

# Assessment of Hemodialysis Diet Education

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## Introduction

The dialysis diet is viewed as one of the most complex medical nutrition therapies to teach, implement, and understand (Birute, Jeeong, Barnes, & Wilund, 2017). Patients are instructed to limit certain fruits and vegetables in addition to whole grains, which contradicts current nutritional guidelines and adds to the complexity of the diet (Nelms, Sucher, & Lacey, 2016). With the prevalence of individuals receiving dialysis and the associated dietary challenges, there is constant room for improvement regarding dialysis diet education. Therefore, it is necessary to identify the needs of the dialysis patient population in regards to the education they receive.

### Purpose

To define and address the challenges of the dialysis diet and develop a curriculum that enhances the educational experience for hemodialysis patients.



This image represents nutritional guidelines for the general population. Individuals on dialysis have different nutritional needs. These differences reinforce the need for continual improvement in the content and provision of dialysis diet education.

## Materials and Methods

### Participants

Surveys were distributed to individuals at the Outpatient Sanford Dialysis Center in Fargo. Those excluded from survey distribution were patients receiving peritoneal dialysis, home hemodialysis, or deemed "inappropriate for survey" by the Sanford renal dietitians. This included patients with mental health issues, personality disturbances, and/or language barriers.

### Procedures

All procedures were approved by the Concordia College Institutional Review Board.

A paper copy of the 12-question survey was offered to participants by the researcher while they were receiving hemodialysis at the Sanford Dialysis Center. An explanation of why the research was being conducted was provided to participants prior to survey distribution. Patients were given the option to verbally decline survey participation if desired. Participants consented verbally by agreeing to take and complete the survey.

Review of current education materials and brief interviews with the two renal dietitians at the Sanford Dialysis Center were also completed.

### Assessment Measures

The following variables were assessed:

1. Patients' perceived understanding of the dialysis diet
2. Type of education most helpful to patients
3. Type of education least helpful to patients
4. Areas for improvement in the content and provision of education materials

## Results

A total of 30 patients participated in this survey, which is 36% of the patients appropriate for survey and 27% of all patients on the dialysis unit. Participants ranged in age from 25 to 91 years, with 80% of participants aged 50 years or older.

### Patients' perceived understanding of the diet:

- 100% (n = 30) agreed with the statement "I have a good understanding of why I am on a special diet for dialysis."
- 93% (n = 28) answered "no" when asked, "Do you feel confused by the information given to you about your diet?" Only two participants responded "yes" to this question.

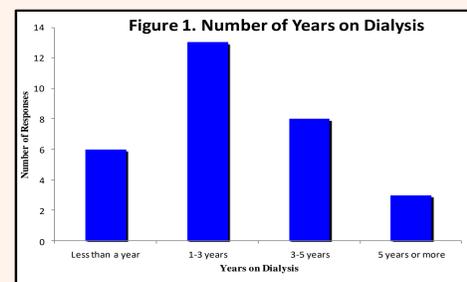


Figure 1. The majority of patients (43%) have been on dialysis for 1-3 years.

### Type of education most helpful to patients:

- 48% (n = 22) Talking to a dietitian
- 24% (n = 11) Informational handouts

### Type of education least helpful to patients:

- 33% (n = 11) Online education/websites
- 21% (n = 7) Posters

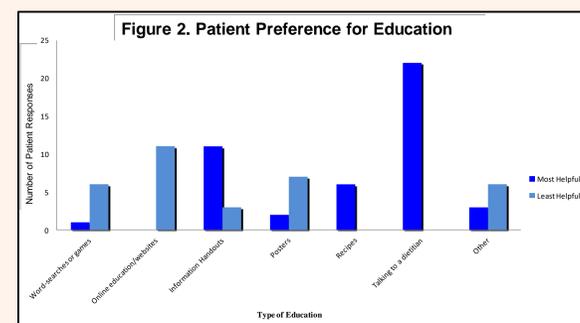


Figure 2. Patients were able to choose more than one type of education for each question. This figure shows total number of responses for education preference.

Participants found talking to a dietitian to be the most helpful way to receive education because they were able to ask questions and get specific answers.

Informational handouts were helpful because patients were able to review and remember the information that was taught to them.

Online education/websites was seen as the least helpful because the majority of participants stated they did not use technology or computers.

### Areas for improvement in the content and provision of education materials:

- 67% (n = 20) indicated they would prefer to receive diet education once a month. According to the Sanford renal dietitians, patients currently receive education once a month when their labs are reviewed.
- 86% (n = 26) said they had a person such as a spouse, family member, or friend available to help them with the dialysis diet.
- 60% (n = 14) of these individuals agreed it would be helpful for this person to receive education on the dialysis diet if they do not already.
- 66% (n = 19) answered "none" when asked, "What changes, if any, would you like to see in how you receive education on your diet?"
- 14% (n = 4) responded with fully developed suggestions for improving education, including:
  - Having more of a variety in education handouts
  - Providing ideas for budget-friendly snacks and meals
  - Incorporating a hands-on experience such as a cooking demonstration
  - Having handouts readily available to grab by the entrance

Table 1. Review of Education Materials

Main Categories	Number of Handouts Per Category
Diabetes and CKD	4
Fluid and IDWG	4
Hemodialysis – Initial	3
Home-hemodialysis - Initial	2
Newsletter	4
Peritoneal Dialysis	9
Phosphorus	12
Posters	7
Potassium	1
Protein and Supplements	3
Recipes	8*
Renal Picture Sheets	11
Sodium	4
Vegetarian	3
Vitamins and Minerals	4

\*Note: The "Recipes" category had one handout regarding recipe guidelines; the remaining seven folders were organized by food groups with multiple recipes provided in each folder.

Figure 4. Summarizes the online education materials available for the Sanford enterprise. Each Sanford dialysis facility has their own materials, however, they are working toward a shared system.

When asked what changes or additions would be beneficial to patients, the renal dietitians at the Fargo facility said incorporating more variety in education materials would be useful. They also expressed an interest in tools that reinforce motivational interviewing skills and techniques that can be applied to practice.

## Conclusions

Even if patients have a general understanding of the dialysis diet, they still have individualized needs that require sufficient content and provision of education materials.

Creating useful and diverse education handouts meets the needs of patients and serves to prevent boredom and repetition in the dialysis diet curriculum.

Providing dietitians with readily available diet education tools could benefit both the dietitian and the patient. The Sanford dialysis center currently has great resources for education, but could benefit from new ideas and creative handouts.

This needs assessment supports the concept of building a dialysis diet curriculum that nicely complements existing resources at dialysis facilities and enhances educational experience for patients.

## References

- Birute, A., Jeeong, J. H., Barnes, J. L., Wilund, K. R. (2017). Modified nutritional recommendations to improve dietary patterns and outcomes in hemodialysis patients. *Journal of Renal Nutrition*, 27(1):62-70.
- Nelms, M., Sucher, K. P., Lacey, K. (2016). *Nutrition Therapy and Pathophysiology*. Cengage Learning. 3rd edition.

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## For Further Information

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