

Perceptions of the Healthfulness of Foods of New Zealand Adults Living With Prediabetes and Type 2 Diabetes: A Pilot Study

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ABSTRACT

Objective: To investigate dietary perceptions of adults with prediabetes and type 2 diabetes.

Methods: Three discussion groups (n = 12) were conducted to investigate how participants source dietary information and evaluate the healthfulness of foods. Participants were men and women with prediabetes or type 2 diabetes. White board notes were photographed and audio recordings transcribed. Codes were applied and themes generated using an inductive approach.

Results: Four themes emerged: (1) perception of food components, (2) factors perceived to influence the healthfulness of foods, (3) perceptions of dietary information, and (4) challenges to forming accurate perceptions. Participants perceived the healthfulness of food to be influenced largely by carbohydrates, fat, and sugar.

Conclusions and Implications: Perception of the healthfulness of food varied among participants and at times was contrary to dietary guidelines. Participants were wary of dietary advice and sought consistent, reliable, and up-to-date sources of information to guide food choices.

Key Words: diet, food, type 2 diabetes mellitus, prediabetes, healthy eating (*J Nutr Educ Behav.* 2017;49:339-345.)

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INTRODUCTION

Type 2 diabetes is a large and fast-growing health issue. On a global scale, approximately 8.3% of adults have been diagnosed with diabetes, 85% to 95% of whom have type 2 diabetes. A further 6.9% have impaired glucose tolerance indicative of prediabetes.¹ The prevalence of diabetes is rapidly increasing and by the year 2035 the number of people with diabetes is projected to increase by 55% worldwide.¹ Improved dietary choices can affect diabetes management significantly through improved glycaemic control.² Therefore, education regarding food choice and what constitutes a healthy diet is necessary for people with prediabetes and type 2

diabetes. However, current sources of dietary information for people with diabetes are varied, with advice being sought from family and friends, health professionals, mass media, and the Internet.³ The quality and reliability of this information are variable. Therefore, it is important to understand common dietary perceptions among people living with and at risk for developing type 2 diabetes. Dietary perceptions influence the type and amount of food eaten, as well as how dietary information is interpreted.⁴⁻⁶

There appears to be some agreement with regard to the perceived healthfulness of certain dietary components. In a review of 38 studies, most participants perceived a healthy diet to be high in fruit and vegetables

and low in fat, sugar, and salt, although optimal red meat intake and definitions of a balanced diet were contentious.⁷ Among adults at risk for type 2 diabetes, vegetables were identified as nutritious, whereas there was uncertainty as to what constituted an overall healthy diet.⁸ Furthermore, participants of previous research were unable to define appropriate portion sizes despite acknowledging portion control as being important.⁸ Research with adolescents with type 1 diabetes indicated that a healthy diet contains fruit and vegetables and is high in vitamins and minerals and low in fat, sugar, and carbohydrate. Some used the diet for diabetes management whereas others were of the opinion that it did not matter what was eaten provided that the insulin dose matched the food intake.⁹

The perception of healthy eating among adults with prediabetes and type 2 diabetes is relatively unexplored. Considering that dietary advice was similar in New Zealand for people with prediabetes and with type 2 diabetes¹⁰ and little work had been done in either condition, it was considered worthwhile to explore

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the foods that people with prediabetes and type 2 diabetes perceived to be healthy or unhealthy. Identifying factors that determined these perceptions would enable health professionals to provide more effective dietary advice. Therefore, the objective of this study was to gain a better understanding of common dietary perceptions held by New Zealand adults with prediabetes and type 2 diabetes.

METHODS

Study Design

In November, 2015, focus groups of approximately 90-minutes duration were planned among adults from Wellington, New Zealand, who self-identified as having had a diagnosis of prediabetes or type 2 diabetes. Given the limited research in this area, focus groups were determined to be the most suitable method because these are flexible and allow for ideas to evolve and be presented.¹¹ Three focus group sessions were planned because this number is considered sufficient to address simple research questions.¹² Sessions were held over 3 consecutive days at different locations and times of the day to reduce anticipated attendance barriers. Five participants were enrolled into each of the 3 focus groups, with participants selecting the time and location that suited them best. Despite confirming intention to participate, 1 respondent did not attend the second session and 2 respondents did not attend the third session, which resulted in a total of 12 participants. As a consequence of nonattendance and smaller numbers than planned, the sessions will be referred to here as in-depth group discussions rather than focus groups. All participants were required to read an information sheet and, if agreeable, to sign a consent form.

Participants and Recruitment

The study was promoted by the use of flyers, social media, a local newspaper, word of mouth, and contact with people who worked within the noncommunicable disease community. Inclusion criteria were English-speaking adults, aged 21–75 years, with a diagnosis of prediabetes or type 2 diabetes. Exclusion criteria

were severe speech or hearing problems, because it was perceived that this would dilute the flow of conversation and sharing of knowledge. A free nutritional consultation after the study was offered to encourage participation. Examination of field notes taken during the group discussions indicated that no new concepts had arisen from the third discussion compared with the first 2 group discussions; hence the researchers agreed that saturation of dietary perceptions had been achieved. The University of Otago Human Ethics Committee approved this study.

Instruments

Based on a review of current literature, the research team developed a moderator guide containing the questions listed in [Table 1](#).

When introducing the discussion groups, the moderator explained that the purpose of the research was to gain insight into the perceptions of people with prediabetes and type 2 diabetes. Questions were adapted to be inclusive of both prediabetes and type 2 diabetes.

Procedures

The same moderator facilitated all 3 group discussions. A second researcher sat in to observe the first discussion, to help in the analysis and interpretation of results. A white board was used to capture key words and ideas and help facilitate the discussion. Sessions were audio-recorded and the text on the white board was photographed.

Data Analysis

Thematic analysis was applied to generate key themes by following published guidelines for interpreting qualitative data using a general inductive approach.^{13,14} The moderator fully transcribed the audio recordings. A second researcher (BJV) verified the accuracy of the transcriptions. Two of the researchers (HL and BJV) independently read each transcript several times to identify codes. Codes were formed by identifying features of the data that were mentioned recurrently or that were considered to be particularly meaningful in relation to the research question. The 2 researchers agreed on a final set of codes. Findings were also compared with current dietary guidelines for people with type 2 diabetes to determine whether participants' perceptions aligned with current dietary recommendations.^{15,16} The transcripts were cross-referenced among group discussions and participant quotations were combined under relevant codes. Codes were then written onto cue cards and conceptualized into 4 key themes and multiple sub-themes that were determined by identifying patterns and links between codes, while considering the key research questions. All researchers discussed the findings, which resulted in the emergence of 4 primary themes.

RESULTS

Twelve participants attended the group discussions: 5 in the first session, 4 in the second, and 3 in the third. The participants were nonsmoking men and women predominantly of

Table 1. Moderator Guide for Group Discussion on Healthful Eating With Adults With Type 2 Diabetes or Prediabetes

| |
|--|
| What nutrition advice have you received from your doctor or nurse for your diabetes? |
| Where else do you get nutrition information for your diabetes? |
| Do you think you get the same message from everyone? |
| Do you feel you have the right information to make the right food choices? |
| What types of foods do you think are healthy? Why? |
| What types of foods do you think are unhealthy? Why? |
| Are there any foods that are both healthy and unhealthy? |
| Do you ever attempt to control food portion sizes? |
| How do you decide what the right portion size is for you? |
| Where do you find information and guidance about food portion size? |

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