

# Lifestyle Modification Programs – The Evidence

## What is the prevalence of diabetes?

The most recent national data indicates that the prevalence of diabetes has more than tripled since 1990.<sup>1</sup> Type 2 diabetes is projected to become the leading specific cause of disease burden by 2023 for males and second for females.<sup>1</sup>

According to the Australian Diabetes, Obesity and Lifestyle (AusDiab) study conducted in 1999-2000, approximately 850,000 Australians aged 25 years and over (7.2% of that population) had type 2 diabetes.<sup>1</sup>

The Second Report of the Chief Health Officer Queensland indicates that 217,000 Queenslanders were living with type 2 diabetes in 2008 with 19,000 new cases being diagnosed each year.<sup>2</sup>

Data from the most recent National Health Survey (NHS) indicated that of the 818,200 people with self-reported diagnosed diabetes in 2007/08, 10% had type 1 diabetes and 88% had type 2 diabetes (with 2% indicating they did not know).<sup>1</sup>

## What is the evidence that lifestyle modification can prevent or delay the onset of type 2 diabetes?

Intensive lifestyle interventions have been shown to reduce the incidence of type 2 diabetes in people with impaired glucose tolerance. Diabetes prevention trials have shown that lifestyle modification is effective in reducing the risk and delaying the onset of type 2 diabetes.

Evidence from a range of different studies conducted in the United States<sup>3,4</sup>, China<sup>5-7</sup>, Japan<sup>8</sup>, Finland<sup>9</sup>, and Germany<sup>10</sup> has indicated that regular moderate intensity exercise combined with positive dietary changes can delay the development of type 2 diabetes particularly in people with impaired glucose tolerance (IGT).

More recently, randomised controlled trials conducted in the United States<sup>11</sup>, Finland<sup>12</sup> and China<sup>13</sup> have provided strong and clear evidence that sustainable lifestyle interventions (that include diet and physical activity) for people at high risk of developing type 2 diabetes lead to significant reductions in the incidence of diabetes. A summary of these three key trials is provided below:

Study	Intervention Participants	Selection Criteria	Mean age	Duration	Intervention	Overall outcome of intervention group compared to control group
<b>U.S. Diabetes Prevention Program<sup>11</sup></b>	2,161	IGT, BMI $\geq 24$ kg/m <sup>2</sup> , FPG $> 5.3$ mmol/l	50yrs	3yrs	Individual intensive lifestyle modification - diet/exercise	Incidence of diabetes was reduced by 58% with the intensive lifestyle program.
<b>Finnish Diabetes Prevention Study<sup>12</sup></b>	522	IGT, BMI $\geq 25$ kg/m <sup>2</sup>	55yrs	3.2yrs	Individual intensive lifestyle modification - diet/exercise	58% reduction in the risk of developing diabetes during the initial study period of four years.
<b>China Da Qing Diabetes Prevention Study<sup>13</sup></b>	259	IGT (randomized groups)	45yrs	6yrs	Group diet/exercise	14 years after the cessation of the active intervention, there was a 43% reduction in diabetes incidence and the onset of type 2 diabetes was delayed by an average of 3.6 years.

For more information about the Prevention of Type 2 Diabetes Program or lifestyle modification programs contact your local Division of General Practice.

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## How do I know if a lifestyle modification program is evidence based and of high standard?

All lifestyle modification programs that can receive the government subsidy for eligible patients must be accredited by the Australian Government Department of Health and Ageing. Accreditation is only awarded to programs that demonstrate full compliance with the National Standards and Accreditation Guiding Principles developed by the Council of Australian Governments (COAG) Diabetes Management Committee and endorsed by COAG partners.

The national standards are based on the evidence for lifestyle modification in reducing the risk of type 2 diabetes. Minimum requirements are set for the core competencies for facilitators, program duration and intensity, and program content and format. The national standards can be accessed by visiting the Australian General Practice Network (AGPN) website via [http://www.agpn.com.au/\\_data/assets/pdf\\_file/0019/30259/Standards-and-Accreditation-Guiding-Principles-FINAL.pdf](http://www.agpn.com.au/_data/assets/pdf_file/0019/30259/Standards-and-Accreditation-Guiding-Principles-FINAL.pdf)

## Where can I find a list of accredited lifestyle modification programs?

All accredited lifestyle modification program providers are listed on the National LMP Facilitator Service Directory hosted and managed by AGPN. The service directory has been developed to assist health professionals to locate accredited lifestyle modification program providers in the local area. To access the National LMP Service Directory visit the AGPN website via <http://www.agpn.com.au/programs/prevention-of-type-2-diabetes-program/national-lmp-facilitator-service-directory>

## References

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