

The Case of Harriet Nells: Hypertension and CKD

Background

Mrs. Nells is a 58-year-old African American with pre-diabetes, hypertension, and chronic kidney disease (CKD). Her mother is deceased (hypertension and diabetes); father has hypertension. Her doctor told her to stop eating salty foods and she is trying to use less salt.

She is worried about diabetes and wants to lose weight.

She teaches 5th grade and usually eats school lunch when working and reports portions are too small. She has no time for exercise as she cares for her father after work and on weekends. Her husband prepares supper and makes fried foods and adds salt. They eat out once a week at the most.

No alcohol. No tobacco.

Physical exam: obese with some lower leg edema. Good dentition. No obvious nutrient deficiencies.

MNT Referral Data

Labs: A1c 5.9, UACR 65 (was 120), creatinine 1.2, eGFR 56, K 4.3, HCO₃ 27.8, BUN 16, Ca 9.0, Phos 4.3, Hgb 13.8, LDL 131, HDL 37, TG 165, Alb 3.6

Medications: baby aspirin, simvastatin 20 milligrams (mg) daily, hydrochlorothiazide 25 mg daily, lisinopril 20 mg daily

Recall

1 large buttermilk biscuit/butter	1 baked chicken leg	4 oz. fried fish
2 fried eggs	½ c. mashed potatoes/ gravy	3 hush puppies
2 sausage links	½ c. green beans, canned	Large baked sweet potato with butter
12 oz. hot tea with sugar	Tomato slices	½ c. coleslaw
	½ c. apple crisp	16 oz. homemade sweet tea
	16 oz. canned iced tea with sugar	
Snacks on canned sausage with low salt crackers.		

At the end of the appointment, she stated she will decrease sodium intake and will try sugar-free beverages to reduce calories and weight. She will return in 2 months.

5. Provide documentation for the visit.

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Follow Up with Mrs. Nells

Mrs. Nells returns in two months as scheduled. She reduced sodium intake by eliminating salt at the table and eats biscuits and sausage only once a month. Her husband buys reduced or low sodium products for the family and bought salt substitute to use in cooking and at the table. She is now used to artificial sweeteners. She walks at least 15 minutes most days and finds this help with stress.

Her legs show no edema. Medications have not changed.

Review of Pertinent Measures

Measure	March 2012	Dec. 2011
Weight (lb.)	197	203
Blood Pressure	135/80	168/105
Hemoglobin A1C	5.7	5.9

Current labs: creatinine 1.1, eGFR > 60, UACR 26, K 4.8, HCO₃ 26.4, BUN 15, Ca 9.0, Phos 4.2, Alb 3.7, random blood sugar 107

Previous labs: creatinine 1.2, eGFR 56, UACR 65, K 4.3, HCO₃ 27.8, BUN 16, Ca 9.0, Phos 4.3, Alb 3.7 (from initial referral)

Recall

1/2 c. orange juice 2 boiled eggs/salt substitute 2 slices whole wheat toast, dry 12 oz. hot tea/sugar substitute	1 slice cheese pizza (school lunch) 3/4 c. tossed salad/ ranch dressing 1/2 c. fruit cocktail 16 oz. sugar-free canned tea	3 oz. oven-fried chicken 1 c. mashed potatoes/salt sub. 1/2 c. collard greens, fried in oil 1 small buttermilk biscuit 16 oz. tea /sugar substitute
When hungry, her afternoon snack is a small bowl of reduced-sodium vegetable soup.		

Additional Questions

6. Which clinical data demonstrates the initial intervention was successful?

7. Identify trend(s) in lab data and medication associated with potential food-medication interaction. Describe intervention.

Use NKDEP's *Eating right for kidney health* (<http://nkdep.nih.gov/resources/eating-right-508.pdf>) and/or *How to read a food label* (<http://nkdep.nih.gov/resources/nutrition-food-label-508.pdf>).

Educational Material

National Kidney Disease Education Program. *How well are your kidneys working? Explaining your kidney test results*. Revised February 2012. NIH Publication No. 12–6220. National Kidney Disease Education Program website. <http://www.nkdep.nih.gov/resources/explaining-kidney-test-results-508.pdf>

National Kidney Disease Education Program. *Sodium tips for people with chronic kidney disease (CKD)*. Revised September 2011. NIH Publication No. 11–7407. National Kidney Disease Education Program website. <http://nkdep.nih.gov/resources/nutrition-sodium-508.pdf>

National Kidney Disease Education Program. *Eating right for kidney health*. Revised September 2011. NIH publication No. 11–7405. National Kidney Disease Education Program website. <http://nkdep.nih.gov/resources/eating-right-508.pdf>

National Kidney Disease Education Program. *How to read a food label*. June 2010. NIH Publication No. 10–7407. National Kidney Disease Education Program website. <http://nkdep.nih.gov/resources/nutrition-food-label-508.pdf>

National Kidney and Urological Diseases Information Clearinghouse. *High Blood Pressure and Kidney Disease*. Washington, D.C.: U.S. Government Printing Office, July 2008. NIH Publication No. 08–4572. http://kidney.niddk.nih.gov/kudiseases/pubs/highblood/highblood_508.pdf

Additional Reading

Jolly SE, Rios Burrows N, et al. Racial and ethnic differences in albuminuria in individuals with estimated GFR greater than 60 mL/min/1.73 m²: Results from the Kidney Early Evaluation Program (KEEP). *American Journal of Kidney Diseases*.2010; 55(3)Suppl 2: S15–S22.

Lancaster KJ. Dietary treatment of blood pressure in kidney disease. *Advances in Chronic Kidney Disease*. 2004; 11(2):217–221.

Lin J, Hu FB, Curhan GC. Associations of diet with albuminuria and kidney function decline. *Clinical Journal of the American Society of Nephrology*. 2010; 5(5): 836–843.

Udani SM, Koyner JL. Effects of blood pressure lowering on markers of kidney disease progression. *Current Hypertension Reports*. 2009; 11(5):368–374.

Ruggenti P, Cravedi P, Remuzzi G. The RAAS in the pathogenesis and treatment of diabetic nephropathy. *Nature Reviews Nephrology*. 2010;6(6):319–330.



For more information, visit www.nkdep.nih.gov/nutrition or call 1-866-4 KIDNEY (1-866-454-3639).

The National Kidney Disease Education Program (NKDEP) works to improve the understanding, detection, and management of kidney disease. NKDEP is a program of the National Institutes of Health.

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