

Solutions

2.1 A An acute response occurs during or soon after exercise. A training adaptation develops over repeated sessions. A lower post-exercise heart rate cannot alone establish greater fitness without comparable workload and participant conditions.

2.2 $\text{Output} = 100 \text{ beats/min} \times 70 \text{ mL/beat} = 7,000 \text{ mL/min} = 7 \text{ L/min}$.

2.3 False. A heart-rate monitor measures one response, not every dimension of performance. Hydration, stress, medication and recent activity can confound comparisons.

2.4 cardiac output. cardiac output means Blood volume pumped per minute.

3.1 Both give 7 L/min. Output is a product; stroke volume matters. These invented arithmetic examples do not diagnose fitness or health.