

A DIETARY ALTERNATIVE TO PHOSPHORUS CONTROL

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Poorly controlled phosphorus can cause dialysis patients major medical complications and degrade the quality and length of a patient's life. Egg white is a high protein food with very low phosphorus content. This study investigated the effect on the serum phosphorus of dialysis patients who ate one meal per day with pasteurized egg white substituted for meat as the principal protein source.

Phase I (baseline) consisted of 4 weeks of preliminary data collection, while Phase II lasted 6 weeks. The change in mean phosphorus level was calculated by subtracting the Phase II mean from the baseline mean for each patient. Normal monthly blood work was drawn to obtain baseline levels of phosphorus. Final blood work was collected at the conclusion of the study. The study was conducted in a suburban freestanding dialysis center September through November 2004.

All male and female patients with serum phosphorus >3.9 mg/dl were able to participate. Patients consumed 8 ounces of pasteurized liquid egg whites for one meal per day in which meat would normally be consumed. Recipe ideas were provided for smoothies and for cooking. The patients kept a daily meal diary for the duration of the study. For each patient, serum phosphorus measurements collected at baseline was averaged and compared to the average of the serum phosphorus measurements collected at follow-up. A paired t-test was used to determine if there was a significant decrease in phosphorus and the Wilcoxon signed rank test was used to confirm the t-test.

Of the thirteen patients participating, six were male and seven were females with an average age of 62 years. A total of 92% had a decrease in phosphorus when they substituted pasteurized liquid egg white for meat in one meal per day for six weeks. In conclusion, the data suggest that pasteurized liquid egg whites are an effective component of the renal diet for lowering serum phosphorus.