

2016 NWRD Annual Conference
Abstracts for Poster Presentations
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TITLE: Frailty Index in Kidney Transplant Evaluations

AUTHORS: Linda Phelan RD CSR LD, Maureen McCarthy MPH RD CSR LD - OHSU

ABSTRACT >>

TITLE: Proposal for Pre-operative Carbohydrate Loading in Living Kidney Donors

AUTHORS: Daniella Gardner RD, Maureen McCarthy MPH RD CSR LD - OHSU

ABSTRACT >>

TITLE: Washington State Council on Renal Nutrition WSCRN - Update on group's activities

AUTHORS: Nikki Nygren RD - Northwest Kidney Centers

TITLE: Phosphorus Labeling of Foods

AUTHORS: Washington State Council on Renal Nutrition (WSCRN) - Kathy Schiro Harvey MS RDN CSR

ABSTRACT for NWRD 2016

TITLE: Frailty Index in Kidney Transplant Evaluations

AUTHORS: Linda Phelan, RD, CSR, LD; Maureen McCarthy, MPH, RD, CSR, LD

Introduction: The Frailty Index was first described in 2001 by Fried, et.al., based on research in elderly residents (≥ 65 years of age) in diverse locations around the United States.¹ It is intended to identify individuals at risk for less desirable outcomes.

Background: In chronic disease states, the Frailty Index may help to identify those who are likely to progress more quickly to outcomes linked with greater morbidity and mortality. A sub-group analysis of the population in Fried, et.al.'s original paper looked at subjects with serum creatinine above normal for age and gender. These individuals had higher incidence of frailty compared to the general study population.² There have been numerous studies in kidney transplant recipients linking frailty measured during pre-transplant evaluations to undesirable outcomes, including higher rates of delayed graft function and more readmissions post-transplant.^{3,4}

Proposal: During kidney transplant evaluations, the OHSU Transplant Dietitian will assess 4 of the 5 components in the Frailty Index: unintended weight loss in the last 12 months, self-reported exhaustion, weakness (measured by hand grip strength), and low physical activity. The fifth item, slow walking speed, will be measured by staff in the transplant medicine clinic. Patient scores will be documented in the electronic medical record and will be part of the large body of patient data considered in transplant evaluations.

Outcomes: Individuals who are positive for 3 or more of the characteristics are considered frail. The OHSU kidney transplant team will evaluate how frailty is linked to outcomes. Dietitians are key members of the transplant team with skills that allow them to contribute strongly to measures that comprise the Frailty Index. It should be noted, however, that the Frailty Index does not replace routine assessment for malnutrition status.

1. Fried, L, et.al. Frailty in older adults: evidence for a phenotype. *J Gerontol A Biol Sci Med Sci.* 2001;56: M146-M152.

2. Shlipak MG, Stehman-Breen C, Fried LF, Song X, Siscovick D, Psaty BM, Newman AB. The presence of frailty in elderly persons with chronic renal insufficiency. *Am J Kid Diseases.* 2004;43:861-867.

3. Garonzik-Wang JM, et.al. Frailty and delayed graft function in kidney transplant recipients. *Arch Surg.* 2012;147:190-193.

4. McAdams-DeMarco, MA, et al. Frailty and early hospital readmission after kidney transplantation. *Am J Transplant.* 2013;13:2091-2095

ABSTRACT for NWRD 2016

TITLE: Proposal for Pre-operative Carbohydrate Loading in Living Kidney Donors

AUTHORS: Daniella Gardner, RD; Maureen McCarthy, MPH, RD, CSR, LD

Introduction: Pre-operative carbohydrate (CHO) loading is one element in a set of peri-operative interventions that comprise recommendations for Enhanced Recovery After Surgery (ERAS). It has the potential to reduce hyperglycemia during surgery, length of stay, and narcotic usage.¹ As a result, fewer patients develop dehydration and post-operative ileus, both unfortunate complications that can occur after living kidney donor surgery.

Background: The European Society for Parenteral and Enteral Nutrition has published detailed guidelines to promote ERAS, especially in colorectal and pancreatic surgery populations.² Interventions include pre-operative education, smoking and alcohol cessation for 4 weeks before surgery, avoiding mechanical bowel preparations, and many others. Several are directly related to nutrition, including pre-operative CHO loading for scheduled surgery.^{2,3}

According to a review article, 50 grams of CHO in 400 mL of fluid can decrease insulin sensitivity and will have an osmolality that supports gastric emptying.⁴ Due to its complex carbohydrate and osmolality properties, maltodextrin is the preferred CHO source. The only maltodextrin-containing product available in the US is quite expensive.⁴ For this reason, other products are often used.

Proposal: As a scheduled procedure, living kidney donation offers an opportunity for pre-operative CHO loading. Oregon Health and Science University's Kidney Transplant team is developing a protocol for ERAS that will include CHO loading. Patients will be instructed to consume Ensure Clear mixed with equal amounts of water to total 400 mL 2 hours before surgery.

Outcomes: Patients will be monitored for post-operative ileus and length of stay. Serum glucose will be measured in the operating room and with the first a.m. labs after surgery is completed.

1. Waits, Seth, et al. Building the case for enhanced recovery protocols in living kidney donors. *Transplantation*. 2015; 99:405-408.

2. Gustafson UO, et.al. Guidelines for perioperative care in elective colonic surgery: Enhanced Recovery After Surgery (ERAS) Society recommendations. *Clin Nutr*. 2012;31:783-800.

Eng OS, Melstrom LG, Carpizo DR . The relationship of perioperative fluid administration to outcomes in colorectal and pancreatic surgery. *J Surg Oncol*. 2015;111:472-477.

Pagatschnik C, Steiger E. Review of preoperative carbohydrate loading. *Nutr Clin Practice*. 2015;30:660-664.