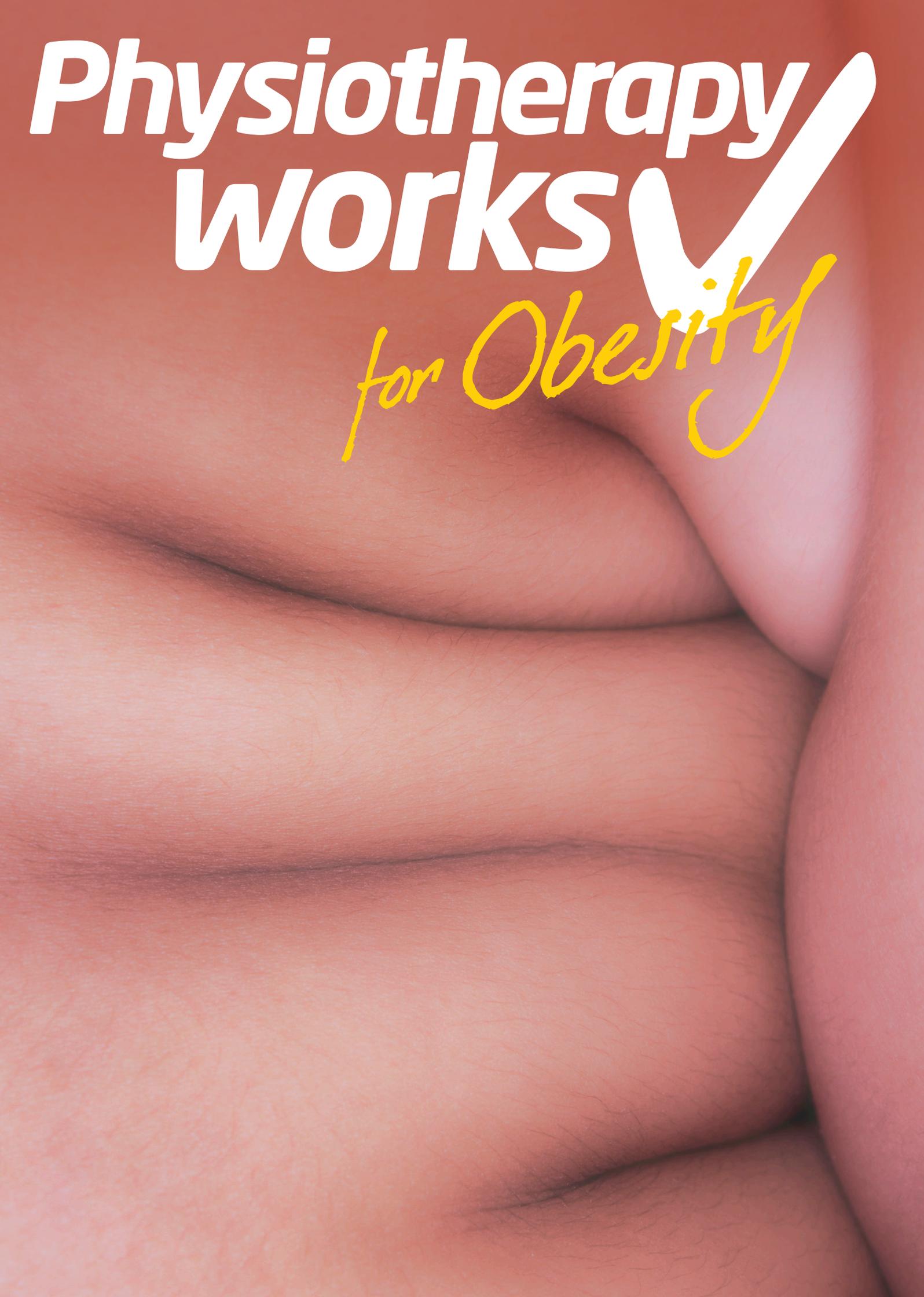


**Physiotherapy  
works ✓**

*for Obesity*



# 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.<sup>(1)</sup>

NICE guidance for the management of obesity recommends that initial management comprises of a variety of interventions to modify diet and physical activity behaviours.<sup>(2)</sup>

Physical activity is important for maintaining long-term weight loss and managing co-morbidities.<sup>(3,4)</sup> NICE guidance also suggests that effective weight management interventions require multi-disciplinary teams.<sup>(2)</sup>

### Weight management

Physiotherapists have a role to play in the prevention and management of obesity.<sup>(5)</sup> Obesity leads to restrictions in movement, affecting engagement in physical activity.<sup>(6)</sup> Exercise and movement is the keystone of the scope of physiotherapy practice.<sup>(7)</sup> 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.<sup>(8)</sup> Physiotherapists provide valuable input and expertise in the multi-disciplinary management of obesity,<sup>(9)</sup> helping to optimise clinical outcomes and patient experience.

While the importance of being physically active is well recognised, 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.<sup>(10)</sup> An assessment and treatment plan from a physiotherapist will help overcome the barriers to exercise.<sup>(8,11)</sup> ▶▶

### Size of the problem



- **24.4%** of adult men and **25.1%** of adult women in England are obese.<sup>(27)</sup>
- **18.9%** of Year 6 (aged 10-11) children and **9.3%** of reception children (aged 4-5) in England are obese.<sup>(28)</sup>
- Similar **rates of obesity** are seen across **Northern Ireland** (23% in adults and 10% in children)<sup>(29)</sup>, **Scotland** (27.1% in adults and 16.8% in children)<sup>(30)</sup> and **Wales** (23% in adults and 19% in children).<sup>(31)</sup>
- By 2050 the prevalence of **obesity** is predicted to affect **60%** of adult men, **50%** of adult women and **25%** of children in the UK.<sup>(32)</sup>



A treatment plan for an obese patient may comprise of:

- **provision of personalised 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 programmes of management in collaboration with service users, other health and social care professionals, and community services.**

## Children and young people

Obese children, like adults, often present with a number of musculoskeletal signs and symptoms that may limit their time spent in physical activity.<sup>(12)</sup> Being obese is detrimental to gross motor skill performance, for example in upper and lower limb coordination, balance, running speed and agility, and strength.<sup>(13)</sup> These differences become more

pronounced as children get older, suggesting the need for early focus on motor skill development to encourage overweight and obese children to be physically active.<sup>(14)</sup> 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.<sup>(15-17)</sup> ▶▶

## Case study

June, a 43 year old woman weighing 153.6kg (BMI 47), was referred to the award-winning Glasgow and Clyde Weight Management Service. On assessment, she scored highly for anxiety and depression and reported very poor levels of physical activity. She rated her confidence in being able to incorporate regular exercise into her daily routine as very low.

June attended a nine session lifestyle intervention group and the physiotherapy led 'Get Started' classes. Throughout the initial exercise classes she needed frequent rests, used crutches to move about and reported pain. June was supported to safely increase her activity levels both in the classes and in her everyday life until she was completing the exercise class without rests and no longer using the crutches.

She attended taster sessions in badminton and belly dancing, after which she accessed the community-based exercise referral scheme and took up playing badminton twice a week with a friend she had made on the programme. She lost 13.3kg.

**60-90 minutes**  
of physical activity  
on at least five days/week  
is recommended for  
weight management.<sup>(26)</sup>

## Bariatrics

There is mounting evidence to demonstrate that physical activity can improve weight loss and other outcomes following bariatric surgery.<sup>(18-22)</sup>

It is consistently seen as the most important predictor of long-term weight loss maintenance.<sup>(23)</sup> Most pre-operative patients are insufficiently active, and without support, fail to make substantial increases in their physical activity postoperatively.<sup>(19)</sup> Wiklund et al<sup>(24)</sup> 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.<sup>(24)</sup> Patients with musculoskeletal conditions, which are especially common among bariatric patients<sup>(25)</sup> should also be referred.

## Physiotherapy management

Recommended evidence-based approach for the physiotherapy management of obesity.<sup>(5)</sup>

1. Assessment of the individual's medical history
2. Evaluation of current physical activity level
3. Provision of an individualised 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.*

## Measuring impact

Public Health England have published a weight management economic assessment tool, available at

[http://www.noo.org.uk/visualisation/economic\\_assessment\\_tool](http://www.noo.org.uk/visualisation/economic_assessment_tool) to help

compare the costs of a weight management intervention with potential savings it may produce to help make the case for investment. In addition, a collection of resources on evaluation (CoRE) is also available at <http://www.noo.org.uk/core> to support high quality, consistent evaluation of weight management interventions and increase the evidence base. ■

## Cost of ill health



- Individuals with a BMI over **35kg/m<sup>2</sup>** cost twice as much in healthcare costs than individuals with a BMI less than **25kg/m<sup>2</sup>**.<sup>(33)</sup>
- The cost of overweight and **obesity** to the NHS in the UK was **£5.1 billion** in 2006-07.<sup>(34)</sup>
- The wider societal cost of overweight and **obesity** in England was estimated at **£15.8 billion** per year in 2007 and is projected to reach **£49.9 billion** in 2050.<sup>(35)</sup>
- In Northern Ireland, **obesity** results in **260,000 working days lost** each year and costs the economy approximately **£500 million**.<sup>(36)</sup> In Scotland the total cost of overweight and obesity was estimated as **£1.4 billion** in 2007.<sup>(37)</sup>

# Service examples

## Specialist multidisciplinary

Aintree University Hospital NHS Foundation Trust's Aintree Weight Management Service (AWMS) offers a weight management support programme to patients with BMI $\geq$ 40, or in the presence of one or more co-morbidities a BMI $\geq$ 35.

The physiotherapy team within the service provides support to enable patients to become more active in a safe and enjoyable way. Patients are referred from the consultant-led clinic and, following an initial physiotherapy assessment, are supported through one of a number of available physiotherapy pathways based on their current activity levels and any barriers they have to increasing their activity.

The success of the AWMS has resulted in two subsequent local authority funded community and domiciliary weight management services:

- Ashton, Wigan and Leigh Specialist Weight Management Service (Lose Weight, Feel Great) Recent analysis of the impact of the Lose Weight Feel Great initiative has shown that 69.4% of people who complete six months maintain or lose weight. Additionally, 96.5% improve or maintain their physical activity, and 88.2% improve or maintain their quality of life.

- Aintree Liverpool Obesity Support Service (LOSS) A retrospective cohort study found that the LOSS service resulted in a mean weight loss of 2.51kg over 1 year, with 28.9% of participants achieving  $\geq$ 5% weight loss, and a significant improvement in quality of life.

## Children and young people

The Activ8 programme, part of a service level agreement between Bart's Health and Tower Hamlets' local authority public health team, is a physiotherapy and dietician-led service for overweight and obese children and young people from 0 to 18 years of age.

The programme team provides multi-disciplinary assessment for children and families who have been referred by GPs because of specific problems, as well as more general advice in local mosques and schools, and training for early years and other health staff. Children can be referred to join an Activ8 exercise and nutrition group for ten weeks which aims to enable children to make healthy lifestyle changes. Once children have completed the programme they are invited to attend an ongoing activity club and are monitored for up to a year. The programme has also been extended to target obese mothers-to-be and mothers.

In 2009, data for the service showed that 70% of children participating had a reduction in BMI, which was maintained at six-month follow-up.

## Inpatient

Howerton University Hospital provides bariatric surgery for obese patients. A specialist bariatric physiotherapist provides consistent physiotherapy support throughout the multi-disciplinary care pathway.

Patients with low levels of physical activity and musculoskeletal or cognitive barriers are referred for physiotherapy assessment. The physiotherapist supports patients to optimise fitness, mobility, and weight loss prior to surgery through motivational interviewing, collaborative goal-setting and physical activity prescription.

The physiotherapist contributes to a multi-disciplinary pre-admission group, providing education on breathing and early mobility exercises for the approaching inpatient stay. This has resulted in greatly improved preparatory levels in patients and a reduction in the average length of stay post bariatric surgery from 4.6 days to 3.6 days.

Once home, patients attend the Howerton Physical Activity Circuits and Education (PACE) class. The 12 week programme consists of education sessions about increasing physical activity, followed by circuit-based physical activity stations. An ongoing evaluation of the service has shown that the six minute walk distance increased by an average of 89 metres.

## Conclusion

Obese individuals often have complex bio-psychosocial 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, personalised 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.



## Further information

### CSP Enquiry Handling Unit

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