

World Physical Therapy Day, clinical area sheet 3

Diabetes

Diabetes mellitus is a condition where the amount of glucose in the blood is too high, causing tissue damage. It falls into two types. Type 1 diabetes occurs when the body is unable to produce any insulin, and cannot be prevented. Type 2 diabetes develops when the body isn't producing enough insulin, or becomes resistant to insulin, and this type of diabetes can be prevented. Most cases of type 2 diabetes are associated with being overweight.

Exercise is one of the key interventions that can help people control or reduce weight, and reduce their risk of type 2 diabetes. Physical therapists are experts in prescribing this as part of a structured, safe and effective programme.

The expert advice provided by physical therapists can also help people who have health complications as a result of diabetes. For example, they can help those who have lost limbs through diabetes-related amputations recover their mobility and adapt their environment so that they have independence. Physical therapists help people achieve a return to work, education, community participation and fulfilled lives.

Diabetes facts

The World Health Organization (WHO) estimates that 180 million people worldwide have diabetes. This number is expected to double by 2030.

Source: World Health Organization factsheet www.who.int/mediacentre/factsheets/fs312/en/

According to WHO, 4-5% of health budgets globally are spent on diabetes-related illnesses.

Source: World Health Organization factsheet www.who.int/mediacentre/factsheets/fs312/en/

Diabetes was traditionally more common in developed countries, but modernisation and lifestyle changes have meant it is increasingly prevalent in developing countries. According to WHO, almost 80% of diabetes deaths occur in low and middle-income countries.

Source: World Health Organization factsheet www.who.int/mediacentre/factsheets/fs312/en/

In 2005, 1.1 million people died from diabetes (5% of global deaths). Almost half of diabetes deaths occur in people under the age of 70 years.

Source: World Health Organization factsheet www.who.int/mediacentre/factsheets/fs312/en/

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The World Confederation for Physical Therapy (WCPT) represents the physical therapy profession worldwide. WCPT is registered in the UK as a charity.

The death and disability rates caused by diabetes for every country are available at:
www.who.int/entity/cardiovascular_diseases/en/cvd_atlas_29_world_data_table.pdf

Prevalence of diabetes by WHO Region

	2000	2030 (predicted)
Africa	7,020,000	18,234,000
Eastern Mediterranean	15,188,000	42,600,000
Americas	33,016,000	66,812,000
Europe	33,332,000	47,973,000
South East Asia	46,903,000	119,541,000
Western Pacific	35,771,000	71,050,100

Source: World Health Organization http://www.who.int/diabetes/facts/world_figures/en/

Exercise and diabetes

Exercise has a role in preventing diabetes and controlling diabetes. According to the World Health Organization, 30 minutes of moderate intensity physical activity on most days, along with a healthy diet, can significantly reduce the risk of developing type 2 diabetes.

Source: World Health Organization <http://www.who.int/mediacentre/factsheets/fs312/en/>

Both resistance exercise and aerobic exercise are effective at reducing glucose intolerance and reducing the risk of diabetes.

Sources: Fenicchia LM et al. Influence of resistance exercise training on glucose control in women with type 2 diabetes *Metabolism*. 2004 Mar;53(3):284-9.

<http://www.ncbi.nlm.nih.gov/pubmed/15015138>

Castaneda C et al. A randomized controlled trial of resistance exercise training to improve glycemic control in older adults with type 2 diabetes. *Diabetes Care*. 2002 Dec; 25(12):2335-41.

<http://www.ncbi.nlm.nih.gov/pubmed/12453982>

High-intensity progressive resistance training, in combination with moderate weight loss, is effective in controlling blood glucose levels in older patients with type 2 diabetes.

Source: Dunstan DW et al. High-intensity resistance training improves glycemic control in older patients with type 2 diabetes. *Diabetes Care*. 2002 Oct;25(10):1729-36.

<http://www.ncbi.nlm.nih.gov/pubmed/12351469>

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