Diabetes Update 2020 – Workshop #1 – Ms. Wendy Graham

Question: The patient's want and need for weight loss is always forefront. Is blood glucose management more important than actual scale weight? Patients deal with daily self management DM - do you recommend we start to focus on weight? In *your* experience do doctors deal with weight loss in patients with DM? Do they refer to dietitians? Foggy area with financial limitations.

Answer: Diabetes is a multifaceted disease. Our guidelines have changed over the years to reflect newer research. Our focus on the ABCDES gives us direction. Weight is one aspect impacted by dietary choices, exercise and genetic factors, but should not be the only focus. Referral to dietitians is very individualized depending on access and the clinician.

Q: What happens to patient's lipid levels on the keto diet? Does this affect CV risk?

A: In the keto diet triglycerides are reduced, HDL is increased and the response of LDL is variable. Some authors suggest that although LDL is elevated there is a shift from small dense particles to less-harmful larger particles. We do not have long term studies to determine the risk on cardiovascular disease.

Q: Are Canadian nutritionists allowed to prescribe keto diet?

A: Each province will have their own college guidelines, however, the two issues to consider would be competency and scope of practice. For example, dietitians in the field of epilepsy have training on the use of ketogenic diet through the 'KetoCollege' in the UK. These patients are also monitored by a medical team and have regular bloodwork. The dietitian would want to collaborate with other members of the medical team to ensure adequate follow-up is being done. In addition, dietitians need to be cautious to stay within the scope of practice when recommending vitamin and mineral supplements.

Q: What resources do you direct your patients towards when they want to do the keto diet? My health authority has nothing on the topic, and Dietitians of Canada resources seem limited to epilepsy.

A: I am not aware of any teaching resources specific to the ketogenic diet and diabetes. There are several reliable websites created by medical professionals in the epilepsy field that could be useful: matthewsfriends.org; charliefoundation.org. Beyond these, there is a myriad of websites offering recipes and meal ideas, although the reliability of the information needs to be assessed.

Q: What kind of diet do you prefer in healthy overweight patients?

A: This needs to be individualized based on the patient's style of eating and preferences. My first choice would be looking at aspects of the Mediterranean style of eating with energy restriction.

Q: How do you transition patients from low carb or keto diets if not tolerated?

A: Carbohydrate is usually added by 10 grams a day, increasing weekly to prevent weight gain. It also depends on how long the patient was on the diet. If they were following it for a short time carbohydrate could be added more quickly.

Q: Do we know what level of carb does the body go into starvation ketosis?

A: Limiting carbohydrate to less than 50 grams will generally create nutritional ketosis. One must also be cautious to limit protein as well, as excess protein can be converted to glucose by gluconeogenesis which would compromise ketosis.

Q: Could high fat diets increase insulin resistance?

A: Interestingly, the studies on the ketogenic diet have shown increased insulin sensitivity, the mechanism is unknown.

Q: Is there a risk of refeeding syndrome with the keto diet?

A: I could not find any specific reference to refeeding syndrome after a ketogenic diet, although certainly a possibility. When reintroducing carbohydrate, the suggestion is to add 10 grams per day each week and increase slowly. The refeeding guidelines from NICE (2006) suggest monitoring electrolytes, thiamine and proceeding cautiously if concerned.

Q: What about Atkins diets?

A: There are various phases of the Atkins diet. The initial phase would be considered, very low carbohydrate, < 20 gram and high protein. Carbohydrate is slowly added, and transitions to a low carbohydrate plan.

Q: Diabetes Canada recommends 175 grams of carb for gestational diabetes patients. However, sometimes this can be difficult for type 1 GDM patients to achieve. How would you suggest they meet their carb needs during pregnancy?

A: The 175 grams of carbohydrate is a guideline estimated to meet the nutrient requirements of pregnancy in the second and third trimester. This would be individualized for women with type 1 diabetes, adjusting to her appetite, weight gain, growth of the fetus and blood sugar control.