

# Fiber: Your Ally in Kidney Health

*This is a recorded webinar*

**Become a member of DPC at <https://www.dialysispatients.org/get-involved/join-dpc/>**

Follow us on social media:

Facebook: <https://www.facebook.com/patientcitizens>

Twitter: <https://www.twitter.com/DPCEdCenter>

Instagram: <https://www.instagram.com/patientcitizens>

LinkedIn: <https://www.linkedin.com/company/dpcedcenter>

YouTube: <https://www.youtube.com/user/DialysisPatients>

# Presentador



- ▶ María Eugenia Rodríguez, MS, RD, CSR
- ▶ Vivo en Puerto Rico
- ▶ Board Certified Specialist in Renal Nutrition desde 2014
- ▶ Trabajo con adultos
  - ▶ que reciben diálisis desde 2009
  - ▶ en estadios tempranos en práctica privada desde 2013
- ▶ Fundadora de ME Nutrition Services, PSC



<https://nutricionrenalpr.com>

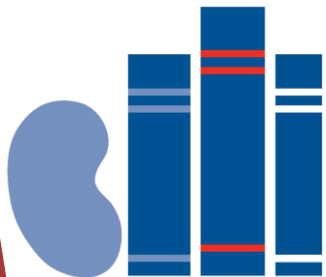


IG @nutricionrenalpr  
FB @menutritionpr



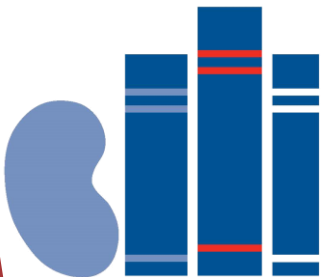
# Welcome

- Thank you for joining the DPC Education Center webinar to learn more about the importance of fiber as part of the kidney diet.
- This program is for your information, and you will need to talk to your health care team about your specific situation.
- Please complete the brief feedback form at the end of the program which also provides a way to suggest additional topics for the future.



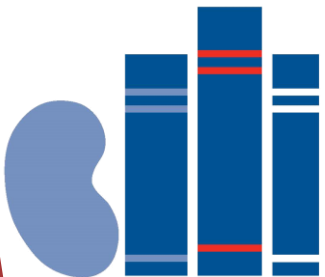
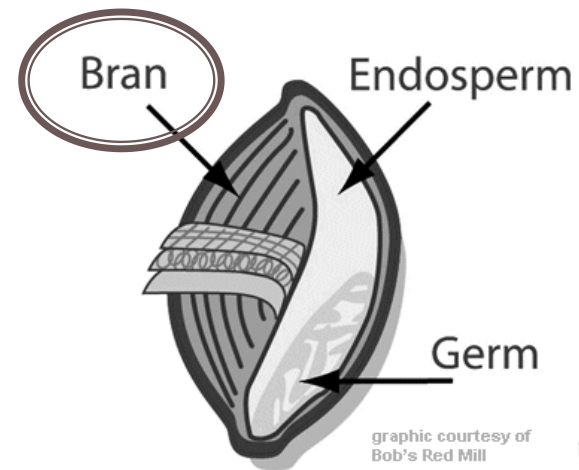
# Objectives

- ▶ Explain benefits of fiber
- ▶ Recommended daily fiber intake for adults
- ▶ Foods high in fiber as part of the kidney diet



# ¿What is fiber?

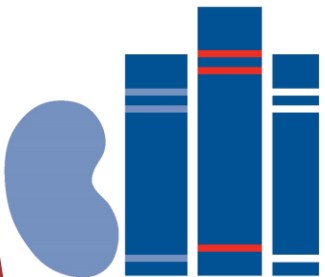
- ▶ Substance that is found in foods from plant sources
- ▶ Not digested nor absorbed
- ▶ Is part of the grain's bran



# Benefits of fiber

## General Population

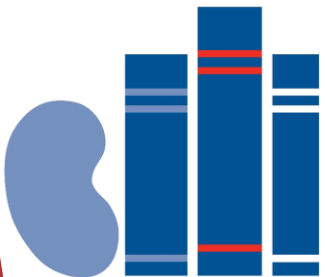
- ▶ Modulates the microbiome
- ▶ Improves gastrointestinal transit
- ▶ Decrease appetite (fullness sensation)
- ▶ Slows down gastric emptying
- ▶ Decreases the post-meal glucose peak
- ▶ Reduces cholesterol (beta-glucan y psyllium)



# Benefits of fiber

## Kidney Population

- ▶ Decreases urea and creatinine
- ▶ Improve survival (CKD 3-5, HD y PD)
  - ▶ CKD 3-5: every 10 g/day increase resulted in 19% reduction in mortality
  - ▶ HD: less risk in cardiovascular death
  - ▶ PD: 13% less all-cause related deaths



# Benefits of fiber

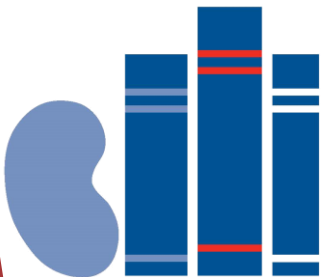
## Kidney Population



Decreases uremic toxins



Decreases inflammation and oxidative stress

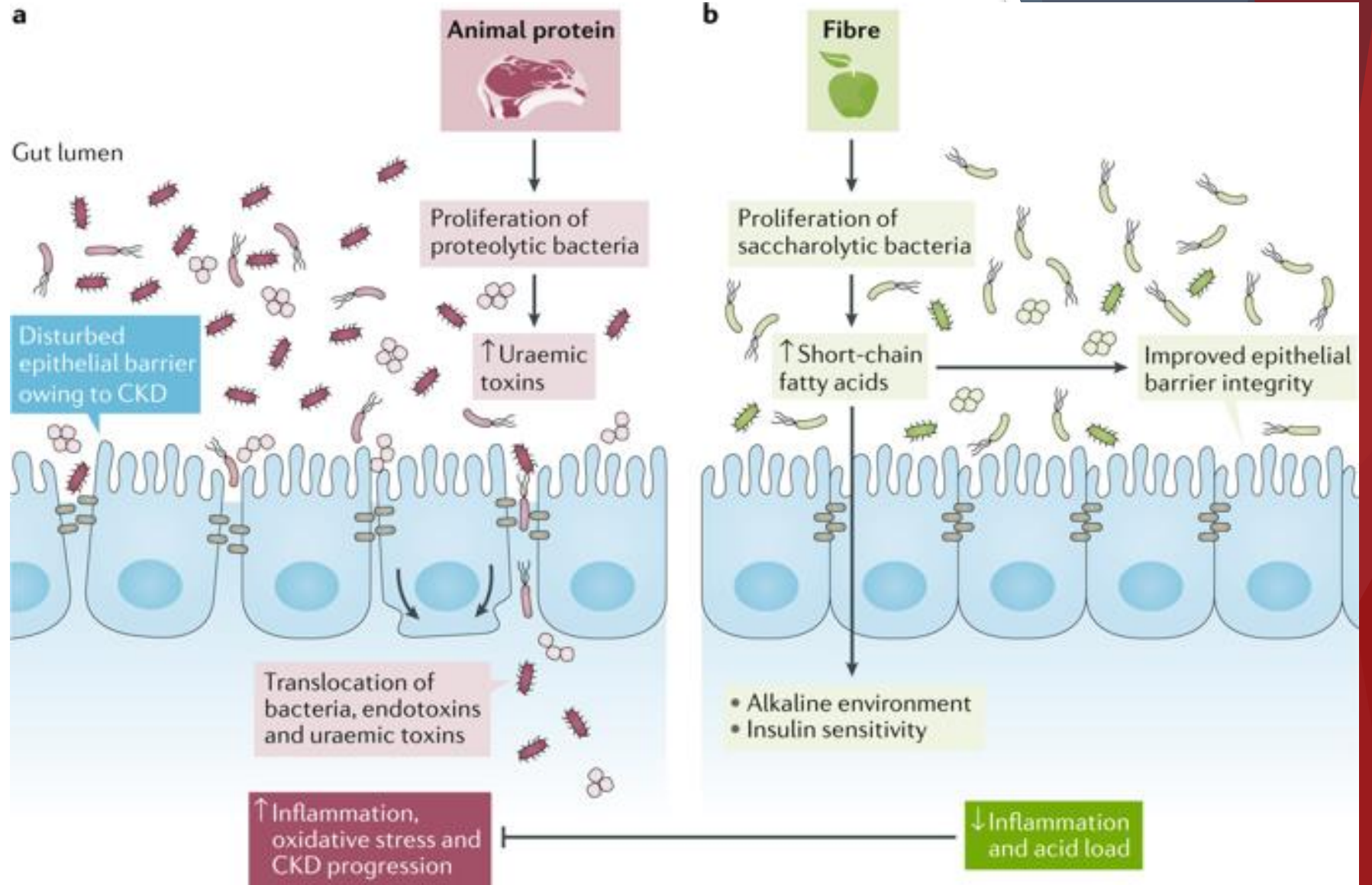




indoxyl sulfate

p-cresyl sulfate

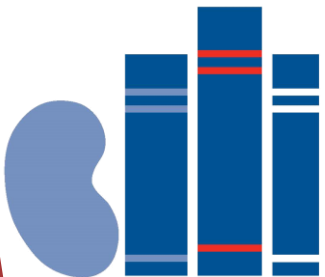
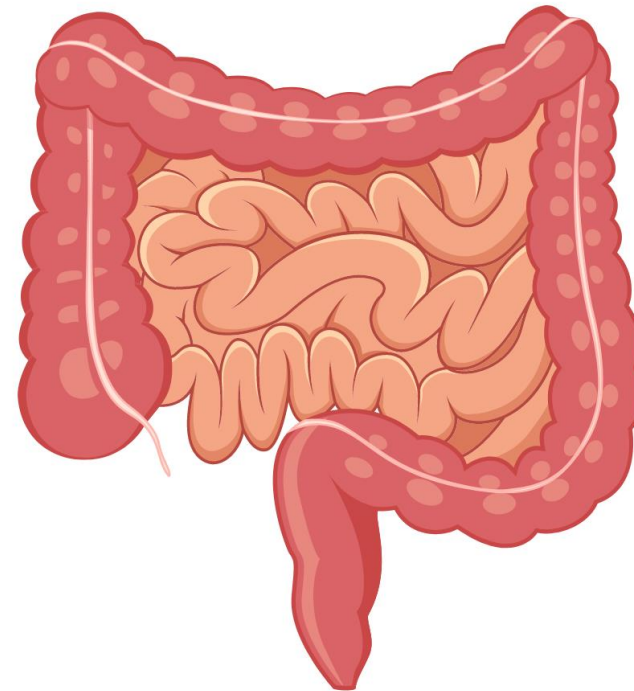
trimethylamine  
N-oxide  
(TMAO)



# Benefits of fiber

## Kidney Population

- ▶ Increase potassium excretion



# ¿How much potassium does your body absorb?

## Plants

50-60%



## Animals

70-90%

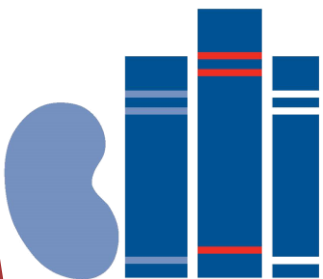


## Additives

90%

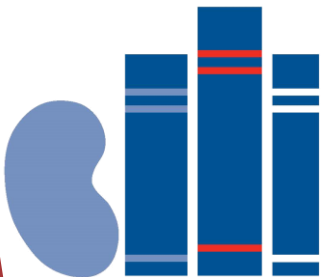


@nutricionrenalpr



# If you need a potassium restriction

- ▶ “... should recommend fruits, vegetables, and other foods with low potassium content that still contain higher levels of fiber and other micronutrients.” KDOQI 2020



## Fruits and Vegetables

CKD 1-4: increasing the intake of fruits and vegetables can decrease **body weight, blood pressure and net acid production (2C)**.

## Management of dietary net acid production

CKD 1-4: increase the intake of fruits and vegetables (2C) to slow down the decrease in residual kidney function.

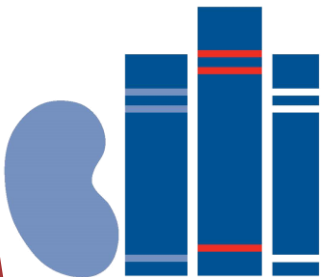
## Mediterranean Diet

- CKD 1-5: a Mediterranean diet can improve blood lipid levels (2C).



Mediterranean diet	
Food group	Recommendation
Whole grains, vegetables, fruits, seeds, olive oil, beans, nuts, legumes	Base every meal on these foods
Fish, seafood	Eat at least twice a week
Poultry, eggs, yogurt, cheese	Eat moderate portions daily to weekly
Meats and sweets	Eat less often than other foods

Clegg, D. J., & Hill Gallant, K. M. (2019). Plant-Based Diets in CKD. *Clinical journal of the American Society of Nephrology : CJASN*, 14(1), 141–143.



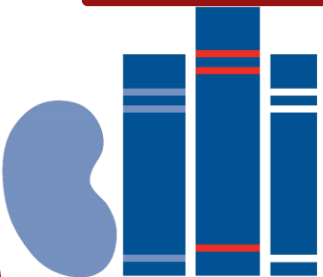
# Fiber Adequate Intake

## Female

- 19-50 years old: 25 grams daily
- 50+ years old: 21 grams daily

## Male

- 19-50 years old: 38 grams daily
- 50+ years old: 30 grams daily



# Recommended Dietary Fiber Intake

## Kidney Population

### Academy of Nutrition and Dietetics (2014)

- 25-35 g/day

### National Kidney Foundation (2015)

- CKD: 20-30 g/day
- Dialysis: 20-25 g/day

### PLADO (2020)

- CKD: at least 25-30 g/day





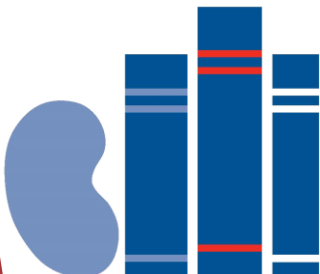
# Nutrition Label

- Good source: 3-4 grams
- High: 5+ grams



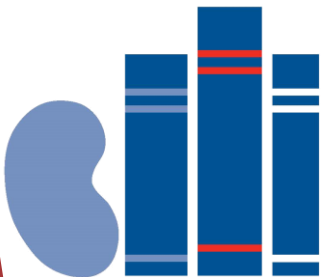
<b>Nutrition Facts</b>	
8 servings per container	
<b>Serving size</b>	<b>2/3 cup (55g)</b>
<b>Amount per serving</b>	
<b>Calories</b>	<b>230</b>
<b>% Daily Value*</b>	
<b>Total Fat</b> 8g	<b>10%</b>
Saturated Fat 1g	<b>5%</b>
Trans Fat 0g	
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 160mg	<b>7%</b>
<b>Total Carbohydrate</b> 37g	<b>13%</b>
Dietary Fiber 4g	<b>14%</b>
Total Sugars 12g	
Includes 10g Added Sugars	<b>20%</b>
<b>Protein</b> 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 235mg	6%

\* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.



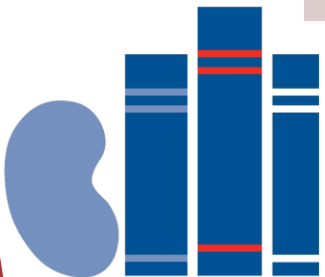
# Foods high in fiber and less than 200 mg of potassium

Grains	Fiber (g)
2/3 cup Bulgur	5.4
2/3 cup Farro	4.2
1/2 cup Oats, raw	4.1
2/3 cup Whole wheat pasta	3.6
3 cup Popcorn	3.5
2/3 cup Millet	3.1



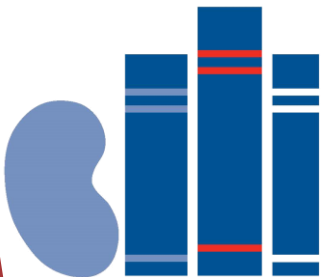
# Foods high in fiber and less than 200 mg of potassium

Plant proteins	Fiber (g)
¼ cup Chia seeds	13.8
½ cup Chickpeas	5.2
¼ cup Almonds	4
½ cup Green peas	3.6
¼ cup Hummus	3.4
¼ cup Pecans	3
¼ cup Hazelnut	3



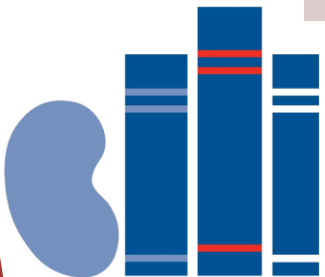
# Foods high in fiber and less than 200 mg of potassium

Vegetables	Fiber (g)
½ cup Green beans	2
½ cup Okra	2
1 cup Cabbage, raw	2
½ cup Carrots, shredded	1.5
½ cup Cauliflower, cooked	1.4
½ cup Eggplant, cooked	1.2



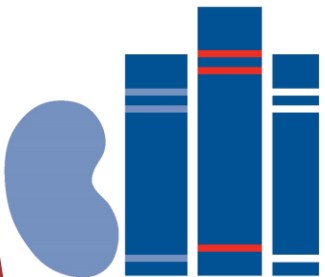
# Foods high in fiber and less than 200 mg of potassium

Fruits	Fiber (g)
1 Pear, small	4.7
½ cup Raspberries	4
½ cup Blackberries	3.8
1 Apple with skin, small	3.6
½ cup Cherries	1.6
½ cup Strawberries, halves	1.5
1 Mandarin Orange, small	1.4



# Practice Points

- ▶ Add fiber gradually
- ▶ Drink enough water
- ▶ Add 1 fruit and 1 vegetable at each meal
- ▶ Try a new grain every time you go to the grocery store
- ▶ Search for recipes that include the new foods you want to incorporate into your eating pattern
- ▶ Add beans, nuts and seeds to your week



**El DPC Ed Center le agradece por su interés en este programa y por completar la encuesta**

**Hazte miembro gratis de DPC y disfruta de los beneficios en**

**<https://www.dialysispatients.org/get-involved/join-dpc/>**

Follow us on social media:

Facebook: <https://www.facebook.com/patientcitizens>

Twitter: <https://www.twitter.com/DPCEdCenter>

Instagram: <https://www.instagram.com/patientcitizens>

LinkedIn: <https://www.linkedin.com/company/dpcedcenter>

YouTube: <https://www.youtube.com/user/DialysisPatients>

