



Hidden Barriers to Metabolic Control -

Eating disorders and insulin manipulation amongst individuals with Type 1 diabetes

Results of a recent online survey conducted by Diabetes Australia – Vic have revealed an alarming mental health issue amongst individuals living with type 1 diabetes in Australia. The Type 1 Diabetes and Eating Disorders Online Survey 2008 Report shows almost 60 per cent of survey respondents had skipped or restricted insulin at some time to lose weight and gain control over their body. Of those, 11 per cent were currently doing so at the time of the survey. Approximately one third of respondents who reported insulin manipulation either skipped or restricted their insulin on a daily basis.

International studies suggest high rates of disturbed eating behaviours and eating disorders in young people with type 1 diabetes [1-3]. DA – Vic's online survey, which was intended as a small-scale pilot study, provides a snapshot of eating disorders and related problems in people with type 1 diabetes in Australia, with a particular focus on insulin manipulation. The survey also provides a valuable insight into the psychosocial origins of these behaviours.

As well as the potential for acute physiological complications, chronic illnesses such as type 1 diabetes can have a profound psychological and behavioural impact. In fact, research indicates that individuals with chronic conditions are more likely to engage in risky behaviours, (such as smoking, drug use, disturbed eating and eating disorders), than the general population [4]. Overseas studies have shown that females with type 1 diabetes are approximately twice as likely to develop an eating disorder or disturbed eating behaviour as their non-diabetic peers [1, 2]. One study revealed that 49 per cent of adolescent females with type 1 diabetes exhibited disturbed eating behaviour [3]. Studies have demonstrated that the most common manifestations of eating disorders and disturbed eating behaviour in females with type 1 diabetes are eating disorder not otherwise specified (ED-NOS) and insulin manipulation for the purpose of weight control [1].

In a study led by the Joslin Diabetes Centre in the US, researchers found that individuals who manipulated their insulin doses had higher rates of diabetes-related complications such as nephropathy and microvascular complications and were at a three-fold risk of premature death [5].

Type 1 diabetes specialist, Dr Phil Bergman, paediatric endocrinologist, Monash Medical Centre, Melbourne, says that while many Australians are concerned about body image, people with type 1 diabetes are twice as likely to personally experience body image issues.

“Just like other Australians, people with type 1 diabetes have issues around body image and weight, particularly given the current focus on the growing number of Australians who are overweight or obese,” says Dr Bergman.

“The difference is that people with type 1 diabetes have discovered a powerful but very risky weight loss tool in that they ‘simply’ skip their insulin. Alarmingly, this practice can lead to earlier than expected onset of diabetes complications and increased risk of death.”

In addition to the worrying statistics around the misuse of insulin, the research also showed that only 12 per cent of people with type 1 diabetes had ever had a healthcare professional directly ask them if they were skipping or restricting insulin as a means of losing weight.

“Clearly, these high levels of insulin misuse need to be addressed,” said Dr Bergman. “If people with type 1 diabetes are considering, or are currently, manipulating their insulin dose, my advice for them is to speak with their healthcare provider and ask for a referral to a mental health professional.

“Opening communication channels between health professionals and the individual with diabetes is the first step in helping people experiencing these issues,” said Dr Bergman.

Summary of results

The survey results were analysed, and a full report prepared, by the Centre for Adolescent Health in consultation with Diabetes Australia – Vic.

Sample: self-selected sample of 148 females, of whom 113 were aged under 35 years and 33 were 35 years or older.

Co-morbidity with type 1 diabetes and eating disorders:

- 27 per cent of respondents reported an eating disorder of some sort and half of these had more than one diagnosis.
- Three quarters of those with any eating disorder diagnosis only reported eating disorder diagnosis after their type 1 diabetes diagnosis.
- Out of the 16 respondents who reported having a bulimia nervosa diagnosis, 14 reported that this diagnosis was made after their type 1 diagnosis.
- Females reporting an anorexia or bulimia diagnosis after type 1 diagnosis were younger than when they were diagnosed with type 1 diabetes than those reporting an anorexia or bulimia diagnosis before type 1 diabetes diagnosis.

Insulin manipulation and disordered eating behaviour:

- 60 per cent of respondents had omitted or restricted insulin at some time, and 11 per cent were currently doing so at the time of the survey.
- Those aged 35 years or under at the time of survey began manipulating their insulin doses on average six years after being diagnosed with type 1 diabetes.
- The minimum age of onset of insulin manipulation reported was 12 years. Most respondents reported that they began manipulating insulin between the ages of 18-20 years. The average age of onset of insulin manipulation in those aged 35 years or under was 19 years; in those aged 35 years or older, the average age of onset was 26 years.
- Approximately one third of respondents who reported insulin manipulation either restricted or omitted their insulin on a daily basis.
- About two thirds reported calorie restriction.
- About two in five reported binge eating.
- One in four reported excessive/compulsive exercise.
- The most common reasons given for manipulating insulin were perceived loss of control of self, low self-esteem, diabetes-related distress, depression and resentment.

Mental health problems, weight and body shape concerns:

- Two thirds reported moderate to severe symptoms of anxiety.
- About one quarter reported moderate to severe symptoms of depression.
- Two in five respondents felt their weight and shape were important and were dissatisfied with their body shape. Approximately a third felt dissatisfied with their weight.

Association of eating disorders, insulin manipulation and disordered eating with mental health problems, weight concerns and poor body image:

- Females who had a history of anorexia or ED-NOS or reported vomiting or calorie restriction in the past month were more likely to have manipulated insulin at some time.
- Respondents with a history of insulin manipulation appeared to be less at risk of reporting anxiety symptoms than those with no history of insulin manipulation.
- Female respondents who reported binge eating had a 50 per cent elevated risk of reporting symptoms of depression.
- Respondents who considered their weight markedly important were about four times more likely to be also manipulating their insulin at the time than those who were less concerned about their weight.

Health professional communication:

- Only 15 per cent of respondents had ever been approached by a health professional about insulin manipulation.
- Out of the 85 per cent of respondents who reported never being approached by a health professional about insulin manipulation, 57 per cent had reported manipulating insulin.
- The most common reason reported for not confiding with a health professional about these issues was 'feeling embarrassed'.

For further information about this research or to obtain an electronic copy of the report, please email Renza Scibilia, Type 1 Diabetes Program Leader at rscibilia@diabetesvic.org.au

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