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Comprehensive care

Combining a healthy diet, exercise, smoking cessation, and management of glucose, blood pressure, and lipids with appropriate medications can reduce risks of kidney failure, heart attack, stroke, and heart failure.

2

Nutrition intake

Consume a balanced, healthy diet: higher in vegetables, fruits, whole grains, fiber, legumes, plant-based proteins, unsaturated fats, and nuts; and lower in processed meats, simple carbohydrates like sugars or white flours, and sweetened beverages. Salt intake should be less than 5 grams per day (equivalent to 2 grams of sodium) and protein should be maintained at 0.8 grams of protein per kilogram of weight per day. These levels should be reviewed by a dietician, and monitored on a regular basis.

3

SGLT2i

SGLT2i (sodium-glucose cotransporter-2 inhibitor) medications were developed to lower blood sugar, but in addition they reduce the risk of kidney failure and cardiovascular disease while lowering blood sugar. They can be started for people with type 2 diabetes and eGFR ≥ 20 ml/min/1.73 m².

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Metformin

Metformin should also be given as an initial therapy to lower blood sugar. It can only be used for people with type 2 diabetes and kidney disease stages 1–3 (eGFR ≥ 30 ml/min/1.73 m²).

5

Glycemic monitoring and targets

HbA1c should be measured regularly in patients with diabetes and CKD. HbA1c reliability decreases for patients with advanced CKD, particularly for those on dialysis, and results should be interpreted with caution. CGM or SMBG may also be useful, especially for treatment associated with risk of hypoglycemia. Targets for glycemic control should be individualized, ranging from $<6.5\%$ to $<8.0\%$, taking into consideration risk factors for hypoglycemia, including advanced CKD and type of glucose-lowering therapy.

6

GLP-1 RA

If you have type 2 diabetes and have not met your target blood sugar with the use of metformin and SGLT2i or are not able to take these medications, your clinician may prescribe a long-acting GLP-1 RA (glucagon-like peptide-1 receptor agonist) which is a blood sugar-lowering medication with added benefit to the heart.

7

RAS blockade

An ACE (angiotensin-converting enzyme) inhibitor or ARB (angiotensin II receptor blocker) – both blood pressure-lowering medications with kidney protective effects – should be given if you have diabetes (type 1 or type 2), high blood pressure, and protein in your urine, sometimes called albuminuria. Kidney function and levels of potassium in your blood should be monitored.

8

Non-steroidal mineralocorticoid antagonists (ns-MRA)

ns-MRA reduce risks of CKD progression and cardiovascular events for people with T2D and residual albuminuria despite other treatments. They are suggested for patients with T2D, urine ACR ≥ 30 mg/g, and normal serum potassium on other standard of care therapies.

9

Approaches to management

Understanding your condition will be of great benefit. Be an active part of the team managing your diabetes and kidney disease. Focusing on self-management and control of multiple risk factors will help protect kidney function and reduce the risk of side effects from diabetes.

10

Become an empowered patient

Patients with diabetes feel overwhelmed with the lifestyle changes required of diabetes. Set small, daily goals to help manage what needs to be done.

Examples:

- Healthy eating – decrease dinner portion size;
- Exercise – walk 10 minutes extra each day;
- Health care team appointments – write down one question each week to ask about your care;
- Medicines – understand each medication you are required to take and why you are taking it;
- Side effects or complications – understand your risk factors, what are good lifestyle choices, and how these impact the side effects of diabetes.

