



Lecture Code : JS11-S5

Session Name : KSN-ISRNM-KSCN Joint Symposium

Session Topic : KSN-ISRNM-KSCN Joint Symposium

Date & Time, Place : June 13 (Sat) / 15:30-17:30 / Room 2 (GBR 102), 1F

Nutrition Management in CKD: The Role of Clinical Dietitians in Reducing Ultra-Processed Food Intake

A Ram Kim

The Catholic University of Korea Eunpyeong St. Mary's Hospital, Republic of Korea

As the global dietary environment shifts, the consumption of ultra-processed foods (UPF) is rising, emerging as a major nutritional risk factor for patients with Chronic Kidney Disease (CKD). This presentation explores the clinical impact of UPF on renal health and the dilemmas faced by patients, and examines intervention strategies for the gradual transition to the 'REAL Food' recommended by Dietary Guidelines for Americans (DGA).

1) Mechanisms of Renal Damage UPF are characterized by high energy density, excessive refined sugars, sodium, and inorganic phosphorus additives with nearly 100% bioavailability. Recent meta-analyses indicate that high UPF intake is associated with a 16% increased risk of CKD, with a dose-response relationship showing a 5% risk increase for every additional daily serving. Key damaging mechanisms include systemic inflammation, increased insulin resistance, and gut dysbiosis caused by a critical lack of dietary fiber. Furthermore, non-nutritional factors like Advanced Glycation End-products (AGEs) and endocrine disruptors from packaging (e.g., BPA) further accelerate renal fibrosis and nephrotoxicity.

2) Clinical Dilemmas Patients face significant barriers to reducing UPF intake. First, the aging and frail CKD population often finds traditional cooking a heavy physical burden, making convenient UPF a "necessary alternative" for survival. Second, aggressive marketing using terms like "No added" or "Natural" creates a false sense of security, masking hidden harmful additives. Finally, a paradoxical fear of potassium and phosphorus in whole foods leads patients to choose refined UPF they mistakenly perceive as "safer".

3) Intervention Strategies Clinical dietitians should shift the paradigm from simple nutrient restriction to individualized dietary patterns. ▲ Food Literacy: Educating patients to prioritize the "Ingredients List" over nutrition

labels to identify "hidden" minerals. ▲Shifting to REAL Food: In alignment with the DGA, dietitians should emphasize a "Return to Basics" by prioritizing REAL Food. This involves a shift toward minimally processed categories. ▲Smart Swaps: Transitioning from Group 4 UPF to Group 1–3 alternatives, such as replacing instant noodles with pasta supplemented with vegetables. ▲Lowering Cooking Barriers: Providing ultra-simple recipes (e.g., microwave steamed eggs) and utilizing kidney-friendly meal subscription services for frail patients. ▲Cooking Techniques: Teaching methods like "double boiling" to reduce mineral loads while preserving fiber. Ultimately, the goal is a gradual shift toward a balanced, whole-food-based diet. By acting as expert guides, clinical dietitians can empower CKD patients to make informed choices that support long-term kidney health.

Keywords: Chronic Kidney Disease (CKD), Ultra-Processed Foods (UPF), REAL Foods