Lactate production retards, not causes, acidosis: a practical approach for physical education students.

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The content of numerous textbooks of exercise physiology, biochemistry and even many papers in the current literature explain acidosis during intense exercise by the production of lactic acid, causing the release of a proton with lactate as the final product. However, lactate production retards not cause acidosis. To understand better the importance of training schedules features and to do a correct interpretation of blood lactate measurements during different kinds of exercise, the goal of this work is to present a practical approach carried out with physical education students that allows the discussion of these concepts with real datas, breaking the myth involving this subject. Firstly, the students were conduct to plan different exercise protocols (continuous versus intermittent) where the average speed and blood lactate were measured. After the exercise protocols done, the students did some correlation among blood lactate, fatigue index and performance datas. The results show that there is not a clear relationship between blood lactate and fatigue, independently of exercise type that is being considered. By this way, it is possible to build with the students a new view of this polemic subject (blood lactate and fatigue) through a simple practical approach, helping the students to understand better metabolic aspects involved with physical exercises.