New guidance on how cardiac patients with diabetes can exercise more safely

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Cardiac patients who also have diabetes will be able to do their rehabilitation exercises more safely, thanks to the world's first guidance on the subject, which has been published by international experts

including a Swansea University academic.

The guidance will be a crucial resource for healthcare professionals, so they can help the growing number of cardiac rehabilitation patients who also have diabetes.

The guidance, approved by international diabetes organizations, was drawn up by a team including Dr. Richard Bracken of the School of Sports and Exercise Sciences, College of Engineering and the Diabetes Research group, located in the Medical School at Swansea University.

Physical exercise and improving activity levels are central parts of cardiac rehabilitation, which aims to boost the health and fitness of people with heart problems.

At present, around 25% of participants attending cardiac rehabilitation in Europe, North America and Australia also have diabetes. This figure is increasing, largely because there are some common risk factors for both cardiovascular disease and diabetes, especially obesity and sedentary lifestyles.

While being more active is crucial for cardiac rehabilitation patients, a major obstacle is that many worry that the exercise itself will put them at risk.

For those patients who also have diabetes, however, there are additional worries, especially about falling blood sugar levels leading to hypoglycaemia. Fear of having a 'hypo,' which can lead to dizziness, disorientation, anxiety and many other symptoms, is one of the main barriers stopping people with diabetes from incorporating exercise into daily life.

This helps explain why cardiac patients who also have diabetes have are

less likely to take up and continue a cardiac rehabilitation program than those without diabetes.

This is where the new guidance can make a difference. It focuses on managing levels of blood sugar during rehabilitation activities, to reduce the risk of acute glycaemic problems during exercise. The aim is to give more confidence to patients with diabetes, making them more likely to do the rehabilitation exercises and keep at it, improving their overall health.

The new guidance gives health professionals clear advice covering areas such as:

- The interactions that can occur between medicines that patients with both cardiovascular disease and diabetes may be using
- The best types of exercise for these patients, the ideal intensity level, and the safest times of day
- The different requirements for patients with type 1 and type 2 diabetes

The guidance, contained in a position statement, was approved by the British and Canadian Associations of Cardiovascular Prevention and Rehabilitation, the International Council for Cardiovascular Prevention and Rehabilitation and the British Association of Sport and Exercise Sciences.

Dr. Richard Bracken, one of the authors, and a diabetes expert from the A-STEM research team in Swansea University School of Sports and Exercise Sciences and the Lifestyle research group lead in the Diabetes Research Group, Medical School, said:

"Exercising safely is essential to improve the health of patients with cardiovascular problems.

A rising number of these patients also have diabetes, so it's essential that cardiac rehabilitation programs meet their needs.

This expert guidance will mean health professionals can design cardiac rehabilitation to give patients with diabetes the reassurance they need to start and stick with the program, boosting their overall health."

The guidance was published in the *British Journal of Sports Medicine*.

More information: John P Buckley et al, Acute glycaemic management before, during and after exercise for cardiac rehabilitation participants with diabetes mellitus: a joint statement of the British and Canadian Associations of Cardiovascular Prevention and Rehabilitation, the International Council for Cardiovascular Prevention and Rehabilitation and the British Association of Sport and Exercise Sciences, *British Journal of Sports Medicine* (2020). DOI: 10.1136/bjsports-2020-102446

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