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Interpreting Research for the Kidney Patient - November, 2005

William E. Mitch wrote a special article in connection with receiving the Robert H. Herman Memorial Award in Clinical Nutrition.¹ Dr. Mitch's paper is of interest to you as he reported that a low-protein diet is useful because most toxins in your blood are caused by your digestion of the protein in your food. He adds that restricting dietary protein is a time-honored method of reducing the amount of toxins in your bloodstream. This diet also helps your kidneys because it lowers the things you shouldn't eat due to your kidney's problems (proteins, sulfates, phosphates, potassium, and sodium). Most importantly he says there **"is evidence that low-protein diets can slow the progressive loss of renal function in some patients."**

¹Mitch WE. Robert H Herman Memorial Award in Clinical Nutrition Lecture, 1997. Mechanisms causing loss of lean body mass in kidney disease. Am J Clin Nutr. 1998 Mar;67(3):359-66; Mitch WE Cachexia in chronic kidney disease: a link to defective central nervous system control of appetite. J Clin Invest. 2005 Jun;115(6):1476-8.

²Lowrie EG, Lew NL. Commonly measured laboratory variables in hemodialysis patients: relationships among them and to death risk. Semin Nephrol. 1992 May;12(3):276-83.

³Rasmussen BB, Tipton KD, Miller SL, Wolf SE, Wolfe RR. An oral essential amino acid-carbohydrate supplement enhances muscle protein anabolism after resistance exercise. J Appl Physiol. 2000 Feb;88(2):386-92

As you know, following the low protein diet and taking the essential amino acid supplements (EAA refers to those amino acids you must take in from an outside source and are found in Nutramine, Nutrasentials and Nutramine T AminoBites), is more difficult for some of you than for others, but Dr. Mitch, in reviewing his research and that of others, is enthusiastic in his support of the regimen because of its value in improving your quality of life.

How well you are going to do with controlling your kidney disease is closely related to your "serum albumin" or "albumin" reported on your blood tests. You need to be at 4.0 or above, although the normal range is given by most labs as 3.8. This measurement was shown by research to be the best indicator of how well you are doing with kidney disease, either before or after starting dialysis.² That's why you have to take the EAA because your kidneys can't handle the waste from eating protein. You are at high risk if your albumin level is below 3.0, but extra EAA will usually bring that up, although it may take several months to get back to normal.

Dr. Robert R. Wolfe recently published another in his long string of excellent work on the essential amino acids, all of which show that **protein from foods results in the production of BUN** (one of the toxins is the urea in your blood which is measured by the amount of nitrogen or **Blood urea Nitrogen**) **but the essential amino acids do not.**³ He also found that taking an EAA supplement resulted in the production of the needed serum albumin. If you don't take your EAA regularly, you will experience a number of the problems associated with kidney disease – most noticeably fatigue.

Remember, **stick to your diet and take your EAA to get your albumin levels to 4.0 or better.** EAA's will also help you if you are on dialysis as well as up to 80% of patients on dialysis have low albumin levels.

Be well and we'll update you on other interesting research in the next issue.