Moderate Impairment
Severe Impairment
Psychologically Disabled
Lifestyle Interventions (Exercise & Diet) + Counseling
Clinical Intervention (Pharmaceutical)
Surgical Intervention
B
Western
Asia
Obesity Class
BMI (kg/m²)
BMI (kg/m²)
Normal
18.5 to 24.9
18.5 to 22.9
Overweight
25.0 to 29.9
23 to 24.9
Class I
30.0 to 34.9
25.0 to 29.9
Class II
35.0 to 39.9
30+
Class III
40+
*
Functional
•Lower body joint pain
•Muscle pain
•Fatigue
•Limited endurance
•Inability to climb stairs
•Poor sleep
•Low strength
Somatic
•Obstructive sleep apnea
•High blood pressure
•Fatty liver
•Glucose dysregulation
•Low sex hormones
•Poor wound healing
•Low immune function
Mental
•Increased stress
•Increased nociception
•Depression
•Anxiety
•Hopelessness
•Poor memory
•Increased senility risk

Challenges


CENTRAL ILLUSTRATION: Clinical Challenges in People With Obesity and CVD
Physical Activity
Limitations
• Osteoarthritis
• Lower back pain
• Obstructive sleep apnea
• Asthma
Mood Disorders
Anxiety/depression and barriers to treatments
Antidepressants
Diets
Complexity in combining them
• ↓ Sodium
• ↓ Water
• ↓ Fats
• ↕ Proteins
• ↓ Carbohydrates
Medication
CVD
• Dyslipidemia
• T2DM → Insulin
• HTN → β-blockers
• Tobacco → Cessation → increased energy intake
Changes in pharmacokinetics/ pharmacodynamics
• ↑ Volume of distribution
• ↑ Glomerular filtration rate
• ↕ Cytochrome P450
• ↓ Hepatic metabolism
• Kidney disease
Heart failure
Ventricular Assists Device
Weight gain
Bridge to
β-Blockers
↓Basal metabolic rate
CV Interventions
Optimal Doses?
• ↑ Insulin
• DOACs vs vitamin K antagonist
• LMWH vs UFH
Heart Transplant
• ↑ Rejection
Heart Surgery
• ↑ AF
• ↑ CVD mortality
• Wound infection
• Respiratory complications
PCI
• Difficult femoral access
• Stent thrombosis
• MACE
Surgical peripheral revascularization:
• Wound complications
Valvular replacement/placement:
• Patient-prosthesis mismatch
Permanent pacemakers:
• ↑ Radiation exposure

Treatment

1. Lifestyle Intervention – First-line treatment for all patients

Indications: All patients with BMI ≥25 kg/m² (overweight or obese)

Components:

- Diet: Hypocaloric diet (–500 to –600 kcal/day)
- Physical activity: ≥150 min/week (aerobic + resistance)
- Behavioral therapy: CBT, digital tools, motivational interviewing
- Structured programs: Multidisciplinary where possible

2. Pharmacotherapy – Second-line Treatment

Indications:

- BMI ≥30 kg/m²
- BMI ≥27 kg/m² with comorbidities (T2D, HTN, NAFLD)

Approved Medications:

- Liraglutide 3.0 (Saxenda)
- Semaglutide 2.4 (Wegovy)
- Naltrexone/Bupropion (Mysimba)
- Orlistat

Monitoring:

- Weight Loss effects evaluated individually
- Aim at 2kg/week
- Reassess at 3–6 months
- Continue if weight loss ≥5%

Surgery

3. Bariatric Surgery – Third-line Treatment

Indications:

- BMI ≥40 kg/m²
- BMI ≥35 kg/m² with at least one serious comorbidity (e.g. T2D, OSA, NAFLD, HTN, joint disease)
- BMI 30–34.9 kg/m² with uncontrolled T2D or other severe conditions (considered case-by-case)

Contraindications:

- Untreated major psychiatric illness
- Substance abuse
- Lack of commitment to post-op follow-up
- BMI >50 kg/m²

Common procedures:

- Sleeve gastrectomy
- Roux-en-Y gastric bypass (RYGB)
- One-anastomosis gastric bypass (OAGB)
- Biliopancreatic diversion (less common)

Expected outcomes:

- 20–35% total body weight loss
- Remission or improvement in T2D, HTN, dyslipidemia
- Long-term monitoring required

Common pre-op strategies:

- Very Low-Calorie Diets (VLCD): e.g. 800–1000 kcal/day for 2–4 weeks
- Goal: shrink liver, reduce visceral fat → easier and safer laparoscopy

Approach to patient, compliance

1. Prepare the Environment

- Ensure privacy and enough consultation time
- Use neutral, non-stigmatizing language
- Provide appropriate seating and weighing equipment

2. Ask Permission to Discuss Weight

"Would it be okay if we talked about your weight today?"

- Builds trust
- Respects autonomy
- Increases openness,

3. Use Person-First, Neutral Language

Avoid terms like: "fat", "morbidly obese", "weight problem"

Use instead:

- "Person with obesity"
- "Increased body weight"
- "Excess weight impacting health"

!!! *Language matters* — reduces shame and improves adherence !!!

Behavioral contract

What is a Behavioral Contract?

A behavioral contract is a written, mutually agreed-upon document between a patient and healthcare provider that outlines specific, measurable behaviors related to weight management.

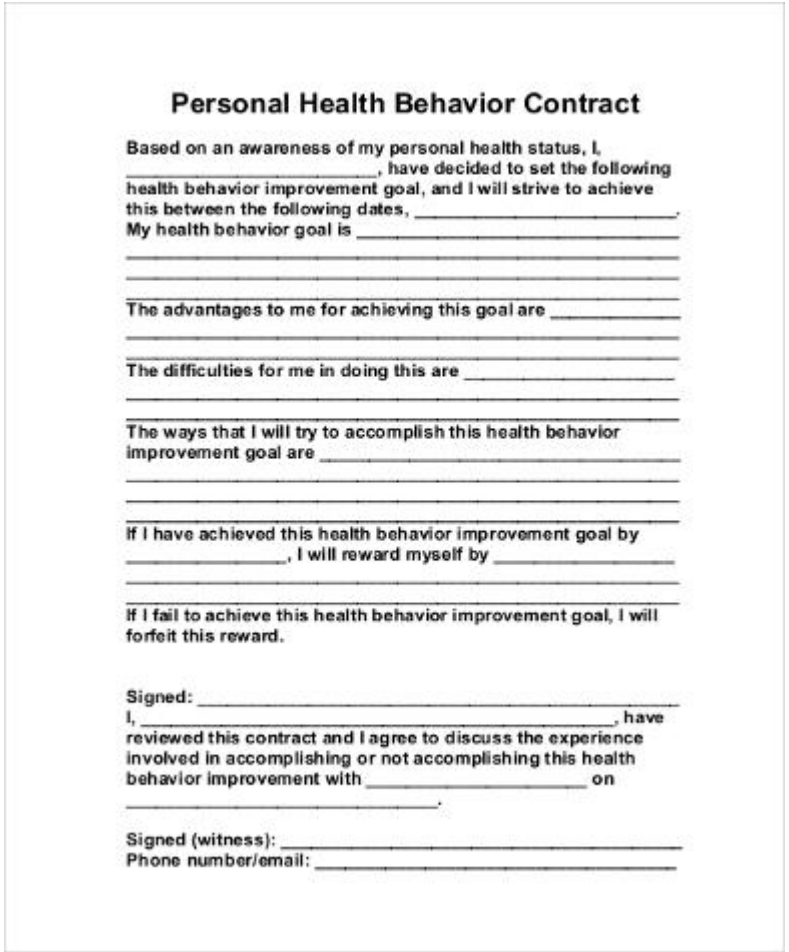
It includes:

Goals (e.g. physical activity, dietary habits)

Timeframes

Follow-up plans

Responsibilities of both the patient and the care team



Personal Health Behavior Contract

Based on an awareness of my personal health status, I, _____, have decided to set the following health behavior improvement goal, and I will strive to achieve this between the following dates, _____.
My health behavior goal is _____
_____
_____
_____

The advantages to me for achieving this goal are _____
_____
_____

The difficulties for me in doing this are _____
_____
_____

The ways that I will try to accomplish this health behavior improvement goal are _____
_____
_____
_____

If I have achieved this health behavior improvement goal by _____, I will reward myself by _____
_____
_____

If I fail to achieve this health behavior improvement goal, I will forfeit this reward.

Signed: _____
I, _____, have reviewed this contract and I agree to discuss the experience involved in accomplishing or not accomplishing this health behavior improvement with _____ on _____.

Signed (witness): _____
Phone number/email: _____

Q & A

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