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(Inq into Obesity)
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AUSTRALIAN PHYSIOTHERAPY ASSOCIATION

Submission

Inquiry into the increasing prevalence of obesity in the Australian population and future implications for Australia's health system due to obesity.

Presented to:

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Executive Summary

The Australian Physiotherapy Association (APA) commends the Federal Government for its recognition of the growing obesity epidemic in Australia and of the impacts of obesity on the Australian health care system.

The prevalence of overweight and obese individuals has increased substantially over the past decade and is set to further increase in the future if measures are not taken now to curb this epidemic.

The role of physiotherapy in the management and prevention of obesity is considerable.

Physiotherapy has a crucial role to play in the provision of exercise programs to at-risk groups in the community as well as in treating many of the secondary health problems associated with obesity.

Some of the health problems for which there is evidence of efficacy and cost effectiveness for physiotherapy management are:

1. Musculoskeletal conditions
2. Type 2 diabetes
3. Respiratory problems
4. Stress incontinence.

The considerable economic burden of this epidemic is set to progress rapidly. While not the only solution to this problem, the effective utilisation of the health workforce is critical to the fight against obesity.

This submission clearly identifies for the contribution physiotherapists can make in addressing this problem.

The Australian Physiotherapy Association

The Australian Physiotherapy Association (APA) is the peak body representing the interests of Australian physiotherapists and their patients. The APA is a national organisation with state and territory branches and specialty subgroups.

The APA corporate structure is one of a company limited by guarantee. The organisation has approximately 12,000 members, some 70 staff and over 300 members in volunteer positions on committees and working parties. The APA is governed by a Board of Directors elected by representatives of all stakeholder groups within the Association.

The APA vision is that all Australians will have access to quality physiotherapy, when and where required, to optimise health and wellbeing. The APA has a Platform and Vision for Physiotherapy 2020 and all its submissions are publicly available via the APA website:

www.physiotherapy.asn.au

1. Musculoskeletal conditions

Evidence

Physical activity is important for the maintenance of healthy weight and for decreasing overall morbidity from a number of conditions including obesity, cardiovascular disease and diabetes. Chronic musculoskeletal conditions are strongly linked with a high Basal Metabolic Index (BMI) (WHO, 2003) and the incidence of musculoskeletal conditions is increased by lifestyle factors which lead to increased obesity and sedentary routines (Woolf & Pfleger, 2003).

The Australian Bureau of Statistics (ABS) data from 2004-05 found musculoskeletal diseases were more prevalent among overweight or obese individuals (ABS, 2008). Alarmingly, 52 per cent of obese women and 45 per cent of obese men had at least one musculoskeletal condition (ABS, 2008).

The type of musculoskeletal conditions experienced by overweight and obese Australians is variable. One of the most common conditions is arthritis, with 23 percent of reported cases occurring in overweight or obese people (ABS, 2008). Reported cases of osteoarthritis are also closely linked to obesity (ABS, 2008), which is thought to be due to increased loading on the joints (Felson *et al*, 2007).

According to data available from the ABS, 63 per cent of Australian adults who reported suffering from osteoarthritis could also be categorized as either overweight or obese (ABS, 2008). A study by March & Bagga (2004) found individuals with a BMI greater than 30 have a 20-fold increased risk of developing bilateral osteoarthritis of the knee.

Role of physiotherapists

Muscle weakness, pain, and joint stiffness associated with arthritis can often limit the choices of physical activity (American College of Sports Medicine, 2000 & 2001).

Because physiotherapists are highly skilled in exercise prescription, they can play a key role in the design, delivery and implementation of exercise programs for the management of these disorders.

Physiotherapists are able to design appropriate modifications to exercise programs so that the benefit of increased physical activity is achieved without aggravating any co-existing musculoskeletal problems caused by arthritis. Appropriate exercise plays a vital role in prevention and early intervention.

The treatment of arthritis and musculoskeletal conditions is a core function of physiotherapy practice. Physiotherapy has been recommended in a number of international guidelines for the management of osteoarthritis of the knee (American College of Rheumatology, 2000; Jordan et al., 2003).

Intensive rehabilitation programs led by physiotherapists have also been shown to be as effective as spinal surgery in improving outcomes for patients with chronic low back pain (LBP) and are associated with lower costs (Fairbank et al., 2005; Rivero-Arias et al., 2005).

2. Type 2 diabetes

Evidence

Obesity and physical inactivity are key contributors to the development of Type 2 diabetes (AIHW, 2002). Adipose tissue dysfunction is thought to be involved in the development of diabetes by distending the receptor sites, and therefore, reducing the ability of the body to effectively take up glucose (Sorisky, 2008; Boden & Shulman, 2002).

Other risk factors for Type 2 diabetes include high blood pressure and inappropriate dietary intake (Shaw & Chisholm, 2003).

Strategies to reduce the incidence of Type 2 diabetes need to address obesity and physical inactivity concurrently (NHMRC, 2001).

Exercise can play an important role in preventing or delaying the onset of Type 2 diabetes because of its ability to improve blood sugar metabolism, reduce body fat, increase muscle mass and improve cardiovascular fitness (Aas et al., 2005; McAuley et al., 2003).

Role of physiotherapists

Physiotherapists have the broad clinical knowledge and skills necessary to manage patients with diabetes. Common co-existing medical conditions for people with diabetes include heart disease, obesity, high blood pressure and stroke.

Physiotherapists are able to take into consideration these conditions and tailor treatment (including exercise programs) to the client's individual needs.

In addition, physiotherapists treat individuals who suffer complications arising from diabetes. This may include vascular (circulatory system) complications, such as visual disturbances, nephropathies and neuropathies.

Peripheral neuropathies (disorders of the nerve endings) can result in disorders of sensation and balance and patients may need physiotherapy assistance to address these problems and prevent further complications.

Physiotherapists frequently design exercise programs to reduce sedentary behaviours and increase physical activity. With optimal design, these programs may contribute to the reduction of body fat levels and improve glucose metabolism – both of which are important in the treatment of diabetes (particularly Type 2) - as well as for general health and fitness.

3. Respiratory conditions

Evidence

Respiratory conditions such as asthma, sleep apnoea and chronic obstructive pulmonary disease are also positively correlated with obesity (WHO, 2003).

ABS statistics from 2004-05 indicate that 32 per cent of Australian adults have some form of respiratory condition; and these respiratory conditions are most prevalent among obese females [43%] (ABS, 2008).

In Australia, while approximately 11 per cent of adults have been diagnosed with asthma, this is even higher in children [approximately 15%] (AIHW: Australian Centre for Asthma Monitoring, 2005).

Research undertaken by Sulit et al. (2005) found that children with a BMI in the 95th percentile are significantly more likely to suffer asthma and wheezing. In addition, they found that sleep-disordered breathing (SDB) in children is related to obesity and wheezing in children.

Role of physiotherapists

Training in healthy subjects improves cardiorespiratory performance and improves musculoskeletal function. If evaluated at a time when they are symptom free, people with asthma respond to exercise in the same physiological way as healthy subjects (Satta, 2000). However, many patients with asthma often avoid physical activity.

One reason for the sedentary lifestyle may be exercise-induced asthma (EIA). The mechanism for EIA is not fully understood, however it seems to be related to the increase in pulmonary ventilation that occurs in response to heavy exercise (Tan & Spector, 1998). It is estimated that 80 per cent of people with asthma experience varying degrees of EIA (National Asthma Council of Australia, 2002).

Prevention of EIA by modification of the exercise environment and optimal pharmacological management is essential in the physical training of people with asthma (Satta, 2000).

Physiotherapists have a thorough knowledge of exercise prescription and respiratory pathophysiology and therefore play a significant role in the development and monitoring of exercise programs for people with asthma.

4. Stress incontinence

Evidence

Obesity may disrupt the normal function of intra-abdominal muscles in women by placing more pressure on the pelvic floor, and also affecting the neuromuscular function of the genito-urinary tract thus contributing to the likelihood of incontinence (Cummings & Rodning, 2000).

Role of physiotherapists

In the majority of cases, physiotherapy techniques can provide effective treatment for both urinary and faecal incontinence. Physiotherapists utilise a range of exercise modalities to improve continence.

Pelvic floor muscle training programs have been shown to be effective in alleviating urinary stress incontinence in women (Hay-Smith et al., 2003) as well as urgency incontinence in older women (Berghmans et al., 2000).

It has also been shown that exercise-based pelvic floor retraining programs can improve quality of life and symptom severity for those with mild to moderate faecal incontinence (Solomon et al., 2003).

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