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Playing a Role in the Diabetes Care Continuum

A recent 'Number Check' article in the American College of Cardiology's monthly magazine realerted me to the havoc of diabetes (1). The article provided the following sobering data of the U.S. population: 11.3% has type 2 diabetes (T2D). And while this is alarming because of the cost for caring for these patients and the downstream adverse health effects likely to occur, I was surprised to find out that in South Asians living in the U.S., an estimated 23% have T2D. Black Americans have an incidence of about 12% (2), and Hispanics and American Indians and Alaskan Natives are at about a 15% incidence rate. The article also explained the relationship between T2D and the increased risk of cardiovascular disease, particularly heart failure. And even if the other major risk factors (i.e., blood pressure, cholesterol, smoking, and albuminuria) are under control, those with T2D have a 45% increased risk of hospitalization for heart failure that in those who do not have T2D.

Certainly, the initial goal should be one of primary prevention in which the avoidance of T2D is paramount. However, the current reality of the scourge of T2D emphasizes the importance of secondary disease prevention that requires the control of T2D. Evaluating A1C is the current gold-standard for assessing glycemic control (3). Pharmacologic approaches to glycemic control of T2D is of primary importance. However, the updated guidelines suggest that healthy lifestyle behaviors, including physical activity and exercise should be part of an overall approach to managing T2D. A recommendation is to use physical activity, along with nutrition and behavioral therapy to reduce body weight by $\geq 5\%$ in those who are overweight or obese, which encompasses most people with T2D (3). The stated target is to achieve a daily energy deficit of 500 to 700 kilocalories per day with a combined diet intake reduction and physical activity increase. To achieve this, the guidelines recommend that at least 16 counseling sessions occur over a 6-month period. The guidelines also recommend regular resistance training and provide information for specific exercise-related situations including the risk of hypoglycemia, exercising with existing peripheral and/or autonomic neuropathy, and exercising with diabetic kidney

disease. Each of these can have complexities that require expertise when counseling and designing/implementing an exercise program.

While CEPs are not currently routinely part of the multidisciplinary diabetes care team, there is a strong case that they should be part of this team. Often clinical recommendations for exercise are part of the task of a registered dietitian nutritionist. Many of these allied health professionals have an interest in exercise and some may have taken courses in school or have a personal trainer level certification. While this may be adequate for uncomplicated patients, those with obesity or the other aforementioned diabetes-related morbidities might benefit from the experience of a qualified CEP who can assess for low blood sugars postexercise, or for abnormal heart rate and blood pressure responses, and who can work with patients with loss of sensation in their feet or who may develop sores on their feet that can be exacerbated by exercise. Each of these situations requires an understanding of the pathophysiology involved and how it relates to exercise and how exercise mode, intensity, and durations might be modified. This sets up a perfect scenario for the CEP to become part of the diabetes care team. But how does that happen? One thought is for those working in a clinical program such as cardiac rehabilitation, to consider contacting the diabetes management team in your hospital system to discuss the advantages of having a CEP either on staff or on-call to provide their expertise as needed for patients with T2D. A potentially helpful tool in the United States to aid in gaining professional respect from the diabetes team is to consider becoming a Certified Diabetes Care and Education Specialist (CDCES). This is available to those who are an ACSM-CEP. Effective diabetes care requires regular physical activity and exercise, and many of those with T2D have not been regular practitioners. This is yet another opportunity for CEPs, no matter where in the world, to expand into care for patients other than those with cardiac disease. Be progressive and move toward working with those with TD2. They need you!

REFERENCES

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