An Exercise Training and Behavioral Weight Loss Program after an Acute Blood Clot: TRAIN ABC

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Abstract:
Venous thromboembolism (VTE) is a blood clot that forms in a deep vein of leg and can travel to the lung. It is the third most common cardiovascular illness after heart attack and stroke. Obesity is a major modifiable risk factor driving occurrence of VTE, and it’s recurrence after an initial event. While exercise training through Cardiac Rehabilitation is proven effective in heart patients to induce weight loss and improve clinical outcomes, no similar exercise program exists for VTE patients, though this is urgently needed given the strong link between obesity and blood clot formation. In our proposed pilot trial, we will randomize patients after acute VTE to 3 months of a high-caloric energy expenditure exercise program or to usual care. We advocate that high-caloric energy expenditure is a bold approach after acute VTE to reduce obesity-related VTE recurrence. Furthermore, we will challenge the prevailing notion that obesity-related VTE is due to mechanical factors affecting venous return, and hypothesize it is secondary to dysregulated adipose tissue function. The current proposal is innovative in developing an exercise and behavioral weight loss program (VTE Rehabilitation) in a high-risk patient population to reduce comorbidities and obesity-related vascular risk by leveraging existing infrastructure and strengths of the University of Vermont.