## A Diet Reinforced with **Phytochemicals Stops** the Deterioration of Severe Renal Disease

## By Ma Shun-De

Robert J. Veach, whose wife is Taiwanese, almost succumbed to Uremia during a visit to Taiwan. His fate is closely tied to his relationship with Dr. Chen Yi-Shin, Director of the Department of Nephrology at Taichung Tzu Chi Hospital over the past ten years. Through the guidance provided by the CKD (chronic kidney disease) health education team, Robert has been able to completely change his diet and thereby stabilize his kidney functions and prevent a further deterioration. Director Chen stresses the importance of selecting the right ingredients for vegetarian diets. CKD patients must choose suitable ingredients and cooking techniques and control their calorie intake when they adopt vegetarianism.

| Stage | eGFR<br>Glomerular<br>Filtration Rate<br>(mL/min/1.73m2) | Symptoms  |
|-------|--|---|
| 1     | 90 or greater  | Normal kidney functions, protein or blood in urine  |
| 2     | 60-89  | Mild renal dysfunction, protein or blood in urine   |
| 3     | 30-59  | Medium renal dysfunction  |
| 4     | 15-29  | Severe renal failure coupled with edema, hypertension, anemia, and fatigue                                |
| 5     | Less than 15   | Renal functions of less than 15%, inability to discharge metabolic waste and moisture resulting in uremia |

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When Robert met Director Chen for the first time, he was already at stage 5 CKD (end stage renal disease) and had to undergo dialysis to save his life. After the dialysis treatment in the hospital, his kidney stabilized and resumed its normal functions. His doctor therefore told him he could take a long-distance flight, whereupon Robert flew back to America with his wife. Little did they know that they would be back in Taiwan for medical treatment after only 6 months because his kidney functions had deteriorated again. In addition to providing treatment, Dr. Director Chen also asked the CKD health education team to intervene.

The team repeatedly analyzed Robert's diet and recommended that he cut down on the processed foods in his vegetarian diet, switch to boiling as the main cooking technique, and avoid deep-fried and pan-fried foods. They also asked Robert and his wife to keep a dietary journal which would be assessed by a nutritionist. Through a multipronged approach which involved dedicated efforts by the team and full cooperation by the patient and his wife, his kidneys which were close to failure recovered again and his renal functions improved to Stage 4. Dialysis treatment was not necessary provided that regular tracking in three-month intervals was implemented. Despite the fact that Robert's vegetarian diet was one of the key factors responsible for recovery of his kidney functions, Director Chen reminded him that he shouldn't lull himself into believing that a vegetarian diet would guarantee his health. CKD patients must avoid processed foods, select seasonal vegetables from each of the five main color groups with rich phytochemical contents, adopt boiling as the main cooking technique, and stay away from potassium and phosphorous rich foods.

Director Chen points out that the bodies of CKD patients are prone to serious inflammatory responses. He



Group photo of Robert J. Veach, his wife, and Mr. Chen Yi-Shin (center), Director of the Department of Nephrology at Taichung Tzu Chi Hospital.



CKD case manager Yan Pei-Shi (right) provides health education for renal patients.

found in his research that fruit and vegetables in each of the five color groups have powerful antioxidation and inflammation inhibiting functions due to their high phytochemical content. He demonstrates the significant beneficial effects of phytochemical rich ingredients such as carrots, white radish, bitter gourd, and red cabbage for CKD patients with the aid of Robert's dietary journal. CKD patients should therefore increase their intake of such fruits and vegetables. A positive daily routine with a regular exercise regimen coupled with abstinence from smoking and alcohol also greatly contributes to the maintenance of kidney functions.

Director Chen praises the 84-yearold Robert as a model patient. His improving renal functions can be attributed to his strict dietary controls, regular medication intake, sustained exercise routine, and ultimately his perseverance and determination to preserve his health. Robert, who has been a vegetarian for 30 years by following the example of his wife, is deeply grateful to Director Chen and the CKD health education team for their detailed guidance in the fields of medication intake, dietary habits, and lifestyle adjustments. He points out that it is not difficult to adopt vegetarianism, but vegetarian diets that promote renal health require a certain level of perseverance. The elderly couple sincerely hopes that their experiences with such vegetarian diets will serve as an example for other CKD patients in their efforts to maintain or improve their renal functions.

