

Nutrition in Diabetic Kidney Disease

Chair: *Lurline Less*

Nutrition in Diabetes

Joy Callender

Nutrition is an important aspect of the management of all types of diabetes. Persons living with diabetes mellitus (DM) need to meet their nutrient requirements as do other persons in the general population. Macronutrient distribution should be based on the needs of the individual, but within the range of the general dietary guidelines. The focus should be on a balanced diet with the regular consumption of vegetables, legumes, some fruit, whole grains and ground provisions, lean protein sources and healthy and essential fats. The Caribbean Food Groups provide helpful choices.

The objective of this presentation is to make persons living with DM, their caregivers and healthcare providers aware of the importance of the following goals:

- * Glycaemic control
- * The management of cardiovascular risk factors (hyperlipidaemia and hypertension)
- * Energy balance and weight management

The above are of special importance to prevent and/or delay complications such as chronic kidney disease. Strategies to achieve these goals include the provision of an individualized eating plan and the introduction of food substitution lists which allow persons to choose and exchange a variety of foods which are culturally appropriate, familiar, affordable and prepared in a healthful way. There should be particular focus on portion control, especially of the carbohydrate-rich foods.

This empowers persons to plan their own meals while taking into consideration their eating pattern. The guidance of a registered nutritionist or dietitian skilled in teaching meal planning can be particularly helpful.

Behaviour modification should be an important component of any new meal planning process.

Evidence-based Nutrition for Nephropathy in Type 2 Diabetes: The Case of Protein Restriction

Damian Francis

Diabetes-related kidney disease is the leading cause of kidney disease globally and accounts for significant morbidity and mortality. Nutrition has been recognized as the cornerstone of both diabetes and chronic kidney disease manage-

ment. However, there are uncertainties in the value of protein restriction and the progression of kidney disease. Current dietary approaches to manage diabetes have suggested increases of up to two times (0.8–1.0g/kg to 1.5–2g/kg) the protein requirement, especially for overweight and obese patients with normal kidney function. An evaluation of the evidence on the renal effects of low protein diets (LPD) in diabetic nephropathy showed small improvements in the decline of glomerular filtration rate (GFR) of 0.1 ml/min/month (95%CI: 0.1, 0.3). On the other hand, there is no evidence to suggest that increasing protein intake in patients with microalbuminuria accelerates diabetic nephropathy or increases risk in those with normal renal function. One randomized trial of people with Type 2 diabetes on an LPD (0.8 g/kg/day) group vs an unrestricted group found no differences in either GFR or microalbuminuria at 28 months. Difference in protein intake was also not sustained beyond six months. A 2007 Cochrane review concluded that reducing protein intake is associated with moderate, non-significant slowing in the progression of diabetic nephropathy to renal failure. But a specific recommendation of the necessary protein level to achieve this outcome is not possible. The recommendation that patients with diabetes reduce their intake of protein to < 1.0 g/kg of ideal body weight to prevent acceleration of renal function decline is weak and with low quality evidence.

Nutrition in Chronic Disease Prevention

Fitzroy Henry

Diabetes, kidney disease and other chronic diseases are all predicated to a large extent on nutrition. More specifically, obesity is the most important underlying cause of death in the Caribbean. While the efforts to refine clinical nutritional interventions must continue with speed, the fierce urgency is to prevent obesity and the resultant chronic diseases from occurring. Because these diseases are fuelled by the obesity epidemic, prevention should involve medical and non-medical scientists urging bold action on public policies which address its social determinants. The traditional models of obesity control have generally failed globally and a new approach needs to be instituted to attack this epidemic in a multi-sectoral way. Outlined in the paper are key changes vital to the success of prevention efforts.

Chronic diseases are shown to cut across socio-economic, spatial and demographic lines, and are situated within the context of the globalization process that is currently transforming world economic relationships with direct effects on health. The paper advances the search for ways in which domestic policies and globalization can be guided to address the nutrition problems in the region, especially for low-income people and those who are in a position of vulnerability. Clearly, the medical and non-medical driving forces and obstacles need to be identified and acted upon.

This paper will argue that substantial reductions in the prevalence of chronic diseases are more likely to come from structural and policy-related changes to the obesogenic environment than from medical interventions targeted to the individual. If action is not taken to curb our increasingly overweight populations, the resultant burden of diabetes and other chronic diseases will overwhelm our health systems and ultimately retard overall health and development.