Patient-Centred Obesity Care

This clinical practice guideline is organized around the arc of the patient journey and related clinical management approaches in the primary care setting.

Key Concepts

- Obesity definition: A complex, progressive and relapsing chronic disease characterized by abnormal and/or excessive body fat (adiposity) that impairs health.

- Despite growing evidence and acknowledgement (e.g., American and Canadian Medical Associations) that obesity is a serious chronic disease, it is not effectively managed within our health systems.

- People with obesity experience pervasive weight bias and stigma, which contributes to increased morbidity and mortality, independent of weight or BMI. Obesity stigma also negatively influences the level and quality of care provided to people living with obesity.

- BMI is not an accurate tool for identifying adiposity-related complications, nor is waist circumference a direct measure of visceral adiposity. Integration of both into a holistic clinical assessment may identify higher-risk phenotypes of obesity better than either alone (particularly at lower BMI).

- In addition to BMI and waist circumference measurements, a comprehensive history to identify the root causes of obesity, appropriate physical examination and relevant laboratory investigations are required to identify those who will benefit from obesity treatment.

- Use tools such as the 5As of Obesity Management to guide patient interaction and management, the 4Ms framework (see page 9) to assess root causes of weight gain, and the Edmonton Obesity Staging System (see page 10) to assess disease severity and guide treatment.

- Treating the root causes of obesity is the foundation of obesity management.

- The goals of obesity management should be improved health and well-being, and not just weight loss.

Learn more:
www.obesitycanada.ca/guidelines/weightbias
www.obesitycanada.ca/guidelines/primarycare
www.obesitycanada.ca/guidelines/assessment

A Framework for Obesity Management in Adults

The Canadian Adult Obesity Clinical Practice Guidelines were produced through a partnership between Obesity Canada and the Canadian Association of Bariatric Physicians and Surgeons. They were published in August 2020, the result of more than two years of work by over 60 Canadian clinicians, researchers and people living with obesity. Together, they assessed more than 550,000 peer-reviewed papers and built consensus on a wide variety of topics related to obesity prevention and management, and developed 80 key recommendations applicable to healthcare professionals, health policy makers, health systems and people affected by obesity.

A summary article of the Canadian Adult Obesity Clinical Practice Guidelines is published in the Canadian Medical Association Journal, and contains information on the full methodology, management of authors’ competing interests, a brief overview of all recommendations and other details.

More detailed guideline chapters (including references) and related tools are published on the Obesity Canada website at www.obesitycanada.ca/guidelines. The CPGs are a living document, with only the latest chapters posted online; updates will be made as emerging evidence requires. This Quick Guide is intended to provide an overview of the patient journey when managing obesity and does not present all of the information, key messages or recommendations covered in the CMAJ article or the 19 supplementary chapters.
5 Steps in the Patient Journey

Ask, Assess, Advise, Agree, Assist

1. Recognition of obesity as a chronic disease by healthcare providers, who should ask the patient permission to offer advice and help treat this disease in an unbiased manner.

2. Assessment of an individual living with obesity, using appropriate measurements, and identifying the root causes, complications and barriers to obesity treatment.

3. Discussion of the core treatment options (medical nutrition therapy and physical activity) and adjunctive therapies that may be required, including psychological and behavioural, pharmacologic and surgical interventions.

4. Agreement with the person living with obesity regarding goals of therapy, focusing mainly on the value that the person derives from health-based interventions.

5. Engagement by healthcare providers with the person with obesity in continued follow-up and reassessments, and encouragement of advocacy to improve care for this chronic disease.

Step 1 Recognition of obesity as a chronic disease

- Acknowledge that obesity is a complex, heterogeneous chronic disease that requires individualized treatment and long-term support.

- Weight bias in healthcare settings can reduce the quality of care for patients living with obesity and worsen their outcomes — assess your own bias with tools such as the Implicit Association Test.

- Don’t assume all patients living with obesity are prepared to initiate obesity management.

- Ask patients’ permission to discuss obesity before proceeding.

Step 2 Assessment

Recommendations

1. We suggest that healthcare providers involved in screening, assessing and managing people living with obesity use the 5As of Obesity Management framework to initiate the discussion by asking for their permission and assessing their readiness to initiate treatment (Level 4, Grade D, Consensus).

2. Healthcare providers can measure height, weight and calculate Body Mass Index (BMI) in all adults (Level 2a, Grade B), and measure waist circumference in individuals with a BMI 25–35 kg/m². (Level 2b, Grade B).

3. We suggest a comprehensive history to identify root causes of weight gain as well as complications of obesity and potential barriers to treatment be included in the assessment (Level 4, Grade D). See Figure 1: Components of the 4Ms Framework for Assessment of Obesity on page 9.

4. We recommend blood pressure measurement in both arms, fasting glucose or glycated hemoglobin and lipid profile to determine cardiometabolic risk and, where appropriate, ALT to screen for nonalcoholic fatty liver disease in people living with obesity (Level 3, Grade D).

5. We suggest providers consider using the Edmonton Obesity Staging System to determine the severity of obesity and to guide clinical decision making (Level 4, Grade D). See Figure 2: Edmonton Obesity Staging System on page 10.

When discussing weight and health with patients, remember:

- Weight is a sensitive issue.
- Do not assume every patient with a larger body has obesity.
- Ask for permission to discuss body weight.
- Ask patients if they feel their weight is impairing their medical, functional, or psychosocial health.
- If the person is not ready to discuss their weight, offer resources about obesity as a chronic disease (see www.obesitycanada.ca) and extend an open opportunity to reassess.
5 Steps in the Patient Journey (cont’d)

Step 2  Assessment (cont’d)

Understanding an individual’s story and life context is crucial in the management of obesity:

1. Set value-based goal that matters to the patient e.g., “Being able to play at the park with my grandchildren.”
2. Assess obesity classification (height, weight, BMI & waist circumference)
3. Assess adiposity related complications and root causes of weight gain (see the 4M Framework on page 9)
4. Assess disease severity (see Edmonton Obesity Staging System on page 10)

Learn more at:
www.obesitycanada.ca/guidelines/assessment:
• How to measure BMI and weight circumference
• Proposed waist circumference cut-off points (cm) to define abdominal adiposity by ethnicity
• Components of an obesity-centred medical history
• Key components of an obesity-centred physical exam
• Investigations to assess obesity
• Summary of weight-promoting medications and alternate therapies

Learn more:
www.obesitycanada.ca/guidelines/nutrition

Step 3  Discussion of treatment options

Medical nutrition therapy and physical activity are part of any chronic disease management strategy, including obesity management. Sustaining weight loss may be difficult long-term because of compensatory mechanisms in the brain that promote positive caloric intake by increasing hunger and ultimately causing weight gain. Medical nutrition therapy and physical activity interventions in combination with adjunctive obesity treatments can be tailored to meet an individual’s health-related or obesity-related outcomes.

Medical Nutrition Therapy (MNT)

Medical nutrition therapy is a foundation for chronic disease management, including obesity management. However, medical nutrition therapy should not be used in isolation in obesity management, as sustaining weight loss may be difficult long term because of compensatory mechanisms in the brain that promote positive caloric intake by increasing hunger, ultimately causing weight gain. Instead, medical nutrition therapy, in combination with other interventions (psychological, pharmacologic, surgical), should be tailored to meet an individual’s health-related or weight-related outcomes. See Figure 3: Medical Nutrition Therapy for Obesity Management on page 11.

Learn more:
www.obesitycanada.ca/guidelines/physicalactivity

Physical Activity

Recommendations

1. Aerobic physical activity (30–60 minutes of moderate to vigorous intensity most days of the week) can be considered for adults who want to:
   a) Achieve small amounts of body weight and fat loss (Level 2a, Grade B);
   b) Achieve reductions in abdominal visceral fat (Level 1a, Grade A) and ectopic fat such as liver and heart fat (Level 1a, Grade A), even in the absence of weight loss;
   c) Favour weight maintenance after weight loss (Level 2a, Grade B);
   d) Favour the maintenance of fat-free mass during weight loss; (Level 2a, Grade B); and,
   e) Increase cardiorespiratory fitness (Level 2a, Grade B) and mobility (Level 2a, Grade B).
2. For adults living with overweight or obesity, resistance training may promote weight maintenance or modest increases in muscle mass or fat-free mass and mobility (Level 2a, Grade B).
3. Increasing exercise intensity, including high-intensity interval training, can achieve greater increases in cardiorespiratory fitness and reduce the amount of time required to achieve similar benefits as from moderate-intensity aerobic activity (Level 2a, Grade B).
4. Regular physical activity, with and without weight loss, can improve many cardiometabolic risk factors in adults who have overweight or obesity, including:
   a) Hyperglycemia and insulin sensitivity (Level 2b, Grade B);
   b) High blood pressure (Level 1a, Grade B) and,
   c) Dyslipidemia (Level 2a, Grade B).
5. Regular physical activity can improve health-related quality of life, mood disorders (i.e., depression, anxiety) and body image in adults with overweight or obesity (Level 2b, Grade B).
5 Steps in the Patient Journey (cont’d)

Step 3 Discussion of treatment options (cont’d)

The three pillars of obesity management that support medical nutrition therapy and physical activity are:

1) Psychological and Behavioural Interventions
2) Pharmacotherapy
3) Bariatric Surgery

Psychological and Behavioural Interventions

Recommendations

1. Multicomponent psychological interventions (combining behaviour modification [goal setting, self-monitoring, problem solving], cognitive therapy [reprogramming] and values-based strategies to alter nutrition and activity) should be incorporated into care plans for weight loss and improved health status and quality of life (Level 1a, Grade A) in a manner that promotes adherence, confidence and intrinsic motivation (Level 1b, Grade A).

2. Healthcare providers should provide longitudinal care with consistent messaging to people living with obesity to support the development of confidence in overcoming barriers (self-efficacy) and intrinsic motivation (personal, meaningful reasons to change), to encourage the patient to set and sequence health goals that are realistic and achievable (Level 1a, Grade A), to self-monitor behaviour (Level 1a, Grade A) and to analyze setbacks using problem-solving and adaptive thinking (cognitive reframing), including clarifying and reflecting on values-based behaviours (Level 1a, Grade A).

3. Healthcare providers should ask patients’ permission to educate them that success in obesity management is related to improved health, function and quality of life resulting from achievable behavioural goals, and not on the amount of weight loss (Level 1a, Grade A).

4. Healthcare providers should provide follow-up sessions consistent with repetition and relevance to support the development of self-efficacy and intrinsic motivation. Once an agreement to pursue a behavioural path has been established (health behaviour and/or medication and/or surgical pathways) follow-up sessions should repeat the above messages in a fashion consistent with repetition (the provider role) and relevance (the patient role) to support the development of self-efficacy and intrinsic motivation (Level 1a, Grade A).

Pharmacotherapy

Recommendations

1. Pharmacotherapy for weight loss can be used for individuals with BMI ≥ 30 kg/m² or BMI ≥ 27 kg/m² with adiposity-related complications, in conjunction with medical nutrition therapy, physical activity and psychological interventions (liraglutide 3.0 mg [Level 2a, Grade B], naltrexone/bupropion combination [Level 2a, Grade B], orlistat [Level 2a, Grade B]). Pharmacotherapy may be used to maintain weight loss that has been achieved by health behaviour changes, and to prevent weight regain (liraglutide 3.0 mg or orlistat) (Level 2a, Grade B).

2. For people living with type 2 diabetes and a BMI ≥ 27 kg/m², pharmacotherapy can be used in conjunction with health behaviour changes for weight loss and improvement in glycemic control: liraglutide 3.0 mg (Level 1a, Grade A); naltrexone/bupropion combination (Level 2a; Grade B), orlistat (Level 2a, Grade B).

3. We recommend pharmacotherapy in conjunction with health behaviour changes for people living with prediabetes and overweight or obesity (BMI > 27 kg/m²) to delay or prevent type 2 diabetes. (Liraglutide 3.0 mg (Level 2a, Grade B); orlistat (Level 2a, Grade B).

4. We do not suggest the use of prescription or over-the-counter (OTC) medications other than those approved for weight management (Level 4, Grade D, Consensus).

5. For people living with overweight or obesity who require pharmacotherapy for other health conditions, we suggest choosing drugs that are not associated with weight gain (Level 4, Grade D, Consensus).

See Figure 4: Choice of Obesity Pharmacotherapy on page 12.
Step 3  
**Discussion of treatment options (cont’d)**

### Bariatric Surgery

**Recommendations**

1. Bariatric surgery can be considered for people with BMI ≥ 40 kg/m² or BMI ≥ 35 kg/m² with at least one adiposity-related disease to (Level 4, Grade D, Consensus):
   - i. Reduce long-term overall mortality (Level 2b, Grade B);
   - ii. Induce significantly better long-term weight loss compared to medical management alone (Level 1a, Grade A);
   - iii. Induce control and remission of type 2 diabetes, in combination with best medical management, over best medical management alone (Level 2a, Grade B);
   - iv. Significantly improve quality of life (Level 3, Grade C) and,
   - v. Induce long-term remission of most obesity-related diseases, including dyslipidemia (Level 3, Grade C), hypertension (Level 3, Grade C), liver steatosis and nonalcoholic steato-hepatitis (Level 3, Grade C).

2. Bariatric surgery should be considered in patients with poorly controlled type 2 diabetes and Class I obesity (BMI between 30 and 35 kg/m²) (Level 1a; Grade A) despite optimal medical management.

3. Bariatric surgery may be considered for weight loss and/or to control adiposity-related diseases in persons with Class 1 obesity, in whom optimal medical and behavioural management have been insufficient to produce significant weight loss (Level 2a, Grade B).

4. We suggest the choice of bariatric procedure (sleeve gastrectomy, gastric bypass or duodenal switch) be decided according to the patient’s need, in collaboration with an experienced inter-professional team (Level 4, Grade D).

5. We suggest that adjustable gastric banding not be offered due to unacceptable complications and long-term failure (Level 4, Grade D).

6. We suggest that single-anastomosis gastric bypass not be routinely offered, due to long-term complications in comparison with standard Roux-en-Y gastric bypass (Level 4, Grade D).

**Learn more:**
- www.obesitycanada.ca/guidelines/surgeryoptions
- www.obesitycanada.ca/guidelines/preop
- www.obesitycanada.ca/guidelines/postop

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Step 4  
**Agree on goals of therapy**

**When setting goals with patients:**

1. Consider using the concept of “best weight” (i.e., the weight that a person can achieve and maintain while living their healthiest and happiest life). This education should be offered as a means of reducing self-bias and supporting appropriate outcome goals that acknowledge that weight is not a behaviour. This encourages body acceptance.

2. Educate the patient that success is related to setting achievable, sustainable goals to which they can adhere, while developing confidence to overcome barriers and fostering an intrinsic motivation to maintain the plan. Goals should positively impact health, function and quality of life.

3. Encourage the patient to:
   - a) Set and sequence goals that are realistic and achievable;
   - b) Self-monitor behaviour; and,
   - c) Analyze setbacks using problem solving and cognitive reframing, including clarifying and reflecting on values-based behaviours.

4. For providers who function within teams, at least one member of the team should develop competency in behavioural interventions, including self-monitoring, goal setting and action planning, reinforcement management, social comparison, cognitive restructuring, motivational interviewing and values-based counselling. Psychological and behavioural interventions should focus on the impact of the intervention on adherence, self-efficacy and autonomous motivation.

**Learn more:**
- www.obesitycanada.ca/guidelines/behavioural
Follow-up and reassessment

- Longitudinal primary care interventions should focus on incremental, personalized, small behaviour changes to be effective in supporting people to manage their weight.

- Given that obesity management involves overcoming many challenges (cravings, habits, availability, social pressures) sustained behaviour change is more successful if the behaviours chosen by the individual are consistent with his/her core values.

- Healthcare providers should provide follow-up sessions consistent with repetition and relevance to support the development of self-efficacy and intrinsic motivation.

Learn more:
www.obesitycanada.ca/guidelines/primarycare
www.obesitycanada.ca/guidelines/behavioural
www.obesitycanada.ca/guidelines/nutrition
www.obesitycanada.ca/guidelines/pharmacotherapy
www.obesitycanada.ca/guidelines/postop
www.obesitycanada.ca/guidelines/mentalhealth

CONNECT WITH CANADA’S PROFESSIONAL OBESITY PREVENTION AND TREATMENT COMMUNITY:
www.obesitycanada.ca
### Figure 1: Components of the 4Ms Framework for Assessment of Obesity

<table>
<thead>
<tr>
<th>Category</th>
<th>Complications</th>
<th>Frequency</th>
<th>Investigations</th>
<th>Treatment Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mental Health</strong></td>
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<tr>
<td>Knowledge/cognition</td>
<td>+ + +</td>
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<tr>
<td>Expectations</td>
<td>+ + *</td>
<td></td>
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<td></td>
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<tr>
<td>Self image</td>
<td>+ + * (F&gt;M)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internalized weight bias</td>
<td>+ + +</td>
<td></td>
<td>This can be accomplished through sensitive questioning/dialogue (e.g., “Can you share with me if or how your weight affects your perception of yourself/motivational interviewing,”) or by questionnaire (WBIS). See the chapter Reducing Weight Bias in Obesity Management, Practice and Policy for details.</td>
<td>Unresolved perception of weight bias can have an influence on obesity management. Coping strategies to address internalized weight bias should be incorporated into behavioural interventions, consistent with the principles of cognitive behavioural therapy and acceptance and commitment therapy.</td>
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<tr>
<td><strong>Mood/Anxiety</strong></td>
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<td></td>
<td>+ + * (F&gt;M)</td>
<td></td>
<td>PHQ-9, GAD</td>
<td>If starting pharmacotherapy, consider options that do not increase weight (see the chapter Prevention and Harm Reduction of Obesity (Clinical Prevention))</td>
</tr>
<tr>
<td><strong>Addiction</strong></td>
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<td>Yale Food Addiction Scale</td>
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<tr>
<td><strong>Sleep</strong></td>
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<tr>
<td><strong>Attention</strong></td>
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<tr>
<td><strong>Personality</strong></td>
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<tr>
<td><strong>Mechanical</strong></td>
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<tr>
<td>Osteoarthritis</td>
<td>+ + +</td>
<td></td>
<td>History, X-ray</td>
<td>Avoid steroids if possible</td>
</tr>
<tr>
<td>Gout</td>
<td>+ + +</td>
<td></td>
<td>Uric acid level</td>
<td></td>
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<tr>
<td>Sleep apnea</td>
<td>+ + +</td>
<td></td>
<td>STOP BANG sleep apnea questionnaire, Berlin Questionnaire, overnight sleep study</td>
<td>CPAP therapy if indicated</td>
</tr>
<tr>
<td>Plantar fasciitis</td>
<td>+ + *</td>
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<tr>
<td>Gastroesophageal reflux</td>
<td>+ +</td>
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<tr>
<td>Urinary incontinence</td>
<td>+ + *</td>
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<tr>
<td>Intertrigo</td>
<td>+ + *</td>
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<tr>
<td>Idiopathic intracranial hypertension (Pseudotumour Cerebri)</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thrombosis</td>
<td>+</td>
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<tr>
<td><strong>Metabolic</strong></td>
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<tr>
<td>Type 2 diabetes</td>
<td>+ + +</td>
<td></td>
<td>A1c, fasting glucose</td>
<td>Consider medication options that are weight neutral, promote weight loss</td>
</tr>
<tr>
<td>Hyperlipidemia</td>
<td>+ + +</td>
<td></td>
<td>Total cholesterol, triglycerides, HDL-C</td>
<td></td>
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<tr>
<td>Nutritional deficiency</td>
<td>+ + +</td>
<td></td>
<td>25 hydroxy-vitamin D, iron studies, serum B12 level</td>
<td>Vitamin D 1000–3000 units/day, supplement as needed to achieve therapeutic levels</td>
</tr>
<tr>
<td>Gout</td>
<td>+ + +</td>
<td></td>
<td>Uric acid</td>
<td>Avoid prednisone if possible</td>
</tr>
<tr>
<td>Hypertension</td>
<td>+ +</td>
<td></td>
<td>Ensure appropriate cuff size (bladder width 40% of arm circumference, length 80–100% of arm circumference)¹⁴</td>
<td>DASH diet, consider secondary causes (eg. sleep apnea, pain) Prioritize medications that affect the renin-angiotensin system, avoid beta blockers at first line</td>
</tr>
</tbody>
</table>

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¹⁴ Ensure appropriate cuff size (bladder width 40% of arm circumference, length 80–100% of arm circumference)
<table>
<thead>
<tr>
<th>Endocrine</th>
<th>+</th>
<th>Total testosterone, estradiol, prolactin, 17 hydroxyprogesterone, LH/FSH, DHEAS, TSH if clinical suspicion of hypothyroidism</th>
<th>Consider metformin if insulin resistant</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCOS/hypogonadism</td>
<td>+</td>
<td>ECG, ECHO, treadmill/bicycle/nuclear stress test if indicated and if patient able</td>
<td></td>
</tr>
<tr>
<td>Infertility</td>
<td>+</td>
<td>Hx: Headache, pulsatile tinnitus, papilledema</td>
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</table>

### Cardiovascular disease

- Left ventricular hypertrophy, atrial fibrillation
- Chronic venous stasis, ulcers/thrombophlebitis
- Stroke, DVT/PE
- Neurological
- Pseudotumor cerebri

<table>
<thead>
<tr>
<th>Cardiovascular disease</th>
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<th>+</th>
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<th>+</th>
<th>ECG, ECHO, treadmill/bicycle/nuclear stress test if indicated and if patient able</th>
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<tr>
<td>Left ventricular hypertrophy, atrial fibrillation</td>
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<td>+</td>
<td>+</td>
<td>ECG, ECHO, treadmill/bicycle/nuclear stress test if indicated and if patient able</td>
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<tr>
<td>Chronic venous stasis, ulcers/thrombophlebitis</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>ECG, ECHO, treadmill/bicycle/nuclear stress test if indicated and if patient able</td>
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<tr>
<td>Stroke, DVT/PE</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>ECG, ECHO, treadmill/bicycle/nuclear stress test if indicated and if patient able</td>
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<tr>
<td>Neurological</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>ECG, ECHO, treadmill/bicycle/nuclear stress test if indicated and if patient able</td>
</tr>
<tr>
<td>Pseudotumor cerebri</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>ECG, ECHO, treadmill/bicycle/nuclear stress test if indicated and if patient able</td>
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</table>

### Gastrointestinal disease

- Fatty Liver
- Gallstones

<table>
<thead>
<tr>
<th>Gastrointestinal disease</th>
<th>+++</th>
<th>+</th>
<th>+</th>
<th>+</th>
<th>Liver enzyme elevation, increased liver stiffness (elastography) abdominal ultrasound, FIB-4 score</th>
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<tbody>
<tr>
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<td>+++</td>
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<td>Liver enzyme elevation, increased liver stiffness (elastography) abdominal ultrasound, FIB-4 score</td>
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<tr>
<td>Gallstones</td>
<td>+</td>
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<td>+</td>
<td>+</td>
<td>Liver enzyme elevation, increased liver stiffness (elastography) abdominal ultrasound, FIB-4 score</td>
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### Oncology

- Colorectal, gallbladder, pancreatic, breast, renal, uterine, cervical, prostate

<table>
<thead>
<tr>
<th>Oncology</th>
<th>+</th>
<th>Routine cancer screening</th>
<th>Patients with obesity are at high risk for certain cancers and are less likely to be screened due to technical issues with diagnostic testing and delays in seeking medical attention.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorectal, gallbladder, pancreatic, breast, renal, uterine, cervical, prostate</td>
<td>+</td>
<td>Routine cancer screening</td>
<td>Patients with obesity are at high risk for certain cancers and are less likely to be screened due to technical issues with diagnostic testing and delays in seeking medical attention.</td>
</tr>
</tbody>
</table>

### Skin

- Acanthosis, skin tags
- Candida
- Intertrigo
- Tinea
- Folliculitis

<table>
<thead>
<tr>
<th>Skin</th>
<th>+</th>
<th>+</th>
<th>+</th>
<th>+</th>
<th>Routine cancer screening</th>
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<tbody>
<tr>
<td>Acanthosis, skin tags</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>Routine cancer screening</td>
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<tr>
<td>Candida</td>
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<td>+</td>
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<td>+</td>
<td>Routine cancer screening</td>
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<td>Intertrigo</td>
<td>+</td>
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<td>+</td>
<td>Routine cancer screening</td>
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<tr>
<td>Tinea</td>
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<td>+</td>
<td>Routine cancer screening</td>
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<tr>
<td>Folliculitis</td>
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<td>Routine cancer screening</td>
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### Socioeconomic status

<table>
<thead>
<tr>
<th>Socioeconomic status</th>
<th>+</th>
<th>Routine cancer screening</th>
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<tbody>
<tr>
<td>Socioeconomic status</td>
<td>+</td>
<td>Routine cancer screening</td>
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### Monetary Health / “Milieu”

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<thead>
<tr>
<th>Monetary Health / “Milieu”</th>
<th>+</th>
<th>Routine cancer screening</th>
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</table>

**PHQ-9:** Patient Health Questionnaire-9; GAD: generalized anxiety disorder; CPAP: continuous positive airway pressure; PCOS: polycystic ovarian syndrome; LH/FSH: luteinizing hormone/follicle stimulating hormone; DHEAS: dehydroepiandrosterone; TSH: thyroid stimulating hormone; ECG: electrocardiogram; ECHO: echocardiogram; DVT/PE: deep venous thrombosis/pulmonary embolism; FIB-4: Fibrosis-4, F: Female; M: Male; RR: Relative Risk; *Depending on patient population.
### Figure 2: Edmonton Obesity Staging System

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No apparent obesity-related risk factors (e.g., blood pressure, serum lipids, fasting glucose, etc. within normal range), no physical symptoms, no psychopathology, no functional limitations and/or impairment of well-being</td>
<td>Identification of factors contributing to increased body weight&lt;br&gt;&lt;br&gt;Counselling to prevent further weight gain through behavioural measures, including healthy eating and increased physical activity</td>
</tr>
<tr>
<td>1</td>
<td>Presence of obesity-related subclinical risk factors (e.g., borderline hypertension, impaired fasting glucose, elevated liver enzymes, etc.), mild physical symptoms (e.g., dyspnea on moderate exertion, occasional aches and pains, fatigue, etc.), mild psychopathology, mild functional limitations and/or mild impairment of well-being</td>
<td>Investigation for other (non-weight-related) risk factors&lt;br&gt;&lt;br&gt;More intense behavioural interventions, including nutrition therapy, physical activity and psychological treatments to prevent further weight gain&lt;br&gt;&lt;br&gt;Monitoring of risk factors and health status</td>
</tr>
<tr>
<td>2</td>
<td>Presence of established obesity-related chronic disease (e.g., hypertension, type 2 diabetes, sleep apnea, osteoarthritis, reflux disease, polycystic ovary syndrome, anxiety disorder, etc.), moderate limitations in activities of daily living and/or well-being</td>
<td>Initiation of obesity treatment, including considerations of all psychological interventions, pharmacological and surgical treatment options&lt;br&gt;&lt;br&gt;Close monitoring and management of comorbidities as indicated</td>
</tr>
<tr>
<td>3</td>
<td>Established end-organ damage such as myocardial infarction, heart failure, diabetic complications, incapacitating osteoarthritis, significant psychopathology, significant functional limitations and/or impairment of well-being</td>
<td>More intensive obesity treatment including consideration of all psychological interventions, pharmacological and surgical treatment options&lt;br&gt;&lt;br&gt;Aggressive management of comorbidities as indicated</td>
</tr>
<tr>
<td>4</td>
<td>Severe (potentially end-stage) disabilities from obesity-related chronic diseases, severe disabling psychopathology, severe functional limitations and/or severe impairment of well-being</td>
<td>Aggressive obesity management as deemed feasible&lt;br&gt;&lt;br&gt;Palliative measures including pain management, occupational therapy and psychosocial support</td>
</tr>
</tbody>
</table>

**Figure 3: Medical Nutrition Therapy for Obesity Management**

**ASK/ASSESS:**
Is your patient/client interested in making nutrition changes?

**YES**

**ADVISE:** Provide/Reinforce Key Nutrition Messages for all Adults
- Meet individual values, preferences and goals that are culturally acceptable, affordable and sustainable
- Use person-first language, patient-centred, weight-Inclusive and non-dieting approaches
- Follow Canada’s Food Guide for Healthy Eating recommendations (as applicable to the individual)

**Healthy eating is more than the foods you eat.**
- Be mindful of your eating habits
- Cook more often
- Enjoy your food
- Eat meals with others
- Use food labels
- Limit foods high in sodium, sugars or saturated fat
- Be aware of food marketing and how it can influence your choices.

**Make it a habit to eat a variety of healthy foods each day.**
- Have plenty of vegetables and fruit
- Eat protein foods and choose protein foods that come from plants more often
- Make water your drink of choice
- Choose whole grain foods

**Build a healthy relationship with food and eating**
- Take time to eat
- Notice when you are hungry and when you are full
- Plan what you eat
- Involve others in planning and preparing meals.
- Culture and food traditions can be part of healthy eating
- Reconnect to the eating experience by creating awareness of your feelings, thoughts, emotions and behaviours

**ASK/ASSESS**
Is patient/client interested in making further nutrition changes OR requests additional support to make/sustain changes?

**NO**

**YES**

**AGREE AND ASSIST:** Explore Options, Collaborate Care
Refer to a Registered Dietitian (RD)

**Food Based Approaches**
- Pulses
- Vegetables and fruit
- Nuts
- Whole grains
- Dairy foods

**Dietary Patterns**
- Calorie-restricted patterns with variable macronutrient ranges
- Mediterranean
- Vegetarian
- Portfolio
- Low glycemic index
- DASH
- Nordic
- Partial meal replacements
- Intermittent fasting

**Intensive Lifestyle Interventions with a Multidisciplinary Team**
- Behaviour modification
- Nutrition (RD)
- Partial meal replacements
- Physical activity
- Education
- Self-monitoring/self-care
- Medications
- Frequent follow-up visits

**Monitor and Evaluate Health-Related Outcomes*, including:**
- Health behaviours
- Nutrition status
- Quality of life
- Mental health
- Cardiovascular
- Metabolic
- Functional status
- Body

**Reassess** intervention, plan, readiness, barriers and supports

**Monitor and evaluate for readiness in follow-up visits.**
Figure 4: Choice of Obesity Pharmacotherapy

BMI ≥ 30 kg/m² or BMI ≥ 27 kg/m² plus obesity-related co-morbidities

Consider stopping or changing meds associated with weight gain if possible

Consider co-morbidities or specific features

Diabetes, prediabetes, hypertension, obstructive sleep apnea, polycystic ovary syndrome

Liraglutide 1st choice (for DM level 1, grade A; preDM level 2, grade B)
Naltrexone/bupropion 2nd (for DM level 2, grade B)
Orlistat 3rd (for DM level 2, grade B)

Assess after 3 months on therapeutic dose

Not sufficiently successful for weight management

Discontinue medication and try second line OR continue medication and add second-line agent

Successful for weight management

Continue medication
Canadian Adult Obesity Clinical Practice Guidelines

In addition to a summary article published in the *Canadian Medical Association Journal*, 19 CPG chapters are published on the Obesity Canada website at www.obesitycanada.ca/guidelines:

Reducing Weight Bias in Obesity Management, Practice and Policy

Epidemiology of Adult Obesity

The Science of Obesity

Prevention and Harm Reduction of Obesity (Clinical Prevention)

Enabling Participation in Activities of Daily Living for People Living with Obesity

Assessment of People Living with Obesity

The Role of Mental Health in Obesity Management

Medical Nutrition Therapy in Obesity Management

Physical Activity in Obesity Management

Effective Psychological and Behavioural Interventions in Obesity Management

Pharmacotherapy in Obesity Management

Bariatric Surgery: Selection and Preoperative Work-up

Bariatric Surgery: Surgical Options and Outcomes

Bariatric Surgery: Postoperative Management

Primary Care and Primary Healthcare in Obesity Management

Commercial Products and Programs in Obesity Management

Emerging Technologies and Virtual Medicine in Obesity Management

Weight Management over the Reproductive Years for Adult Women Living with Obesity

Obesity Management and Indigenous Peoples