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Dear CRIC Participants,

As another year draws to a close, we would like to express our appreciation for your continued commitment to the CRIC Study. Despite the many changes going on in the world, you've still made time to participate in study visits. In fact, an impressive 85.5% of all CRIC Study participants completed a study visit in the past 18 months. Your participation is what makes the CRIC Study possible.

In addition to the regular study visits, over 1,300 CRIC Study participants (60% of all participants) have joined at least one of our 3 sub-studies measuring kidney and heart function using take-home devices. These sub-studies gather important new data about your health without needing to be in the clinic. Ask your local CRIC Study coordinator about the kidney function, Zio, or Zephyr studies to learn more.

In this issue, we are pleased to introduce the American Indian CRIC Study (AI-CRIC), a new group of researchers and study participants working to learn more about chronic kidney disease (CKD) in this unique population. This edition of the newsletter also highlights an exciting new branch of the CRIC Study exploring the relationship between sleep apnea and CKD. Over 300 CRIC participants have already completed the Sleep Study, which is currently open to enrollment.

Staying healthy is more important now than ever, so on page 3 we provide some information about COVID-19 and flu vaccination, as well as some useful online resources for people with CKD. Finally, on the last page you'll find a nutritious but simple recipe for Dijon chicken and a healthy holiday-themed crossword puzzle.

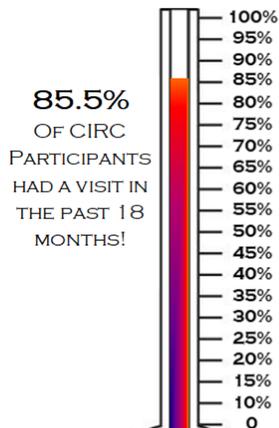
Once again, many thanks for your commitment to helping us to fight kidney disease. The information collected in the CRIC Study helps the medical community to develop new strategies to understand CKD and find new treatments. If you have any questions or comments about CRIC or about this newsletter, please contact the investigators and staff at your local CRIC Center.

Warm regards,

Harold I. Feldman, MD, MSCE



CRIC VISITS COMPLETED IN THE PAST 18 MONTHS



NIDDK



We'd Love to Hear from You!

Do you have a question about the CRIC study or about kidney or heart disease?
If so, please contact your local CRIC staff by writing or calling: [type here]

Looking forward to seeing you again soon!

How Does Sleep Relate to Chronic Kidney Disease?

The CRIC Study is currently looking at the relationship between sleep apnea and chronic kidney disease (CKD). A previous study by CRIC Investigator, Dr. Ana Ricardo, showed that poor sleep quality and short sleep duration, as seen in obstructive sleep apnea, speeds up the progression of CKD.

Sleep apnea has been associated with high blood pressure, insulin resistance, and irregular appetite — factors that can worsen hypertension, diabetes and obesity. Additionally, sleep apnea's repeated cycles of low and high oxygen in the blood may cause damage to the kidneys over time.

All eligible CRIC participants will wear a home sleep monitor for

one night. **The picture to the right shows the monitor in use.** Results from this study will be provided to you and your primary care doctors. If we find that sleep apnea is a risk factor for CKD progression, it might help the planning of studies looking at whether treatment for sleep apnea will help kidney function.

Many CRIC Clinical Centers have already begun enrolling participants in this new study. See the table to the right for which centers have the most sleep study participants.

For more information and to see if you qualify, reach out to your local CRIC Coordinator.



CRIC Study Location	Number of Sleep Study Participants
University of Pennsylvania	38
John Hopkins University	11
University of Maryland	9
University Hospital of Cleveland	6
Metrohealth Medical Center	0
Cleveland Clinic Foundation	6
University of Michigan	44
University of Illinois Chicago	144
Tulane University	54
Kaiser Permanente	5
Total	312

American Indian chronic Renal insufficiency cohort study (AI-CRIC study)

BMC Nephrology July 2020. doi: <https://doi.org/10.1186/s12882-020-01954-y>

Unruh ML, Arzhan S, Feldman HI, Looker HC, Nelson RG, Faber T, Johnson D, Son-Stone L, Pankratz VS, Myaskovsky L, Shah VO, CRIC Study Investigators.

We would like to welcome a new addition to the CRIC: The American Indian Chronic Renal Insufficiency Cohort Study (AI-CRIC study)! This new CRIC sub-study will help us learn more about the health of American Indians in the Southwest United States. American Indians have a higher prevalence of chronic kidney disease (CKD) than most other racial/ethnic groups, due in part to a high prevalence of type 2 diabetes. Other genetic and environmental factors not yet identified may also contribute to the large burden of CKD in American Indians. The purpose of the AI-CRIC study is to help us learn about CKD in this unique population.

AI-CRIC will establish three clinical centers in Albuquerque, NM, Phoenix, AZ, and Zuni Pueblo, NM, to recruit 500 American Indians into the CRIC study. This group will participate in the CRIC 2018 protocol, including the kidney function and cardiovascular disease subprotocols (Zio and Zephyr).

There are two major goals of the AI-CRIC study: 1) learn how the levels of CKD and heart disease differ between American Indians and other racial/ethnic groups already in the CRIC study and 2) learn about the relationship between CKD and potential exposure to risk factors like pollution in the environment or low-income levels.

The AI-CRIC study is led by Dr. Mark Unruh, Professor and Chair of the Internal Medicine Department at the University of New Mexico. Dr. Unruh is a leading physician-scientist performing research focused on finding new ways to improve health of patients with CKD. The research staff for the study are members of the community trained in nursing and health sciences. We are pleased to have AI-CRIC join the CRIC study and looking forward to the findings from this important study.



Frequently Asked Questions about COVID-19 Vaccination*

- 1. Are COVID vaccines safe even though the vaccines were developed rapidly?**
 YES. COVID-19 vaccine safety monitoring has been the most intense and comprehensive in U.S. history. Through several monitoring systems, CDC and FDA provide updated information on vaccine safety.
- 2. If I have already had COVID-19 and recovered, do I still need to get vaccinated with the COVID-19 vaccine?**
 YES. Get vaccinated regardless of whether you already had COVID-19. People get better protection by being fully vaccinated compared with having had COVID-19.
- 3. If I didn't get my second shot of a 2-dose COVID-19 vaccine within the recommended time, what should I do?**
 You should get your second shot as close to the recommended 3-week or 4-week interval as possible. If you receive your second shot of COVID-19 vaccine at any time after the recommended date, you do not have to restart the vaccine series, and you can be considered fully vaccinated 2 weeks after getting your second shot. This guidance might be updated as more information becomes available.
- 4. How long do I need to wait after getting a flu vaccine or another vaccine before getting a COVID-19 vaccine?**
 You can get a COVID-19 vaccine and other vaccines, including a flu vaccine, at the same visit. Experience with other vaccines has shown that the way our bodies develop protection, known as an immune response, and possible side effects after getting vaccinated are generally the same when given alone or with other vaccines.

*Resource: CDC website (<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/faq.html>)

Website Resources for People with CKD

There are numerous internet websites that can help people with CKD obtain information on self-management. A recent paper by Singh et al. published in BMC Nephrology (2020) (doi: <https://doi.org/10.1186/s12882-020-02128-6>) identified eleven websites that addressed physical activity, emotional support and financial information for people with CKD. The table below summarizes the sites with the most applicable information to help people with CKD and their caregivers.

Website Name	Reason to Visit the Website
Diet	
National Kidney Foundation (www.kidney.org/)	Many detailed recipes with pictures and instructions; guidelines for tracking and logging macronutrient content
Fresenius Kidney Care (www.freseniuskidneycare.com/)	Many recipes with instructions and videos; foods to avoid and suggestions for orders at restaurants and grocery stores
Physical Activity	
Kidney Foundation of Canada (https://kidney.ca/)	Detailed instructions and visual photo guidelines for specific exercises and techniques
Life Options (https://lifeoptions.org/)	Booklet with multiple exercises, detailed instructions, and visual guides
Emotional Support	
Fresenius Kidney Care (www.freseniuskidneycare.com/)	Contains portals for different kinds of emotional needs and tools for managing body image, counseling, and forming a social support group
Kidney Care UK (www.kidneycareuk.org/)	Contains information regarding prevalence of depression and depression screening; provides coping strategies and counseling details
Financial Information	
NIDDK (www.niddk.nih.gov/)	Large amounts of information about insurance options, payments, employment rights, and grants
CKD Information	
DaVita (www.davita.com/)	Huge array of educational materials, videos; self-paced classes sometimes with a live instructor
Kidney Foundation of Canada (https://kidney.ca/)	Pamphlets and booklets that describe CKD symptoms and syndromes
Medication	
Manitoba Renal Program (www.kidneyhealth.ca/)	Contains information for each medication class and how best to adhere

Dijon Chicken Recipe

Makes 4 servings



Ingredients

- 4 boneless chicken breasts
- 1/4 cup Dijon mustard
- 3 tablespoons honey
- 1 teaspoon lemon Juice
- 1 teaspoon curry powder

Preparation

1. Preheat oven to 350 degrees.
2. Place chicken in a baking dish.
3. In a bowl mix together other ingredients.
4. Brush both side of chicken with sauce.
5. Bake for 30 minutes or until chicken reaches an internal temperature of 165 degrees.

Nutrition Facts

Per serving

Calories: 189	Sodium: 258 mg
Carbohydrates: 14 g	Potassium: 454 mg
Protein: 25 g	Phosphorus: 250 mg
Dietary Fiber: 3 g	

Sodium: All of our recipes are low in sodium because it is hard on kidneys and raises blood pressure. Most people should limit sodium to 1,500 milligrams per day.

Potassium: If you are on hemodialysis, limit potassium too, to 2,000 milligrams per day. If you are on peritoneal dialysis or short daily dialysis, limit potassium to 3,500 milligrams per day.

Phosphorus: If you are on dialysis, limit phosphorus to about 1,000 milligrams per day.

Protein: If you are not on dialysis but have kidney disease, you might benefit from a diet lower in protein. Check with a kidney doctor or dietitian for guidelines.

Healthy Holidays

Feel Great and Celebrate!

ACROSS

- 1 everything in ____ (small amounts)
- 3 singing with your family and friends
- 5 board ____
- 9 where there's fresh air
- 10 drink 8 glasses a day
- 11 fruits and ____
- 12 put up ornaments
- 13 preparing food

DOWN

- 1 motion pictures
- 2 rest and ____
- 4 strolls
- 6 where to stay if you're sick
- 7 ____ control (small meals)
- 8 sitting down with a good book

