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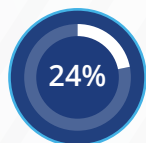# Strategies for the Management of Obesity in the Asia-Pacific Region

Current perspectives on comorbidities, diagnosis, and effective management

Obesity is a chronic condition characterised by excessive body fat and metabolic dysregulation

10% The global prevalence of obesity is expected to increase by 10% between 2020 and 2035[1]

24% Nearly one-quarter of the global population is expected to be obese by 2035[1]

The rising prevalence of obesity is particularly striking in the Asia-Pacific (APAC) region, where around 20–40% of adults are overweight
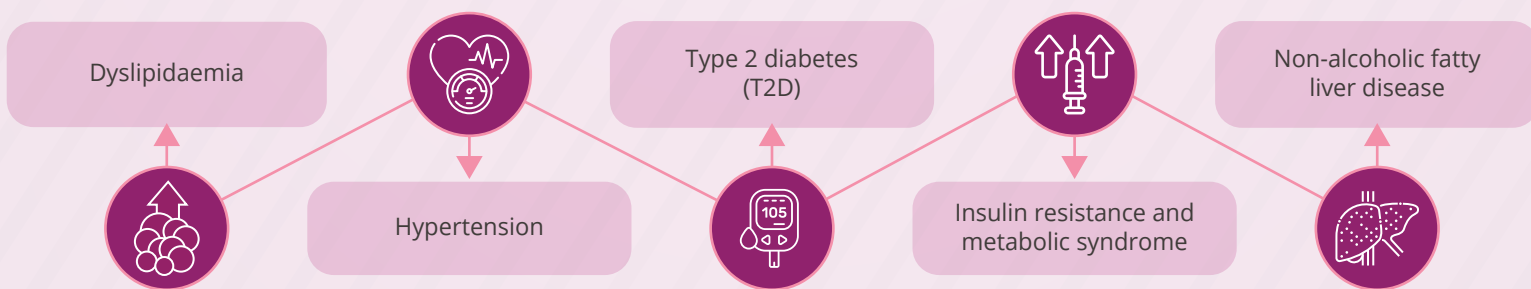
The alarming increase in obesity rates poses significant challenges to the healthcare system, society, and economy of APAC nations

Impact of obesity on patient's quality of life[1,2,3]

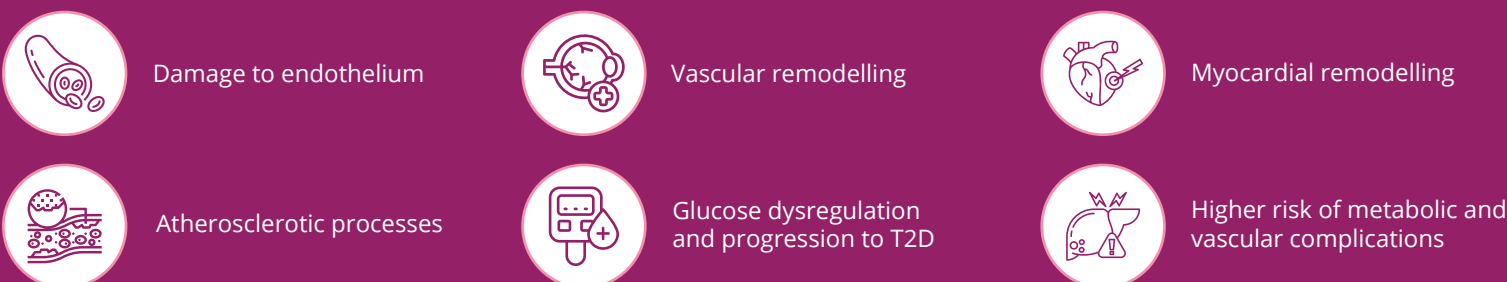Obesity is a significant risk factor for various health conditions, particularly:

Cardiometabolic disorders (CMD)

Dyslipidaemia

Hypertension

Type 2 diabetes (T2D)

Insulin resistance and metabolic syndrome

Non-alcoholic fatty liver disease

Cardiovascular diseases (CVD)

Increased risk of cardiovascular (CV) events → Heart failure → Stroke

Mechanisms through which obesity increases cardiometabolic and CV risk include[3]:

- Damage to endothelium
- Vascular remodelling
- Myocardial remodelling
- Atherosclerotic processes
- Glucose dysregulation and progression to T2D
- Higher risk of metabolic and vascular complications

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Obstructive sleep apnoea (OSA)[4]

- Upper airway obstruction during sleep
- Upper airway collapse during sleep

→

- Daytime sleepiness
- Cognitive impairment

Osteoarthritis

- Degeneration of cartilage and bones in the joints

→

- Joint pain
- Reduced mobility

Weight reduction and proper management of obesity improve cardiometabolic health and reduce the risk of OSA and osteoarthritis, improving the patient's quality of life

Gender differences in obesity-related comorbidities[5,6]

Difference in comorbidities in males and females	♂ Male-specific comorbidities	♀ Female-specific comorbidities
• OSA is more prevalent in males • Coronary artery disease including early onset of hypertension and dyslipidaemia is more common in males • Higher prevalence of depression and anxiety in females than in males • Obesity-related comorbidities as an upstream marker of CMD risk	• Low testosterone and metabolic syndrome • Erectile dysfunction • Higher visceral fat leading to CMD risk • Low sperm count associated with OSA, metabolic syndrome, and diabetes	• Polycystic ovary syndrome, linked to insulin and metabolic syndrome • Gestational diabetes • Reduced sleep quality • Menopause prior to age 40[7] • Increased chances of osteoporosis

Definition of obesity[8]

- Obesity is a condition of excess adiposity that may or may not involve abnormal fat distribution or function but has the potential to impair health
- The Lancet Commission defines clinical obesity as a chronic, systemic illness that disrupts the function of organs, tissues, or the entire body, leading to serious complications such as CVD, diabetes, and organ failure

Obesity is classified based on its impact on health

- **Preclinical obesity:** excess adiposity without immediate organ dysfunction but with an increased risk of developing obesity-related diseases
- **Clinical obesity:** a chronic illness where excess adiposity leads to organ or tissue dysfunction or significant limitations in daily activities

Health conditions and mortality risk are associated with obesity rise as a continuum[4]

Increasing fat mass levels

→

Greater risk of CVD, diabetes, and other complications including mortality

Limitation of body mass index (BMI)-based measurement of obesity

- BMI does not differentiate between fat and muscle mass
- It can underestimate or overestimate adiposity
- It does not account for fat distribution, metabolic health, or ethnicity-based differences

Measuring excess adiposity for obesity diagnosis

Criterion for obesity diagnosis[5]: BMI ≥25 kg/m² (patients in the APAC region)[9]	People with BMI >40 kg/m² Excess body fat can be reasonably assumed without requirements of additional confirmation

Additional methods of assessing body fat include[8]:

Direct measurement of body fat (if available) or by using additional measures such as:

- Waist circumference
- Waist-to-hip ratio
- Waist-to-height ratio

Diagnosis of clinical obesity

Diagnostic criteria for clinical obesity (one or both are applied, as required)[8]	Reduced organ or tissue function which is due to the presence of obesity	Significant difficulty in performing daily activities (age-adjusted)

Strategies for managing preclinical obesity[1]

Health monitoring	Health counselling	Appropriate lifestyle interventions

Strategies for managing clinical obesity in the APAC region

Setting and achieving critical weight loss targets[1]

5–10% Default short-term weight loss goal	10–15% Weight loss for patients with a BMI of 30–40 kg/m²	>15% Weight loss for patients with BMI >40 kg/m²

Lifestyle interventions[1]

Nutrition therapy – reduction in daily caloric intake by at least 500 kcal

Increased physical activity

Moderate-intensity aerobic exercises 150–300 mins/week + Strength training exercises ≥2 days/week	**OR**	High-intensity aerobic exercises 75–150 minutes + Strength training exercises ≥2 days/week

Behavioural changes[1]
Building and sustaining healthy habits through:

- Patient education
- Appropriate goal setting
- Self-monitoring
- Practicing stimulus control
- Stress reduction exercises

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Pharmacotherapy for obesity[1]

- Anti-obesity drugs are prescribed when patients fail to meet weight loss goals despite nutrition therapy/lifestyle changes
- Anti-obesity drugs approved in the APAC region for people with BMI ≥30 kg/m^2

- **Adrenergic agonists:** phentermine
- **Combination therapy:** phentermine and topiramate (combination of adrenergic agonist and anti-convulsant with appetite suppression effect)
- **Lipase inhibitors:** orlistat
- **Opioid antagonist and dopamine/noradrenaline reuptake inhibitor:** bupropion and naltrexone

- **Glucagon-like peptide 1 (GLP-1) receptor agonists**
  - Liraglutide
  - Semaglutide
- Dual GLP-1 and glucose-dependent insulinotropic polypeptide receptor agonist

Tirzepatide: recently approved for chronic weight management and OSA management

BMI cut-off for tirzepatide
- Recommended for adults with an initial BMI of at least 35 kg/m² and at least one weight-related comorbidity
- Lower BMI thresholds (by 2.5 kg/m²) are recommended for individuals from South Asian, Chinese, other Asian, Middle Eastern, Black African, or African–Caribbean ethnic backgrounds

Bariatric and metabolic surgery[1]

- Bariatric surgery is used predominantly for weight reduction
- Eligibility criteria for bariatric surgery
  - BMI ≥35 or ≥37 kg/m² (East and Southeast Asia)
  - ≥40 or ≥35 kg/m² (West Asia and Australia)

- Metabolic surgery is used predominantly for managing T2D
- Eligibility criteria for metabolic surgery
  - BMI ≥27.5 or ≥32 kg/m² (East and Southeast Asia)
  +
  - Diabetes or two other obesity-related diseases

Barriers to the effective management of obesity[10]

- Difficulty adhering to exercise regimen
- Unhealthy eating habits such as consuming large portion sizes and frequent snacking
- Consumption of unhealthy food
- Consumption of high-carbohydrate diet
- Lack of hunger stimulus control
- Lack of motivation

Shared decision-making (SDM) in obesity care

SDM represents an innovative patient-centred approach to obesity management where:

- Patients are educated on evidence-based obesity management
- Patients make informed health management decisions based on personal preference in the clinical setting
- SDM not only enhances patient satisfaction but also leads to better health outcomes and improved management of CMD

Advantages of SDM in obesity management[11]
- Higher patient satisfaction
- Improved patient-perceived quality of care
- Possibility of incorporating the latest technology such as artificial intelligence

Key messages

- The rising obesity rates in the APAC region pose serious health, economic, and societal challenges, requiring urgent and effective management strategies
- Obesity is now recognised as a chronic, systemic illness that can impair organ and tissue function, increasing the risk of life-threatening complications
- Obesity is closely linked to CMD, and effective obesity management significantly reduces the risk of CMD, including T2D, hypertension, and CVD
- A combination of lifestyle interventions, pharmacotherapy, and surgical options can help manage obesity and its associated health risks
- Patient-centered care and SDM can improve treatment outcomes and enhance quality of life

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