

“Improved Outcomes in CKD with a Plant-Forward Approach”

Webinar Questions Answered by Melanie Betz, MS, RD, CSR, CSG

Please note that these are brief answers to complex questions and are not meant as medical advice. Please seek medical advice for more complete information.

- How are protein needs calculated for obesity class III or those with BMI of 50-59? Is it best to use IBW or actual weight?

Unfortunately, the guidelines just call for protein in “body weight per day” and don’t specify what weight to use. We just have to use our trusty clinical judgement. I personally tend to lean towards adjusted body weight, as I find that using IBW isn’t realistic, especially for a BMI in that range.

- What is acid load of eggs?

Eggs have a slightly positive acid load, but nothing compared to a serving of animal flesh protein. You can calculate the exact PRAL value of any food yourself using a simple equation. My friend, Jen Hernandez, has a [great article](#) about PRAL, that includes the calculation.

- What is the PRAL for tofu?

Tofu has a slightly higher PRAL compared to other plant proteins because it has so much protein in it, but definitely lower than animal flesh proteins. You can calculate the exact value using a simple equation, [found in this article](#).

- What factors are you using for calculating protein needs of hospitalized patients with CKD with HD and without HD?

Certainly, low protein diets are not always appropriate for people with CKD. If someone is acutely ill, has pressure wounds, malnutrition, etc. we need to increase protein needs as you would with any patient!

- Do you know of updated patient handouts since the 2020 guidelines were launched?

The Renal DPG has some wonderful handouts that are free to members. Jesianna Saville has some wonderful plant forward handouts she sells on [RD2RD.com](#). I also have some handouts available.

- For non-dialysis CKD, do you recommend patients count nuts/nut butters and beans/legumes in their meat/others target (for example, 1/4 cup nuts, 2 Tbsp nut butter, 1/2 cup beans are equivalent to 1 ounce of meat/protein foods) or do you only have them count animal protein?

Yep! All sources of protein “count” towards that total grams of protein daily goal. I find that it is MUCH easier for patients to meet these lower protein targets when they start incorporating more plant proteins in place of animal proteins because they are SO much lower in protein!

- Could you give an example of plant-based meals that the CKD patients can use to replace some of the animal-based meals?

One of my favorite recommendations is a homemade “chipotle” bowl – brown rice, black beans, tomatoes, onions, lettuce, avocado and some salsa!

- So, should we recommend little to no deli meats? Only fresh meats? How can we be sure of this recommendation?

Deli meat is inevitably packed with phosphorus and potassium additives, as well as sodium (even the low sodium stuff!). Reducing deli meat, along with other processed meats such as bacon/sausage/etc. is often the first thing I work with patients to do!

- So since dietary K⁺ intake is not associated with serum K⁺ levels is it okay/a good idea to still recommend low Na⁺ foods even though they typically have more potassium chloride additives?

Great question! We can't say that dietary K is NOT associated with serum K levels, we just DON'T KNOW. There are SUCH limited studies in this area. I do think it makes sense to avoid extremes. Those low sodium products with sodium chloride have INSANE amounts of potassium (many around 2,000-3,000mg potassium per teaspoon). “Heart Healthy” canned soup typically has around 600mg potassium PER SERVING (aka, 1/2 a can – and who actually eat only 1/2 a can?). So, I definitely recommend avoiding low sodium products with these potassium additives.

- Does a low protein diet also assist with proteinuria? I have read from NKF that this lab value also is a contributing factor to disease progression.

Yep! A low protein diet is recommended to improve proteinuria in the 2020 KDOQI/AND Guidelines

- Does red meat have any difference in disease progression compared to other meat sources?

There is some data to suggest that red meat has worse outcomes for CKD progression compared to chicken/fish. Interestingly, red meat has nearly the exact same PRAL value as chicken/fish. But, there are likely other things in red meat that are associated with worse outcomes.

- Is it a good recommendation for someone with high phosphorus who is on dialysis to start a phosphate binder?

Disclaimer: I don't work in dialysis! But yes, phosphate binders are certainly widely used and can be effective at lowering phosphorus (when taken appropriately!). Of course, if the patient is willing, working on getting rid of (or reducing!) those phosphate additives first can help reduce the need for binders!

- For patients following WFPB diet, what do you recommend for protein guidelines? still 0.8 gm/kg BW?

Yep! Technically the protein recommendation for protein is the same. The 2020 Guidelines recommend lower protein – more like 0.6g/kg for people with CKD who are not on dialysis, or 0.8g/kg for people with diabetes with CKD who are not on dialysis.

- Have you found research re: phosphorous control in patients with Gastroparesis? Obviously, constipation is common with gastroparesis.

Interesting! I am not personally familiar with this area.

- Do you recommend plant-based nutritional supplements (i.e., Orgain) to help meet protein needs in this population? Do they tend to contain phosphorous or potassium additives we need to be cautious of?

Because I work in CKD and NON dialysis, I am typically working with people to REDUCE protein intake. However, protein needs certainly change if dialysis is started. In the case where patients are having a hard time meeting protein needs, I definitely think there is room for more plant based protein supplements. Some do still contain these additives. However, if the bulk of the product is truly plant based, we can assume that much of the phosphorus is less bioavailable!

- Are there more accurate protein dosing recommendations? We use the 0.6-0.8 gm/kg in clinical setting.

Yep! See answer above – the 2020 Guidelines recommend a lower protein intake. [Here is a link to the complete updated protein recommendations.](#)

- I noticed that Tums was on list for added phosphorus, yet sometimes it's used as a phosphorus binder, is that phosphorus absorbed or just continues to be bound?

Unfortunately, much of that phosphorus is absorbed!

- How do you encourage behavior change in patients with little trust in these "new" recommendations?

I find myself doing a TON of education around WHY the recommendations changed. People are usually pretty excited to learn they can eat nuts again!

- Can you comment on recommendations for HBV protein to dialysis patients?

The concept of HBV protein was completely removed from the recommendations. There is good data to suggest that we don't really need to worry about this. As long as people are eating a variety of foods, it is really easy to get a complete profile of essential amino acids.

- Do you recommend cranberry juice? It is low in K+, but more acidic?

I generally don't recommend juice from the sugar/lack of fiber standpoint. But, I wouldn't necessarily choose cranberry juice over any other kind. It is important to remember that the acid load I am talking about is VERY DIFFERENT than the acidity of a food itself. Tomatoes are acidic themselves, but actually produce BASE during metabolism. So tomatoes (and cranberry juice!) actually produce alkali and are considered NEGATIVE PRAL foods.

- I still don't understand how potassium in diet doesn't cause increase in serum potassium. Can you briefly explain?

There is no research that has shown that lowering how much potassium you eat reduces serum potassium. There is also not any research to show that potassium intake even CORRELATES with serum potassium values. Admittedly, there is essentially NO research in this area. So, we just can't say!

- Do you feel medications to lower K+ (Veltassa) are being prescribed and not really addressing the true issue?

This is a tough one. Many of the big wig plant based CKD gurus actually present these medications as a good thing because they allow patients to eat all of these healthy "high" potassium foods. I tend to agree with them. Potassium control is SO complicated in CKD, and SO many things impact it. It is notoriously very difficult to control. If someone has chronically high potassium, even if it isn't diet related, it is really hard to justify not taking away whole grains, beans, nuts, etc. (even though we know this probably isn't going to help). So, if the medication helps us feel more comfortable recommending all of these wonderful foods, that we know are beneficial for CKD for so many reasons, I think these medications really are a good thing!

- Do you think HD patients would be able to meet protein needs on a vegan/vegetarian diet?

I don't personally work in dialysis. However, I do know that it can be done! I have talked with dialysis RDs who have had success.

- Any tips on how to talk to nephrologists about this information on plant-based diet?

Come at them with better outcomes! Ultimately, we all want to help keep people off dialysis, right? Showing them the research that these dietary patterns are consistently shown to reduce mortality, slow GFR decline, improve glucose control and heart health makes it hard to argue with it!

- Does acid base balance also help increase low serum Albumin?

It could! Metabolic acidosis can reduce albumin – so if we can help improve acid base balance with food, it could help improve albumin!

- As a renal dietitian, I am hesitant to add plant-based phosphorus-rich foods. I do feel bad when my patients tell me that they cut beans & it usually works. Thoughts?

I think it is SO important to remember that even though beans (and other plant sources of phosphorus) LOOK like they have a lot of phosphorus, only about ½ of this phosphorus is absorbed. Plus, if we can get patients to eat these plant sources of phos IN PLACE of animal sources, we can make a huge impact on phosphorus. Replacing that highly absorbable phosphorus source with a lower one is a win!

- How do we get nephrologists on board with this? My nephrologists are not up to date with the absorption of organic vs added phosphorus. I educate and educate and then they come along behind me and tell the patient to avoid beans/nuts/seeds/nut butters.

I see this as a wonderful (and required!) job for Registered Dietitians! We just need to educate again and again. And to be patient. This is a HUGE change, and it will take time. I certainly haven't won over all the

nephrologists I work with yet! I frequently ask to present Grand Rounds in the section, educate the fellows and seek out ways to get this information in front of them as often as possible!

- For a patient on HD, what would you recommend for a plant base diet and making sure the patient obtained enough protein?

It is certainly not impossible to meet the recommendation of 1.2g/kg protein on a plant based diet. Making sure all meals and snacks have some plant protein source such as beans, nuts, seeds, tofu, etc. The use of plant based protein powders can also help if patients are having a hard time meeting their needs.