

EXERCISE AND SPORT SCIENCES REVIEWS



ESSR Journal Club

Covered Article: “Revisiting CPX Applications in Heart Failure: Aligning Evidence with Clinical Practice” by Ross Arena, Marco Guazzi, Lawrence P Cahalin, Jonathan Myers. *Exercise and Sport Sciences Reviews*. 42(4), October 2014.

1. Cardiopulmonary exercise testing has been shown to provide important clinical information in patients with heart failure. Describe the history of the current literature related to cardiopulmonary exercise testing in heart failure: subject characteristics and key findings related to prognostic, diagnostic, and therapeutic efficacy.
2. What is the pathophysiologic premise for an abnormal response for key cardiopulmonary exercise testing variables in patients with heart failure?
3. Given a specific clinical indication for cardiopulmonary exercise testing in heart failure by your journal club facilitator, perform a literature search and propose a Class recommendation and associated Level of Evidence.
4. What are strengths and limitations of approaching clinical decision-making via a Class recommendation and associated Level of Evidence scheme?
5. Given the responses of key cardiopulmonary exercise testing variables for a hypothetical patient with heart failure described by your journal club facilitator, perform a clinical interpretation related to prognostic outlook and any diagnostic implications.
6. A researcher developing a pharmacologic clinical trial in heart failure wants to include cardiopulmonary exercise testing as an endpoint. Based on a drug class provided by your journal club facilitator, describe appropriate exercise testing procedures and the most important cardiopulmonary exercise testing variables to be included as endpoints.
7. To further strengthen support for appropriate clinical utilization of cardiopulmonary exercise testing in patients with heart failure, describe the top three areas of research needed over the next 10 years.