

# Energy Expenditure in a Ballroom Dancing Competition Simulation



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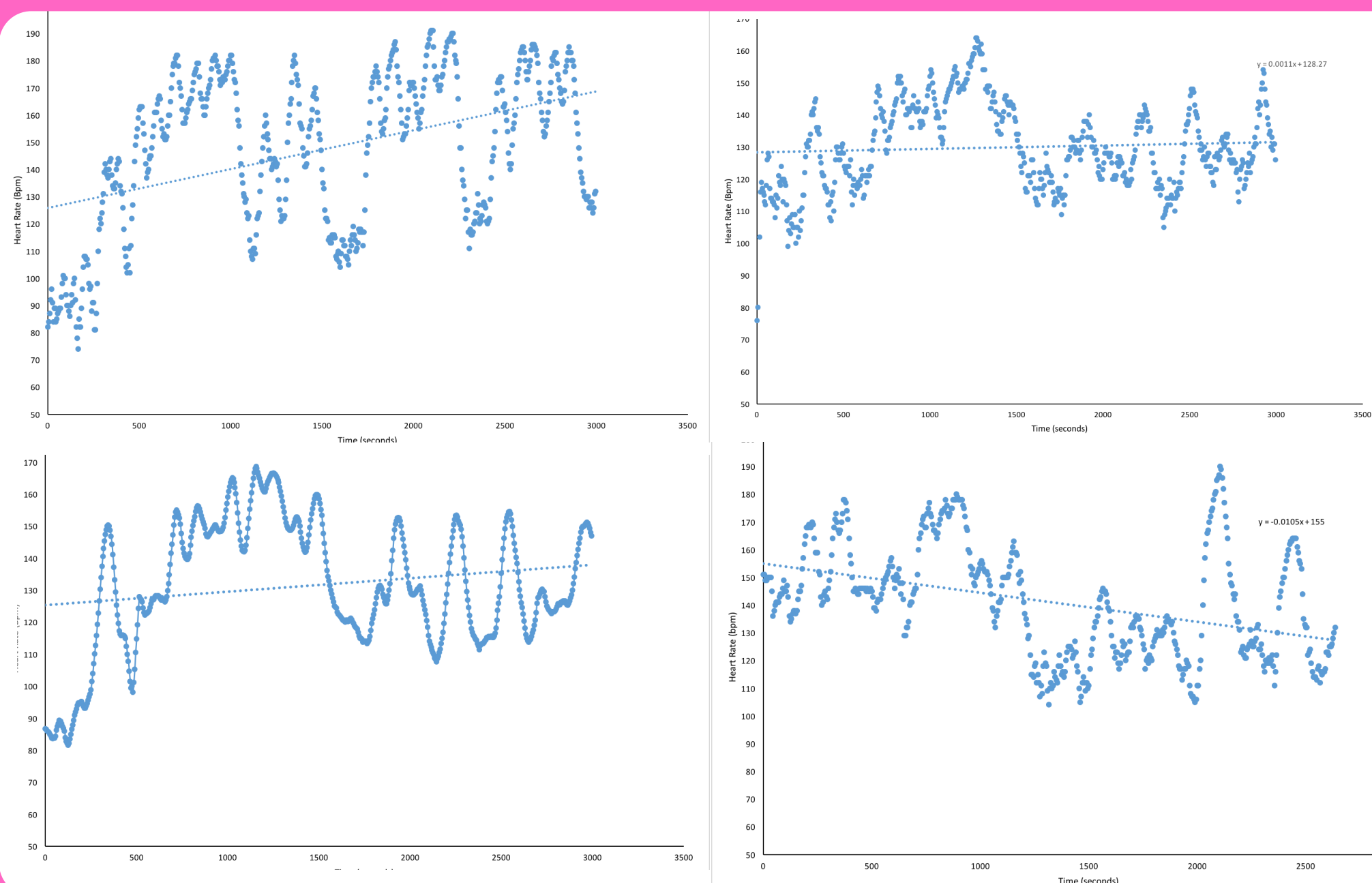
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Ballroom dancers require a high amount of energy during a competition day as they are constantly using their aerobic energy system as the competition can last for several hours. Ballroom dancing unlike other types of dance has come from a social element as it is based on a natural walk, ballroom dancers are told to move through the floor, moving from the back of the heel through the foot and out of the toe. Ballroom dancing is an endurance sport in which nutrition prior to a day of competing is going to be beneficial for the next day's performance. Currently there has been very little research conducted of the relationship between dancers and energy expenditure.

*The purpose of this study was to gain knowledge about how much energy an amateur ballroom dancer uses during a simulation competition and how this relates to overall fatigue and burnout in dancers.*

## Findings

- Maximum Heart Rate was met by majority of the participants during the simulation ( $179.5 \pm 13.5$  bpm).
  - RMR values across all participants were varied ( $2282 \pm 585.9$  kcal/d), this could have been the cause of an unfamiliar environment.
  - Total Estimated Energy Expenditure was determined for the entire group ( $11.22 \pm 3.46$  kcal/min).
  - Ballroom Dancers do consume a lot of carbohydrates pre competition but could have more sustainable meals to keep muscle stores full while competing.
- This study was completed over one day. Participants completed a Resting Metabolic Rate test (RMR) before performing in a competition simulation.
  - The simulation ran for 52 minutes, 1 minute 20 seconds per dance plus two 2 minute rest breaks.
  - All 3 three styles were performed with approximately five dances per style.
  - Each participants heart rate and energy expenditure was monitored; GPS units were used to monitor these measures.
  - Four participants (age: 27.8yrs; height: 166.6cm; mass: 72.5kgs) completed the study.



## Primary Findings

*The small bouts of high intensity exercise showed that Ballroom Dancing is an Intermittent based Sport*

*During the simulation the end of the Ballroom Style and the entire Latin Style showed they are the most physically exhausting on the body.*

