

Preventing Pre-diabetes through a Lifestyle Modification Program

PECOT Question:

Amongst 20-40 year olds (male and female) with a BMI equal or greater than 25, will the introduction of a healthy lifestyle program reduce the risk of overweight related health problems, in particular pre-diabetes, compared to current weight management strategies?

Background:

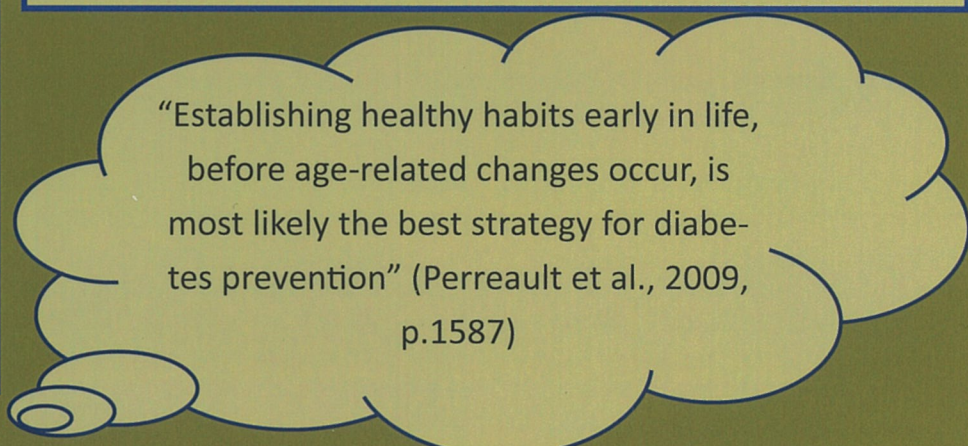
The global overweight and obesity problem has more than doubled in the last 35 years and eighteen percent of the OECD population is obese (OECD, 2014). Overweight and obesity has become a global epidemic and is a major public health concern, and just like pre-diabetes, overweight and obesity are both preventable (Teixeira, 2011). New Zealand has the third highest rate of overweight and obesity on the OECD and one in three adults living in New Zealand are obese (Ministry of Health, 2013).

Literature Review Results:

- The Diabetes Prevention Program (DPP), is a trial involving 3,234 participants, who were each put in 1 of 3 intervention groups (Perreault et al., 2009), 1) intensive lifestyle modifications (ILS), 2) 850 mg of metformin twice daily 3) placebo twice daily and standard lifestyle modifications. The ILS group was the only intervention that saw the return of normal blood glucose in participants. The ILS intervention was a 16 week program featuring a different topic each week with supervised physical activity sessions.
- A trial called The Healthy Living Course, which was a six-month diabetes prevention group program (Moore, 2009). The trial proved that participants in the intervention group had made significant improvements in a number of the areas measured including BMI, weight, waist circumference, diabetes knowledge, motivation, physical activity levels and healthy eating. As well as almost half of the group moving from pre-diabetes to non-diabetes during the course of the program. This trial also concluded that participants had a much higher chance of improvement in a group setting which is also more cost effective.
- Community-based obesity prevention programs are proving very successful and part of the success is that individuals are overcoming a number of prevention barriers such as cost, access, motivation and lack of ongoing support (Teixeira (2011). HEAL: Healthy Eating, Healthy Living is a community-based program, including eight 90 minute sessions over 10 weeks. Results included a 5% reduction in body weight in one year.

Recommendations

- Intensive lifestyle modification program, Each week a different topic can be discussed and implemented
- No less than 12 week program
- Support networks during and after course completion
- Focus on positive outcomes like encouraging sport, healthy cooking, motivation and knowledge rather than negative outcomes such as co-morbidities like diabetes
- Develop a focus group and ask communities what they want from the program
- Focus on individuals aged 20-40, before age-related health problems occur
- Offer program at a trusted location and involve well-known locals who are looked up to such as the mayor, sports heroes, fireman and other motivational people
- Use of social media, set up a facebook group, which is a great means of communication for this age group. Also use of email and text.



"Establishing healthy habits early in life, before age-related changes occur, is most likely the best strategy for diabetes prevention" (Perreault et al., 2009, p.1587)

References:

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PECOT Framework

PECOT Category	Information relating to question	Explanation
Population	Sample group required. 20-40 year old, male and female, who are overweight or obese (BMI =>25)	It is in these years that unhealthy lifestyle habits are being formed. It is also within these years that changes to lifestyles can have an impact of future health outcomes, before age-related health issues occur.
Exposure (Intervention)	Intervention provided to improve the situation. A healthy lifestyle program.	To determine whether such a program will have beneficial effects to those who are overweight and obese and if the program can reverse the effects of overweight and obesity.
Comparison/ Control	Group that has not been exposed to the interventions. Current overweight and obese management strategies.	Benefits of Intensive lifestyle modifications verse standard lifestyle modifications
Outcome	Results from Intervention. Benefits from literature reviews of trialled healthy lifestyle changes and prevention programs.	To find healthy lifestyle modification programs already developed and assisting with good effect and adapt to suit our communities.
Time	Duration of research. This research is ongoing.	Unhealthy lifestyles will always be an increasing issue for our population. The program needs to be reviewed and adapted to suit communities.

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Why a Poster to deliver my presentation?

I chose to submit a poster rather than a written submission because I think a poster is more visual and has the potential to reach more members of the public. If the poster is hung in a location where it will get a lot of views and reach other likeminded member of the public, the poster is more likely to have a lasting effect (Plunkett, n.d.). I hope that some health care professionals will read my poster and agree that a program needs to be established and indeed do so. It may even draw the attention of member of the public who is not associated with the health care field but is interested in this topic and/or want to establish/attend a program such as what I have recommended. A poster also highlights the key points and most important information which has been found through various literature reviews. A poster can enhance the audiences understanding of the topic in a much shorter period of time.

Plunkett, S. (n.d.). *Enjoy life: Plunk's page*. Retrieved from http://www.csun.edu/plunk/documents/poster_presentation.pdf

