Physiotherapy is an ideally placed profession to provide the physical activity component of multidisciplinary weight management services.

**Introduction**

Obesity is a strong predictor of adult morbidity and mortality. Any loss of weight is beneficial in reducing many of the complications of obesity.\(^{(1)}\)

Canadian guidelines for the management of obesity recommend that initial management comprises of a variety of interventions to modify diet and physical activity behaviours.\(^{(2)}\)

Physical activity is important for maintaining long-term weight loss and managing co-morbidities.\(^{(3)}\)\(^{(4)}\)

Canadian guidelines also suggest that effective weight management interventions require multi-disciplinary teams.\(^{(2)}\)

**Weight management**

Physiotherapists have a role to play in the prevention and management of obesity.\(^{(5)}\) Obesity leads to restrictions in movement, affecting engagement in physical activity.\(^{(6)}\)

Exercise and movement is the keystone of the scope of physiotherapy practice.\(^{(7)}\) Along with a holistic, patient-centred, and problem solving approach, physiotherapists have advanced knowledge and skills in:

- anatomical, physiological, and psychosocial mechanisms of health and disease
- assessment and diagnosis
- behaviour change
- biomechanics
- exercise prescription and therapeutic exercise
- management of long-term conditions

Physiotherapists are therefore ideally suited to address the physical and psychological complexities of obesity.\(^{(9)}\) Physiotherapists provide valuable input and expertise in the multi-disciplinary management of obesity,\(^{(10)}\) helping to optimise clinical outcomes and patient experience.

While the importance of being physically active is well recognized, in reality patients often experience difficulties in doing so. It is important to facilitate patients to increase physical activity at the right level, which can be achieved by referral to a physiotherapist.\(^{(10)}\) An assessment and treatment plan from a physiotherapist will help overcome the barriers to exercise.\(^{(10)}\)\(^{(11)}\)

*Image courtesy of the Canadian Obesity Network*
A treatment plan for an obese patient may comprise of:

- provision of personalized lifestyle advice, taking into account individual attitudes, beliefs, circumstances, cultural and social preferences, and readiness to change
- prescription, supervision, and progression of appropriate physical activity to increase muscle strength, flexibility, and endurance, and sustain energy output to enhance and maintain weight loss under safe and controlled conditions
- management of associated conditions such as arthritis, back pain, and other musculoskeletal and chronic conditions, such as heart disease
- co-ordination of comprehensive and sustainable programs of management in collaboration with service users, other health and social care professionals, and community services.

**Bariatics**

There is mounting evidence to demonstrate that physical activity can improve weight loss and other outcomes following bariatric surgery. There is mounting evidence to demonstrate that physical activity can improve weight loss and other outcomes following bariatric surgery. It is consistently seen as the most important predictor of long-term weight loss maintenance. Most preoperative patients are insufficiently active, and without support, fail to make substantial increases in their physical activity postoperatively.

Wiklund et al [24] found that even one year post-surgery patients still experience social, physical and mental barriers preventing them from being physically active, often related to side effects from the surgery and a lack of support to increase physical activity. In particular, patients with balance, gait or other physical or sensory deficits should be referred to physiotherapy for support. Patients with musculoskeletal conditions, which are especially common among bariatric patients [25] should also be referred.

**Cost of ill health**

- Obesity is a risk factor for multiple health conditions and co-morbidities, including COPD, cardiovascular disease, type 2 diabetes, asthma, osteoarthritis, and certain cancers.
- Workers who are obese report decreased productivity, claim more days off and are more at risk for occupational injuries.
- Children who are obese are at risk for obesity as adults.
- Healthcare costs attributable to overweight or obesity was calculated as $6 billion in 2006, or 4.1% of the total healthcare budget.
- Direct and indirect cost of illness associated with overweight and obesity in Alberta is over $1.27 billion.

**Prevalence of the problem**

- 62% of adults and 26% of children in Canada are overweight or obese.
- In the 5-11 age group, obesity is three times more prevalent in boys than girls.
- In 2012, 7 in 10 adults Albertans were overweight or obese.

**Children and young people**

Children who are obese often present with a number of musculoskeletal signs and symptoms that may limit their time spent in physical activity.

Being obese is detrimental to gross motor skill performance, for example in upper and lower limb coordination, balance, running speed and agility, and strength. These differences become more pronounced as children get older, suggesting the need for early focus on motor skill development to encourage children who are overweight or obese to be physically active.

Physiotherapy-led exercise classes and multi-disciplinary team interventions including physiotherapy input are effective in significantly improving motor skills, activity levels, BMI, and other anthropometry in children.

**Physiotherapy management**

Recommended evidence-based approach for the physiotherapy management of obesity.

1. Assessment of the individual’s medical history
2. Evaluation of current physical activity level
3. Provision of an individualized physical activity program
4. Gradual progression of a physical activity program
5. Prescription of a cardiovascular training program
6. Prescription of resistance exercises
7. Prescription of moderate-intensity physical activity, 30 min/d, 3-5 d/wk
8. Calculation of body mass index

Note: Including education on strategies for adherence to an independent exercise program is also recommended whenever possible.
Obesity management in primary care

The Canadian Obesity Network (CON-RCO) is the primary association for professionals, researchers, policy makers, and other stakeholders to advance education, research, treatment, and the management of obesity. The website http://www.obesitynetwork.ca provides a number of resources that support this goal.

The 5As of Obesity Management is a tool developed by CON as a resource for the management of obesity in adults, pediatrics and pregnant women in primary care settings. It provides practitioners with strategies for obesity management that focus on improving health and wellbeing along with weight loss. The tools are available through the CON-RCO website.

Alberta Health Services' Obesity Initiative offers a comprehensive approach to weight management that aims to reduce the impact of obesity in Alberta. Its multidisciplinary Provincial Bariatric Resource Team (PBRT) is a key service within the initiative that supports obesity care providers and zone-based programs for both the adult and pediatric populations. The team is composed of two clinical nurse specialists, two psychologists, two dietitians, an occupational therapist and a physiotherapist.

The PBRT physiotherapist provides clinically relevant resources to support bariatric care including education to apply research to clinical practice, consultation, linking providers to optimize care, and development of evidence-informed practice resources such as Helping Adults with Obesity (BMI > 30kg/m2) Who have Functional Concern: Tips on Identifying When Physiotherapy Can Help. Additional resources and information are available at http://www.albertahealthservices.ca/info/page7468.aspx

Conclusion

Individuals who are obese often have complex biopsychosocial barriers to physical activity participation. Physiotherapists are uniquely positioned to facilitate physical activity required for weight management in these patients due to their sound grounding in a range of relevant areas. They autonomously and effectively deliver high quality, personalized exercise and lifestyle interventions to prevent and address barriers to physical activity participation, promoting physical and mental health and wellbeing, and enabling obese people to move and function as well as possible.
References


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