OBESITY
(A GRAVE PROBLEM)
TREAT IT LIKE OTHER DISEASES

By combining the most advanced laboratory diagnostics, imaging systems and healthcare information technology, Max Super Speciality Hospital, Bathinda enables clinicians to diagnose disease earlier and more accurately, making a decisive contribution to improving the quality of healthcare.

OBESITY
It is a major, progressive, chronic & relapsing medical problem & infact basically a complex multifactorial disease of appetite regulation & energy metabolism that involves genetics, physiology, biochemistry, psychological, environmental, & cultural factors.

PREVALENCE
Obesity is emerging as an important health problem in India. 22 million Indians are obese, especially abdominal obese.
The Nutrition Foundation of India (NFI) showed that 32.3% of middle class males & 50% of middle class females are obese in India.

HOW DO WE MEASURE OBESITY?
It has been traditional to define obesity in terms of a particular individual’s body mass index (BMI). BMI = wt in Kgs / (ht. in mts.)²

CAUSES
Obesity is a multifactorial condition. Factors playing a role in eating & weight control include genetic, cultural, socioeconomic, behavioral, situational, metabolic & physiological.
Thus, when energy expenditure is less than energy intake, there will be weight gain.
a) Endocrine causes like hypothyroidism, Cushing’s disease, hypogonadism, insulinoma.
b) Hypothalamic causes like tumors, damage by infection or irradiation etc.
c) Drugs like anabolic agents, steroids, oral contraceptives, sulphonylureas, antidiabetic drug, tricyclic antidepressants, lithium etc.
d) Sociocultural factors like women with no educational qualification show a mean BMI of 26.7 kg/m²
e) Behavioral change factors like declining physical activity has been matched by the adoption of increasing sedentary lifestyles.

BMI Table

<table>
<thead>
<tr>
<th></th>
<th>WHO Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Built</td>
<td>18-23</td>
</tr>
<tr>
<td>Overweight</td>
<td>25-29</td>
</tr>
<tr>
<td>Obesity</td>
<td>30-40</td>
</tr>
<tr>
<td>Morbidly Obese</td>
<td>&gt;40</td>
</tr>
</tbody>
</table>

Dr. Sushil Kotru
Consultant-Diabeties & Metabolic Disease

Department of DIABETES & OBESITY
SPECIAL FACILITIES
Diabetes OPD Clinic (Daily)
Diabetes Foot Clinic (Daily)
Diabetes & Retinopathy Clinic (Daily)
Diabetes & Kidneys Clinic (Tuesday)
Type 1 DM & Pregnancy with DM Clinic (Wednesday)
Obesity Clinic (Thursday)
Thyroid Clinic (Friday)
COMORBID CONDITIONS

In addition to having a marked effect on mortality, obesity also has a major impact on morbidity on various systems.

IMPACT OF OBESITY ON MORBIDITY

Various systems

Comorbid conditions

Type 2 Diabetes Mellitus

Hyperinsulinism/ insulin resistance

Dyslipidemia (high triglycerides & low HDL cholesterol)

Hypertension, coronary heart disease, Cerebrovascular diseases, deep vein thrombosis

Gastrointestinal system

Hiatus hernia, cholecystitis, fatty infiltration of the liver, hemorrhoids, gastritis, gastroesophageal reflux disease, colorectal cancer

Respiratory

Obstructive sleep apnoea, restrictive lung disease

Breath

Breast cancer

Uterus

Endometrial cancers, cervical cancers, gynaecological abnormalities

Skin

Fungal infections, intertrigo, cellulitis, lymphoedema

Unrelated

Stress incontinence

STEP BY STEP RECOMMENDATION

For adult weight loss therapy or Management of Obesity

Goals

The first attempt is to reduce body weight by approximately 10% from baseline. Further weight loss if indicated, through further assessment is attempted only after success is achieved with the first goal.

The patient is advised to attempt to reduce weight at a rate of about 1-2 kg per week for first 6 months.

Regular follow up with alteration in strategies is based on the amount of weight loss by the patient.

Dietary therapy

The patient is advised about low calorie diets with advice been imparted by a trained dietician if possible. Fat reduction is a practical way to reduce calories & hence the patient needs to follow this. Total calorie reduction of dietary carbohydrates & fat will help in better caloric reduction. The patient should aim to create a calorie deficit of 500-1000 kcal per day.

Physical activity

Exercise plays an important role by contributing directly to weight loss and also plays a very important role in weight maintenance, post weight loss. Physical activity increases cardiovascular fitness & reduces body fat. Physical activity needs to be an integral part of weight loss therapy & weight maintenance program & patient can not overlook this. The patient needs to plan moderate levels of activity like brisk walking at least 30-40 minutes per day initially for 5 days/week & slowly work up to everyday of the week. The patient should be encouraged for increasing the intensity of the physical activity slowly.

Behavioral therapy

Behaviour therapy is a useful adjunct to diet & physical activity. The physician needs to assess patient motivation & readiness to implement the weight management plan & the commitment for the same. The patient should be encouraged to plan small steps at a time with periodic non foods rewards being incorporated for self encouragement.

Combined therapy

The patient needs to have clear guideline that adequate weight loss is possible only with a combination therapy of low calorie diets, increased physical activity & behavior therapy.

Pharmacotherapy

Lifestyle therapy is essential before the patient can be considered for drug therapy. Weight loss drugs may be used in patients with BMI >30kg/m² with no accompanying obesity - related risk factors or diseases. The patient needs to be monitored continuously for drug efficacy & safety. Any drug being used needs to be discontinued if the drug is ineffective in weight loss or weight maintenance or if there are serious adverse effects. Maximum benefits of pharmacotherapy can be expected in the first 6 months in terms of weight loss & these drugs can be continued for a longer period as per their approval for long-term management.

Bariatric surgery

Bariatric Surgery is a treatment option. Weight loss surgery is an option in carefully selected patients with clinically severe obesity i.e. persons with a BMI > 40kg/m² or with a BMI > 35kg/m² with comorbid conditions like Type 2 DM, obstructive sleep apnoea etc. Surgery should be considered when less invasive methods have failed and the patient is at high risk for obesity related morbidity & mortality.

Impact of obesity on morbidity

IMPACT OF OBESITY ON MORBIDITY

In addition to having a marked effect on mortality, obesity also has a major impact on morbidity on various systems.

IMPACT OF OBESITY ON MORBIDITY

In addition to having a marked effect on mortality, obesity also has a major impact on morbidity on various systems.

OBESITY IS A HEALTH RISK

Obesity is an independent risk factor for increased mortality. Overall mortality begins to increase with BMI levels greater than 25 & increases most dramatically as BMI levels surpass 30. Risk of Obesity are parallel to hypertension & dyslipidemias, BMI > greater than 25 is associated with a seven fold increase in mortality risk in coronary patients. Equally strong association are well documented with degenerative joint diseases, depression, sexual dysfunction in both genders.

COMORBID CONDITIONS

In addition to having a marked effect on mortality, obesity also has a major impact on morbidity on various systems.

IMPACT OF OBESITY ON MORBIDITY

Various systems

Comorbid conditions

Type 2 Diabetes Mellitus

Hyperinsulinism/ insulin resistance

Dyslipidemia (high triglycerides & low HDL cholesterol)

Hypertension, coronary heart disease, Cerebrovascular diseases, deep vein thrombosis

Gastrointestinal system

Hiatus hernia, cholecystitis, fatty infiltration of the liver, hemorrhoids, gastritis, gastroesophageal reflux disease, colorectal cancer

Respiratory

Obstructive sleep apnoea, restrictive lung disease

Breath

Breast cancer

Uterus

Endometrial cancers, cervical cancers, gynaecological abnormalities

Skin

Fungal infections, intertrigo, cellulitis, lymphoedema

Unrelated

Stress incontinence

STEP BY STEP RECOMMENDATION

For adult weight loss therapy or Management of Obesity

Goals

The first attempt is to reduce body weight by approximately 10% from baseline. Further weight loss if indicated, through further assessment is attempted only after success is achieved with the first goal.

The patient is advised to attempt to reduce weight at a rate of about 1-2 kg per week for first 6 months.

Regular follow up with alteration in strategies is based on the amount of weight loss by the patient.

Dietary therapy

The patient is advised about low calorie diets with advice been imparted by a trained dietician if possible. Fat reduction is a practical way to reduce calories & hence the patient needs to follow this. Total calorie reduction of dietary carbohydrates & fat will help in better caloric reduction. The patient should aim to create a calorie deficit of 500-1000 kcal per day locally.

Physical activity

Exercise plays an important role directly to weight loss and also plays a very important role in weight maintenance, post weight loss. Physical activity increases cardiovascular fitness & reduces body fat. Physical activity needs to be an integral part of weight loss therapy & weight maintenance program & patient can not overlook this. The patient needs to plan moderate levels of activity like brisk walking at least 30-40 minutes per day initially for 5 days/week & slowly work up to everyday of the week. The patient should be encouraged for increasing the intensity of the physical activity slowly.

Behavioral therapy

Behaviour therapy is a useful adjunct to diet & physical activity. The physician needs to assess patient motivation & readiness to implement the weight management plan & the commitment for the same. The patient should be encouraged to plan small steps at a time with periodic non foods rewards being incorporated for self encouragement.

Combined therapy

The patient needs to have clear guideline that adequate weight loss is possible only with a combination therapy of low calorie diets, increased physical activity & behavior therapy.

Pharmacotherapy

Lifestyle therapy is essential before the patient can be considered for drug therapy. Weight loss drugs may be used in patients with BMI >30kg/m² with no accompanying obesity - related risk factors or diseases. The patient needs to be monitored continuously for drug efficacy & safety. Any drug being used needs to be discontinued if the drug is ineffective in weight loss or weight maintenance or if there are serious adverse effects. Maximum benefits of pharmacotherapy can be expected in the first 6 months in terms of weight loss & these drugs can be continued for a longer period as per their approval for long-term management.

Bariatric surgery

Bariatric Surgery is a treatment option. Weight loss surgery is an option in carefully selected patients with clinically severe obesity i.e. persons with a BMI > 40kg/m² or with a BMI > 35kg/m² with comorbid conditions like Type 2 DM, obstructive sleep apnoea etc. Surgery should be considered when less invasive methods have failed and the patient is at high risk for obesity related morbidity & mortality.
MAX SUPER SPECIALITY HOSPITAL, BATHINDA
NEAR CIVIL HOSPITAL, MANSO ROAD, BATHINDA.
PH: 0164 660 1000 0164 660 1666, EMERGENCY:
FAX: 0164 660 1555 www.maxhealthcare.in

EMPANELLED WITH:
Empanelled with ESI, ECHS, all major TPA & Corporates for cashless services

SPECIALITIES:
- Cardiology & Cardiothoracic Surgery
- Orthopaedics & Knee/Hip Replacement
- Medical & Surgical oncology
- Radiotherapy
- Neurology & Neurosurgery
- Gastroenterology
- Obstetrics & Gynecology
- Paediatrics
- Ophthalmology
- ENT
- Dermatology
- Nephrology
- Internal Medicine
- Gen. & Laparoscopic Surgery
- Diabetes & Obesity Care
- Radiology
- Urology
- Nuclear Medicine
- Dietetics
- Physiotherapy
- Critical Care
- Lab Medicine & Transfusion
- Services (24 hours blood Bank)
- 24x7 Max Chemist

EMERGENCY
0164-660-1666
30 MINUTES MAX